
Phase I Desk Study and Site Reconnaissance

at 30-32 Queens View,
Netley, Southampton SO31
5EA

for Eastleigh Borough
Council

Report Reference: LP3177/DS/I

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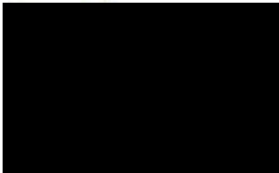
APPENDIX E – Preliminary Risk Assessment & Geotechnical Risk Register Tables

EXECUTIVE SUMMARY

The site comprises a ~0.2 Ha residential and commercial plot consisting of a parking area with a turning circle, soft landscaped area to the south east and a two storey commercial building with residential flats on the first floor. The eastern side of the property is currently a newsagents with a garage, conservatory and garden. The site is situated north of Netley and borders a recreation ground on the east and residential housing to the north south and west. It is proposed to redevelop the site into a three storey residential building consisting of 20 flats.

The site has a history of use as part of an allotment gardens between 1933 and 1965, and then was developed from 1970s to present day. The desk study has identified a number of potential sources of contamination associated with the site's former and current use. This includes heavy metals, PAHs, pesticides, asbestos and a low risk of ground gases. The site is not affected by radon gas and is classified as a low UXO risk.

The desk study has identified substantial geotechnical risks on site associated with anticipated high groundwater levels and granular soils which may lead to unstable excavations and dewatering.

Signed :	 Kiera McMahon BSc
Countersigned :	 Helen Smith MSc BSc CGeol SiLC
Date :	4 January 2023
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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 reconnaissance of a site located at 30-32 Queens View (Figure I, Appendix B). The instruction was given in an email dated 28th November 2022 and signed by Harry Lee of Eastleigh Borough Council.

2 Objective

LEAP understands that the site is currently owned by Eastleigh Borough Council, and that it is proposed to redevelop the site with a three storey block of 20 No. residential units, though no further details of the proposed development have been provided.

The proposed development is currently at a preplanning phase and based on the provisional information has been assessed, in accordance with BS EN 1997¹, as being a Geotechnical Category I structure.

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 development;
- 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

To **LEAP**'s knowledge, no previous investigations have been found at the subject site.

¹ BS EN 1997-1(2004)+A1:2013 Eurocode 7:Geotechnical Design: General Rules

4 Scope of Works

This report presents the results of a desk study and site reconnaissance. The desk study comprises a review of the following publicly accessible sources of information²:

- British Geological Survey (BGS) 1:50,000 Series Geological Map Sheet EW315 *Southampton* Solid and Drift ed. 1987.
- BGS 'Geology of Britain' online viewer accessed on 2nd December 2022.
- BGS Borehole log refs. SU40NE108 located 600m to the east of the site boundary.
- Groundsure.io website accessed on 5th December 2022.
- Groundsure database report (report ref: GS-9237301).
- Unexploded WWII aerial delivered bomb (UXB) regional risk maps produced by Zetica.
- Interrogation of the World Wide Web on 2nd December 2022 for general information pertaining to the site history.
- Interrogation of Eastleigh Borough Council Planning records for the site.

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 the qualitative degree of 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 Investigation³.

The following terms are used throughout the report:

² The report contains British Geological Survey materials ©UKRI 2019 and public sector information licensed under the Open Government Licence v3.0.

³ BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites – Code of Practice.

- 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.
- 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 Sustainability Considerations

5.1 Carbon Reduction

There is an urgent need to optimise redevelopment to significantly reduce the carbon footprint of the process without compromising the requirement for delivering a safe and suitable use of the site. With that in mind, Leap has worked in partnership with the University of Surrey to develop a series of carbon reduction design tools (CreDiT). These provide information on the embodied carbon cost of its report recommendations and encourage the conversation about carbon at an early stage in the design process.

Consideration has been taken throughout the report to align the recommendations with climate protection, circular economy and sustainable materials.

Leap recognises the unique position that it occupies at the very beginning of development projects and the value of informing clients on the carbon cost of design recommendations. As such, headline information from the CreDiT tools will be provided in site investigation reports without additional cost to the client. This is being done in order to engage furthermore detailed consultation where the full range of Leap's sustainability capabilities can be deployed.

6 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

7 Environmental Setting

7.1 Site Location and Description

The site is located at 30-32 Queens View, Netley, Southampton SO31 5EA as shown in Figure I, Appendix B.

The approximate National Grid Reference of the site is 445870, 108823. The site lies at an estimated elevation of 24m Above Ordnance Datum (mAOD).

7.1.1 General Description and Boundaries

The current site layout is shown in Drawing QueensView Netley_Project Outline in Appendix B. A walkover survey was carried out on 15th December 2022 and photographs are included within Appendix C. The Groundsure report is provided as Appendix D.

The site lies to the south east of the junction between Queens View and Castle Road and occupies a plot approximately 0.2ha in size.

The southwestern half of the site comprises asphalt surfaced parking area, turning circle with grass surfaced centre, and a grass surfaced area of soft landscaping in the southeastern most corner. The southwestern side of the site is grass surfaced with an electricity substation.

The northeastern half of the site is occupied by a two storey brick semi-detached commercial building with residential flats on the first floor. The eastern property is a newsagents, with the adjacent garage having been converted for residential use, with a conservatory and rear garden. The garden is mostly laid to lawn and has a mature Eucalyptus on the northern boundary. The western property is occupied by a church group, The Haven, with the adjacent garage being used as a food bank. The garage was noted to be surfaced with concrete and no staining was noted. The rear garden of this plot is also mostly laid to lawn, with a few areas of paving.

The topography of the site is generally flat-lying at approximately 24m OAD, although a slight downwards slope towards the south is noted in keeping with the topography of the general area.

7.2 Geology

The geology of the site has been ascertained by reference to the 1:50,000 British Geological Survey sheet EW315, solid and drift edition, the BGS website (www.bgs.ac.uk) and the Groundsure report.

The site is mapped as being underlain by superficial River Terrace Deposits over bedrock of the Selsey Sand Formation. The boundary to the Marsh formation is located 400m northeast of the site.

7.2.1 River Terrace Deposits

River terrace sand and gravel and alluvial floodplain silt, silty clay and sand, together with related organic and mass movement deposits of the “Solent River” (Frome, Piddle, Stour and Avon) of the Hampshire Basin and Dorset. The Subgroup includes interbedded units of river terraces comprising fossiliferous silty sand, silt, together with organic clay, tufa and peat, which are biostratigraphically correlated with interglacial (warm) stages.

7.2.2 Selsey Sand Formation

Selsey Sand Formation consists of silty sand, silty clay and sandy clayey silt, glauconitic, bioturbated, locally calcareous. It is part of the Eastern Hampshire basin and rests on the Marsh Farm Formation at a sharp contact on a burrowed surface overlain by glauconitic sandy silt with a few pebbles.

7.2.3 BGS Boreholes

The online BGS Geoindex (<http://www.bgs.ac.uk/geoindex/>) has been reviewed for detailed local geological and hydrogeological information. No boreholes have been identified within 250m of the site. The nearest data point (BGS ref SU40NE108) is located 600m east-southeast of the site and comprises 7 No. trial pits to between 1.8m and 4.2m depths. Ground conditions generally comprise of gravelly sandy fill made ground to depths between 0.6m and 4.2m depth over clayey gravel over clayey sand or sandy clay to the end of excavation. The logs didn't identify groundwater during the site investigation.

7.3 Hydrogeology

Table 1: Hydrogeology

Superficial Deposit	River Terrace Deposits	Secondary A – High Vulnerability
Bedrock	Selsey Sand Formation	Secondary A – High Vulnerability
Source Protection Zone	None on site	
Licensed Abstractions	None on site	

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.

Both the superficial River Terrace Deposits soils and the underlying Selsey Sand Formation are classified as high vulnerability Secondary A aquifers.

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 Southampton Water some 570m to the southwest that groundwater flow would be in a south west direction, towards the sea.

7.4 Hydrology

There are no surface water features within the site or adjoining the site boundary. There are also no surface water features within 500m of the site. The closest is Southampton Water which is located ~570m southwest of the site.

The site is situated within the Itchen coastal catchment.

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

7.5 Flooding

According to the Environment Agency, the site is not located within a flood zone.

7.6 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.

According to the Groundsure report, 2 No. ancient woodlands are located within 1000m of the site. The nearest is West Wood Woodland Park located 547m northwest of the site, which is also recorded as a local nature reserve.

One site of special scientific interest (Lee-on-the Solent estuary to Itchen estuary) is located 548m southwest of the site. This area is also a conserved wetlands site and a special protection area.

7.7 Ground Workings

No surface ground or underground workings are recorded within 250m of the site. The closest workings are surface ground workings associated with the railway line 330m northeast of the site.

One historical brit pit is reported by the Groundsure report within 500m of the site. Netley Gravel Pit is located 464m southeast of the site and is described as a surface mineral working with the main commodities as sand and gravel.

7.8 Mining, Extraction and Natural Cavities

The Groundsure report indicates the site is not situated within an area affected by mining, with no presence of natural cavities within 1000m of the site boundary.

8 Site Usage

8.1 Current Land Use

The current site layout is shown in Drawing Queens View Netley_project outline, Appendix B.

The two-storey building in the centre of the site is currently used as two commercial units; A convenience store/newsagents in the east and a church group in the west. The eastern garage is used as a residential residency, and the western garage is a food bank.

There are no active contemporary trade directory entries on site reported in the Groundsure report database search. 4 No. are listed within 250m of the site, with the nearest located 82m southwest of the site consisting of a electrical substation.

8.2 Evidence of Onsite Contamination

A walkover survey was carried out on 15th December 2022. No significant sources of potential contamination were noted onsite during the walkover, other than the hard surfacing's and any underlying sub-base.

8.3 Neighbouring Land Use

The main feature identified as a potential source of contamination in the surrounding area is electrical substations situated 82m southwest and 196m northwest of the site. These may be a source of polychlorinated biphenyls (PCB) and mineral oils, among other general contaminations including heavy metals, PAHs and petroleum hydrocarbons associated with any made ground beneath the substations.

No features in the surrounding area were noted to be potential sources of contamination.

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

8.4 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, the subject site was mapped as undeveloped land from the earliest available map dated 1867. The site formed part of an allotment from 1933 to 1965, which extended to the south. The site was developed around 1965 with a small unidentified building, which was demolished between 1965 and 1973 and a new building with gardens and a road in the same layout as the present day were constructed. No further developments have been constructed onsite since the 1960s.

The areas surrounding the site comprised mainly of farmland and woodland on the earliest historical maps with the small town of Netley located south of the site. The Netley and Fareham Railway line was located east of the site, in a northwest to southeast direction, and is still present today. In 1909, a recreational ground was developed east of the site. From 1909 to 1973 the areas surrounding the site were developed with residential housing.

8.4.1 Historical Map Evidence

The historical Ordnance Survey maps provided spanned the period from 1867 to present day (2022) at scales of 1:10,560 and 1:2,500. The maps are included in full in Appendix D.

Table 2: Summary of Historical Map Evidence

Year	On site	Surrounding area
1867	The site is mapped as part of a field.	The surrounding areas are mapped as agricultural fields. Netley and Fareham railway line is 400m east of the site aligning northwest to southeast. A footpath is located 180m south of the site and a road is located 280m northwest of the site. West Wood (a woodland) is situated 600m northwest of the site. The town of Netley is situated 400m south west consisting of two Inns, a hotel and a post office.
1897	No significant change on site.	Two buildings labelled Beulah are mapped 200m south of the site. Netley has been developed 300m south west. Farmland with buildings is mapped 500m north of the site. Two fishponds are located 480m north west and 550m north of the site. Three gravel pits are mapped 750m northeast, 550m east and three 550m southeast. Station road is mapped 220m south of the site.
1909	The southeastern site boundary meets the recreational ground.	A recreation ground with a pavilion is mapped on the south eastern site boundary extending further to

		the south east. More buildings are mapped 220m south of the site. A residential development including allotment gardens is located 200m southwest of the site. A brick works is located 750m east of the site.
1933	The site is used as part of allotment gardens with a footpath through the centre of the site aligning north east to south west.	The allotment gardens on site extend towards the south. Another allotment gardens is located 150m southwest and a nursery is located 240m north of the site. Residential developments are mapped 150m east, 200m south and 250m west of the site boundary. A tank is located 600m east of the site.
1962	No significant change on site.	Incomplete residential developments are mapped meeting the site boundaries in the north and west, and south of the allotment gardens. A tank is situated 650m south east of the site. The nursery 240m north if the site is no longer mapped.
1965	The site is no longer mapped as allotment gardens. One building is mapped in the eastern corner with a pathway/road leading west.	Only large-scale map available. The allotments extending south of the site are now mapped as a large building with a road footprint. The north west site boundary meets Queens View Road. The recreation ground on the south east boundary of the site has a tennis court mapped within the southern corner. The housing estate meeting the site boundaries is mapped as finished residential housing with private gardens.
1973	Two buildings with gardens are situated in the north east half of the site with the footprint for a road in the south in the site.	Allotment gardens and a substation are located 200m northwest of the site. A works is mapped 250m southwest of the site. Gravel pits and the tank located approximately 500-600m south of the site are no longer mapped.
1979	No significant change on site (small-scale map incomplete)	No significant changes.
1993	No significant change on site.	The tennis court at the recreation ground is not mapped. Three more buildings have been mapped within the north corner of the recreation ground. An electrical substation is mapped 80m south. Ashburton house is mapped 20m south of the site. A school is mapped 300m north of the site. The tank located 600m east is no longer mapped.
2003	No significant change on site	Allotment gardens and substation 200m north west of the site are no longer mapped.
2010	No significant change on site	No significant change.
2022	No significant change on site	No significant change.

8.5 Unexploded Ordnance (UXO)

The risks from unexploded ordnance have been assessed in accordance with CIRIA guidance⁴. 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 a low risk. Internet searches indicate that Southampton (approximately 1.5km to the northwest of site) was heavily bombed during WWII, and the northern portion of Netley was also a target for bombing. However, both are considered to be a sufficient distance from the site, and hence the overall risk of UXO is rated as low.

8.6 Waste Planning and Landfill Records

8.6.1 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 active historical landfills within 500m of the site.

There is one historic landfill recorded on the Groundsure report located ~401m north of the site. Information from Hampshire County Council identifies the landfill as a 'refuse tip'. Environment Agency details for the landfill (referred to as Westwood Phase 3) indicate inert, industrial, commercial and household wastes were deposited in the landfill from 1978. No date has been given for the surrendering of the license for the landfill.

8.6.2 Waste Management Facilities

According to the Groundsure report, there are no waste management facilities within 250m of the site.

8.6.3 Waste Transfer or Treatment Sites

According to the Groundsure report, there are no waste transfer or treatment sites within 250m of the site.

8.7 Radon

According to the Envirocheck report database search, 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.

⁴ CIRIA C681 2009. Unexploded ordnance (UXO) - A guide for the construction industry

C PRELIMINARY RISK ASSESSMENT

9 Preliminary Geoenvironmental Conceptual Site Model

9.1 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 all of 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.

9.2 Potential Sources of Contamination

Based on a review of the available information discussed in Section B of this report, Table 3 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 3: Potential Plausible Sources of Contamination

Potential Source	Potential Contaminants of Concern	Anticipated Distribution
On-Site		
Made Ground associated with current buildings and structures	Wide range of contaminants possible including: asbestos, metals, polycyclic aromatic hydrocarbons (PAH), petroleum hydrocarbons, ground gases	Site wide
Historic allotment gardens	Pesticides, heavy metals and polycyclic aromatic hydrocarbons (PAH)	Site wide.
Off-Site		
Gardens, allotment gardens and historic farmland.	Pesticides, heavy metals and polycyclic aromatic hydrocarbons (PAH)	Surrounding the site. Farmland present until approximately 1933.
Electrical substation	Polychlorinated Biphenyl, petroleum hydrocarbons and heavy metals.	Located 80m south.

No information is available on the construction of the buildings onsite in the late 1960s/early 1970s and therefore the thickness and composition of the made ground likely to be present beneath the building is unknown, though given its use is unlikely to comprise significant contamination, other than potentially asbestos containing materials. Based on the age of

construction it's likely that asbestos will be present. The road and turning circle to the south of the buildings are also likely to contain high PAHs due to coal tar.

Allotments were present onsite and to the south of the site between 1935 and 1963, and pesticides may have been used to improve plant growth which could still be present today. Historically pesticides contained heavy metals, and are likely to be present given when the allotments were active.

Given the distance of the infilled gravel pits and railway from the site, they are not considered to be plausible sources and are discounted from further assessment.

9.3 Potential Receptors

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

Human Health

- Future residents and site users.
- Neighbours – residential housing surrounding the site and Netley recreation ground to the east.
- Construction workers.

Controlled Waters

- Superficial - Secondary A River Terrace deposits aquifer
- Bedrock - Secondary A Selsey Sand Formation aquifer

Other

- Material construction of buildings and infrastructure

West Wood Woodland Park and Lee-on the Solent estuary to Itchen estuary will be discounted due to the distance from the site (547m northwest and 548m southwest, respectively).

9.4 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.

9.4.1 Human Health

Whilst details of the proposed development have not been provided, private gardens may be proposed. Therefore, to remain conservative, all the generic Contaminated Land Exposure Assessment (CLEA)⁵ exposure linkages between humans and potential contaminants in the ground are retained as being possible i.e. direct ingestion of soil, ingestion of homegrown produce, and inhalation of indoor and outdoor vapours and dusts. Groundworkers could be potentially exposed via all these pathways, except for those involving edible plants.

The historic use of the site as allotments poses a potential risk of various contaminants particularly within the topsoil and subsoil.

Overall, given the residential/commercial nature of the site, any made ground present beneath the buildings and structures is unlikely to contain high concentrations of contaminants, other than possibly asbestos. As such the potential for unacceptable risks to human health via these pathways is considered to be low.

Due to the buildings on site being constructed during the late 1960's to early 1970's the potential for asbestos to be present within the made ground and in the buildings is high, and the overall risk to human health from asbestos is considered to be medium. The risks can be mitigated for construction workers by using appropriate control measures.

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

9.4.2 Controlled Waters

The site is underlain by a Secondary A aquifers in both the superficial (River Terrace Deposit) bedrock (Selsey Sand Formation) deposits. The depth to the groundwater table is unknown, though given the proximity to the estuary it is anticipated to be high. No surface water features are within 250m of the site. with Southampton Water is located 550m south west of the site.

No evidence of aqueous contamination has been found within this report. Due to the relatively low likelihood of soluble contamination to be present on site, the overall risk to controlled waters is considered to be low.

9.4.3 Ground gases

There is potential for ground gases derived from made ground associated with the buildings, pavements and roads on site. These gases can build up in confined spaces within building structures and be released particularly during significant falling and low pressure atmospheric

⁵ Environment Agency 'Updated technical background to the CLEA model' Science Report: SC050021/SR3. January 2009.

conditions. Carbon dioxide can cause asphyxia and methane can cause explosions. The risk on site is considered as low given that the thickness is unlikely to exceed 1m.

9.4.4 Below Ground Infrastructure

The site is unlikely to be contaminated and so the potential for unacceptable impacts to below ground infrastructure, including concrete and plastic pipework is considered to be very low.

9.5 Summary of Geo-Environmental Preliminary Risk Assessment

The main contamination concern for the site is the 1960-1970s buildings and made ground on site due to the likely asbestos contamination. The historic use of allotments on site poses a low to moderate risk of contamination including pesticides, heavy metals and PAHs.

10 Geotechnical Risk Assessment

10.1 Preliminary Ground Model

Based on the findings of the desk study, the preliminary ground model for the site is summarised in Table 4 below.

Table 4: Preliminary Ground Model

Ground Model	Characteristics	Notes
Ground Conditions	Superficial: River Terrace Deposits	Interbedded fluvial deposits comprising sands, gravels, and clays
	Bedrock: Selsey Sand Formation	Clays, sands and silts.
Groundwater	Depth to groundwater unknown	Closest borehole logs (600m west) did not encounter groundwater during trial pit investigations to 4.8m. Shallow groundwater may be anticipated given proximity to Southampton Water.
Surface Water features	None within 250m of site	
Topography	Generally flat.	
Existing structures	Two shops with residential flats and garages. A road is located in the south and a public footpath to the west.	Shallow made ground anticipated due to small building footprint.
History	Previously used as allotment gardens.	Low potential for deep contaminated soils and contaminated groundwater.

10.2 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.

10.3 Summary of Preliminary Geotechnical Risk Register

The following geotechnical hazards have been identified as substantial risks:-

Table 5 Geotechnical Risk Register Summary

Geotechnical Hazard	Overall Risk
High groundwater table	Substantial

The groundwater table depth is unknown. Due to the close proximity to Southampton water and the presence of shallow granular deposits, groundwater level is anticipated to be high. Therefore, unstable excavation running sands and dewatering may be a risk on site during and post construction. A pathway for contamination may also be likely if high concentrations are found on site.

The site is underlain by River Terrace Deposits comprising of granular soil and occasionally clay. These clay deposits can include moderate to high volume change potential leading to a risk of heave or the requirement to deepen foundations of buildings on site, although the risk is rated as low.

On the basis of the initial review and preliminary risk assessment, the site is given a Geotechnical Classification of **Geotechnical Category I** in accordance with EN1997-1 §2.1(14)-(21).

11 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.

12 Recommendations for Intrusive Ground Investigation

Based on this desk study report, the site poses a low to moderate risk of contamination with the exception of asbestos. The presence of made ground on site and the historic allotments site use indicates contaminants such as asbestos, heavy metals, pesticides, PAHs and ground gases.

The anticipated shallow groundwater levels and potential of shrinkable soils on site poses geotechnical risks of deepened foundations, unstable excavations, dewatering and settlement/heave.

An asbestos survey is recommended for the site. Further site investigation and sampling is also recommended to target possible geoenvironmental and geotechnical risks on site.

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: © OpenStreetMap contributors
Note 1: Elevations not shown



Client: Eastleigh Borough Council

Project: 30-32 Queens View

Title: Site Location

Date: 12/12/2022

Project ID: LP3177

Figure No. 1

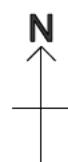


	Client:	Eastleigh Borough Council	Title:	Site Plan	Project ID:	LP3177
	Project:	30-32 Queens View	Date:	12/12/2022	Figure No.	2



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Queens View development project boundary



Department:

Date: 24/08/2021

Department

Scale: 1:1250

APPENDIX C – Photographic Record

Photographic Record



Plate 1 – Looking north at buildings.



Plate 2 – Looking east at turning circle.



Plate 3 - Looking south at soft landscaping.



Plate 4 – Looking north west across rear garden of newsagent and residential property.



Plate 5 - Looking south.

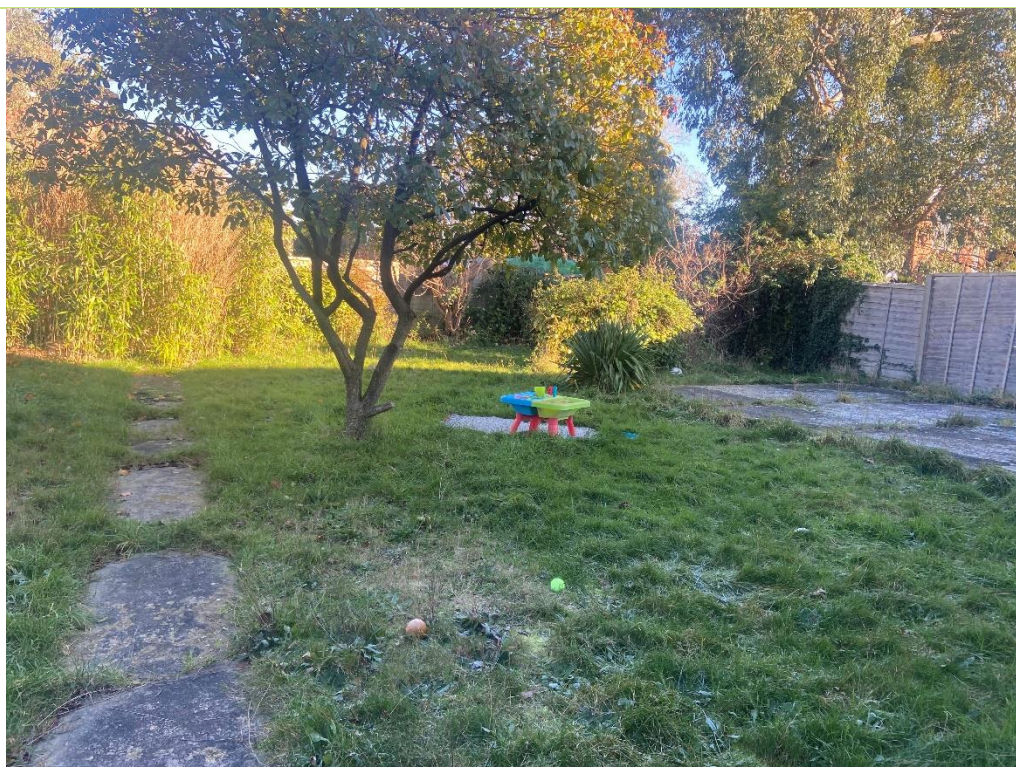


Plate 6 – Looking north across rear garden of The Haven and residential properties.

APPENDIX D –Groundsure Report

Groundsure Report

Queens view, netley abbey, SO31 5EA

Order Details

Date: 02/12/2022

Your ref: LP3177

Our Ref: GS-9237301

Site Details

Location: 445890 108811

Area: 0.25 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	0	0	2	44	-
16	1.2	Historical tanks	0	0	0	1	-
17	1.3	Historical energy features	0	0	5	11	-
18	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	5	-
18	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
19	2.1	Historical industrial land uses	0	0	3	49	-
21	2.2	Historical tanks	0	0	0	1	-
22	2.3	Historical energy features	0	0	9	21	-
23	2.4	Historical petrol stations	0	0	0	0	-
23	2.5	Historical garages	0	0	0	10	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
25	3.1	Active or recent landfill	0	0	0	0	-
25	3.2	Historical landfill (BGS records)	0	0	0	0	-
26	3.3	Historical landfill (LA/mapping records)	0	0	0	2	-
26	3.4	Historical landfill (EA/NRW records)	0	0	0	1	-
26	3.5	Historical waste sites	0	0	0	0	-
27	3.6	Licensed waste sites	0	0	0	0	-
27	3.7	Waste exemptions	0	0	0	1	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
28	4.1	Recent industrial land uses	0	0	4	-	-
29	4.2	Current or recent petrol stations	0	0	0	0	-
29	4.3	Electricity cables	0	0	0	0	-
29	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	-
30	4.7	Regulated explosive sites	0	0	0	0	-
30	4.8	Hazardous substance storage/usage	0	0	0	0	-
30	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	-
31	4.12	Radioactive Substance Authorisations	0	0	0	0	-
31	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	0	1	-
31	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
31	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	<u>Pollution Incidents (EA/NRW)</u>	0	0	2	1	-
33	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)				
35	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
36	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
37	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
37	5.5	Groundwater vulnerability- local information	None (within 0m)				
38	5.6	<u>Groundwater abstractions</u>	0	0	0	0	2
39	5.7	<u>Surface water abstractions</u>	0	0	0	0	4
40	5.8	Potable abstractions	0	0	0	0	0
41	5.9	Source Protection Zones	0	0	0	0	-
41	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
42	6.1	Water Network (OS MasterMap)	0	0	0	-	-

42	6.2	Surface water features	0	0	0	-	-
43	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
43	6.4	WFD Surface water bodies	0	0	0	-	-
43	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
45	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
45	7.2	Historical Flood Events	0	0	0	-	-
45	7.3	Flood Defences	0	0	0	-	-
46	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
46	7.5	Flood Storage Areas	0	0	0	-	-
47	7.6	Flood Zone 2	None (within 50m)				
47	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
48	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding					
49	9.1	<u>Groundwater flooding</u>	Moderate-High (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
50	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	0	1
51	10.2	<u>Conserved wetland sites (Ramsar sites)</u>	0	0	0	0	1
51	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
52	10.4	<u>Special Protection Areas (SPA)</u>	0	0	0	0	4
53	10.5	National Nature Reserves (NNR)	0	0	0	0	0
53	10.6	<u>Local Nature Reserves (LNR)</u>	0	0	0	1	0
53	10.7	<u>Designated Ancient Woodland</u>	0	0	0	0	6
54	10.8	Biosphere Reserves	0	0	0	0	0
54	10.9	Forest Parks	0	0	0	0	0
54	10.10	Marine Conservation Zones	0	0	0	0	0
54	10.11	Green Belt	0	0	0	0	0
54	10.12	Proposed Ramsar sites	0	0	0	0	0



55	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
55	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
55	10.15	Nitrate Sensitive Areas	0	0	0	0	0
55	10.16	<u>Nitrate Vulnerable Zones</u>	1	0	0	0	0
57	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
58	10.18	<u>SSSI Units</u>	0	0	0	0	3
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
60	11.1	World Heritage Sites	0	0	0	-	-
60	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
60	11.3	National Parks	0	0	0	-	-
60	11.4	Listed Buildings	0	0	0	-	-
61	11.5	Conservation Areas	0	0	0	-	-
61	11.6	Scheduled Ancient Monuments	0	0	0	-	-
61	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
62	12.1	<u>Agricultural Land Classification</u>	Non Agricultural (within 250m)				
63	12.2	Open Access Land	0	0	0	-	-
63	12.3	Tree Felling Licences	0	0	0	-	-
63	12.4	Environmental Stewardship Schemes	0	0	0	-	-
64	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
65	13.1	Priority Habitat Inventory	0	0	0	-	-
65	13.2	Habitat Networks	0	0	0	-	-
65	13.3	Open Mosaic Habitat	0	0	0	-	-
65	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
66	14.1	<u>10k Availability</u>	Identified (within 500m)				
67	14.2	<u>Artificial and made ground (10k)</u>	0	0	0	2	-
68	14.3	<u>Superficial geology (10k)</u>	1	0	1	4	-

69	14.4	Landslip (10k)	0	0	0	0	-
70	14.5	<u>Bedrock geology (10k)</u>	1	0	0	1	-
71	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
72	15.1	<u>50k Availability</u>	Identified (within 500m)				
73	15.2	<u>Artificial and made ground (50k)</u>	0	0	0	2	-
74	15.3	Artificial ground permeability (50k)	0	0	-	-	-
75	15.4	<u>Superficial geology (50k)</u>	1	0	1	4	-
76	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
76	15.6	Landslip (50k)	0	0	0	0	-
76	15.7	Landslip permeability (50k)	None (within 50m)				
77	15.8	<u>Bedrock geology (50k)</u>	1	0	0	1	-
78	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
78	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
79	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
80	17.1	<u>Shrink swell clays</u>	Low (within 50m)				
81	17.2	<u>Running sands</u>	Very low (within 50m)				
82	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
83	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
84	17.5	<u>Landslides</u>	Very low (within 50m)				
85	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
86	18.1	Natural cavities	0	0	0	0	-
87	18.2	<u>BritPits</u>	0	0	0	1	-
87	18.3	Surface ground workings	0	0	0	-	-
87	18.4	Underground workings	0	0	0	0	0
87	18.5	Historical Mineral Planning Areas	0	0	0	0	-



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

Recent aerial photograph



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Capture Date: 05/04/2020

Site Area: 0.25ha



Recent site history - 2017 aerial photograph



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Capture Date: 21/06/2017

Site Area: 0.25ha



Recent site history - 2013 aerial photograph



Capture Date: 03/06/2013

Site Area: 0.25ha



Recent site history - 2005 aerial photograph



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Capture Date: 16/05/2005

Site Area: 0.25ha



Recent site history - 1999 aerial photograph

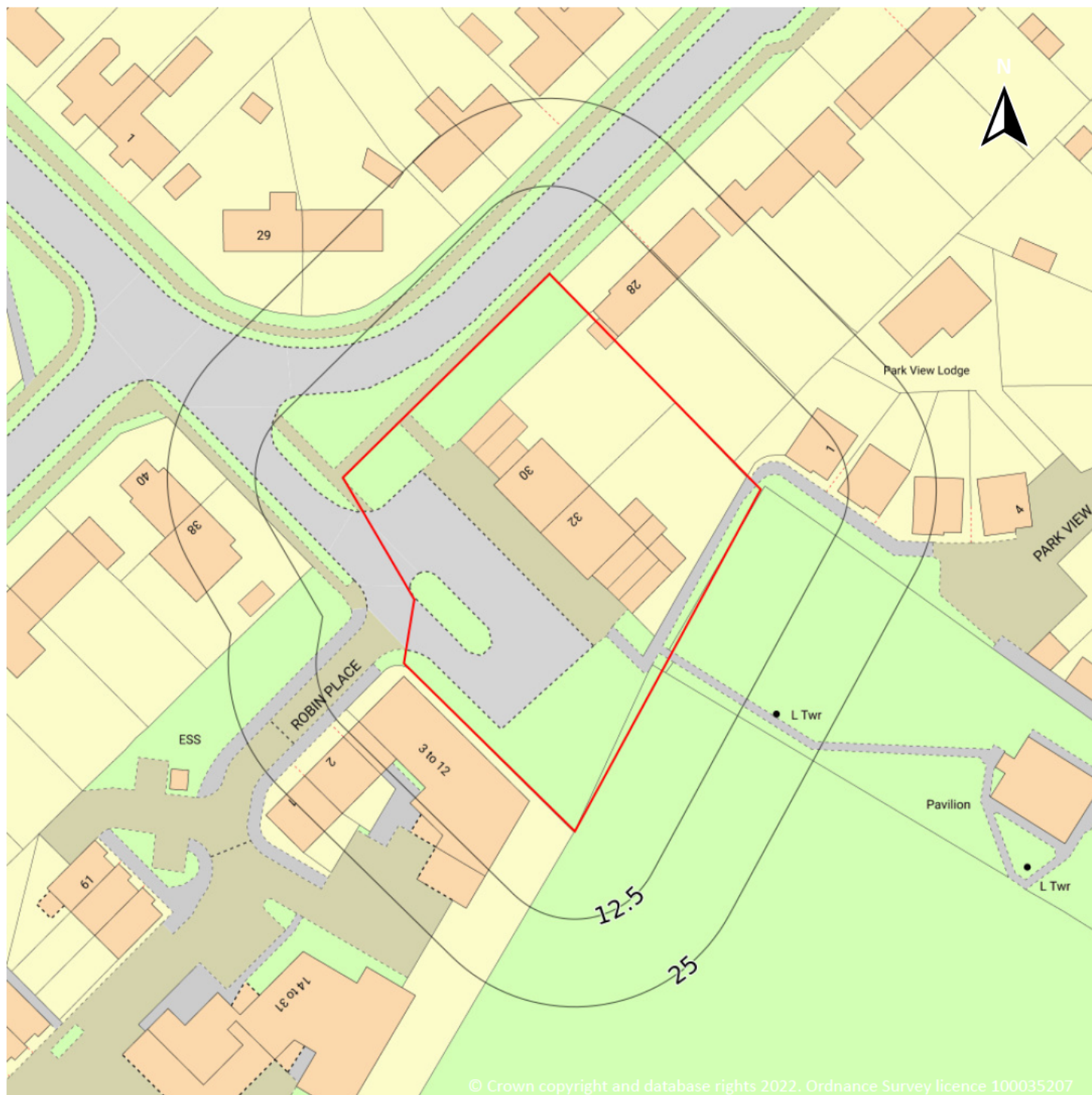


Capture Date: 30/04/1999

Site Area: 0.25ha



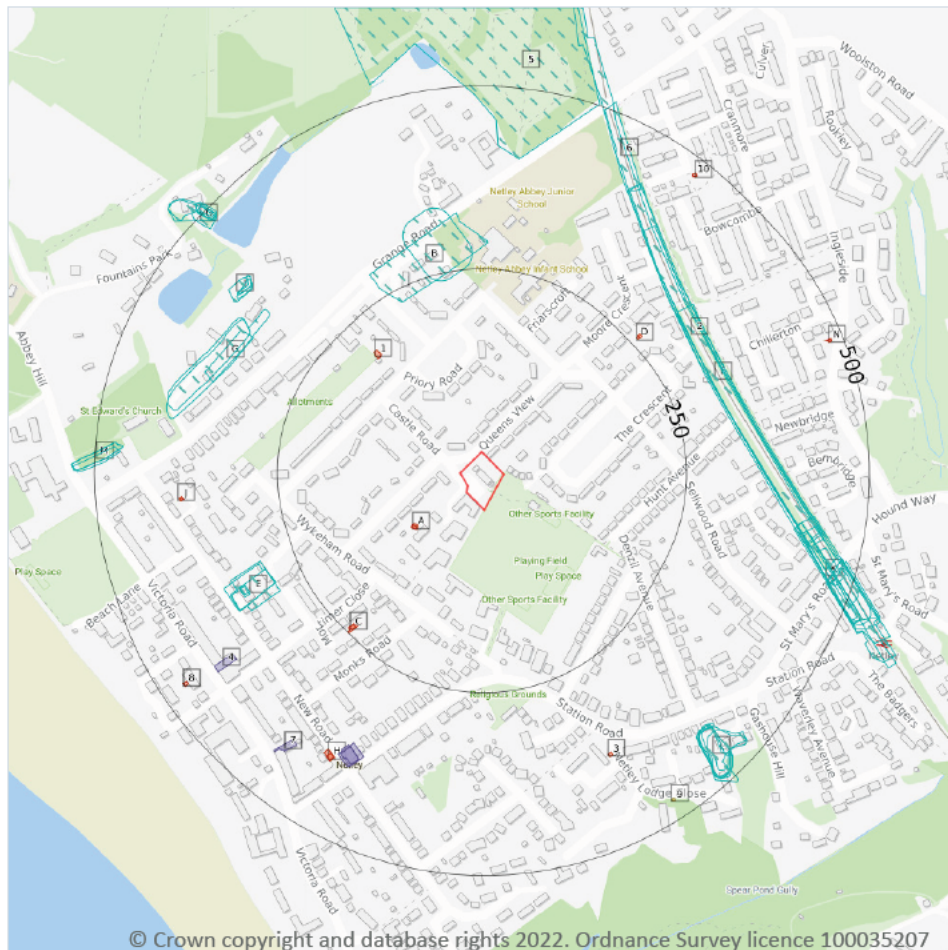
OS MasterMap site plan



Site Area: 0.25ha



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

46

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
B	232m NW	Nursery	1932	1956754



ID	Location	Land use	Dates present	Group ID
B	240m N	Nursery	1942	1931640
E	288m SW	Police Station	1989	1891213
E	288m SW	Police Station	1957 - 1971	1949298
E	288m SW	Police Station	1971	1960291
F	307m NE	Cuttings	1957	1909241
F	308m NE	Cuttings	1907	1953023
F	311m NE	Cuttings	1932 - 1942	1963520
F	311m NE	Cuttings	1932	1925025
2	312m NE	Cuttings	1869	1918958
E	327m SW	Police Station	1942	1901602
E	328m SW	Police Station	1932	1958232
G	338m NW	Cuttings	1971	1881859
G	338m NW	Unspecified Ground Workings	1907	1899007
G	345m NW	Unspecified Ground Workings	1942	1899088
I	380m NW	Unspecified Ground Workings	1932	1851436
I	381m NW	Unspecified Pit	1932	1916470
I	384m NW	Unspecified Pit	1907	1906364
I	384m NW	Unspecified Pit	1942	1965256
5	404m N	Refuse Heap	1989	1883948
K	404m E	Railway Sidings	1971	1956445
K	405m E	Railway Sidings	1957	1919469
K	406m E	Railway Sidings	1942	1904925
6	408m NE	Cuttings	1907	1961791
K	413m E	Railway Sidings	1932	1913226
K	418m E	Railway Sidings	1932	1905357
L	421m SE	Unspecified Pit	1957	1961692
L	421m SE	Unspecified Ground Workings	1942	1851440
L	422m SE	Unspecified Pit	1932	1960790



ID	Location	Land use	Dates present	Group ID
L	425m SE	Old Gravel Pits	1907	1863714
L	425m SE	Unspecified Pit	1932	1889554
L	436m SE	Gravel Pit	1896	1871287
K	441m E	Railway Sidings	1869	1891762
M	462m W	Unspecified Pit	1907	1954943
M	462m W	Unspecified Pit	1942	1959643
K	466m E	Railway Sidings	1907	1945291
M	466m W	Unspecified Pit	1932	1943803
K	467m E	Railway Sidings	1896	1962059
K	469m E	Cuttings	1907	1918482
K	471m E	Railway Sidings	1971	1942415
K	471m E	Railway Station	1971	1952954
O	478m NW	Unspecified Pit	1869	1876775
O	481m NW	Unspecified Heap	1932	1906911
O	482m NW	Unspecified Heap	1932	1923683
O	485m NW	Unspecified Heap	1957	1921390
O	486m NW	Unspecified Heap	1942	1904428

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
9	472m SE	Unspecified Tank	1867	302784



This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

16

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
A	80m SW	Electricity Substation	1987 - 1993	203703
A	83m SW	Electricity Substation	1973	199838
1	190m NW	Electricity Substation	1973 - 1993	196646
C	233m SW	Electricity Substation	1993	211684
C	237m SW	Electricity Substation	1973 - 1987	204320
D	260m NE	Electricity Substation	1978	187939
D	264m NE	Electricity Substation	1986 - 1993	197486
3	373m SE	Electricity Substation	1986 - 1993	211012
J	380m W	Electricity Substation	1973	204506
J	380m W	Electricity Substation	1986 - 1993	209378
H	390m SW	Electricity Substation	1986 - 1993	195092
H	393m SW	Electricity Substation	1973	201082
8	462m SW	Electricity Substation	1986 - 1993	198330
10	475m NE	Electricity Substation	1978 - 1993	206505
N	476m E	Electricity Substation	1993	198238
N	480m E	Electricity Substation	1986	206027

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

5

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
H	365m SW	Garage	1986	61736
H	371m SW	Garage	1964 - 1989	64007
H	372m SW	Garage	1993	62134
4	389m SW	Garage	1964 - 1973	63490
7	409m SW	Garage	1964 - 1973	63496

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.



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

Records within 500m	52
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Features are displayed on the Past land use - un-grouped map on [page 19](#)

ID	Location	Land Use	Date	Group ID
C	232m NW	Nursery	1932	1956754
C	234m NW	Nursery	1932	1956754
C	240m N	Nursery	1942	1931640

ID	Location	Land Use	Date	Group ID
F	288m SW	Police Station	1971	1949298
F	288m SW	Police Station	1989	1891213
F	288m SW	Police Station	1971	1960291
F	288m SW	Police Station	1971	1960291
F	294m SW	Police Station	1957	1949298
G	307m NE	Cuttings	1957	1909241
G	308m NE	Cuttings	1907	1953023
G	311m NE	Cuttings	1932	1963520
G	311m NE	Cuttings	1932	1925025
G	312m NE	Cuttings	1869	1918958
G	313m NE	Cuttings	1942	1963520
F	327m SW	Police Station	1942	1901602
F	328m SW	Police Station	1932	1958232
H	338m NW	Cuttings	1971	1881859
H	338m NW	Unspecified Ground Workings	1907	1899007
H	345m NW	Unspecified Ground Workings	1942	1899088
K	380m NW	Unspecified Ground Workings	1932	1851436
K	381m NW	Unspecified Pit	1932	1916470
K	384m NW	Unspecified Pit	1942	1965256
K	384m NW	Unspecified Pit	1907	1906364
1	404m N	Refuse Heap	1989	1883948
N	404m E	Railway Sidings	1971	1956445
N	405m E	Railway Sidings	1957	1919469
N	406m E	Railway Sidings	1942	1904925
2	408m NE	Cuttings	1907	1961791
N	413m E	Railway Sidings	1932	1913226
N	418m E	Railway Sidings	1932	1905357
P	421m SE	Unspecified Pit	1957	1961692



ID	Location	Land Use	Date	Group ID
P	421m SE	Unspecified Ground Workings	1942	1851440
P	422m SE	Unspecified Pit	1932	1960790
P	425m SE	Old Gravel Pits	1907	1863714
P	425m SE	Unspecified Pit	1932	1889554
P	436m SE	Gravel Pit	1896	1871287
N	441m E	Railway Sidings	1869	1891762
R	462m W	Unspecified Pit	1942	1959643
R	462m W	Unspecified Pit	1907	1954943
N	466m E	Railway Sidings	1907	1945291
R	466m W	Unspecified Pit	1932	1943803
N	467m E	Railway Sidings	1896	1962059
N	469m E	Cuttings	1907	1918482
N	471m E	Railway Sidings	1971	1942415
N	471m E	Railway Station	1971	1952954
N	471m E	Railway Sidings	1971	1942415
N	471m E	Railway Station	1971	1952954
U	478m NW	Unspecified Pit	1869	1876775
U	481m NW	Unspecified Heap	1932	1906911
U	482m NW	Unspecified Heap	1932	1923683
U	485m NW	Unspecified Heap	1957	1921390
U	486m NW	Unspecified Heap	1942	1904428

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 19**



ID	Location	Land Use	Date	Group ID
3	472m SE	Unspecified Tank	1867	302784

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	30
----------------------------	-----------

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 19**

ID	Location	Land Use	Date	Group ID
A	80m SW	Electricity Substation	1987	203703
A	81m SW	Electricity Substation	1993	203703
A	83m SW	Electricity Substation	1973	199838
B	190m NW	Electricity Substation	1973	196646
B	191m NW	Electricity Substation	1993	196646
B	192m NW	Electricity Substation	1987	196646
D	233m SW	Electricity Substation	1993	211684
D	237m SW	Electricity Substation	1987	204320
D	238m SW	Electricity Substation	1973	204320
E	260m NE	Electricity Substation	1978	187939
E	264m NE	Electricity Substation	1993	197486
E	264m NE	Electricity Substation	1986	197486
J	373m SE	Electricity Substation	1993	211012
J	374m SE	Electricity Substation	1986	211012
L	380m W	Electricity Substation	1973	204506
L	380m W	Electricity Substation	1993	209378
L	380m W	Electricity Substation	1986	209378
I	390m SW	Electricity Substation	1986	195092
I	393m SW	Electricity Substation	1993	195092



ID	Location	Land Use	Date	Group ID
I	393m SW	Electricity Substation	1973	201082
I	394m SW	Electricity Substation	1986	195092
I	394m SW	Electricity Substation	1989	195092
Q	462m SW	Electricity Substation	1986	198330
Q	462m SW	Electricity Substation	1993	198330
S	475m NE	Electricity Substation	1978	206505
S	475m NE	Electricity Substation	1986	206505
S	475m NE	Electricity Substation	1993	206505
T	476m E	Electricity Substation	1993	198238
T	480m E	Electricity Substation	1986	206027
T	480m E	Electricity Substation	1986	206027

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

10

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 19**

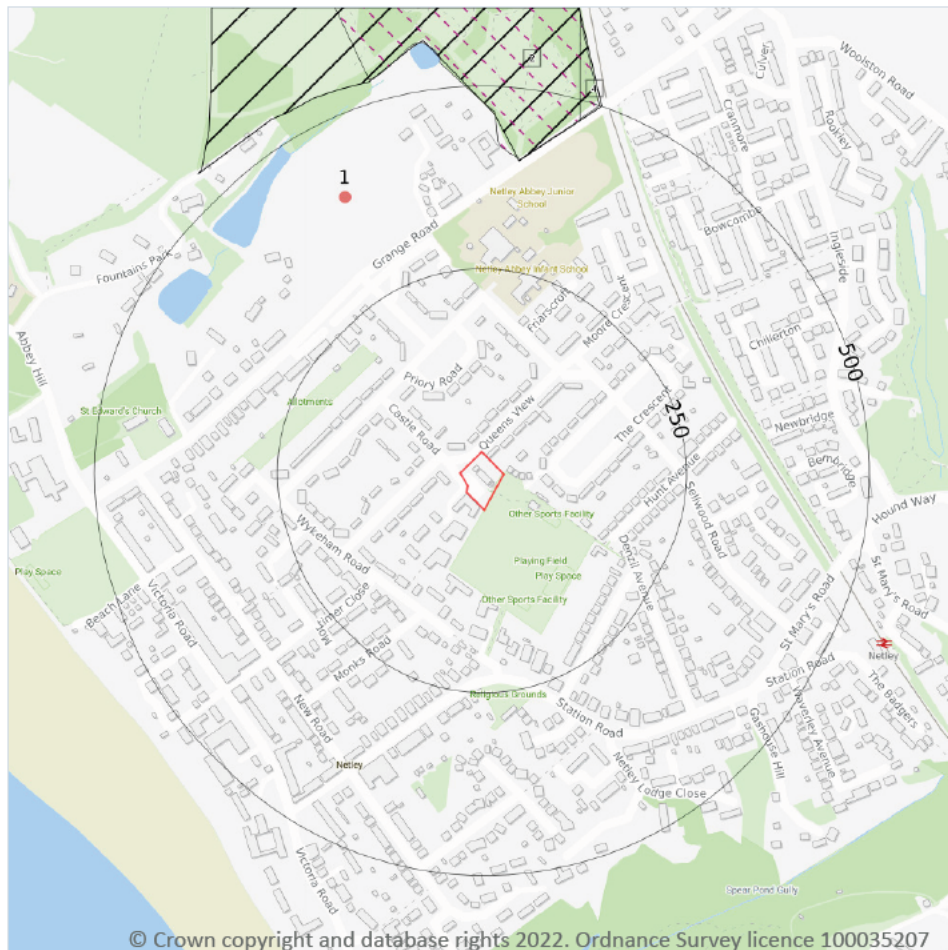
ID	Location	Land Use	Date	Group ID
I	365m SW	Garage	1986	61736
I	371m SW	Garage	1964	64007



ID	Location	Land Use	Date	Group ID
I	371m SW	Garage	1973	64007
I	372m SW	Garage	1993	62134
I	372m SW	Garage	1986	64007
I	372m SW	Garage	1989	64007
M	389m SW	Garage	1964	63490
M	389m SW	Garage	1973	63490
O	409m SW	Garage	1964	63496
O	409m SW	Garage	1973	63496

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

2

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

Features are displayed on the Waste and landfill map on **page 25**

ID	Location	Site address	Source	Data type
3	403m N	Refuse Tip	1985 mapping	Polygon
4	474m N	Refuse Tip	1985 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 25**

ID	Location	Details		
2	401m N	Site Address: Westwood Phase 3, Newtown Road, Netley, Hampshire Licence Holder Address: The Castle, Winchester, Hampshire	Waste Licence: Yes Site Reference: 1760/1/9/8, FEA6 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 20/12/1978 Licence Surrender: -	Operator: - Licence Holder: Hampshire County Council First Recorded - Last Recorded: -

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

3.5 Historical waste sites

Records within 500m

0

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

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

3.6 Licensed waste sites

Records within 500m

0

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

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

3.7 Waste exemptions

Records within 500m

1

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

Features are displayed on the Waste and landfill map on **page 25**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	395m NW	-	WEX284068	Using waste exemption	On a Farm	Use of waste in construction

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
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

4

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on page 28

ID	Location	Company	Address	Activity	Category
1	82m SW	Electricity Sub Station	Hampshire, SO31	Electrical Features	Infrastructure and Facilities
2	196m NW	Electricity Sub Station	Hampshire, SO31	Electrical Features	Infrastructure and Facilities
5	223m E	Hindesign	36, Hunt Avenue, Netley Abbey, Hampshire, SO31 5BD	Published Goods	Industrial Products



ID	Location	Company	Address	Activity	Category
6	240m SW	Electricity Sub Station	Hampshire, SO31	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0
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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

1

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

Features are displayed on the Current industrial land use map on **page 28**

ID	Location	Address	Details	
8	486m NW	PLOT 3 FOUNTAIN PARK, NETLEY, SOUTHAMPTON	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: N03365 Permit Version: 1 Receiving Water: INTO LAND	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 21/07/1978 Effective Date: 21/07/1978 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

3

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

Features are displayed on the Current industrial land use map on **page 28**

ID	Location	Details	
3	207m S	Incident Date: 29/07/2002 Incident Identification: 95116 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4	219m N	Incident Date: 15/08/2001 Incident Identification: 24372 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
7	391m N	Incident Date: 22/04/2002 Incident Identification: 73460 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

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

4.19 Pollution inventory substances

Records within 500m

0

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

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

4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

4.21 Pollution inventory radioactive waste

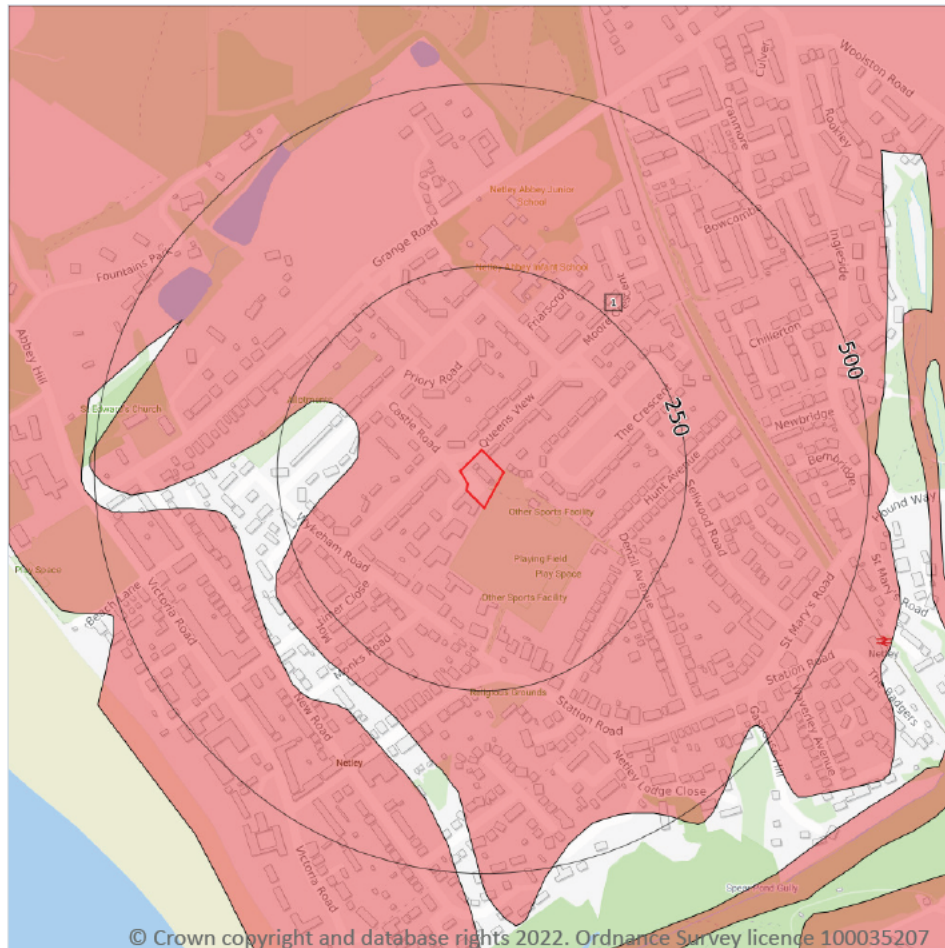
Records within 500m

0

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

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

5 Hydrogeology - Superficial aquifer



— Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m

1

Aquifer status of groundwater held within superficial geology.

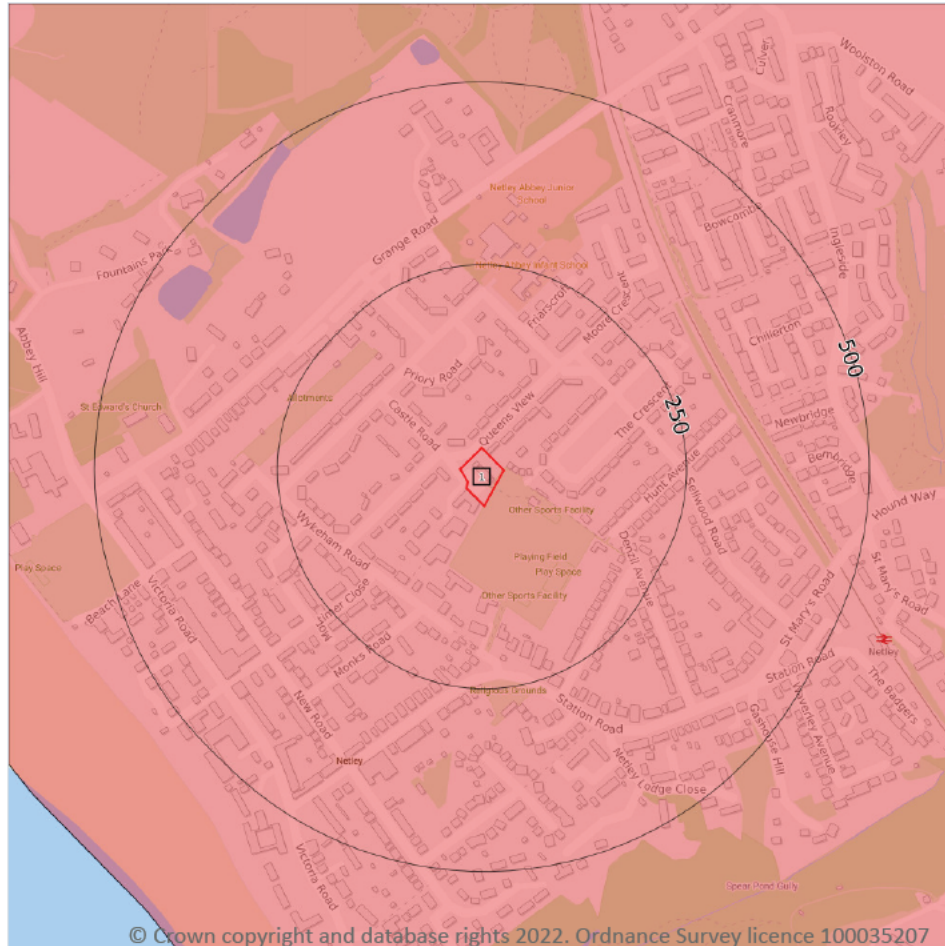
Features are displayed on the Hydrogeology map on page 34

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

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



Bedrock aquifer



— Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m

1

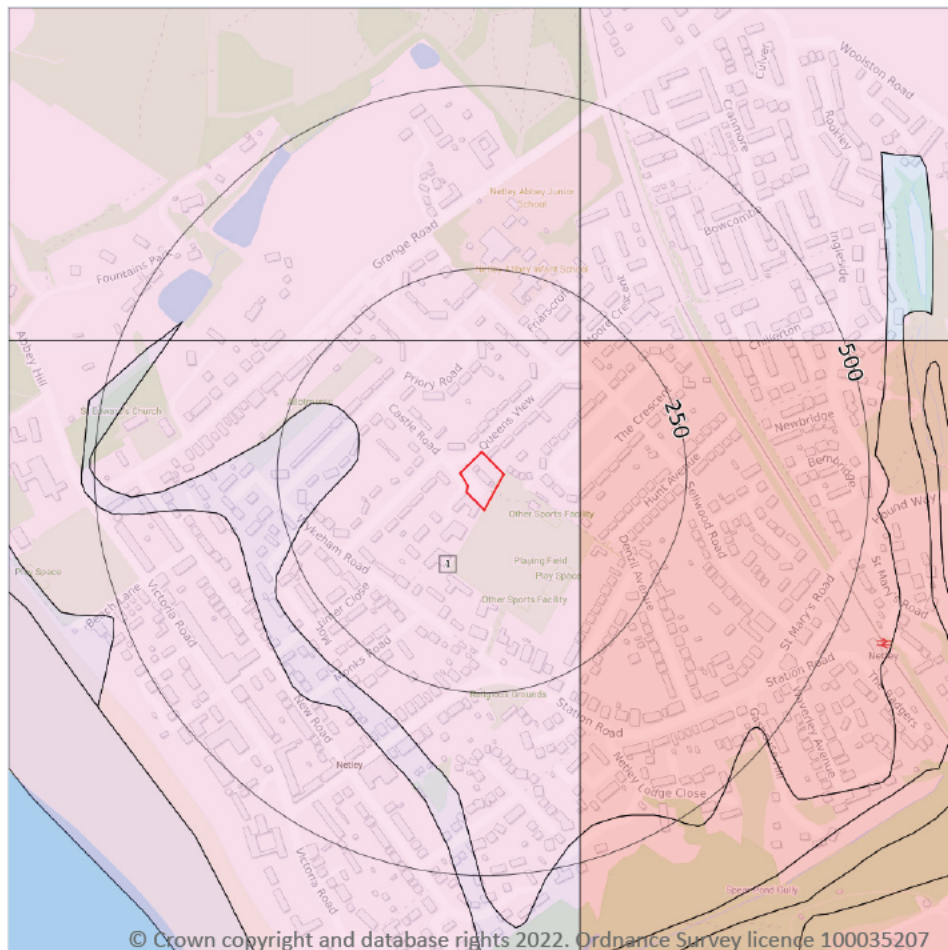
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on page 35

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

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

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

Bedrock vulnerability

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

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m

1

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

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

Features are displayed on the Groundwater vulnerability map on page 36



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: High	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Intergranular

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
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

2

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 38](#)

ID	Location	Details	
-	1963m SE	Status: Historical Licence No: 11/42/24/1 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: HAMBLE AIRFIELD Data Type: Point Name: G E Aviation Easting: 446920 Northing: 107110	Annual Volume (m ³): 182,000 Max Daily Volume (m ³): 455 Original Application No: - Original Start Date: 23/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2016 Version End Date: -
-	1963m SE	Status: Active Licence No: 11/42/24/1/1 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: HAMBLE AIRFIELD Data Type: Point Name: Hamble Aerostructures Limited Easting: 446920 Northing: 107110	Annual Volume (m ³): 182,000 Max Daily Volume (m ³): 455 Original Application No: NPS/WR/034158 Original Start Date: 01/04/2014 Expiry Date: - Issue No: 2 Version Start Date: 19/08/2020 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

4

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 38**

ID	Location	Details	
-	1509m N	Status: Historical Licence No: 11/42/23/5CA Details: Mineral Washing Direct Source: Southern Region Surface Waters Point: TICKLEFORD GULLEY IMPOUNDMENT AT BURROWS COPSE Data Type: Point Name: Leigh Environmental Ltd Easting: 446200 Northing: 110320	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 19/06/1991 Version End Date: -



ID	Location	Details	
-	1543m NE	Status: Active Licence No: 11/42/24/5CA Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: PICKWELL FARM RESERVOIR Data Type: Poly4 Name: D & M Draper & Sons Easting: 447168 Northing: 109906	Annual Volume (m ³): 13,638 Max Daily Volume (m ³): 545.50 Original Application No: NPS/NA/001896 Original Start Date: 24/03/1986 Expiry Date: - Issue No: 101 Version Start Date: 13/08/2021 Version End Date: -
-	1543m NE	Status: Active Licence No: 11/42/24/5CA Details: Trickle Irrigation - Direct Direct Source: Southern Region Surface Waters Point: PICKWELL FARM RESERVOIR Data Type: Poly4 Name: D & M Draper & Sons Easting: 447168 Northing: 109906	Annual Volume (m ³): 13,638 Max Daily Volume (m ³): 545.50 Original Application No: NPS/NA/001896 Original Start Date: 24/03/1986 Expiry Date: - Issue No: 101 Version Start Date: 13/08/2021 Version End Date: -
-	1609m NE	Status: Historical Licence No: 11/42/24/5CA Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: PICKWELL FARM IMPOUNDMENT, OLD NETLEY Data Type: Point Name: Draper Easting: 447170 Northing: 109800	Annual Volume (m ³): 13,638 Max Daily Volume (m ³): 545.50 Original Application No: - Original Start Date: 24/03/1986 Expiry Date: - Issue No: 100 Version Start Date: 11/06/2009 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

0

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

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

0

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

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

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

Features are displayed on the Hydrology map on [page 42](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	Coastal Catchment	Not part of a river WB catchment	60	Itchen	Test and Itchen

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

6.4 WFD Surface water bodies

Records identified

0

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.

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 42](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Central Hants Bracklesham Group	GB40702G500900	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

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

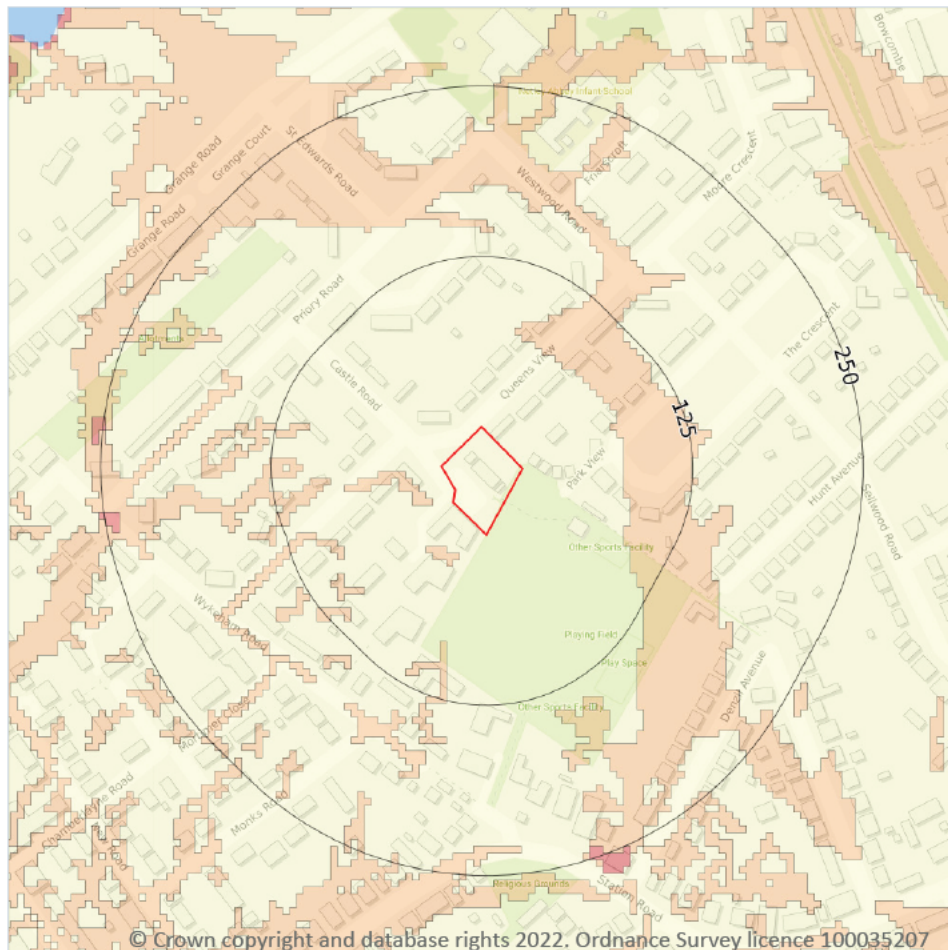
Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year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

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

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

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

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

9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

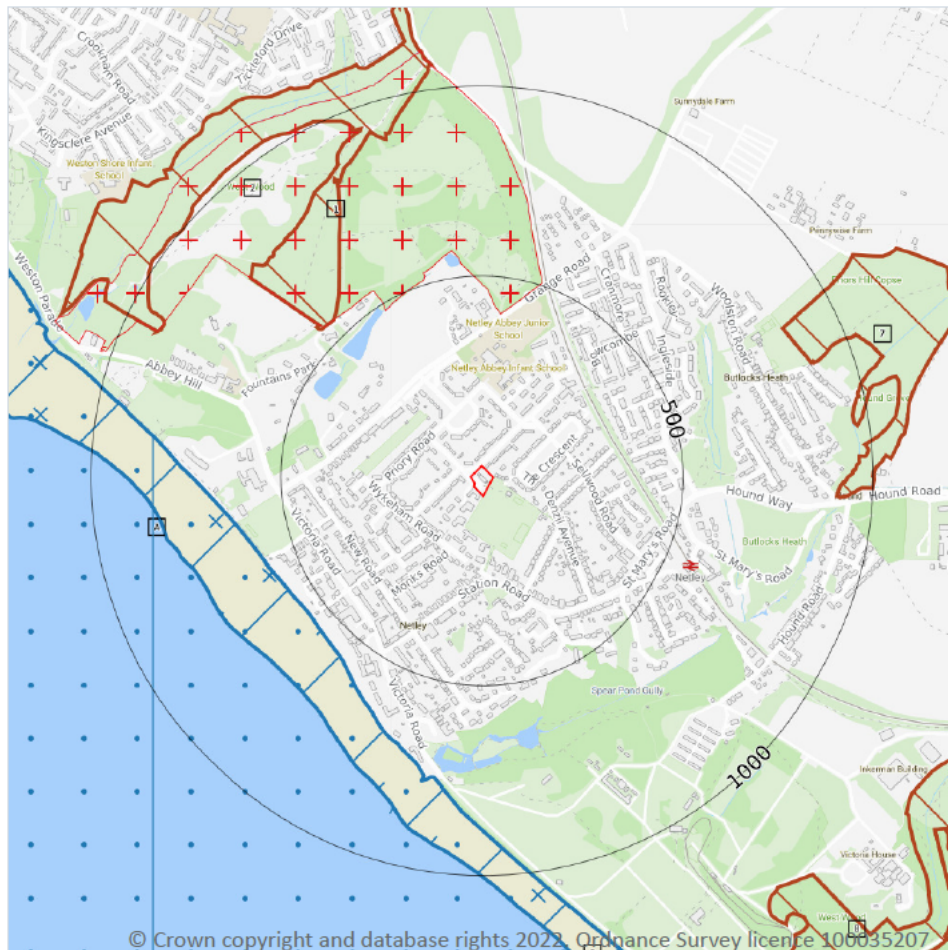
Moderate-High

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 49**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- ▣ Sites of Special Scientific Interest (SSSI)
- ⊗ Conserved wetland sites (Ramsar sites)
- Special Protection Areas (SPA)
- ⊕ Local Nature Reserves (LNR)
- ▤ Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

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 50

ID	Location	Name	Data source
A	548m SW	Lee-on-the Solent to Itchen Estuary	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

1

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.

Features are displayed on the Environmental designations map on **page 50**

ID	Location	Site	Details
A	548m SW	Name: Solent & Southampton Water Site status: Listed Data source: Natural England	Overview: The area covered extends from Hurst Spit to Gilkicker Point along the south coast of Hampshire and along the north coast of the Isle of Wight. The site comprises of estuaries and adjacent coastal habitats including intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland, and grazing marsh. The diversity of habitats support internationally important numbers of wintering waterfowl, important breeding gull and tern populations and an important assemblage of rare invertebrates and plants. Ramsar criteria: Ramsar criterion 1 The site is one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. It includes many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs. Ramsar criterion 2 The site supports an important assemblage of rare plants and invertebrates. At least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site.

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

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

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



10.4 Special Protection Areas (SPA)

Records within 2000m

4

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.

Features are displayed on the Environmental designations map on [page 50](#)

ID	Location	Name	Species of interest	Habitat description	Data source
3	548m SW	Solent & Southampton Water	Eurasian teal; Ringed plover; Mediterranean gull; Sandwich tern; Roseate tern; Common tern; Little tern; Black-tailed godwit; Dark-bellied brent goose	Salt marshes, Salt pastures, Salt steppes; Coastal sand dunes, Sand beaches, Machair; Shingle, Sea cliffs, Islets; Broad-leaved deciduous woodland; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins); Humid grassland, Mesophile grassland; Bogs, Marshes, Water fringed vegetation, Fens	Natural England
4	701m SW	Solent and Dorset Coast	Sandwich tern; Common tern; Little tern	Marine areas, Sea inlets; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins); Salt marshes, Salt pastures, Salt steppes; Shingle, Sea cliffs, Islets; Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	Natural England
5	837m W	Solent & Southampton Water	Eurasian teal; Ringed plover; Mediterranean gull; Sandwich tern; Roseate tern; Common tern; Little tern; Black-tailed godwit; Dark-bellied brent goose	Salt marshes, Salt pastures, Salt steppes; Coastal sand dunes, Sand beaches, Machair; Shingle, Sea cliffs, Islets; Broad-leaved deciduous woodland; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins); Humid grassland, Mesophile grassland; Bogs, Marshes, Water fringed vegetation, Fens	Natural England
6	840m W	Solent and Dorset Coast	Sandwich tern; Common tern; Little tern	Marine areas, Sea inlets; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins); Salt marshes, Salt pastures, Salt steppes; Shingle, Sea cliffs, Islets; Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	Natural England

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

1

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.

Features are displayed on the Environmental designations map on **page 50**

ID	Location	Name	Data source
1	403m N	Westwood Woodland Park	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m

6

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 50**

ID	Location	Name	Woodland Type
2	547m NW	West Wood	Ancient & Semi-Natural Woodland
7	858m NE	Priors Hill Copse/hound Grove	Ancient & Semi-Natural Woodland
8	1290m SE	West Wood	Ancient & Semi-Natural Woodland
9	1479m SE	West Wood	Ancient Replanted Woodland
-	1849m E	Mallards Moor	Ancient & Semi-Natural Woodland
-	1992m NW	Mayfield Park Wood	Ancient & Semi-Natural Woodland



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

10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

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

1

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.

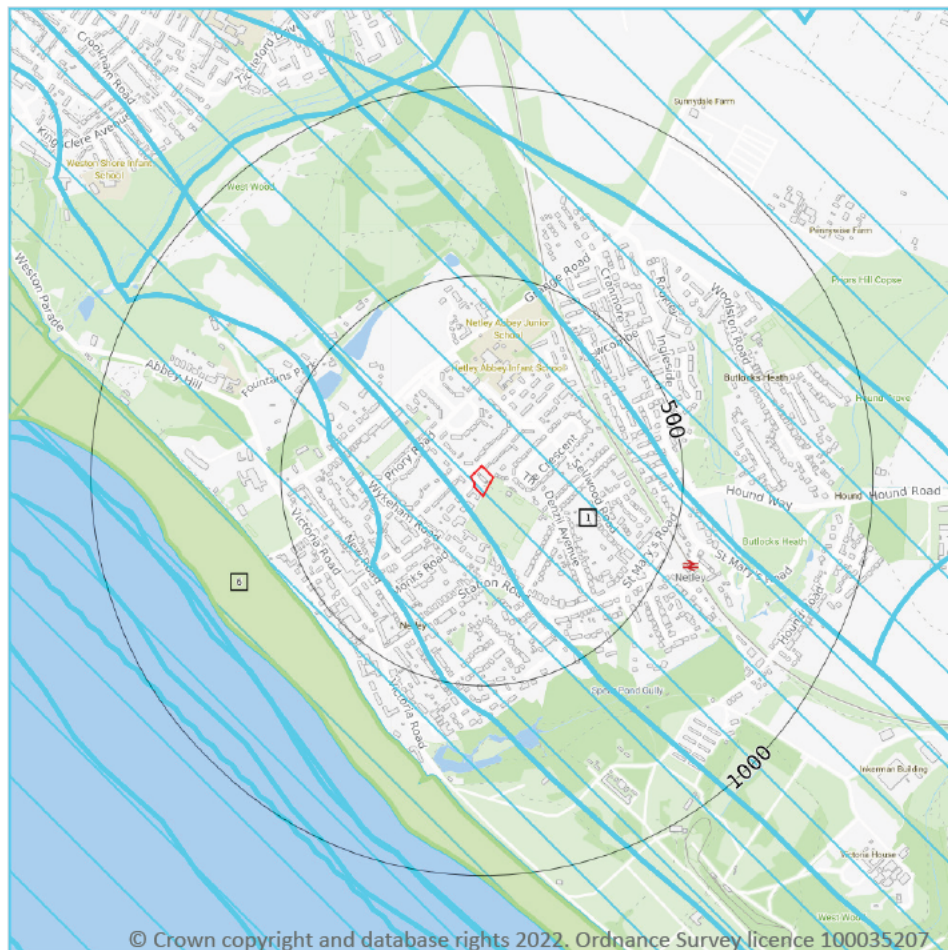
Location	Name	Type	NVZ ID	Status
On site	Hamble Estuary Eutrophic NVZ (TraC)	Eutrophic Water	3	Existing



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



SSSI Impact Zones and Units



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

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on [page 57](#)

ID	Location	Type of developments requiring consultation
1	On site	All applications - All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures. Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. 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 net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 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 500 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 net additional gross internal floorspace is > 1,000m² or any development needing its own water supply . 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.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

3

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

Features are displayed on the SSSI Impact Zones and Units map on [page 57](#)



ID: 6
Location: 548m SW
SSSI name: Lee-on-the Solent to Itchen Estuary
Unit name: Netley Foreshore
Broad habitat: Littoral Sediment
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
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ID: 19
Location: 1124m W
SSSI name: Lee-on-the Solent to Itchen Estuary
Unit name: Weston Shore
Broad habitat: Littoral Sediment
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
--------------	-------------------	--------------------

ID: -
Location: 1636m SE
SSSI name: Lee-on-the Solent to Itchen Estuary
Unit name: Hamble Foreshore
Broad habitat: Littoral Sediment
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
--------------	-------------------	--------------------

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



11 Visual and cultural designations

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

0

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



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

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

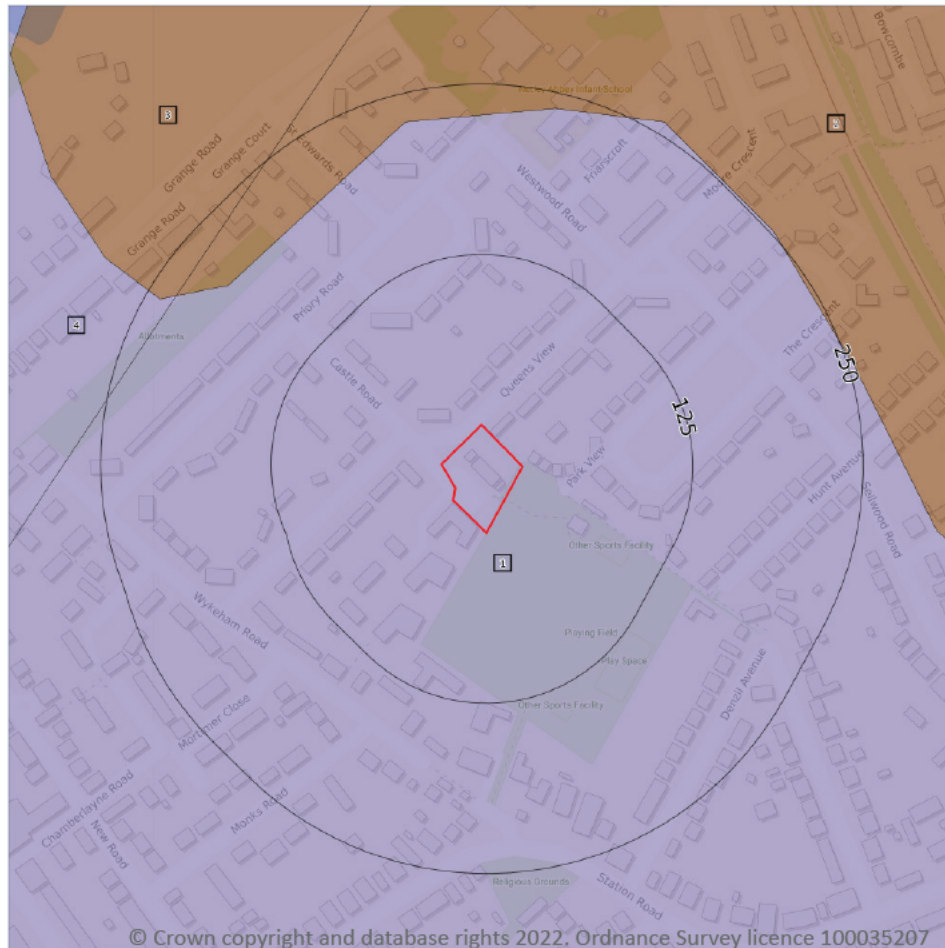
Records within 250m

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

4

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 62

ID	Location	Classification	Description
1	On site	Non Agricultural	-



ID	Location	Classification	Description
2	201m NW	Grade 1	Excellent quality agricultural land. Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.
3	231m NW	Grade 1	Excellent quality agricultural land. Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.
4	231m NW	Non Agricultural	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

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

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

12.3 Tree Felling Licences

Records within 250m

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

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

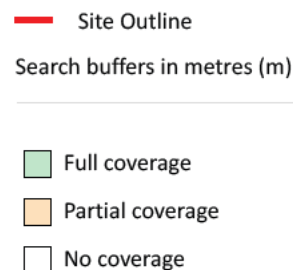
0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m

1

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

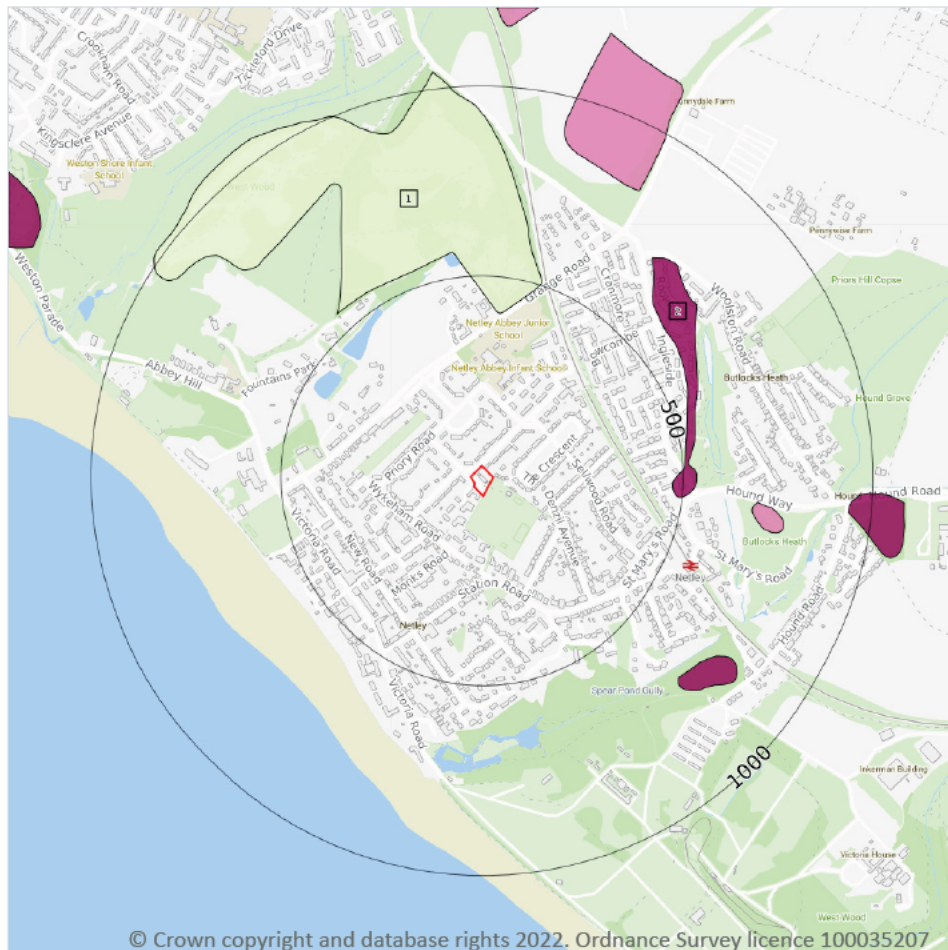
Features are displayed on the Geology 1:10,000 scale - Availability map on page 66

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SU40NE

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

2

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 67](#)

ID	Location	LEX Code	Description	Rock description
1	405m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	473m E	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

6

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 68

ID	Location	LEX Code	Description	Rock description
1	On site	RTD3-XSV	River Terrace Deposits, 3 - Sand And Gravel	Sand And Gravel
2	131m NE	RTD4-XSV	River Terrace Deposits, 4 - Sand And Gravel	Sand And Gravel
3	294m W	RTD2-XSV	River Terrace Deposits, 2 - Sand And Gravel	Sand And Gravel
4	440m NW	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel



ID	Location	LEX Code	Description	Rock description
5	458m NW	RTD2-XSV	River Terrace Deposits, 2 - Sand And Gravel	Sand And Gravel
6	493m NW	RTD3-XSV	River Terrace Deposits, 3 - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

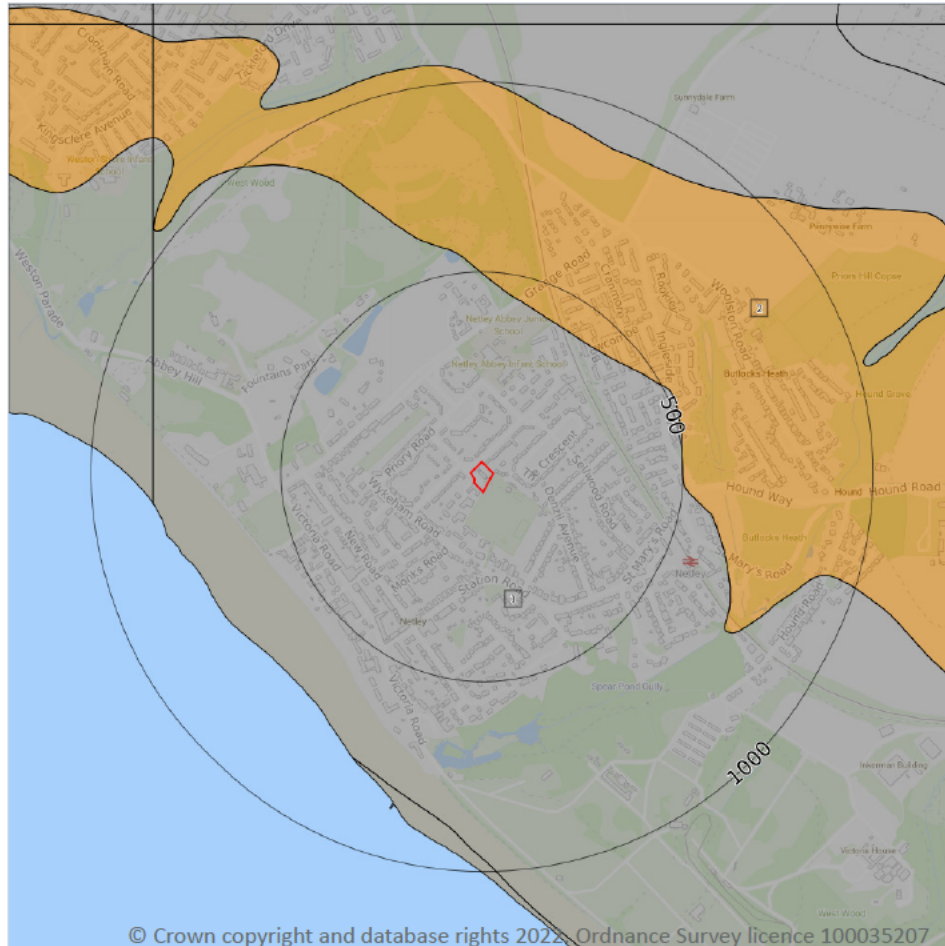
0

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

2

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 70

ID	Location	LEX Code	Description	Rock age
1	On site	SLSY-SSCL	Selsey Sand Formation - Sand, Silt And Clay	Lutetian Age
2	412m NE	MARF-CLSISA	Marsh Farm Formation - Clay, Silt And Sand	Lutetian 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.

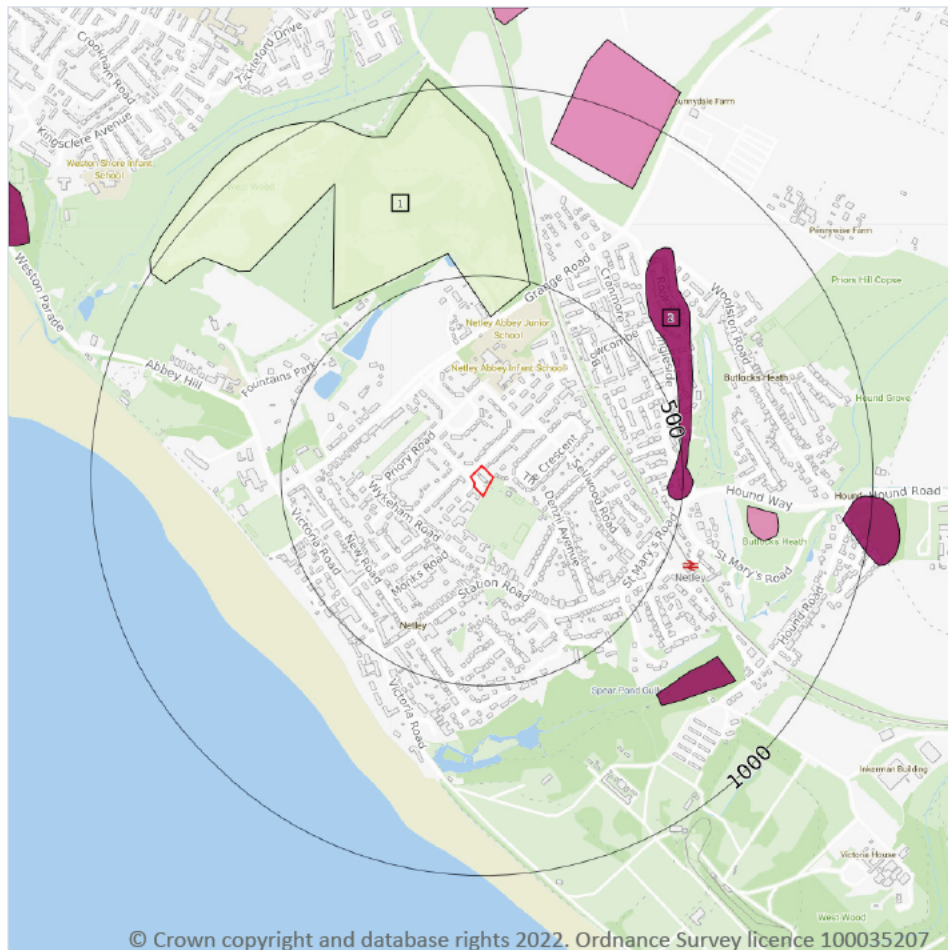
Features are displayed on the Geology 1:50,000 scale - Availability map on page 72

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

2

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 73](#)

ID	Location	LEX Code	Description	Rock description
1	394m N	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	459m E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	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

6

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 75

ID	Location	LEX Code	Description	Rock description
1	On site	RTD3-XSV	RIVER TERRACE DEPOSITS, 3	SAND AND GRAVEL
2	118m NE	RTD4-XSV	RIVER TERRACE DEPOSITS, 4	SAND AND GRAVEL
3	316m W	RTD2-XSV	RIVER TERRACE DEPOSITS, 2	SAND AND GRAVEL
4	394m N	T3T4-XSV	RIVER TERRACE DEPOSITS, 3 TO 4	SAND AND GRAVEL



ID	Location	LEX Code	Description	Rock description
5	430m NW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
6	467m NW	RTD2-XSV	RIVER TERRACE DEPOSITS, 2	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

1

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.



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

77

15.9 Bedrock permeability (50k)

Records within 50m**1**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	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

16.1 BGS Boreholes

Records within 250m

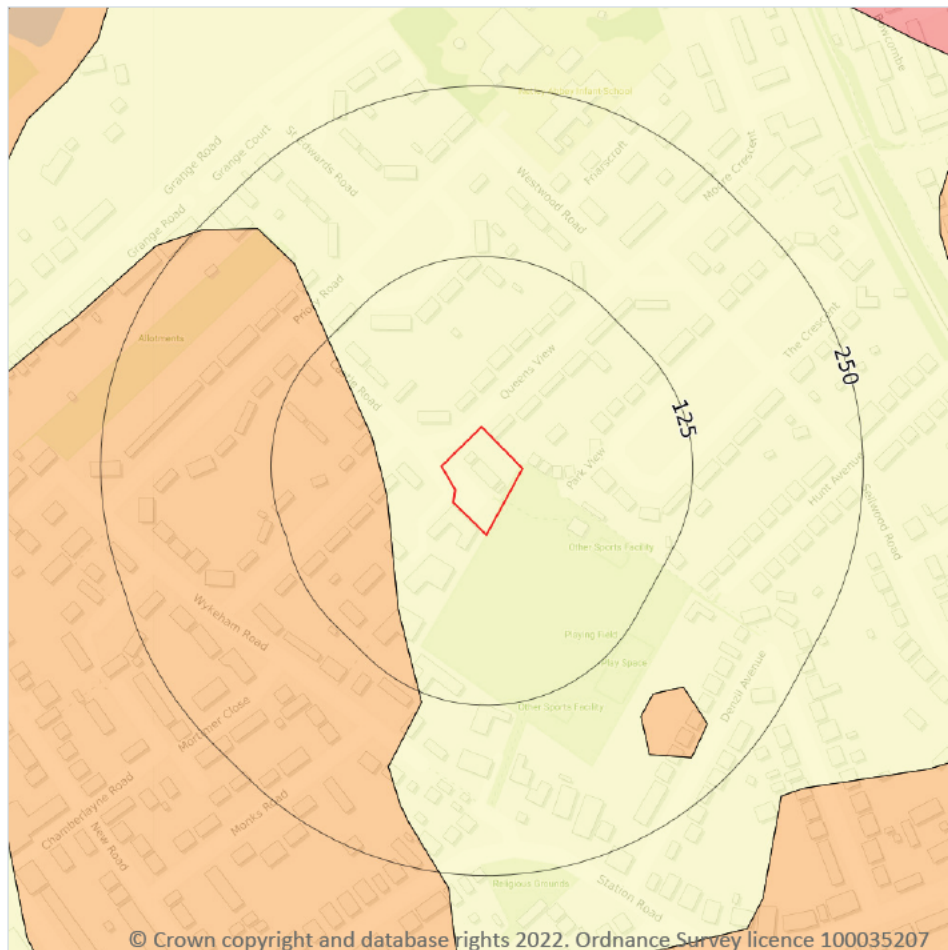
0

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

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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).

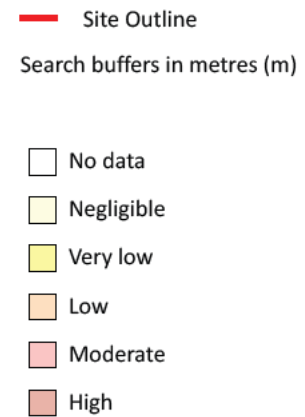
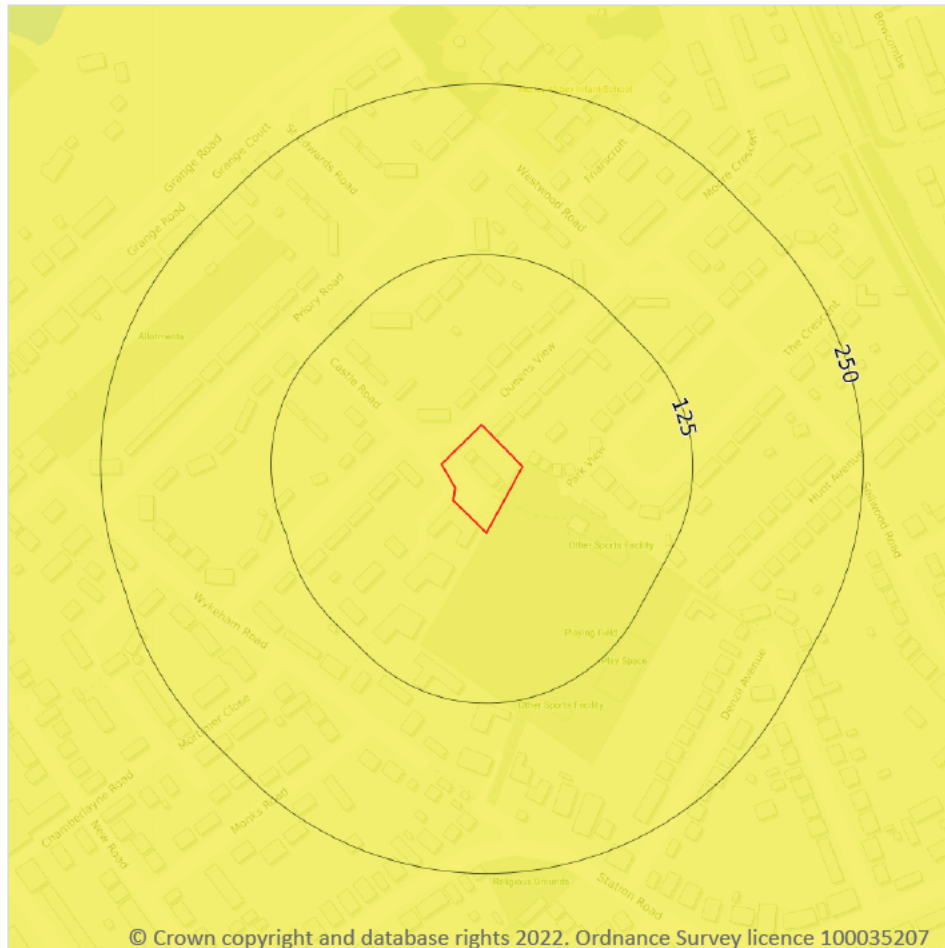
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 80](#)

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
44m W	Low	Ground conditions predominantly medium plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

1

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

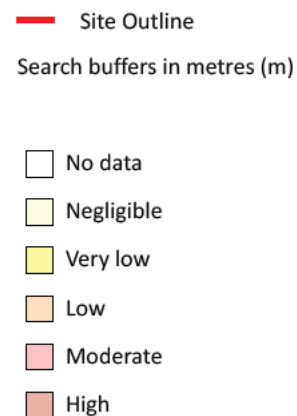
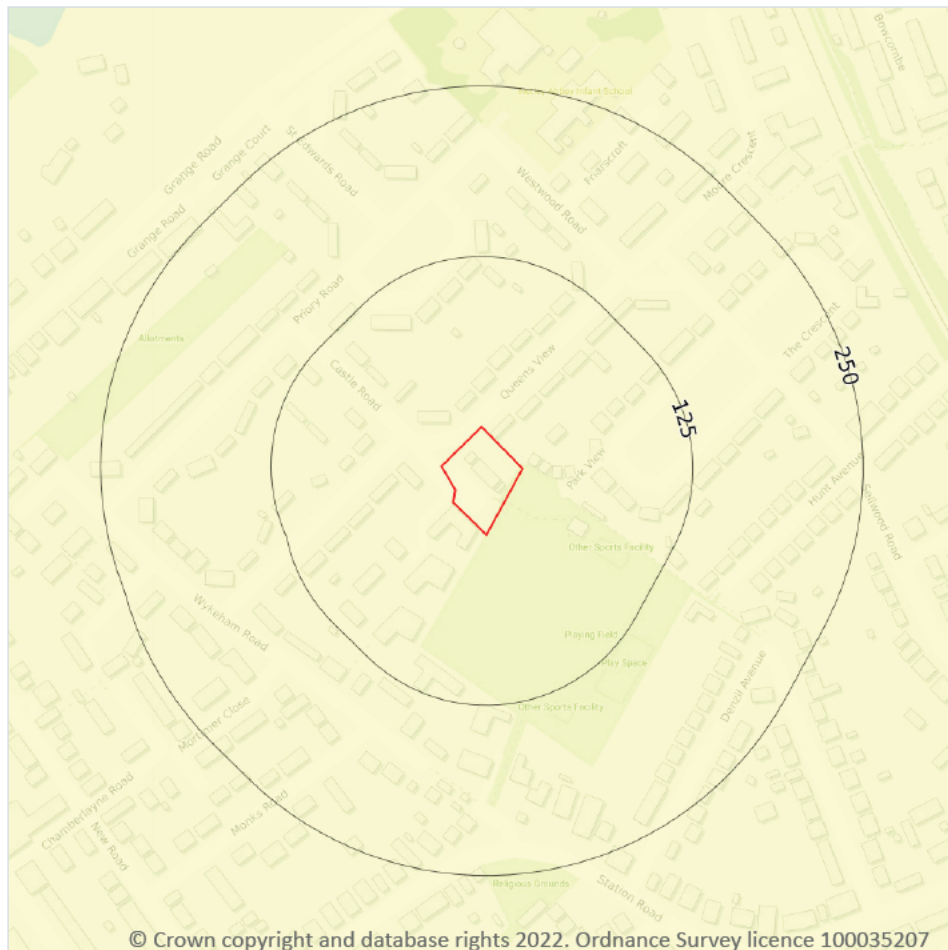
Features are displayed on the Natural ground subsidence - Running sands map on [page 81](#)

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.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

1

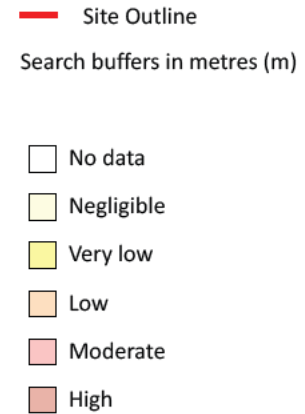
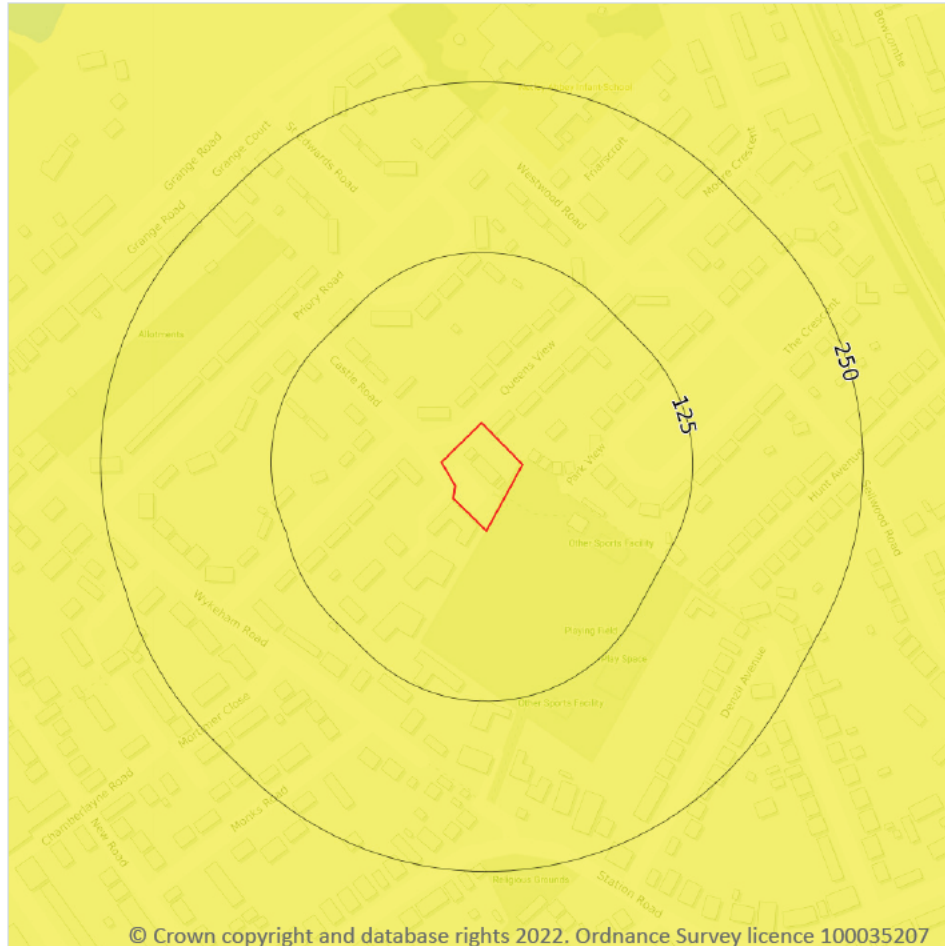
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

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

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

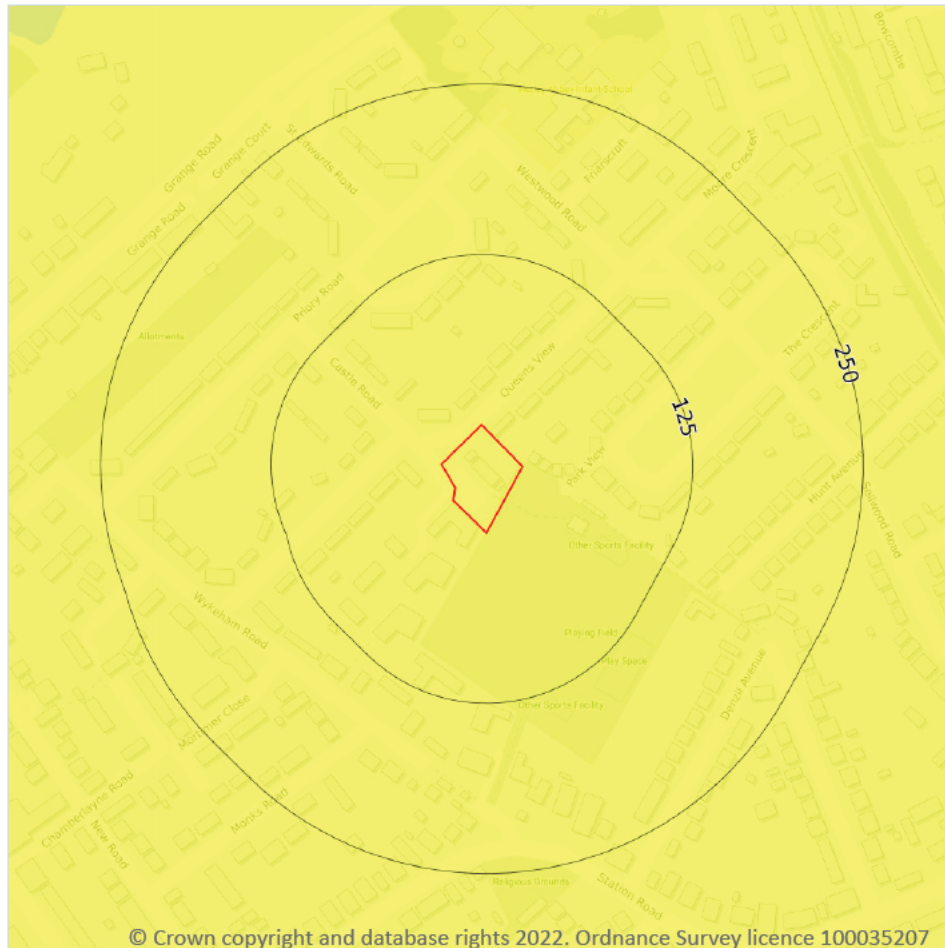
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on page 83

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

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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.

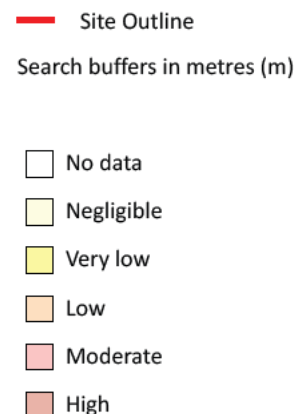
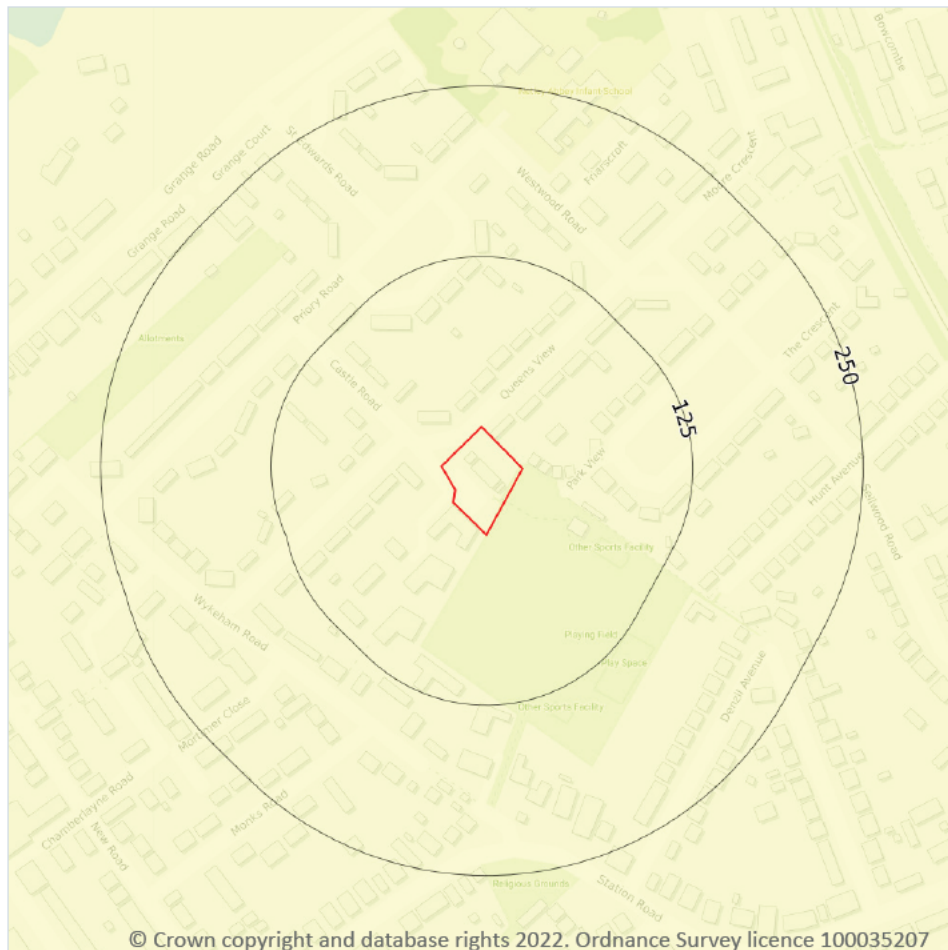
Features are displayed on the Natural ground subsidence - Landslides map on **page 84**

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

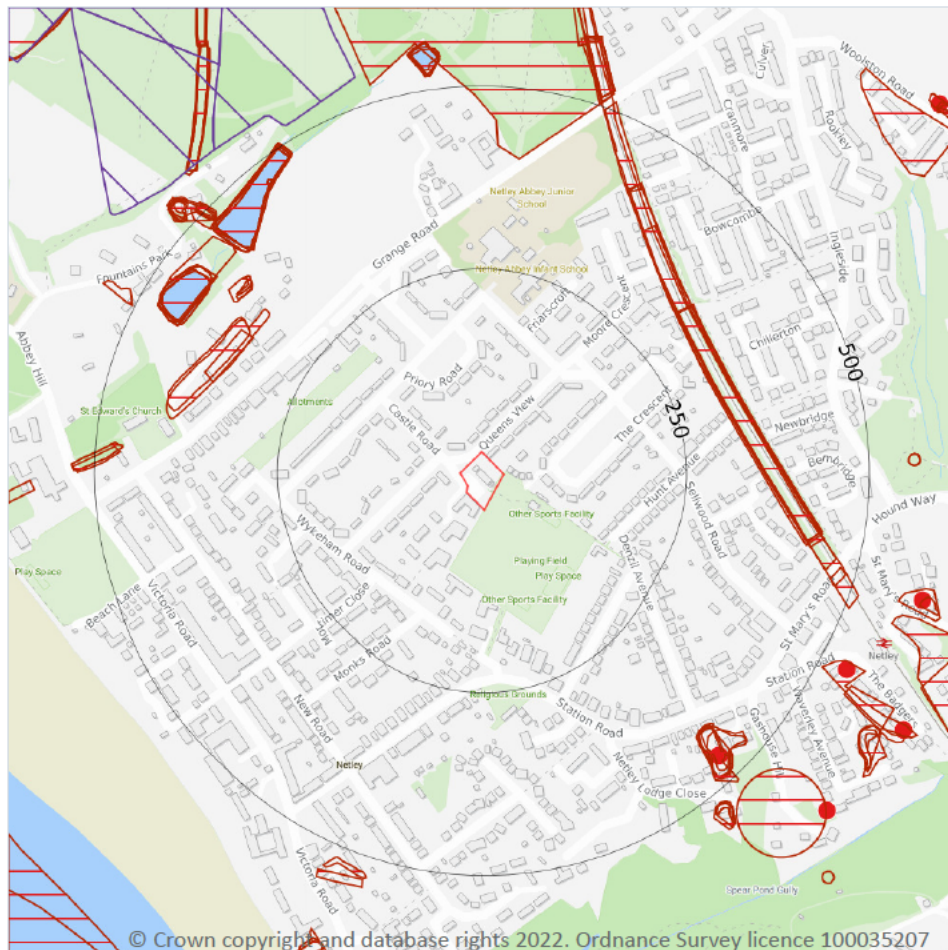
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 85**

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 86](#)

ID	Location	Details	Description
E	464m SE	Name: Netley Gravel Pit Address: Netley, SOUTHAMPTON, Hampshire Commodity: Sand & Gravel 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

0

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.

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

0

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

This data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

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
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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.

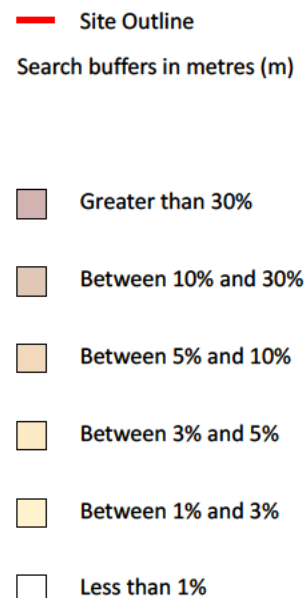
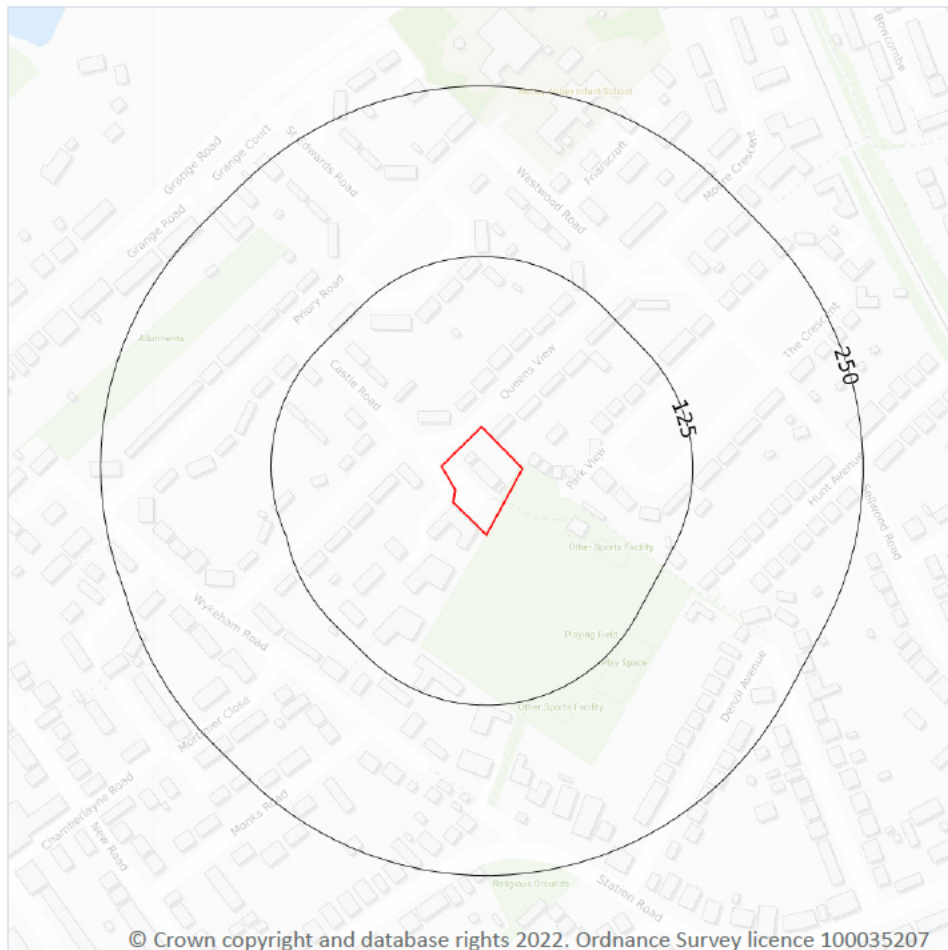
18.13 Clay mining

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 90](#)

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

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



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

1

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 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 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

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

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Site Details:

Queens view, netley abbey,
SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1867

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1867
Revised 1867
Edition N/A
Copyright N/A
Levelled N/A

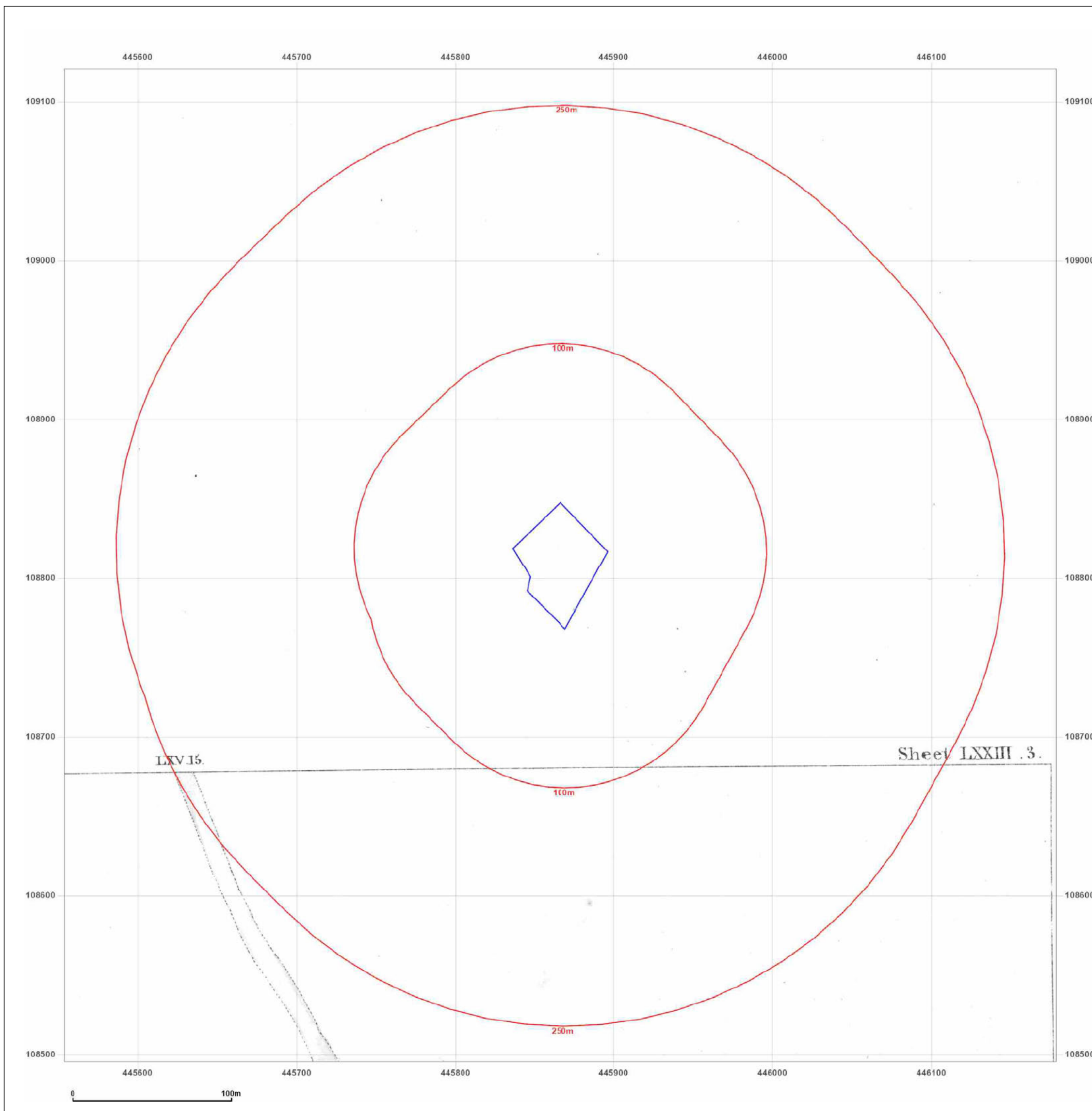


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Production date: 02 December 2022

Map legend available at:
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Site Details:

Queens view, netley abbey,
SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1867

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1867
Revised 1867
Edition N/A
Copyright N/A
Levelled N/A

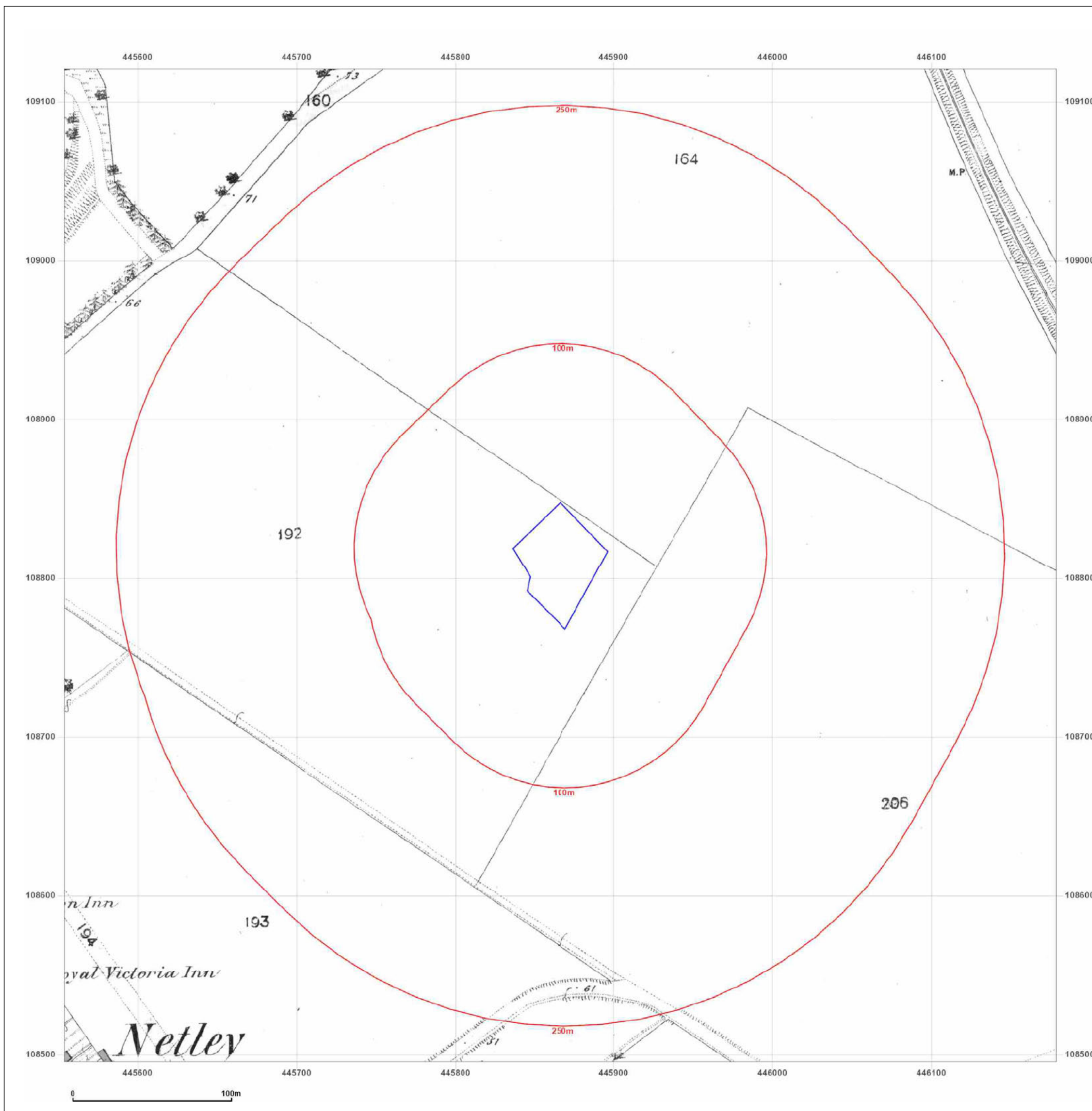


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Site Details:

Queens view, netley abbey,
SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1897

Scale: 1:2,500

Printed at: 1:2,500



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

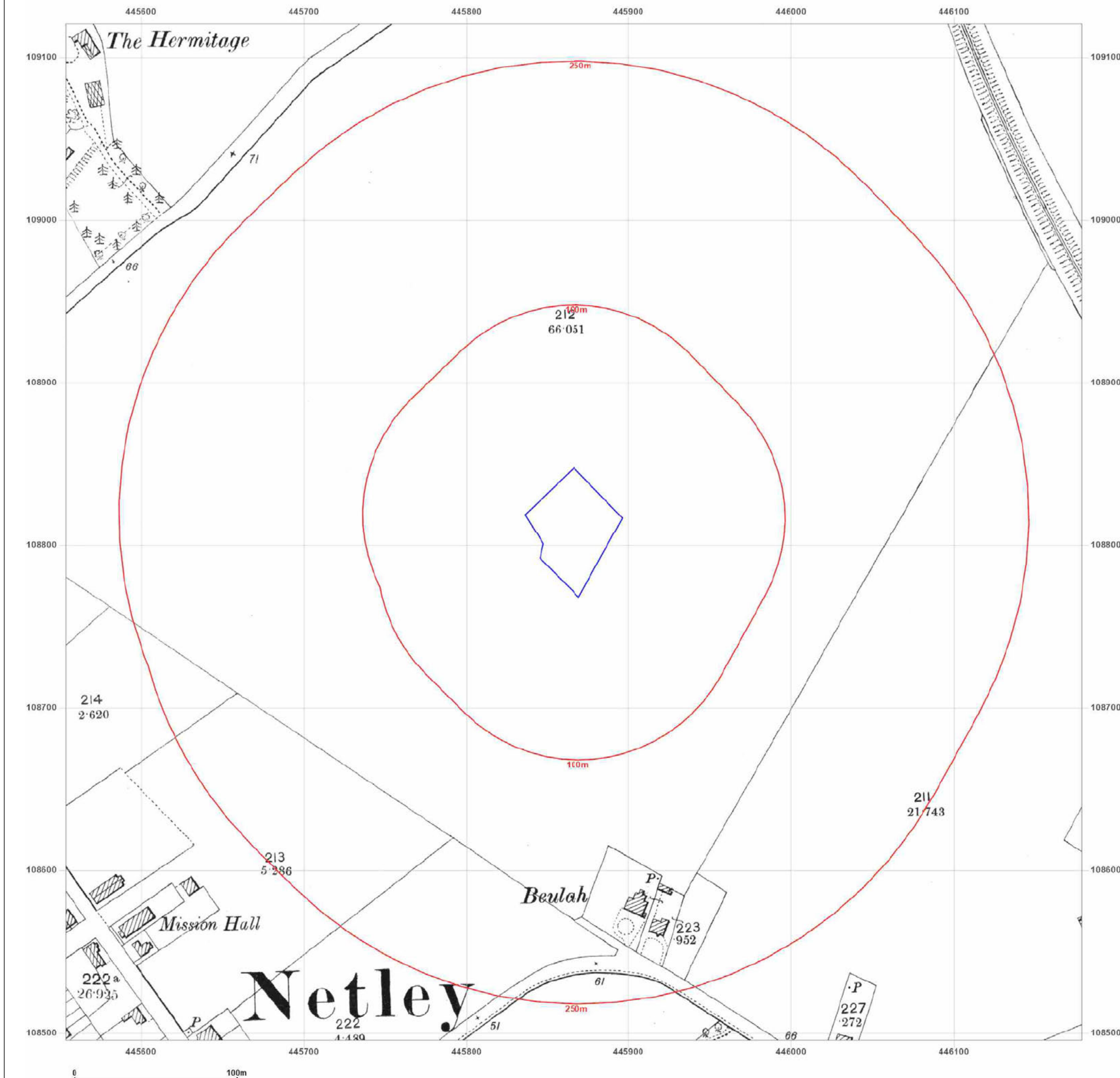


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1909

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1909
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

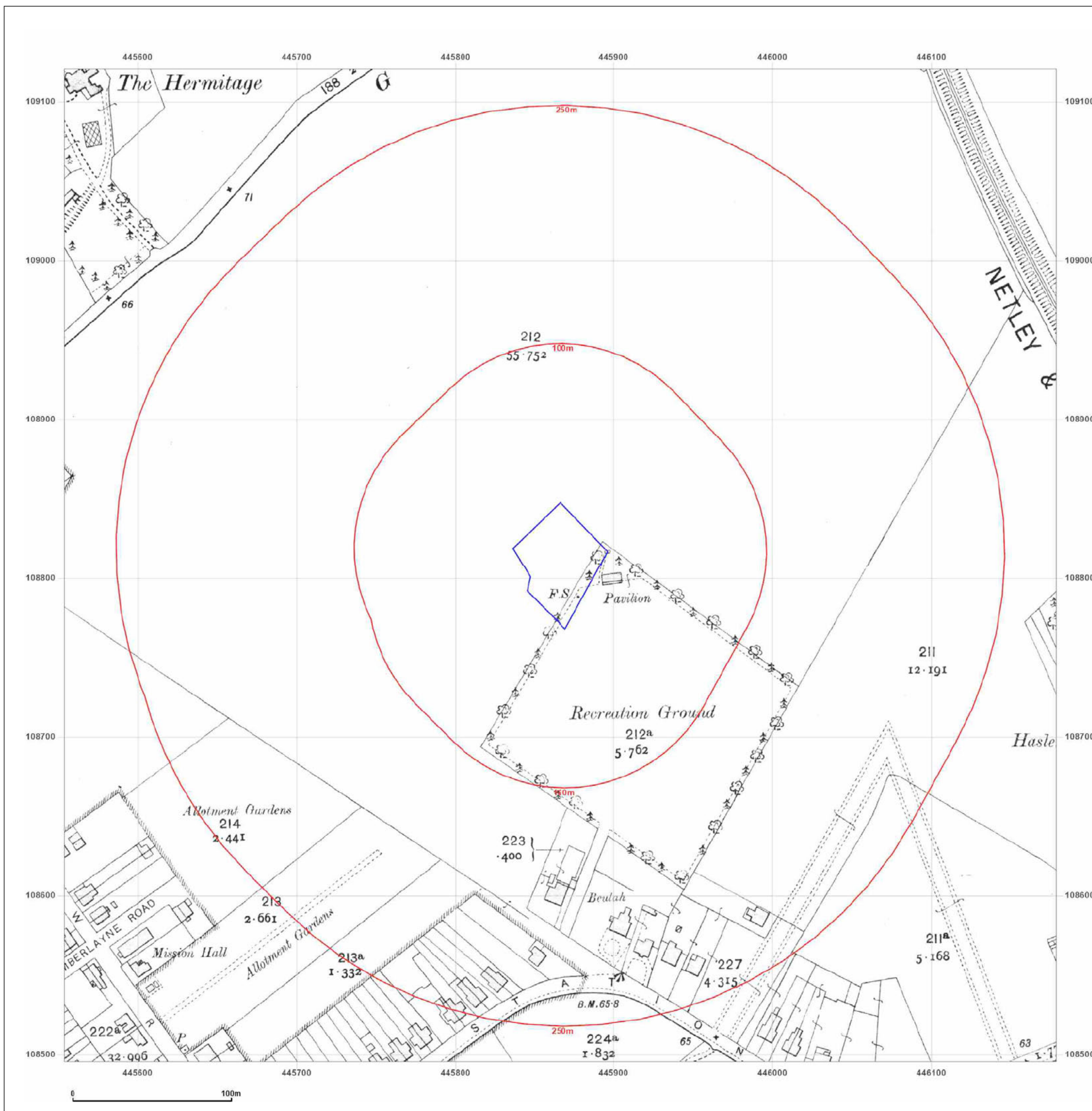


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1933

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1933
Revised 1933
Edition N/A
Copyright N/A
Levelled N/A

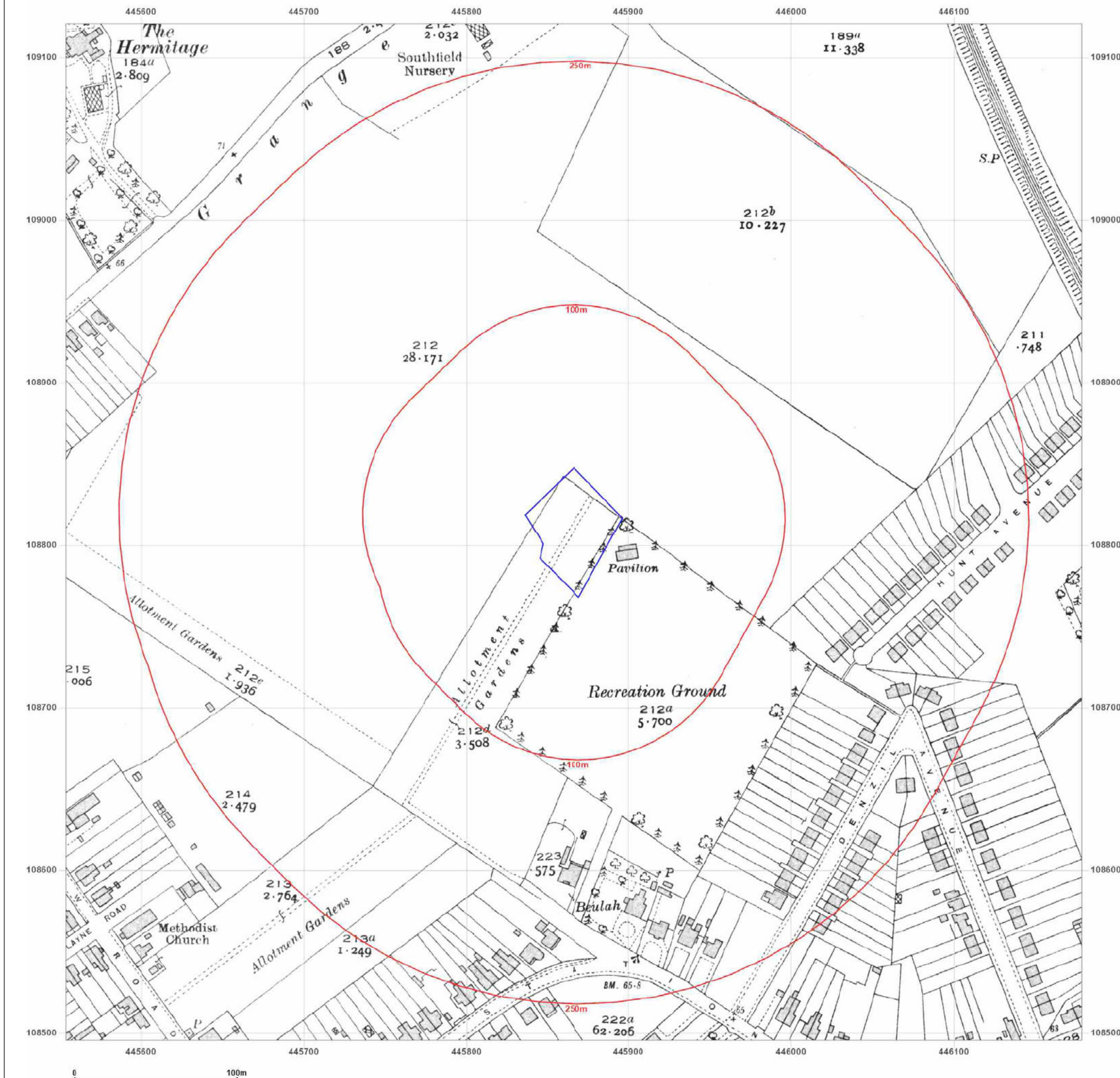


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 1973-1978

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1978
Revised 1978
Edition N/A
Copyright 1978
Levelled N/A

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

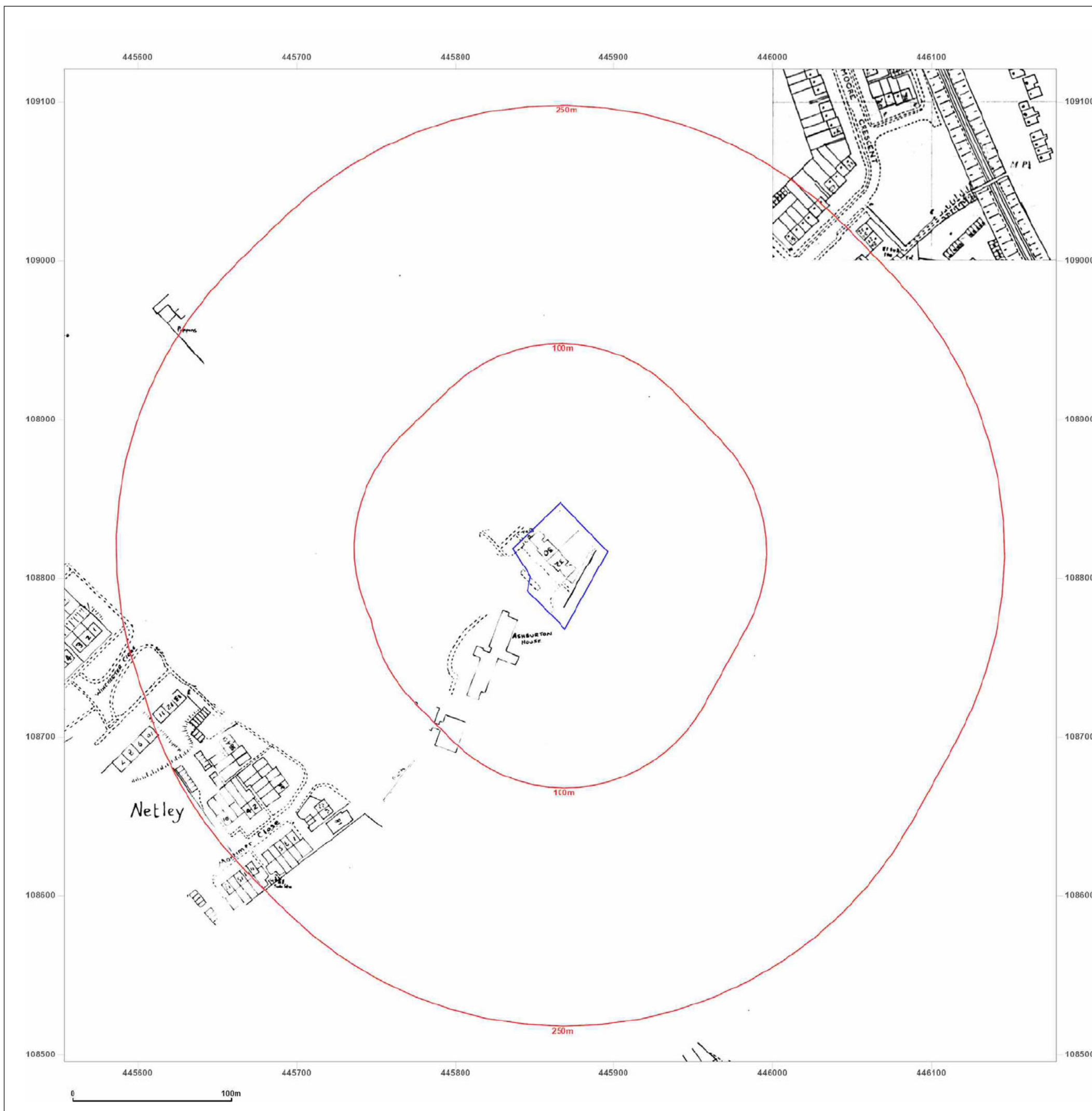


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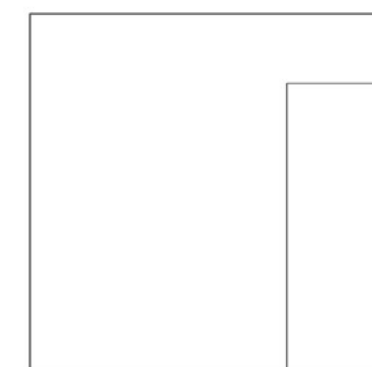
Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 1979

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition 1979
Copyright 1979
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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 1979-1980

Scale: 1:2,500

Printed at: 1:2,500



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

Surveyed N/A
Revised N/A
Edition 1979
Copyright 1979
Levelled N/A

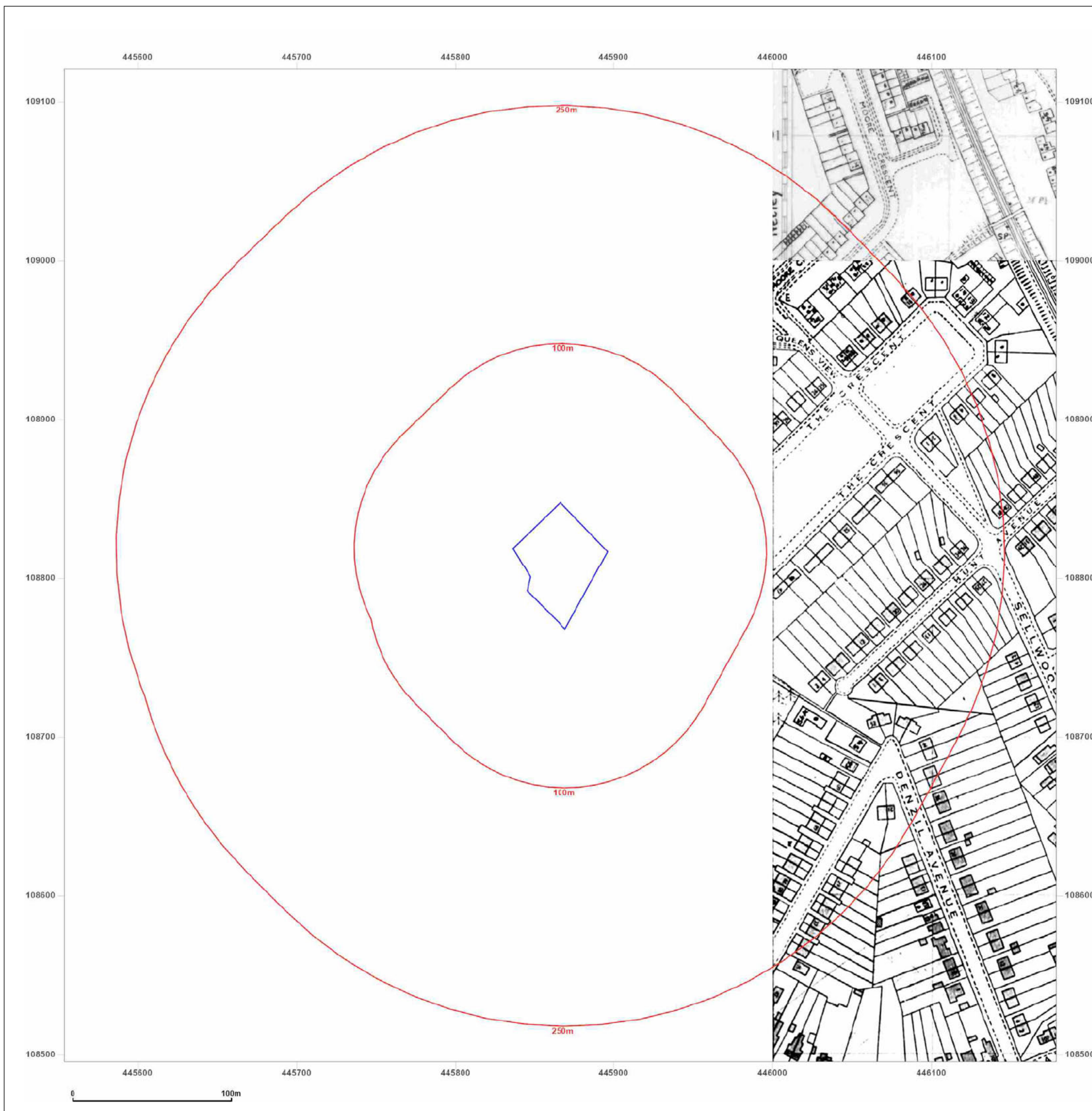


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Site Details:

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Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 1986-1987

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1985
Revised 1985
Edition N/A
Copyright 1986
Levelled 1959

Surveyed 1985
Revised 1985
Edition N/A
Copyright 1986
Levelled 1959

Surveyed 1985
Revised 1985
Edition N/A
Copyright 1987
Levelled 1959

Surveyed 1985
Revised 1985
Edition N/A
Copyright 1986
Levelled 1959

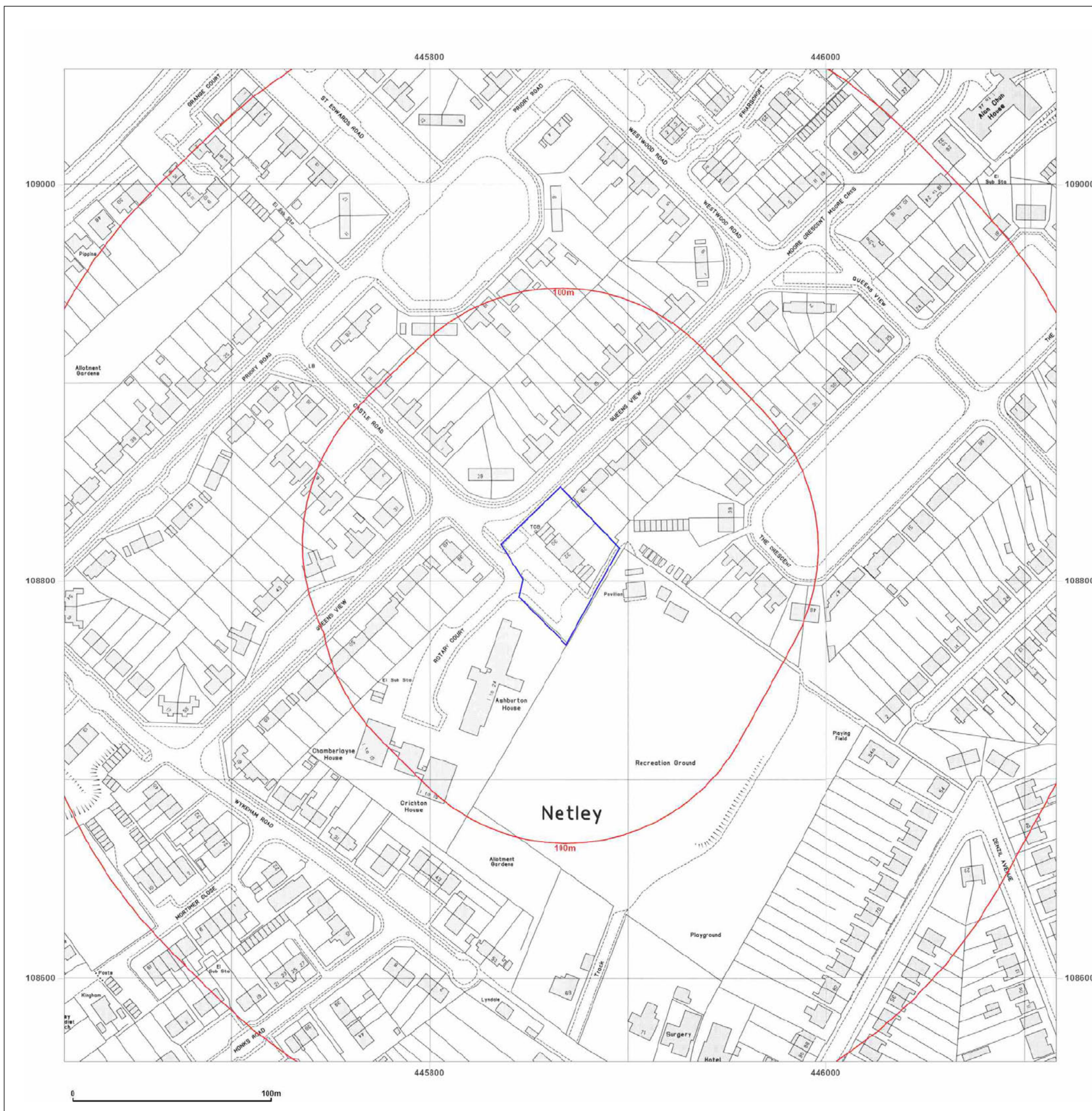


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 1993

Scale: 1:1,250

Printed at: 1:2,000



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

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

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

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

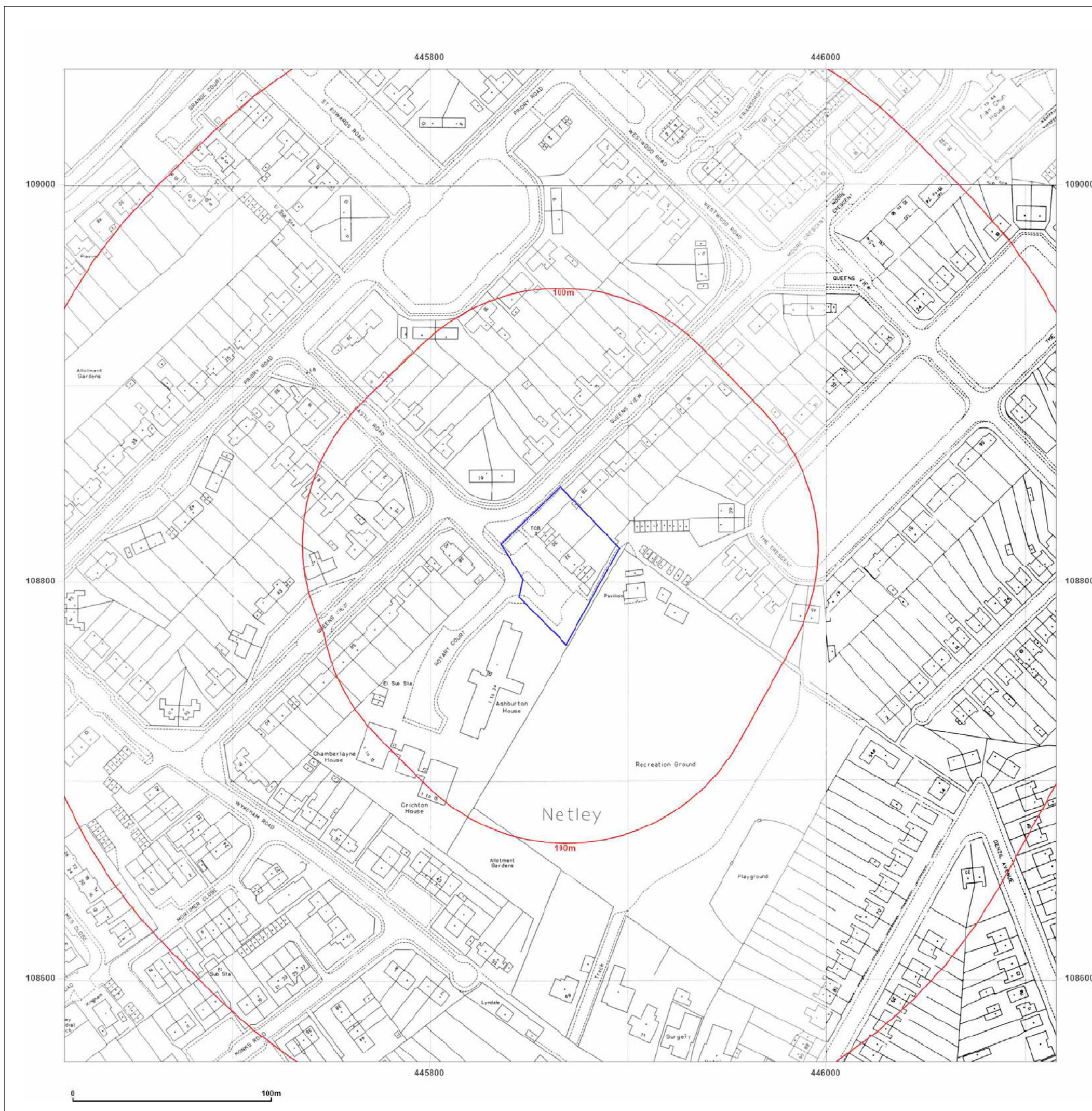


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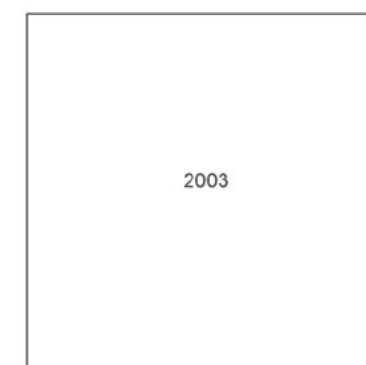
Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250

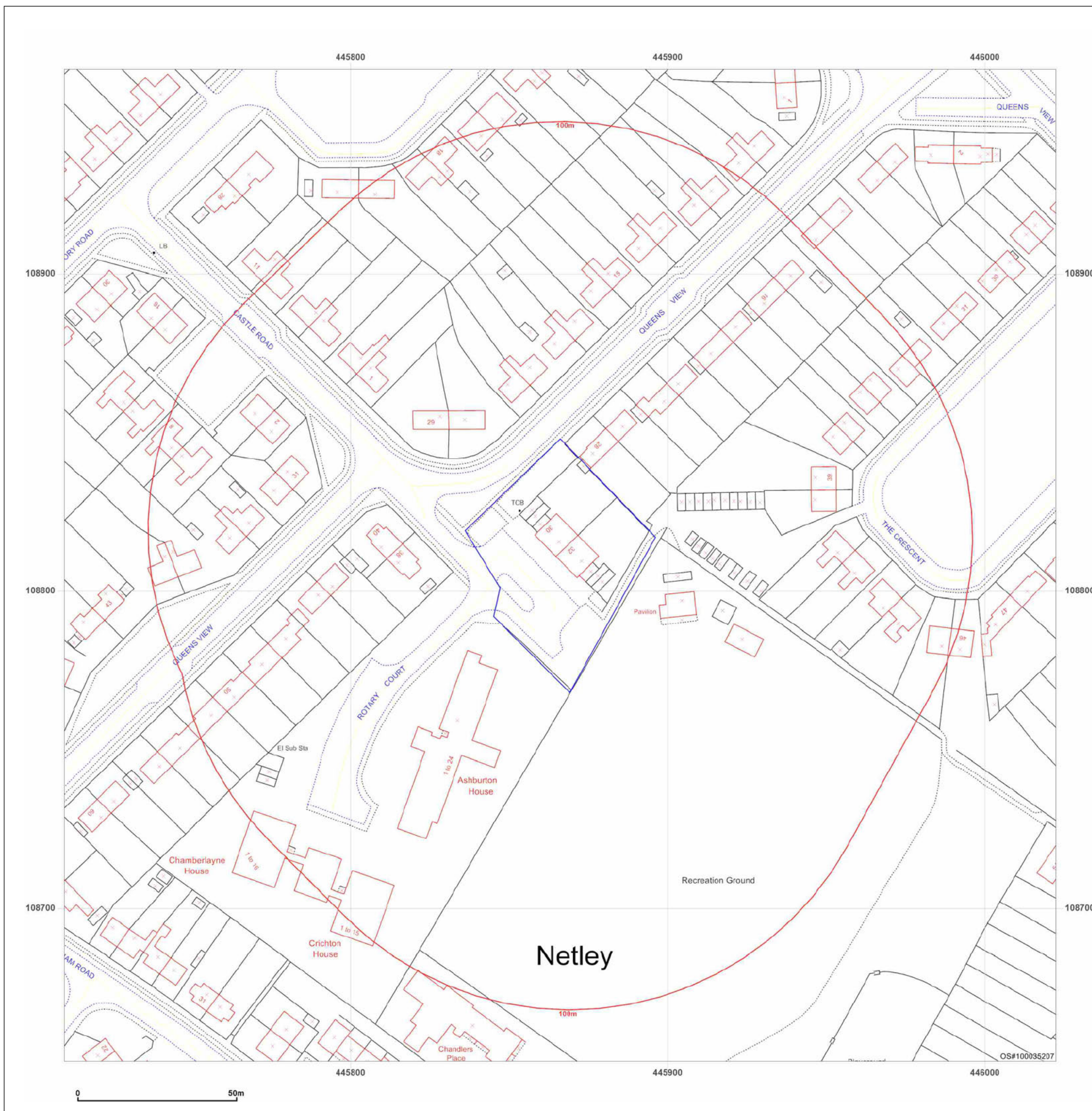


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

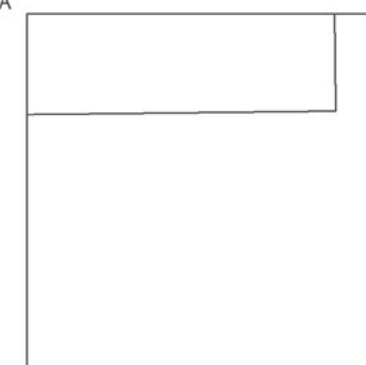
Map date: 1869

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1869
Revised 1869
Edition N/A
Copyright N/A
Levelled N/A

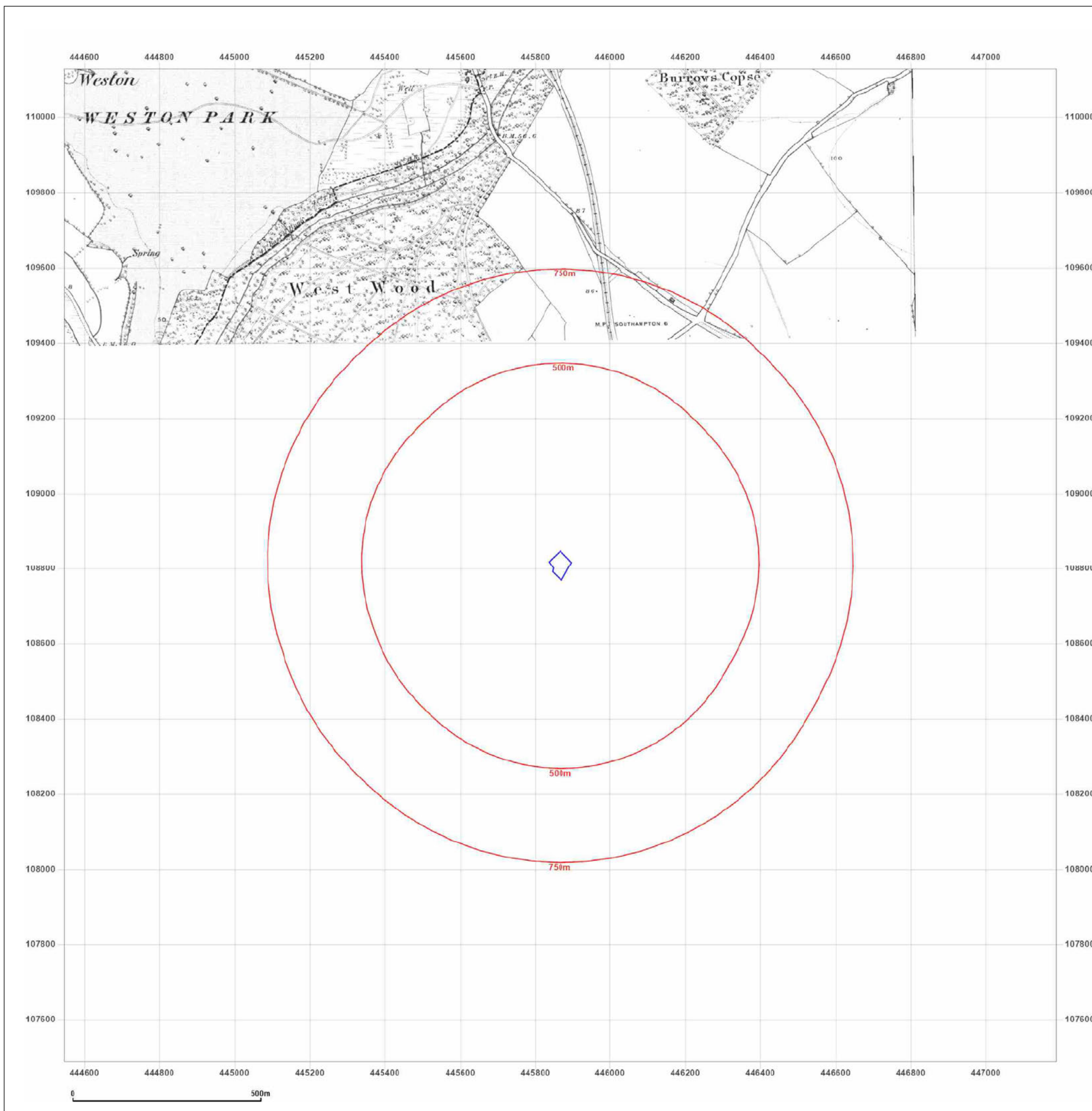


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

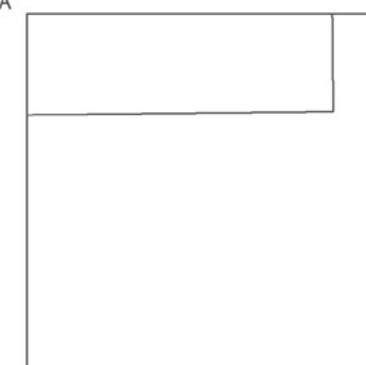
Map date: 1871

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1869
Revised N/A
Edition 1871
Copyright N/A
Levelled N/A

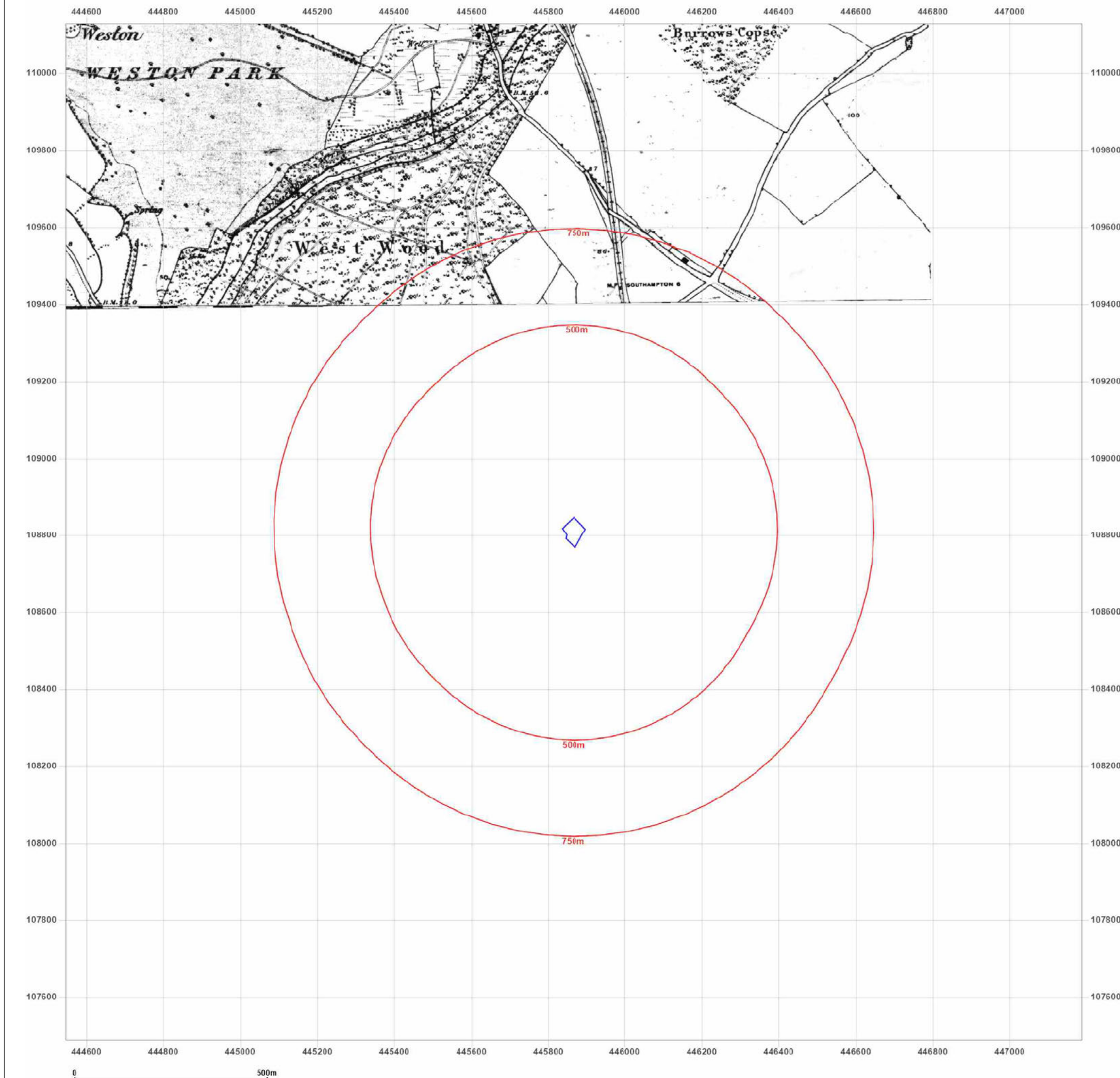


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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1895-1896

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1868
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1868
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

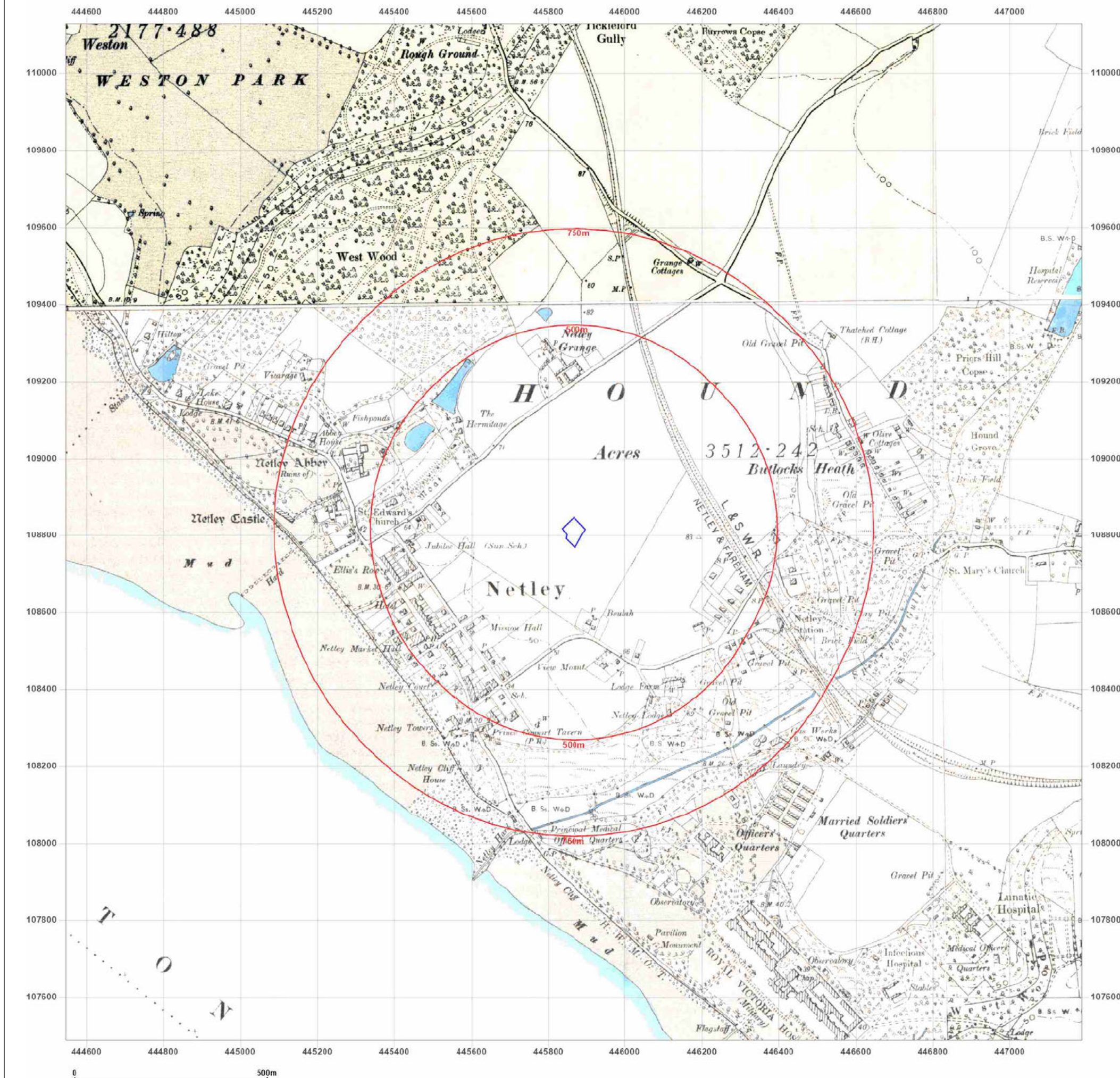


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Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1908

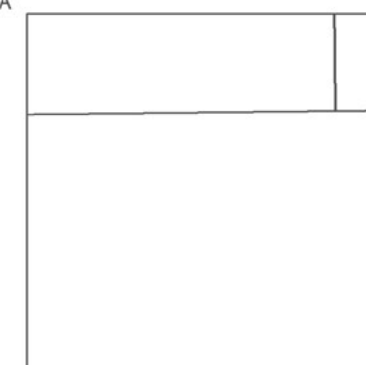
Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1867
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1866
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

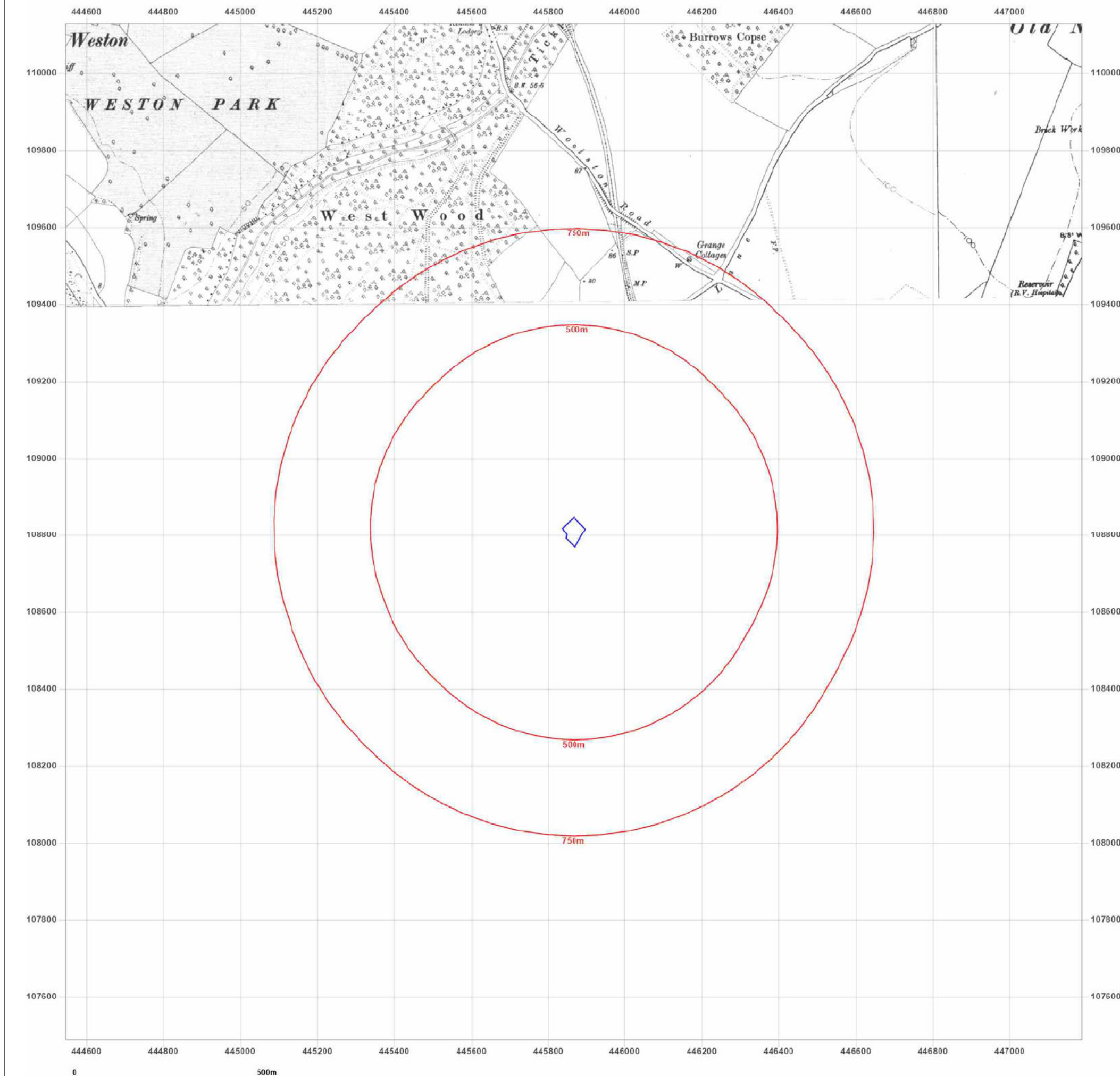


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Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1931-1932

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1867
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1865
Revised 1931
Edition N/A
Copyright N/A
Levelled N/A

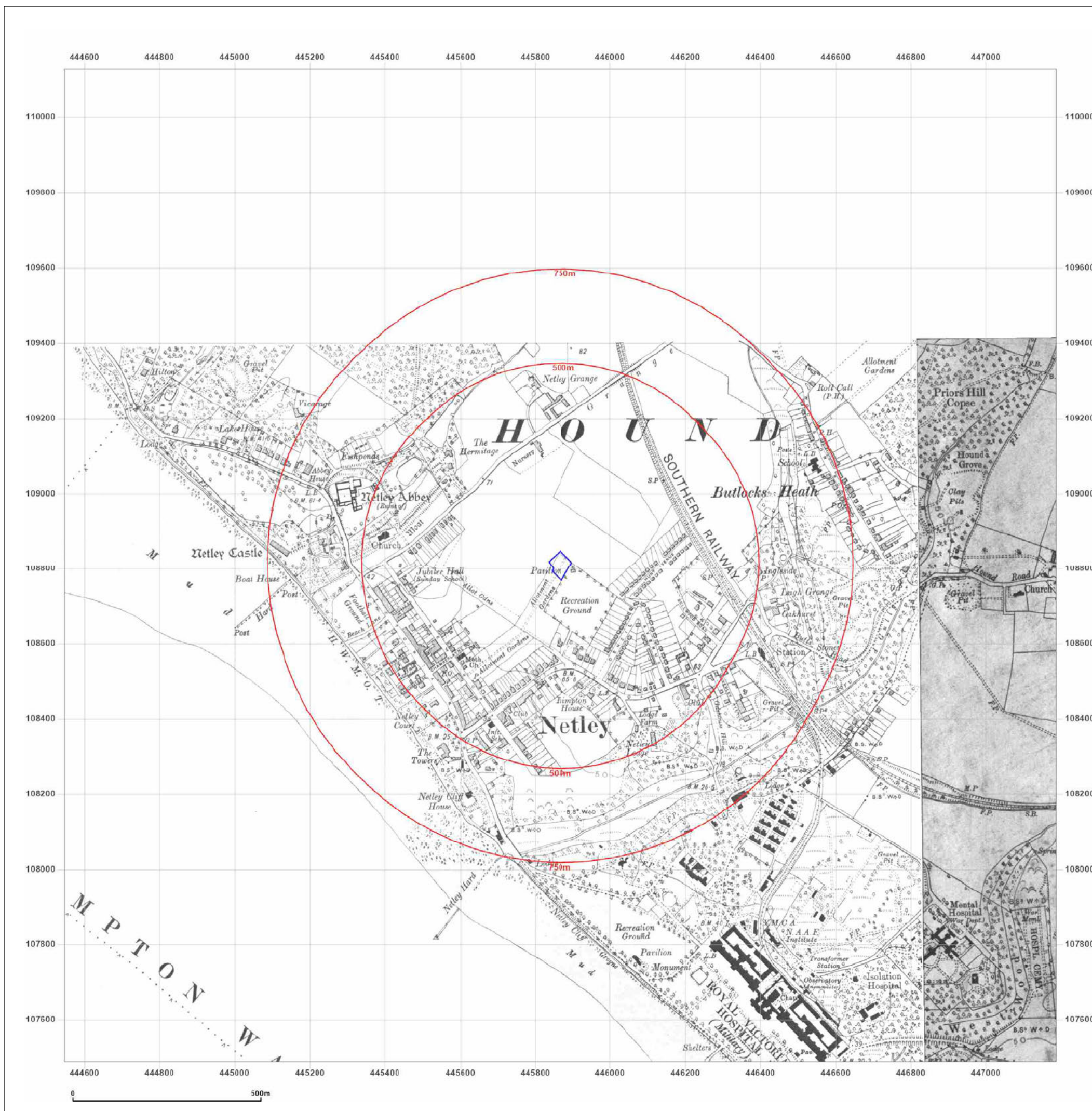


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Site Details:

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Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1932

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1867
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

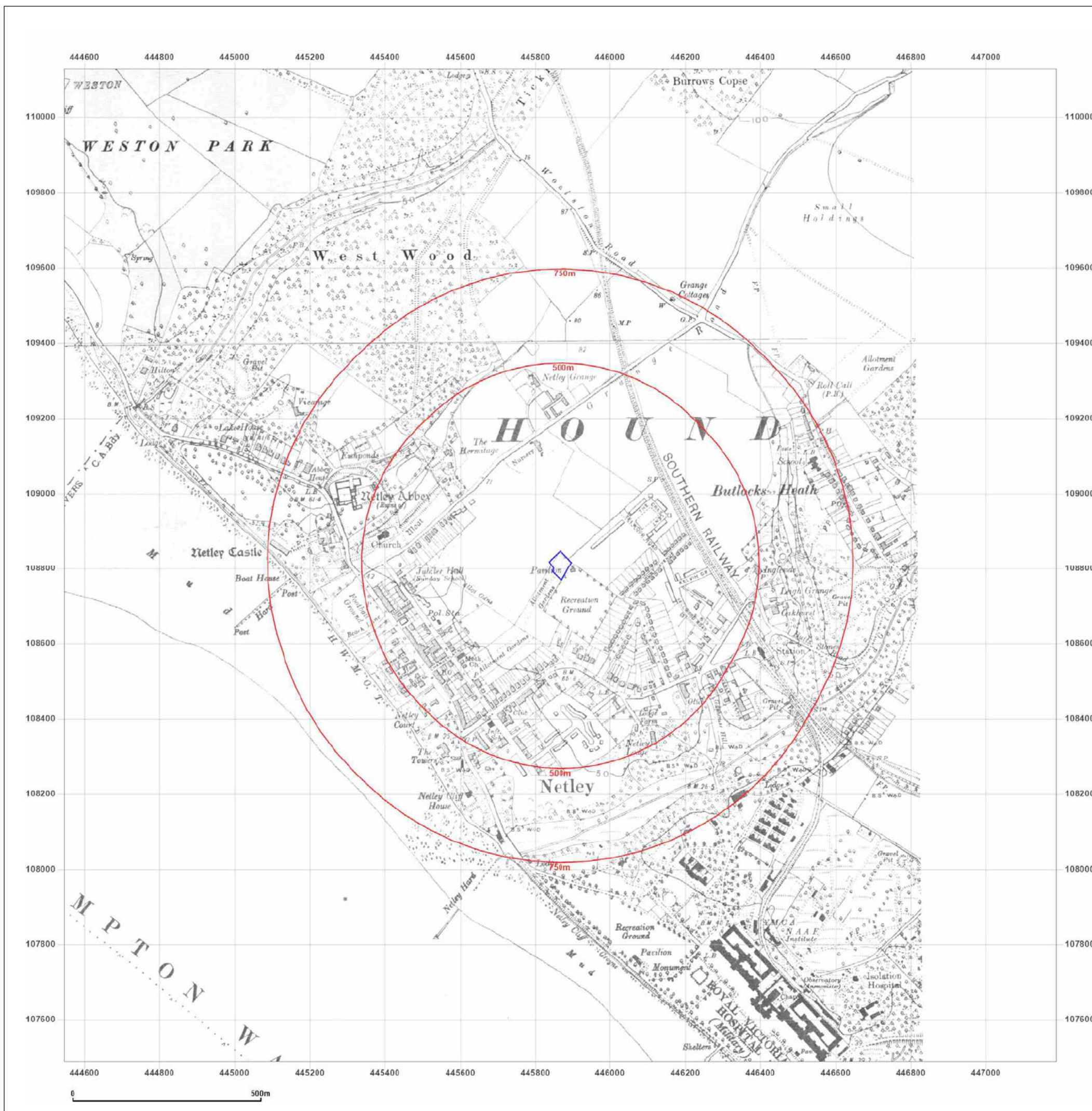


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

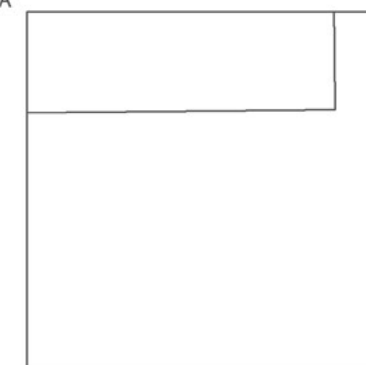
Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1867
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

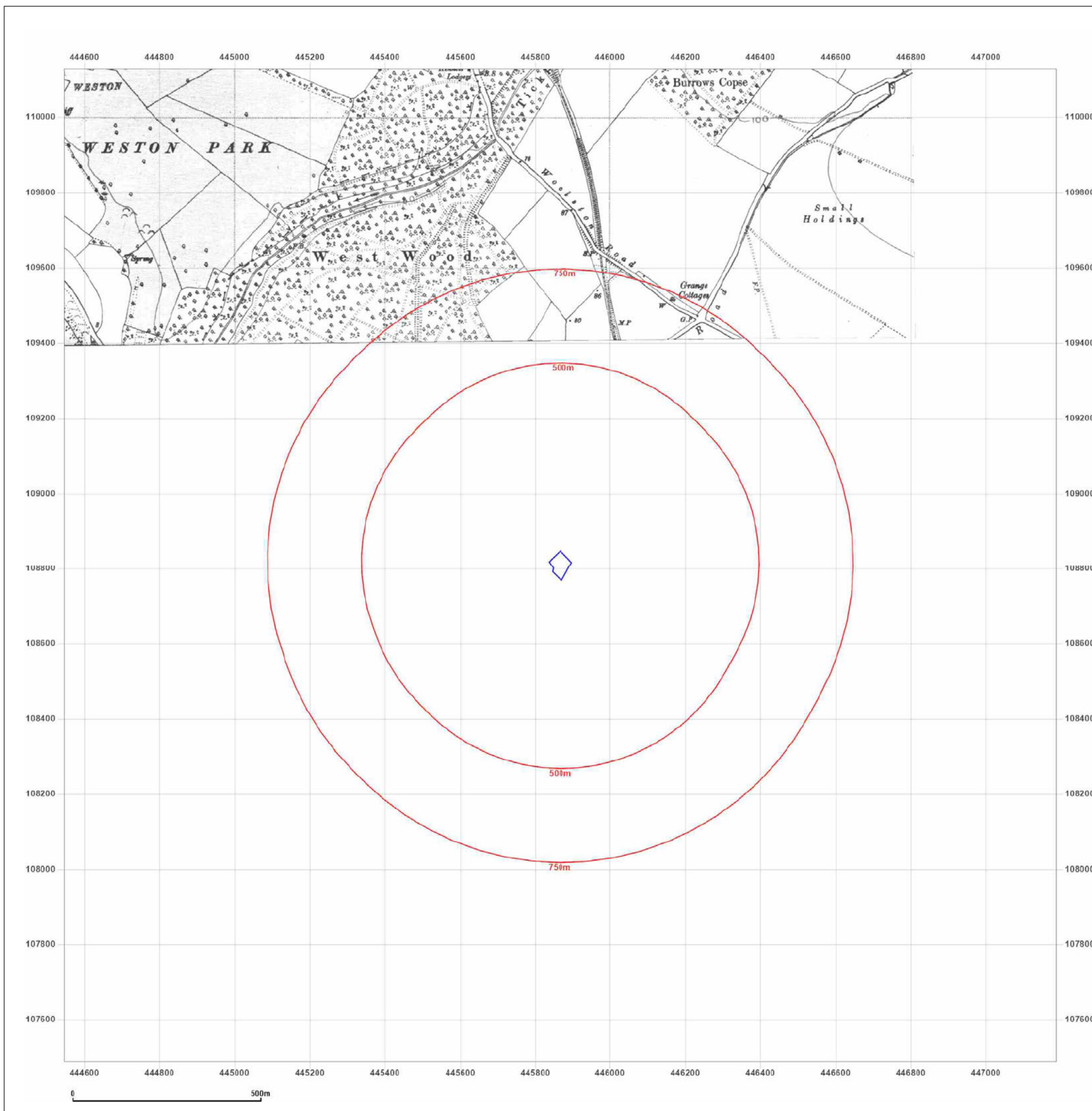


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Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: County Series

Map date: 1938-1942

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1867
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1942
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1942
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1942
Edition N/A
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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: Provisional

Map date: 1957-1962

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1867
Revised 1957
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1957
Edition N/A
Copyright N/A
Levelled N/A

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

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

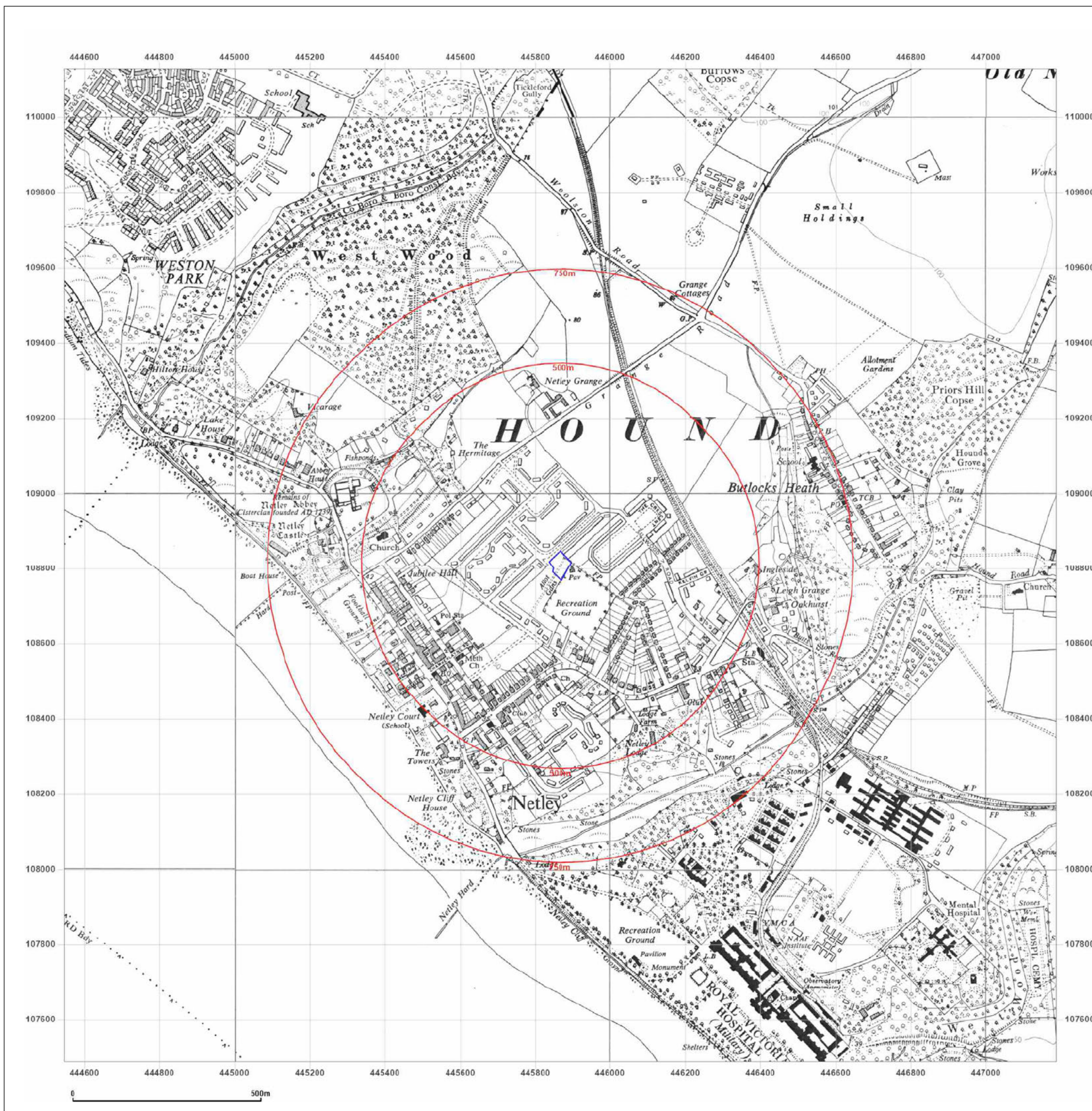


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Site Details:

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Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 1972-1973

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1971
Revised 1973
Edition N/A
Copyright 1973
Levelled 1971

Surveyed 1970
Revised 1972
Edition N/A
Copyright 1972
Levelled 1968

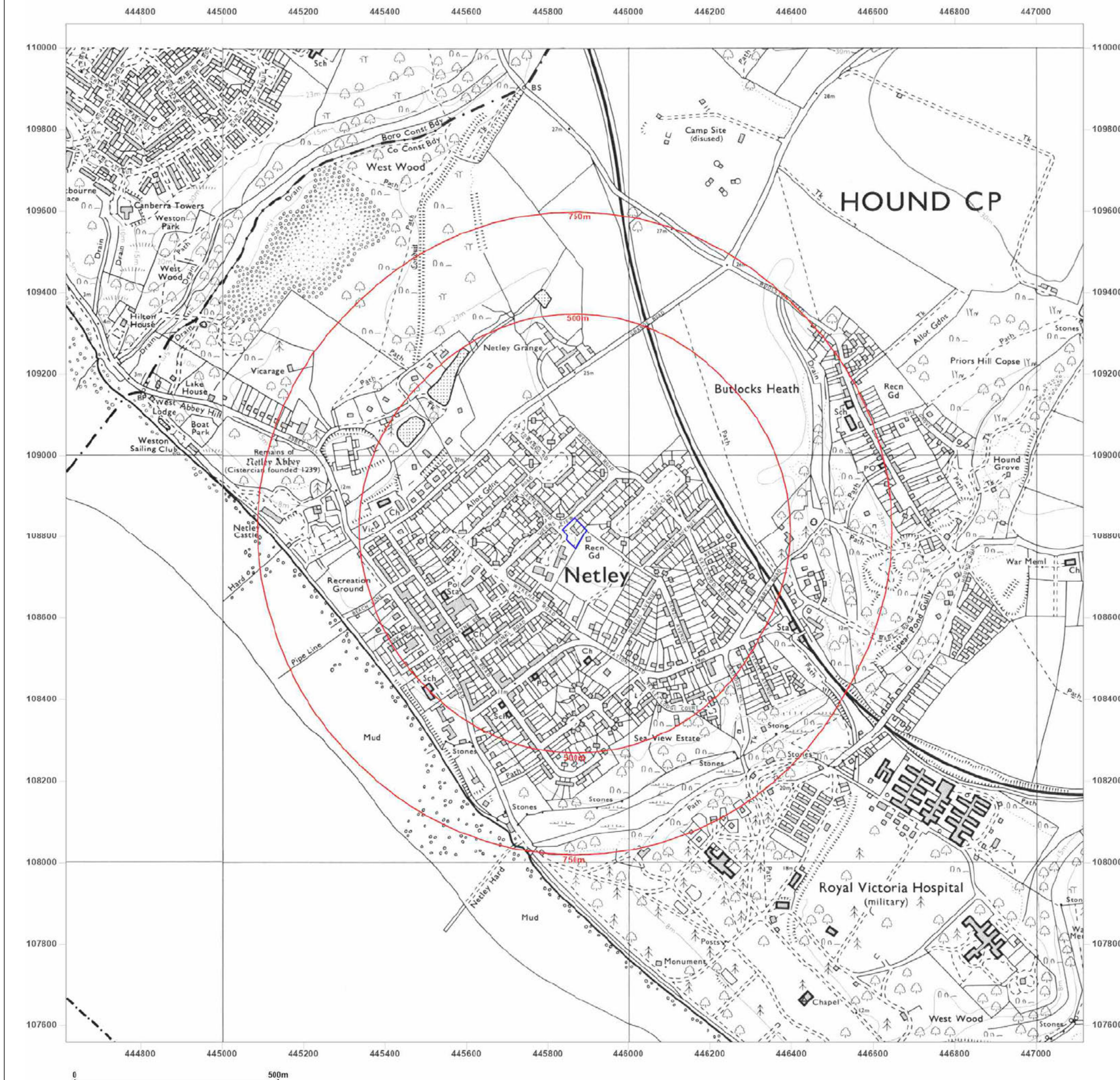


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Site Details:

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Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 1976-1979

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1977
Revised 1979
Edition N/A
Copyright 1979
Levelled 1971

Surveyed 1976
Revised 1978
Edition N/A
Copyright 1978
Levelled 1973

Surveyed 1970
Revised 1976
Edition N/A
Copyright 1972
Levelled 1971

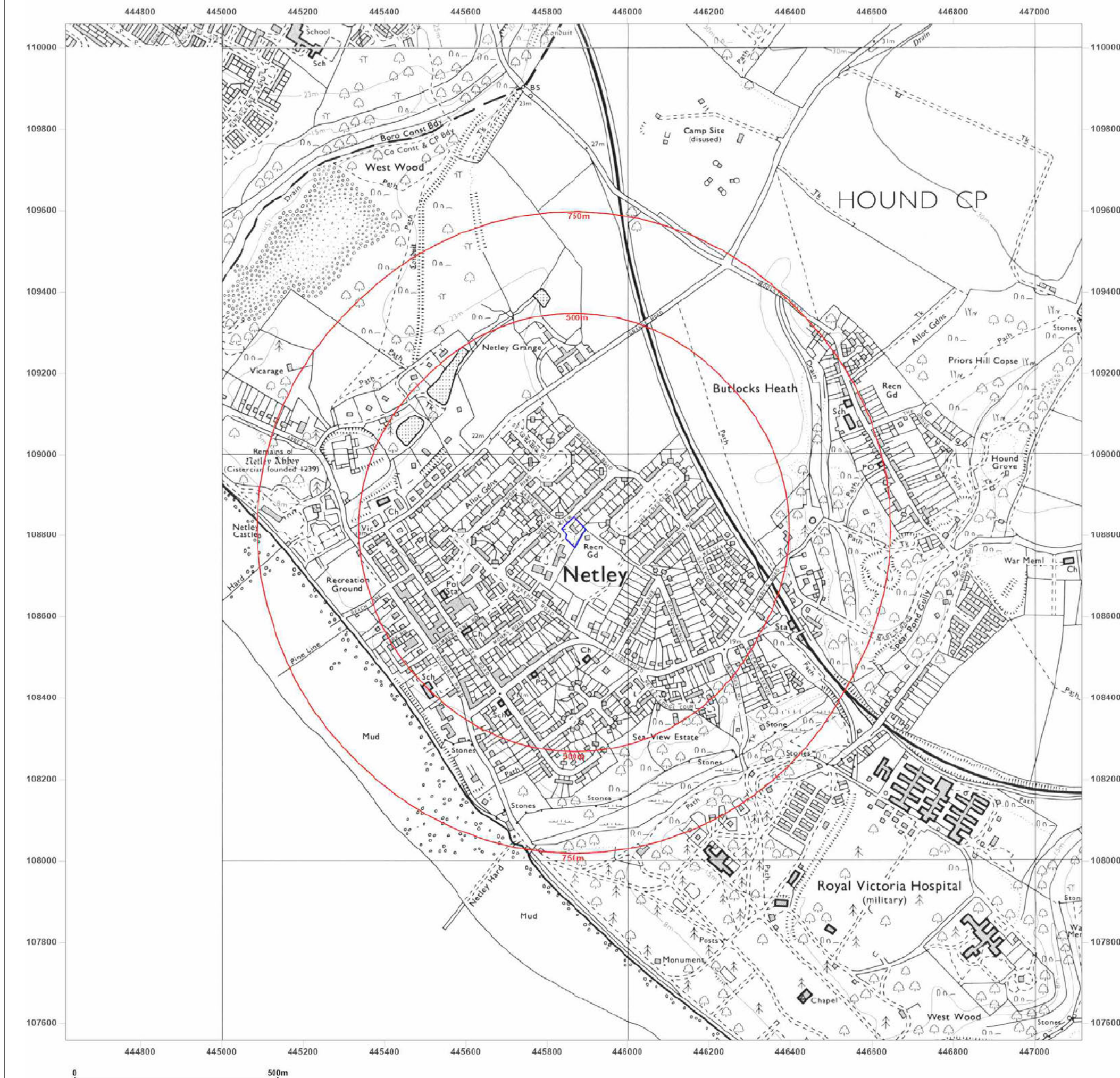


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 1989-1993

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1984
Revised 1990
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1991
Revised 1993
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1985
Revised 1989
Edition N/A
Copyright N/A
Levelled N/A

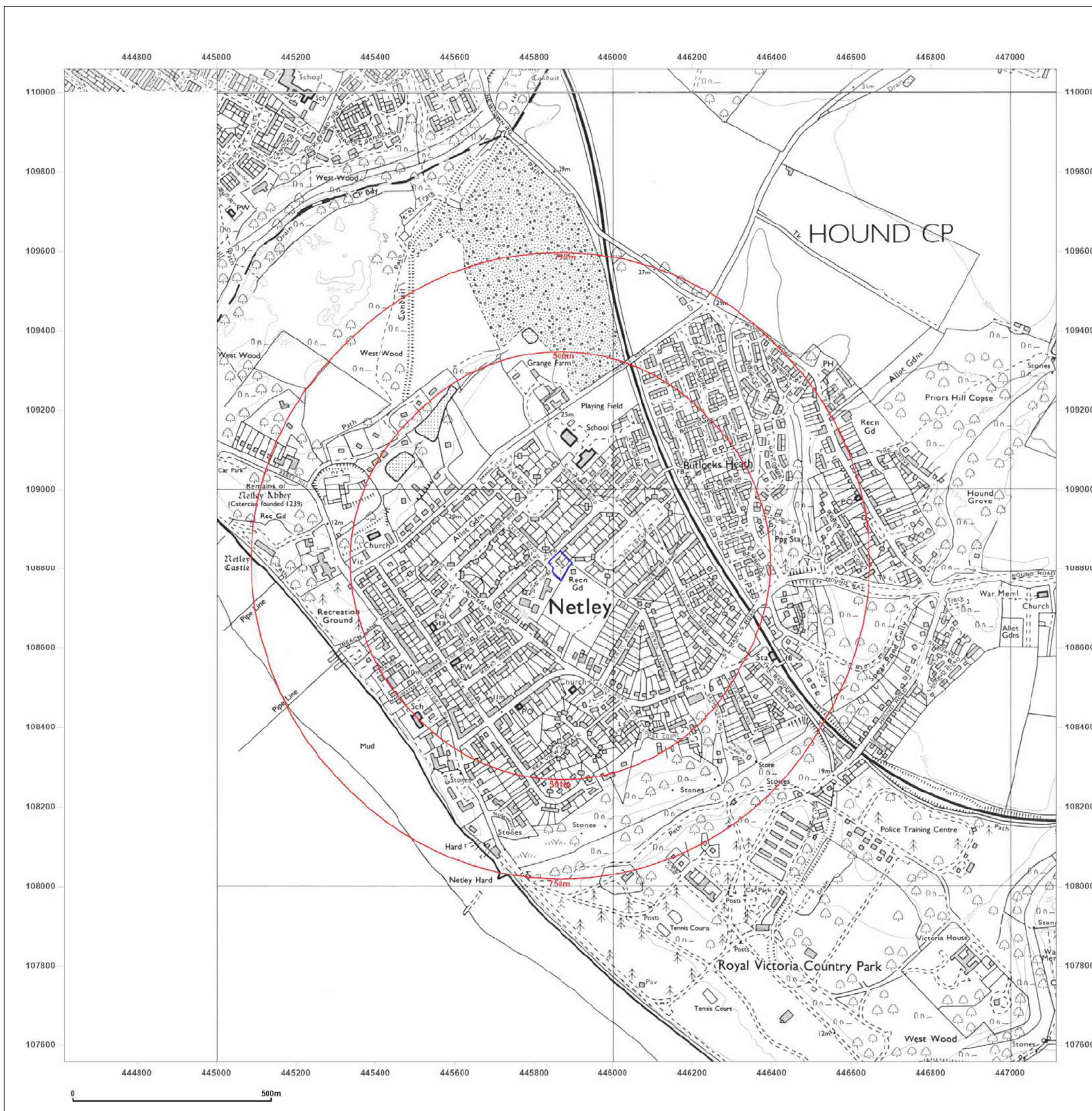


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001

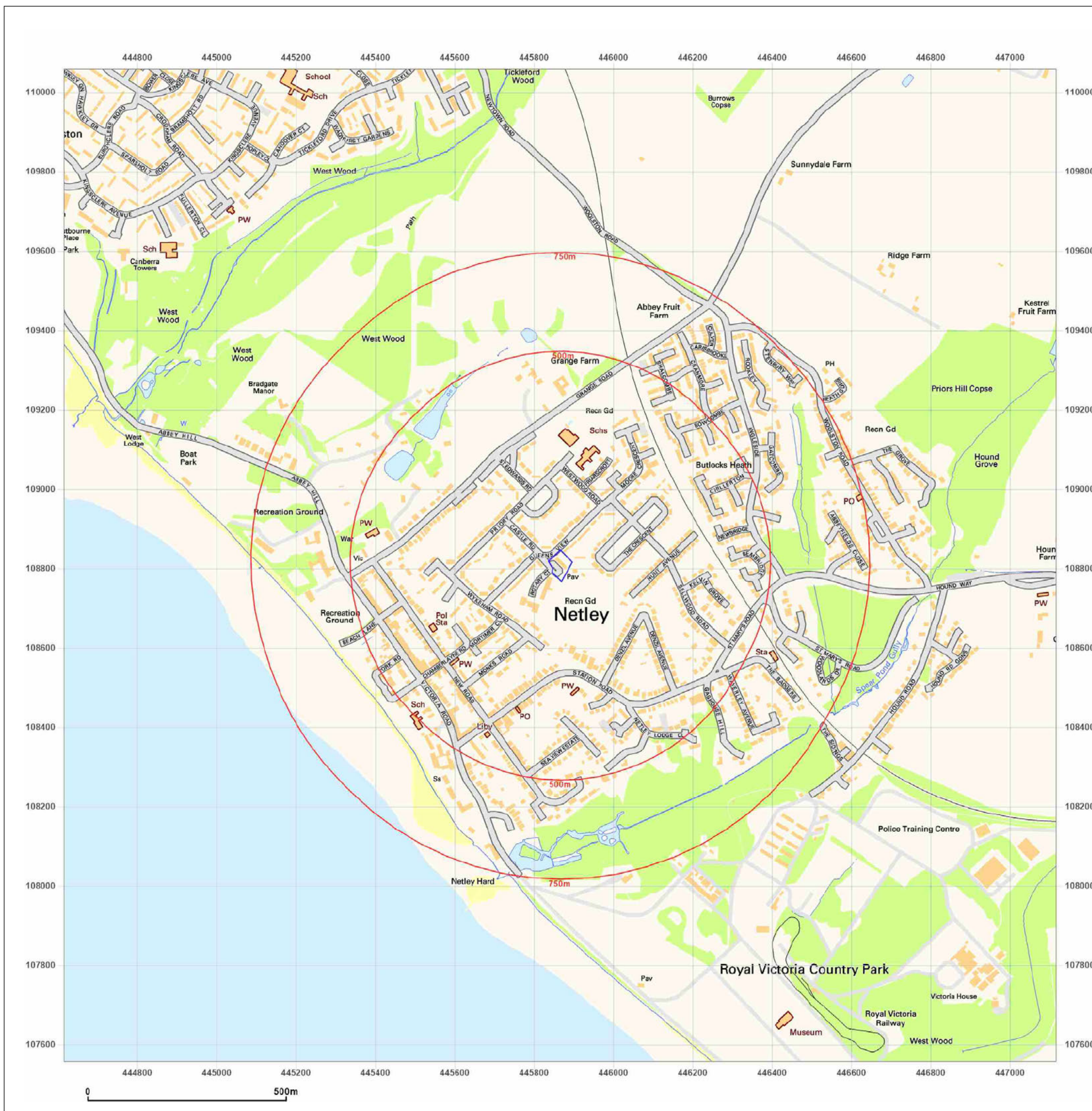


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Site Details:

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SO31 5EA

Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

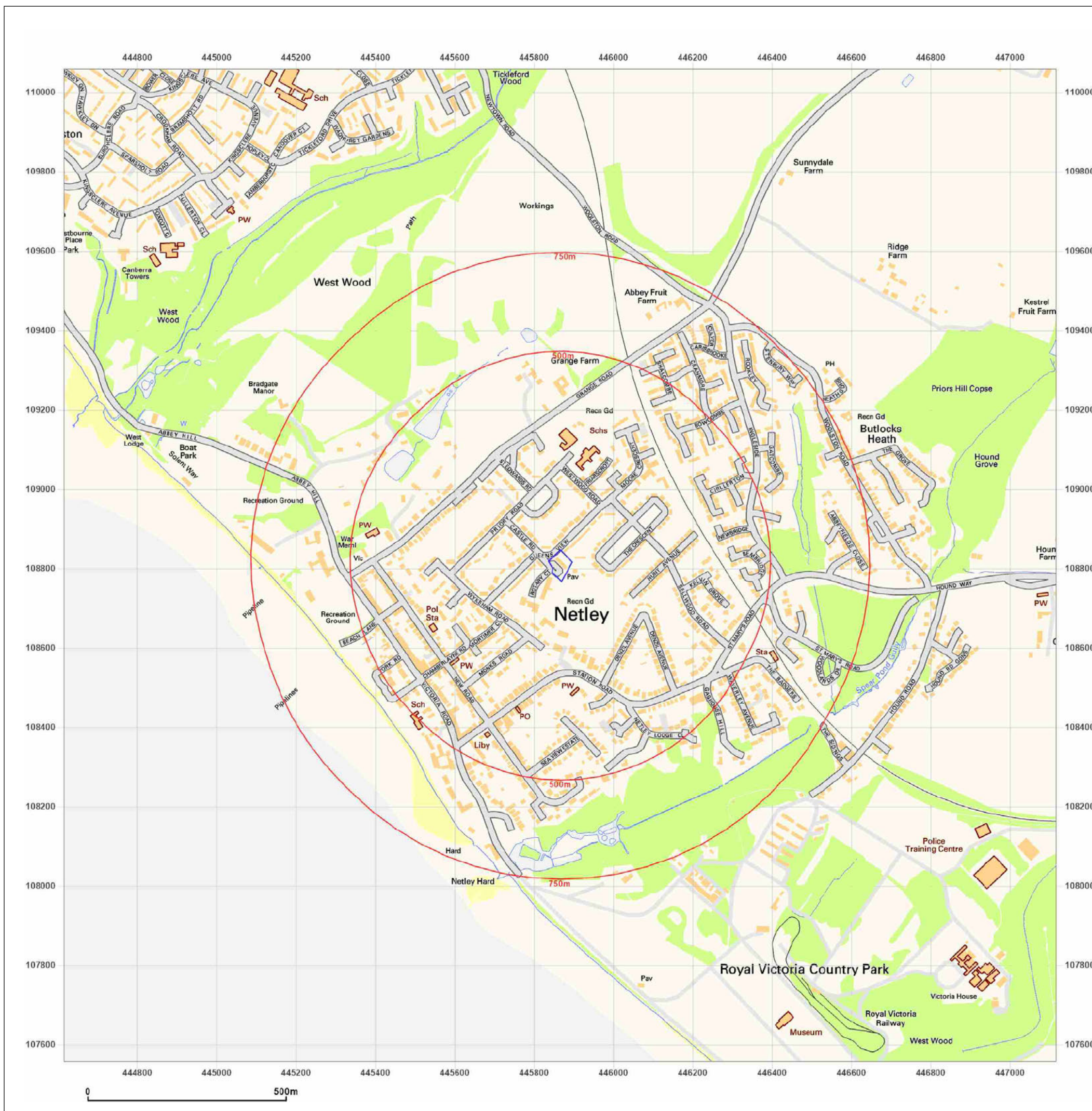


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Production date: 02 December 2022

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Site Details:

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SO31 5EA

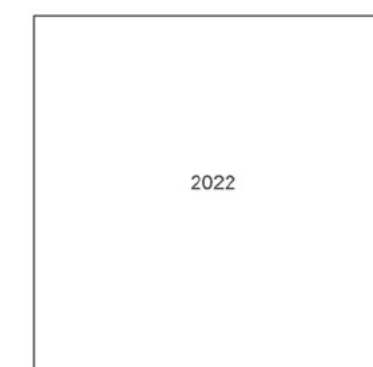
Client Ref: LP3177
Report Ref: GS-9237300
Grid Ref: 445866, 108808

Map Name: National Grid

Map date: 2022

Scale: 1:10,000

Printed at: 1:10,000



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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 Residents	Dermal contact, ingestion and inhalation of soil particles	Likely	Medium	Moderate risk	There is a low risk of contamination from the made ground on site. Private residential gardens are planned for the future development, therefore dermal contact and consumption from soils is likely.
		Consumption of contaminated home grown produce	Likely	Medium	Moderate risk	
	Construction workers	Dermal contact, ingestion and inhalation of soil particles	Unlikely	Medium	Low risk	Construction workers are expected to have limited contact with soils provided normal standards of hygiene are adopted and appropriate PPE/RPE is provided.
	Groundwater (Secondary A River Terrace Deposits aquifer and Secondary A Selsey Sand Formation aquifer)	Vertical infiltration and leaching from impacted on-site soils	Unlikely	Medium	Low risk	The site is underlain by secondary A aquifers which are of high vulnerability, however the site is not within a SPZ and there are no potable abstractions within 1km. Whilst limited potential soil sources have been identified, levels of soluble contaminants in soil are likely to be relatively low.
All contaminants in groundwater	Construction workers	Dermal contact and ingestion	Unlikely	Mild	Very low risk	Construction workers are expected to wear appropriate PPE and RPE. Groundwater levels are unknown. Heavy metals from the allotments on site are a low risk of contamination. The electrical substation located 80m south of the site is an unlikely risk due to the anticipated groundwater flow direction and low solubility of PCB.

Contaminant	Receptor	Pathway ¹	Likelihood of Exposure	Severity of Exposure	Risk Classification	Notes
Asbestos fibres in soils	Future Residents	Inhalation of asbestos fibres	Low likelihood	Severe	Moderate risk	The buildings on site may contain asbestos as they were built during the late 60s/ early 70s, however given that the buildings are going to be demolished the overall risk of exposure is reduced.. There is a high likelihood of made ground similiary containing asbestos. Risk to groundworkers should be mitigated by the use of appropriate control measures.
	Construction workers	Inhalation of asbestos fibres	Likely	Medium	Moderate risk	
Soil gases generated from fill materials	Future 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.	Low likelihood	Severe	Moderate risk	Any made ground on site has the potential for ground gases, although deep made ground is not anticipated. Possible ingress into confined spaces in buildings during servere low/falling pressure events.

The classification is based upon the consideration of both the magnitude of consquence 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.

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

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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	Deep made ground unlikely to be present given the current structures onsite, and foundations are unlikely to require deepening for this reason. More granular made ground horizons may become unstable during excavation.
	Unstable excavations	Likely	Low	Significant	
Compressible Ground	Bearing capacity failure	Unlikely	High	Significant	The site is underlain by river terrace deposits over Selsey Sand Formation, which are unlikely to be significantly compressible to result in bearing capacity failure and settlement.
	Excessive settlement	Unlikely	High	Significant	
High Groundwater Table	Unstable excavations/ running sands	Likely	High	Substantial	The depth to the groundwater table is unknown. Local trial pit information indicates groundwater below 4.8mbgl however is likely to be shallower given the proximity to the Southampton Water estuary. Shallow deposits also appear to be granular and perched water may be present within these horizons.
	Dewatering	Likely	High	Substantial	
	contamination	Unlikely	Low	Trivial	
Deep Excavations	Deepened foundations	Negligible	High	Trivial	Whilst details of the proposed development are unknown, it is likely to be residential and therefore it is unlikely that deep excavations will be carried out.
Working in highway	Traffic Management	Negligible	Very low	Trivial	At present no works are understood to be taking place in the highways
Shrinkable soils	Deepened foundations	Unlikely	High	Significant	The BGS logs indicate the River Terrace Deposits are fairly granular, however the deposits are variable in nature and may comprise clay with a moderate to high volume change potential.
	Heave	Unlikely	High	Significant	

Frost Susceptible soils	Road Design	Likely	Low	Significant	Given the variable nature of the River Terrace Deposits there is potential for the shallow soils to be frost susceptible.
Aggressive ground conditions for Concrete	Concrete design	Unlikely	Low	Trivial	The soils mapped beneath the site are not likely to contain high volumes of pyrite, and so aggressive ground conditions are not anticipated.
Slope Stability/Retaining Structure	Local stability	Negligible	High	Trivial	The site is relatively level and is unlikely to have slope stability issues.
	Global stability	Unlikely	High	Significant	
Mining	Suitability for development	Negligible	High	Trivial	The site is not affected by mining.
Ground dissolution/ Natural cavities	Remedial measures	Negligible	High	Trivial	The soils mapped beneath the site are not at risk of dissolution features.
Landfill	Land gas	Negligible	High	Trivial	There are no landfills in close proximity to the site which could be a source of significant volumes of landfill gases.
Contaminated land	Remedial measures	Unlikely	Low	Trivial	High concentrations of contamination is not expected on site.
Archaeological remains	Remedial measures	Negligible	High	Trivial	There is no evidence of archaeological features onsite or in the surrounding area.
UXO	UXO supervision	Unlikely	Very high	Significant	Zetica UXO risk mapping indicates the site is situated within an area of LOW risk.