



Preliminary Investigation Report

at

**Flint Cottage, Northfleet Green, Northfleet,
Gravesend, Kent DA13 9PN**

for

DHA Planning Ltd

**Reference: 21397/PIR Rev1.0
April 2024**

Control Document

Project

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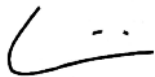
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This is not a valid document for use in the design of the project unless it is titled Final in the document status box.

Current regulations and good practice were used in the preparation of this report. The recommendations given in this report must be reviewed by an appropriately qualified person at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.



Commission

This document comprises the Preliminary Investigation Report (PIR) and incorporates the results, discussion, and conclusions to this intrusive works. General site data is recorded below:

Commission Record	
Client	DHA Planning Ltd
Site Name	Flint Cottage, Northfleet Green, Northfleet, Gravesend, Kent DA13 9PN
Grid Reference	TQ 62669 71286
Soils Limited Quotation Ref	Q28661, dated 29 th February 2024.
Clients Purchase Order	Q28661, dated 25 th March 2024.
Note:	

The record of revision is presented below:

Record Of Revisions		
Revision	Date	Reason
Rev 1.0	04/24	Initial completion of report for client
Note: The latest revised document supersedes all previous revisions of the PIR produced by Soils Limited.		

Caveats

Whilst reasonable skill and care has been taken to determine the site history and the environmental setting within the time constraints applied by the project, it should be appreciated that uncertainties may occur owing to the natural variability of soil material within a defined area or as a result of unknowns that are associated with contaminated land assessment in general. The site conditions may be different from that indicated by this Preliminary Investigation, particularly on a site with a history of past development. No responsibility can be accepted should such conditions alter the recommendations made in this report.

Without a drainage survey it is not possible to establish if the surface water drainage is to the main drainage system or soakaways. If there are soakaways on-site, they could act as a potential source. The geology on-site to an extent may determine if soakaways were likely to have been adopted.

Ordinary watercourses (OWs) are defined as rivers (which are not designated as main rivers), streams, ditches, drains, culverts, cuts and sewers (other than public sewers). This includes all OWs that are not mapped. Ordinary watercourse consent (OWC) is required from the Lead Local Flood Authority (LLFA) when changing/adapting/adding to the cross sections of OWs. Installations of any structure or obstruction into an OW that impedes the flow without consent is prohibited by the Land Drainage Act 1991 Section 23.

Failure to remove obstructions may result in legal action by the LLFA with powers under Section 25 of the Land Drainage Act 1991.

Soils Limited suggest surveying the site for OW usually seen in rural areas as boundary ditches in order to avoid potential impacts to residents downstream and prosecution. OWC can be applied for from your LLFA.

This Preliminary Investigation does not include a detailed UXO risk assessment, it does however contain a basic assessment in accordance with CIRIA C681 and C785. In preparing a Preliminary Investigation reference is made to historical maps and web based sources to assess the risk of the site potentially having been impacted by bombing during the World Wars. The data readily available is not necessarily definitive. Certain areas were bombed heavily such as centres of industrial manufacture, airfields, shipyards, docklands, railways sidings and junctions. The assessment is based on the likely area risk, bomb patterns (i.e. lines of recorded bomb impacts with gaps where an impact would be anticipated) and the age of structures on and in close proximity to the site.

Explanations

The Preliminary Investigation Report was undertaken to advise the client on the risk pertaining to the site, with special reference to historic and current potential contaminative activities and processes. This also included the assessment of their impact on current and future sensitive receptors such as human health, controlled waters, ecological features, building structures and services.

During the site walkover observations were made in relation to current activities, evidence of historical activities, sources of potential contamination such as fuel storage tanks, oil drums and chemical storage and evidence of contamination. The walkover also looked for evidence of soil contamination in the form of staining odours and stressed or discoloured vegetation.

To assess the vulnerability of groundwater to contamination, consideration must be given to the leaching characteristics of the overlying soils and the characteristics of the strata in the unsaturated zone. Information on the geological strata such as lithological type and permeability characteristics has been combined with the physical properties of the soil to produce varying degrees of vulnerability.

The object of the historic map study was to report on the evidence of site history and redevelopment of the site and its environs from available County Series and Ordnance Survey Maps dating from the mid to late 19th Century to the present day as downloaded from Landmark Environmental.

The published maps only represent a “snap shot” of the site and its environs at the date of the survey. The detail of the information recorded can vary between epochs, map scale and county areas. It should be noted that changes in land uses, processes or activities may have occurred outside of published epochs and these may not have been recorded on subsequent epochs. Also note that as methods of projection, production and recording have changed over time, this can result in geo-reference errors that may indicate the established site boundary is off-centre from its true location on older historical maps. Where this is potentially significant it will be noted.

Any distances quoted for features remote from the site have been scaled from the maps and are only approximate. Where dates have been noted in brackets, these are the actual dates applicable to the map editions and may not reflect the date of the original survey it is based on. The information reported might not represent all pertinent information that could be obtained. The interpretation of the maps and/or other data commented on in this report is subjective.

As part of the review of the historical plans, only features considered to have or to have had a potential contaminative impact on the site and usually within a notional 250m radius are discussed. The north point and approximate extent of the site are indicated on each figure.

Dataset survey is undertaken, and the extent of the search has initially been limited to a radius of 250m as it is considered that sources of contamination beyond 250m are unlikely to impact on the site.

The BGS soil chemistry for environmental assessments dataset coverage, was developed from BGS G-BASE and Imperial College Wolfson Atlas data. It contains estimated ambient As, Cd, Cr, Ni and Pb background concentrations for rural topsoils across Great Britain. It also contains the locations and measured concentrations (mg kg⁻¹) of As, Cd, Cr, Cu, Ni, Pb, Sn and Zn in urban topsoil samples, collected from geochemical surveys in 23 major urban centres.

In accordance with CIRIA C681 and C785 a review has been undertaken of the historic maps and the Zetica UXO risk website which indicated that the site was in an area of moderate bombing density and may have been subject to bombing, shelling or has had a military use.

Legislation and Liability

The primary legislative mechanism for contaminated land management in the UK is Part 2A of the Environmental Protection Act, 2021 (EPA). Part 2A was introduced into the EPA under Section 57 of the Environment Act 1995 to help deal with the substantial legacy of land contamination. The legislation provides powers in relation to the identification, remediation and apportionment of liability for contaminated land. Part 2A applies where there is unacceptable risk, assessed on the basis of the current use and the relevant circumstances of the land. It is not directed to assessing risks in relation to a future use of the land that would require a specific grant of planning permission.

Under Part IIA of the Environment Act 2021, Local Authorities are required to identify contaminated land and serve on every person who is an appropriate person a remediation notice setting out what is to be done by way of remediation and the period within which it must be done.

If the person who caused, or knowingly permitted, the contaminating substance cannot be found, the owner and/or, occupier for the time being, of the property can be the appropriate person.

Under the legislation, Contaminated Land is defined as: -

“Land which is in such a condition by reason of substances in, on or under the land that significant harm is being caused or that there is a significant possibility of such harm being caused or that pollution of controlled waters is being, or is likely to be caused.”

Where the Act defines harm as:

“harm to the health of living organisms or other interference with the ecological systems of which they form a part and, in the case of man, includes harm to his property.”

and pollution of controlled waters is defined as: -

“the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter.”

In addition, The Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 introduced the supplementary definition of harm to include: lasting exposure to any person resulting from the after-effects of a radiological emergency, past practice or past work activity.

With regard to contaminated waters, the Environment Act 1995 amends the Water Resources Act 1991 and provides the Environment Agency with the power to force clean-up of historical contamination by issuing a Works Notice, with remediation paid for by the responsible parties.

The Groundwater Regulations (1998) stated that entry of List 1 substances into groundwater must be prevented, and List II substances must be controlled.

Limitations and Disclaimers

This Preliminary Investigation Report relates to the site located at Flint Cottage and was prepared for the sole benefit of the Client for the brief described in the Commission of this report.

The contents, recommendations and advice given in the report are subject to the Terms and Conditions given in the Soils Limited Quotation and the subsequent Clients Purchase Order.

Soils Limited disclaims any responsibility to the Client and others in respect of any matters outside the scope of the above.

This report has been prepared by Soils Limited, with all reasonable skill, care and diligence within the terms of the contract with the Client, incorporation of our General Conditions of Contract of Business and taking into account the resources devoted to us by agreement with the Client.

The report is personal and confidential to the Client and Soils Limited accept no

responsibility of whatever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report wholly at its own risk.

The Client may not assign the benefit of the report or any part to any third party without the written consent of Soils Limited.

The ground is a product of continuing natural and artificial processes. As a result, the ground will exhibit a variety of characteristics that vary from place to place across a site, and also with time. Whilst a ground investigation will mitigate to a greater or lesser degree against the resulting risk from variation, the risks cannot be eliminated.

The investigation, interpretations, and recommendations given in this report were prepared for the sole benefit of the client in accordance with their brief. As such these do not necessarily address all aspects of ground behaviour at the site.

Current regulations and good practice were used in the preparation of this report. An appropriately qualified person must review the recommendations given in this report at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

There may be other sources of information not included in those listed that hold data relevant to the Preliminary Investigation Report undertaken at the site that could materially affect the conclusions made in this report.

It should be noted that a detailed survey of the possible presence or absence of invasive species, such as Japanese Knotweed, is outside of the scope of investigation.

Ownership of land brings with it onerous legal liabilities in respect of harm to the environment. "Contaminated Land" is defined in Section 57 of the Environment Act 2021.

Where a contaminative use is identified in the Preliminary Investigation Report this does not determine whether contamination has actually occurred, or if it has the degree to which it may have taken place. An intrusive investigation(s) and analysis is required to establish the nature and degree of any contamination present.

All works are undertaken in the context of, and in compliance with, BS10175+A2 2017 and LCRM (EA 2021) and all other pertinent planning, standards, documentation and guidance appropriate to the site at the time of production which may include, but are not necessarily limited to, documents provided by BS/CEN/ISO, NHBC, AGS, CIEH, CIRIA, SoBRA and CLAIRE.

Ownership of copyright of all printed material including reports, survey data, drawings, laboratory test results, trial pit and borehole log sheets, including drillers log sheets remains with Soils Limited. License is for the sole use of the client and may not be assigned, transferred or given to a third party. This license is only valid once we have been paid in full for this engagement. In the event of non-payment for our services, we reserve the right to retract the license for all project data, preventing their use and any

reliance upon such data by the client or any other third party. We may also contact parties other than the client to notify them of this retraction.

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Appendix C Site Sensitivity Maps

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Appendix E UXO Information

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Appendix G Risk Assessment Criteria

Section I Site Conditions and Proposed Development

I.1 Site Walkover

A site walkover was undertaken in April 2024, by Soils Limited. The notes of the site walkover are presented in Table 1.1 and Table 1.2.

Table 1.1 Site Walkover Record (On-site)

Use of Site	Former farmland which was used for car and containers storage within the northern half portion.
Structures	Dilapidated barn supported by scaffolding and piers. The barn was brick built on three sides except the north which had no wall and a concrete floor slab. The roof was pitch with corrugated iron sheeting. The barn occupied the southern fourth portion. The northern half portion was occupied by abandoned cars and three containers. Anecdotal evidence indicated there was a barn within the northern portion until 1987 hurricane that got swept away.
Site Topography	Sloping down towards the north <2°
Site Covering	Area without the barn, cars and containers was soft landscaped.
Vegetation	Shrubs and trees within the southern and northeast portions.
Potential Contamination Sources	The former use of the barn for tractor storage and maintenance, and later car storage. Fuel barrels within the barn and stains on the ground within the western portion within the barn. Cars storage within the northern portion of the site.
Odour	None observed
Drainage	None observed
Note(s):	

Table 1.2 Site Walkover Record (Off-site)

Use of Land	N: Residential gardens with sheds E: Open agricultural land S: Residential garden W: Residential with Northfleet Green Road beyond
Area Topography	Sloping down towards the north and northeast <2°.
Vegetation	Scattered shrubs and trees along roots and within gardens of properties.
Potential Contamination Sources	None observed.
Note(s):	

I.2 Site Drainage

Unknown, no drainage observed onsite during walkover.

I.3 Site Photographs

The site photographs have been included within Appendix F.

I.4 Proposed Development

The proposal comprised demolition of the existing barn structure and removal of all other structures onsite. Followed by the development of 1No. single dwelling with space for domestic soft landscaping, amenities, parking and access.

No drawings were provided as part of this project. The proposed development was taken from emails discussing the project. The recommendations provided within this report are made exclusively in relation to the scheme outlined above, and must not be applied to any other scheme without further consultation with Soils Limited. Soils Limited must be notified about any change or deviation from the scheme outlined.

Section 2 Geology, Hydrogeology, Hydrology and Radon

2.1 Anticipated Geology

The 1:50,000 BGS Geology map showed the site to be situated on the Thanet Formation bedrock, with no noted superficial deposits.

2.1.1 Bedrock - Thanet Formation

The Thanet Sand Formation comprises mainly of fine-grained light yellow to grey sand becoming silt with depth. The basal level comprises a layer of glauconitic clayey fine sand with green glauconitic coated flints.

2.2 Hydrogeology

Table 2.1 presents the hydrological data that is relevant to the site.

Table 2.1 Hydrogeological Assessment

Hydrogeological Data		Comment
On-site	Superficial	None
Aquifers	Bedrock	Secondary Aquifer A ¹
Groundwater Vulnerability		High Vulnerability
Source Protection Zones (SPZ)		Zone I, Zone II, Zone III ²
Abstraction	Potable	220m E ³ , 272m E ⁴ ,
	Non-potable	225m E ⁵
Sensitive Land Uses		Onsite area of adopted green belt and nitrate vulnerable zone
Surface Water Features		253m N
Flood Risk from Rivers or Seas		None
Flood Risk from Surface Water		None
Flood Risk from Groundwater		Low Risk

Note(s): ¹Secondary A are 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. ²Zone I: Inner protection zone, travel time of 50 days or less to the ground water source. Zone II: Outer protection zone, either 25% of the source area or 400 day travel time whichever is greater. Zone III: Total catchment, the total area needed to support the discharge from the protected groundwater source. ³Groundwater, public water supply H5 Chalk License Revoked. ⁴Groundwater, public water supply 27th November 2006. ⁵Agricultural (General), pond or lake, additional purpose public water supply

Any works or development which has the potential to have an impact on surface water, aquifer or groundwater quality must be approved by the Environment Agency prior to implementation.

2.3 Hydrology

The approximate elevation of the site was ~32m Above Ordnance Datum (AOD). The anticipated groundwater flow direction is given in Table 2.2.

Table 2.2 Hydrological Assessment

Type	Direction	Notes
Surface water	-	Areas of soft landscaping anticipated to drain vertically down into the granular superficial deposits. Drainage of the structures and hardstanding and structures are not known
Groundwater	E	Towards the main abstraction well for the nearest source protection zone
Note(s):		

2.4 Radon Gas

The site is located in an area where the maximum radon potential is 1-3%. This band dose not fall within the action level requirements. No further actions are required.

Section 3 Site History

3.1 Historic Map Study

The historic maps referred to are appended to this report (Appendix A).

Table 3.1 Historic Development of the Site

Site History	Date Range	
	From	To
Structure in NE corner, remaining site greenfield. Site part of Upper Hazells.	1874	1896
Development of a structure along southern boundary. Development of circle structure connected to structure in NE corner.	1896	1961
Site named part of Oast House	1961	2003
Demolition of structure in NE	2003	2006
Installation of 2 shipping containers in northern section of site.	2006	2012
Several cars parked in tight grid along the N boundary.	2012	Current
Note(s):		

Table 3.2 Historic Off-site Development

Off-site Development	Date Range	
	From	To
Surrounding area (up to 1km radius) predominantly agricultural fields and soft landscaping. Pond structure 5m W. Residential property 20m W. Unnamed road 30m W heading N-S eventually connecting to Roman Road 700m N. Residential development 'The Hazells' 160m N with a pond 250m N. Residential properties 130m S and Northfleet Green Farm 260m SW. Scadbury Farm 490m W.	1869	1931
Development of [Roman Road] into Walting Street. Infill of pond 5m W.	1931	1961
Clearing and development of field next to Northfleet Green Farm. Power line structures developed 90m W.	1961	1965
Residential development 35m & 100m N and 140m S. Pumping Station developed 260m E.	1965	1973
Development of more power lines 55m W.	1973	2006
Development of Channel Tunnel Rail Link 300m N running NW to SE. Development of pumping station 260m E now 210m E.	2006	2018
Residential and light industrial/commercial development 130m S and 230m SW, development of a pond 295m SW.	2018	Current
Note(s):		

Table 3.3 Potential Sources of Pollution Indicated from Historic Maps

Source	Direction	Distance (m)	Date Range	
			From	To
Cars parked onsite	N	Onsite	2012	Current
Infilled Pond	W	5	1869	1931
Pumping Station	E	210	1965	Current
Channel Tunnel Rail Link	N	300	2006	Current
Note(s):				

3.2 Bomb damage and the potential for Unexploded Ordnance

Based on the assessment of the historical maps and Zetica UXO, the site is at high risk. It should be considered that a specialist UXO risk assessment is undertaken to determine the risk to the proposed development.

Section 4 Environmental Records and Consultation

4.1 Dataset Information

A copy of the report is appended to this report in Appendix B and summarised in Table 4.1, Table 4.2 and Table 4.3.

Table 4.1 Environmental Significance of Data

Source	Direction	Distance (m)
Contaminated Land Register Entries and Notices	None	None
Discharge Consents	"	"
Integrated Pollution Prevention and Control	"	"
Local Authority Pollution Prevention and Controls	"	"
Local Authority Pollution Prevention and Control Enforcements	"	"
Nearest Surface Water Feature	N	253
Pollution Incidents to Controlled Waters (Significant Incidents only)	None within 500m	
Prosecutions Relating to Authorized Processes	None	None
Registered Radioactive Substances	"	"
Substantiated Pollution Incident Register	"	"
Nearest Potable Abstraction Point	E	220
Nearest Non-Potable Abstraction Point	E	225
Water Industry Act Referrals	None	None
Source Protection Zones	Onsite	
Extreme Flooding from Rivers or Sea Without Defences	None	None
Flooding from Rivers or Sea Without Defences	"	"
Areas Benefiting from Flood Defences	"	"
Flood Water Storage Areas	"	"
Flood Defences	"	"
BGS Recorded Landfill Sites	"	"
Historical Landfill Sites	"	"
Licensed Waste Management Facilities	"	"
Local Authority Recorded Landfill Sites	"	"
Potentially Infilled Land (Non-Water)	"	"
Potentially Infilled Lane (Water)	NW, N	13, 255
Registered Landfill Sites	None	None
Registered Waste Transfer Sites	"	"
Registered Waste Treatment or Disposal Sites	"	"
Control of Major Accident Hazards Sites (COMAH)	"	"
Notification of Installations Handling Hazardous Substances	"	"
Planning Hazardous Substance Consents	"	"

Note(s):

The contemporary trades listed in Table 4.2 are only those considered to be viable potential sources of contamination that could impact the site.

Table 4.2 Contemporary Trade Directory

Contemporary Trade Directory within 250m	Direction	Distance (m)	Status
Commercial Cleaning Services	S	141	Inactive

Note(s):

Table 4.3 Geological Hazards

Source	Nearest Distance from Site/Type
Coal Mining Affected Areas	None noted
Mining Instability	None noted
Natural and Mining Cavities	220m E Chalkwell/Denehole
Potential for Collapsible Ground Stability Hazards	Very Low
Potential for Compressible Ground Stability Hazards	No Hazard
Potential for Ground Dissolution Stability Hazards	Low
Potential for Landslide Ground Stability Hazards	Very Low
Potential for Running Sand Ground Stability Hazards	Low
Potential for Shrinking or Swelling Ground Stability Hazards	No Hazard
Note(s):	

4.2 Site Sensitivity Maps

No other significant potential sources of contamination were shown on the Landmark Envirocheck Site Sensitivity Maps, which have not been listed in Table 4.1, Table 4.2 and Table 4.3, and copies of which are appended to this report (Appendix B).

4.3 Regulatory Enquires

As part of the Preliminary Investigation Report the local authority was contacted and asked to provide any information on potential risks pertaining the site. Information provided by the local authority was not available at the point of formation for this report. Therefore Appendix D has been left blank.

4.4 Soil Geochemistry

The results of this survey are contoured on the Landmark Environmental check report (Appendix C). The results of the local soil chemistry are presented in Table 4.4.

Table 4.4 Soil Geochemistry

Determinant	Indicated Soil Geochemistry (mg kg⁻¹)
Arsenic	25-35
Cadmium	<1.8
Chromium	60-90
Lead	<100
Nickel	15-30
Note(s):	

No exceedances for residential properties with home-grown produce.

Section 5 Data Collection Summary

5.1 General

Table 5.1 summarises the site Environs, which include geology, hydrogeology, the risk from radon and potential risk from flooding.

Table 5.1 Site Environs

Environs	Summary
Geology	Thanet Formation bedrock.
Hydrogeology	Thanet Formation is classed as a Secondary A aquifer and could support shallow groundwater.
Source Protection Zone (SPZ)	Zone I, Zone II, Zone III ¹
Surface Water Flow	In areas of soft landscaping anticipated to be vertically down into the granular superficial deposits. For the structures and areas of hard standing drainage is unknown.
Groundwater Flow	E, Towards the main abstraction well for the nearest source protection zone
Radon	No actionable radon risk.
Flooding	No noted flood risk
Geological Hazard	Onsite hazards are very low to low. 220m E natural/manmade chalkwell cavity
Local Authority Response	Not available during the formation of this report
Soil Chemistry	No exceedance
Ecological	None

Note(s): ¹Zone I: Inner protection zone, travel time of 50 days or less to the ground water source. Zone II: Outer protection zone, either 25% of the source area or 400 day travel time whichever is greater. Zone III: Total catchment, the total area needed to support the discharge from the protected groundwater source

Table 5.2 provides a summary of potential on-site and off-site contamination sources identified during the study of the historic maps, the Landmark Envirocheck Dataset Report and the Site Walkover

Table 5.2 Summary of Potential Contamination Sources

Contaminative Source	Direction	Distance (m)	Date Range		Data Source
			From	To	
On-Site					
Cars parked onsite	N	Onsite	2012	Current	SW, HM, GE
Fuel barrels (oil stains)	SW	Onsite	-	Current	SW
Barn (tractors and car storage)	S	Onsite	-	Current	SW
Off-Site					
Infilled Pond	W	5	1869	1931	HM
Commercial Cleaning Services	S	141	Inactive		DS
Pumping Station	E	210	1965	Current	HM, GE
Potentially Infilled Lane (Water)	N	255	Unknown		DS
Channel Tunnel Rail Link	N	300	2006	Current	HM, GE

Note(s): SW – Site walkover, HM – Historic Maps, DS – Datasheet, GC – Geochemistry, LA – Local Authority, GE Google Earth

Section 6 Preliminary Conceptual Site Model

6.1 Sources and Pathways of Contamination

The Landmark Site Specific Envirocheck Report and Site Walkover have been used to identify potential contaminative sources. These sources have been presented in Table 5.2. An assessment of the likely pathways and the likelihood of each contaminative source that was considered a risk has been presented in Sections 6.2 to 6.4.

6.2 Potential Pathways

A review of the potential pathways on and off the site has been undertaken based on the site, ground conditions, hydrology and scientific knowledge of the behaviour of the contaminants in the ground. The pathways applicable to the site and the proposed development have been marked in Table 6.1.

Table 6.1 Applicable Pathways

Pathway	Present	Comment
Inhalation of dust	✓	During and post construction
Inhalation of vapour/gases	✓	Post construction
Ingestion and absorption via direct contact	✓	During and post construction
Migration via surface runoff	✓	During and post construction in areas of soft landscaping
Migration in solution via groundwater	✓	During and post construction
Migration of gases via permeable soils	✓	Post construction
Direct contact with construction material	✓	During and post construction
Services and utilities	✓	Post construction
Note(s):		

6.3 Potential Sources of On-site Contamination.

The sources are presented in Table 6.2.

Table 6.2 On-site Potential Contamination Sources

Source	Likely	Reasoning
Cars parked onsite	✓	Cars stationary for several years
Fuel barrels	✓	Suspected oil staining on the floor near barrels
Barn (tractors and car storage)	✓	Suspected oil staining on floor of barn
Note(s):		

6.4 Potential Off-site Sources of Contamination

These sources have been presented in given in Table 6.3.

Table 6.3 Off-site Potential Contamination Sources

Source	Direction	Distance (m)	Likely	Reasoning
Infilled Pond	W	5		Size of pond and age of infill makes it unlikely to be a potential source
Commercial Cleaning Services	S	141		Distance from site
Pumping Station	E	210		Down hydraulic gradient
Potentially Infilled Lane (Water)	N	255		Down hydraulic gradient
Channel Tunnel Rail Link	N	300		Down hydraulic gradient

Note(s):

6.5 Potential Contaminants

Table 7.4 presents the range of possible contaminants associated with the onsite and off-site activities and sources identified following a review of historical maps and datasets.

Table 6.4 Potential Contaminants

Potential Contaminative Sources	Contaminants / Chemical Properties
Cars parked onsite	Metals, Semi-metals and non-metals, PAHs, TPHs, Asbestos, pH
Fuel barrels	Metals, Semi-metals and non-metals, PAHs, TPHs, pH
Barn (tractors and car storage)	Metals, Semi-metals and non-metals, PAHs, TPHs, Asbestos, pH

Note(s):

6.6 Potential Exposure Receptors

The assessment for potential receptors is presented in Table 6.5.

Table 6.5 Potential Receptors

Potential Receptor	Present
Human Health	
Future users of the site (End Users)	✓
Construction workers on-site (Site Workers)	✓
Service and maintenance workers (Site Maintenance)	✓
Site neighbours and wider public (Off-site Users)	✓
Groundwater / Controlled Waters	
Surface Water	✓
Shallow Aquifer	✓
Deep Aquifer	✓
Buildings & Materials	
Buildings and Confined Spaces	✓
Buried Structures	✓
Buried Services	✓
Ecosystems	
Flora and fauna	✓

Note(s):

6.7 Preliminary Conceptual Site Model and Risk Assessment

A preliminary risk assessment has been undertaken based on the proposed development. The assessment has been based on the likelihood of the presence of a pollutant linkage.

A pollutant linkage is the relationship between a contaminant source, a pathway and a receptor. Unless all three elements of a pollutant linkage are present, a risk is not considered to exist. Each of the three elements has been considered within Table 6.1 to Table 6.5. The preliminary conceptual site model and risk assessment is presented in Table 6.6. The classification tables on which the level of risk has been determined have been modified from 'Contaminated land risk assessment: A guide to good practice, 2001, CIRIA C552' and are presented in Appendix G.

Table 6.6 Preliminary Conceptual Site Model and Risk Assessment Methodology

Source (Table 6.2 & Table 6.3)	Potential Contaminant (Table 6.4)	Exposure Pathway (Table 6.1)	Receptor (Table 6.5)	Initial Assessment from Preliminary Investigation Report Information			Comments	Proposed Investigation	
				Severity	Probability	Risk			
Cars onsite, Fuel Barrels and Barn Use On-site historic and current site usage.	Metals, Semi-metals and non-metals, PAHs, Asbestos	Inhalation of dust	Site Workers/Site Maintenance	Medium	Unlikely	Low	The site is within Zone 1, Zone 2 and Zone 3 source protection zone with high ground water vulnerability. This is likely to be associated with the principal aquifer of the underlying chalk below the Thanet Formation.	Phase II ground investigation to confirm the ground conditions present and chemical testing prior to undertaking a generic quantitative risk assessment.	
			End Users	Medium	Low	Moderate/Low			
			Off-site Users	Medium	Unlikely	Low			
	PAHs, TPHs	Inhalation of vapour/gases	Site Workers/Site Maintenance	Mild	Low	Low			An asbestos survey should be undertaken due to the age of the structure. If asbestos is not found the risk should be adjusted as required.
			End Users						
			Off-site Users	Minor	Unlikely	Very low			
	Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Ingestion and absorption via direct contact	Site Workers/Site Maintenance	Medium	Unlikely	Low			
			End Users	Medium	Low	Moderate/Low			
	Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Migration via surface runoff	Surface Water	Mild	Low	Low			
			Migration in solution via groundwater					Surface Water	
								Shallow Aquifer	
								Deep Aquifer	
		Direct contact with construction material	Buried Structures						
	PAHs, TPHs	Migration of gases via permeable soils	Buried Services						
			Site Workers/Site Maintenance	Medium	Unlikely	Low			
			End Users						
Off-site Users			Minor	Unlikely	Very low				
Metals, Semi-metals and non-metals, PAHs, TPHs, pH	Migration in solution via groundwater / Root uptake	Building and Confined Spaces							
		Flora & Fauna	Minor	Low	Low				

Section 7 Recommendations

7.1 General

Based on the information obtained during the compilation of this Preliminary Investigation and the preliminary conceptual site model, a potential for a **low to moderate/low** risk of contamination has been identified.

7.2 UXO

Based on the assessment of the historical maps and Zetica UXO, the site is at high risk. considered that a specialist UXO risk assessment is undertaken to determine the risk to the proposed development.

7.3 Proposed Further Site Works

The general requirements for further environmental investigation are presented in Table 7.1.

Table 7.1 Proposed Further Environmental Investigation

Proposed Works	General Purpose	Required
Investigatory Holes	To collect sufficient samples for a robust assessment	✓
Laboratory Testing	To quantify the risks identified in the Conceptual Site Model	✓
Risk Assessment	Assess pollutant linkages based on current contaminated land guidance and screening criteria's	✓
Borehole well installation	To allow for continued groundwater and/or gas monitoring	-
Remediation	If the site-specific risk assessment reveals that the site was contaminated	TBC
Validation & Verification	To validate and verify the remedial objectives based on the site-specific risk assessment	TBC

Note(s): TBC – To be confirmed

7.4 Discovery Strategy

There may be areas of contamination not identified during the course of the investigation. Such occurrences may also be discovered during the demolition and construction phases for the redevelopment of the site.

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Appendix A Country Series and Ordnance Survey Maps

Appendix B Landmark Envirocheck Report

Appendix C Site Sensitivity Maps

Appendix D Local Authority Search Data

Appendix E UXO Information

Appendix F Site Photographs

Appendix G Risk Assessment Criteria



Figure 1 – Site Location Map



Job Number
21397

Project
Flint Cottage

Client
DHA Planning Ltd

Date
April 2024

Appendix A Country Series and Ordnance Survey Maps

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	Standard Gauge Multiple Track		Standard Gauge Single Track
	Siding, Tramway or Mineral Line		Narrow Gauge
	Geographical County		Administrative County, County Borough or County of City
	Municipal Borough, Urban or Rural District, Burgh or District Council		Borough, Burgh or County Constituency
	Civil Parish		
	BP, BS Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

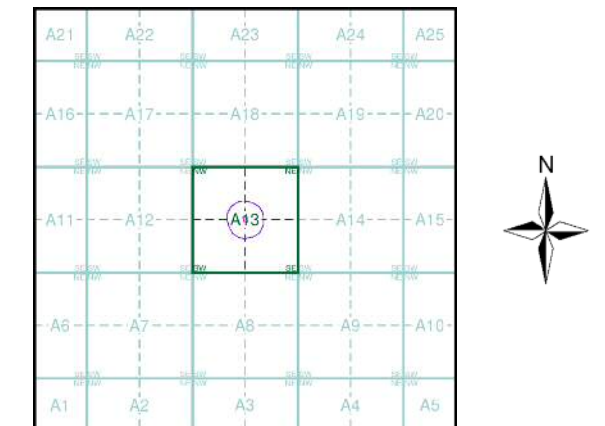
1:10,000 Raster Mapping

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

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Kent	1:10,560	1869	3
Essex	1:10,560	1872	4
Kent	1:10,560	1898	5
Kent	1:10,560	1909	6
Kent	1:10,560	1931	7
Kent	1:10,560	1938	8
Kent	1:10,560	1938	9
Historical Aerial Photography	1:10,560	1947	10
Ordnance Survey Plan	1:10,000	1961 - 1962	11
Ordnance Survey Plan	1:10,000	1965 - 1966	12
Ordnance Survey Plan	1:10,000	1973 - 1975	13
Gravesend	1:10,000	1977	14
Ordnance Survey Plan	1:10,000	1980 - 1981	15
Ordnance Survey Plan	1:10,000	1991	16
10K Raster Mapping	1:10,000	1999	17
10K Raster Mapping	1:10,000	2006	18
VectorMap Local	1:10,000	2024	19

Historical Map - Slice A



Order Details

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Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings

Military and Industrial Buildings

Military and Communication Areas

Subway Entrance

Fireproof Building

Prominent Fireproof Building

Non-fireproof Building

Non-fireproof Building (non-dwelling)

Factory, mill, and flour mill, with chimneys

Factory, mill, and flour mill, without chimneys

Power Station, drawn to scale

Hydroelectric Power Station

Radio Station, drawn to scale

Telephone Station, drawn to scale

Abandoned Open-pit Mine or Quarry

Open-pit Salt Mine

Pit

Oil Deposit or Well

Oil Seepage

Tailings Pile

Fuel Storage Tanks

Natural Gas Tank

Bench Mark

Drill Hole

Burial Mound

Triangulation Point on Burial Mound

Single-track Railroad

Double-track Railroad and Station Building

Coniferous Forest

Deciduous Forest

Mixed Forest

Lawns

Citrus Orchard

Wet Ground

Scattered Vegetation

243.8 Values for prominent elevations

186.0 Numbers for spot elevations, depth soundings, contour lines, etc.

0.2 Velocity of the current, width of river bed, depth of river

180 12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	Ъ (-)
Д д (D)	Л л (L)	У у (U)	Ы (Y)
Е е (E)	М м (M)	Ф ф (F)	Ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings

Military and Industrial Buildings

Military and Communication Areas

Subway Entrance

Partly Demolished Buildings

Demolished Buildings

Built-Up Area with Fireproof Buildings Predominant

Built-Up Area with Non-Fireproof Buildings Predominant

Individual Fireproof Building

Prominent Industrial Building

Individual Dwelling, Fireproof

Ruins of an Individual Dwelling

Factory or Mill Chimney

Factory or Mill with Chimney

Factory or Mill without Chimney

Mine or Open Pit Mine

Operating Shaft or Mine

Non-Operating Shaft or Mine

Salt Mine

Tailings Pile

Pit

Stone Quarry

Gas Pump or Service Station

Fuel Storage or Natural Gas Tank

Oil or Natural Gas Derrick

Small Hydroelectric Power Station

Power Station

Transformer Station

Cemetery

Burial Mound (height in metres)

Triangulation Point on Burial Mound

Triangulation Point

Bench Mark

Bench Mark (monumented)

Telegraph Office

Telephone Station

Radio Station

Radio Tower

Airfield or Seaplane Base

Landing Strip

Cut

Fill

Km Post

Plantings

Telegraph/Telephone Lines

Main Highway

Highway under Construction

Improved Dirt Road (former truck road)

Small Bridge

Pipe (Culvert)

Tunnel

Dismantled Railroad

Double-track Railroad with First Class Station

Railroad Under Construction

Shore Embankment

River or Ditch with Embankment

Direction and velocity of current

Water Gauge

Water Level Mark

Well

Water Reservoir or Rain Water Pit

Spring

Isobath with value

Heavy (Index) Contour Line

Contour Line and Value

Half Contour Line

Spot Elevation Value

Coniferous

Deciduous

Mixed

Scrub

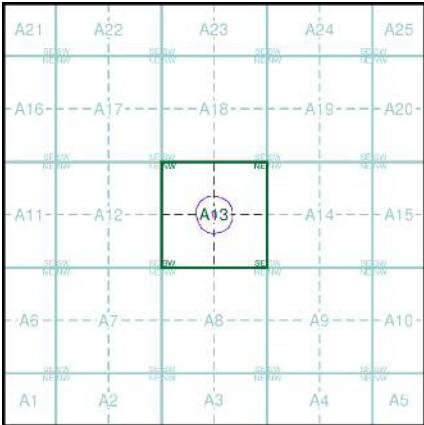
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Essex	1:10,560	1872	4
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Kent	1:10,560	1909	6
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VectorMap Local	1:10,000	2024	19

Russian Map - Slice A



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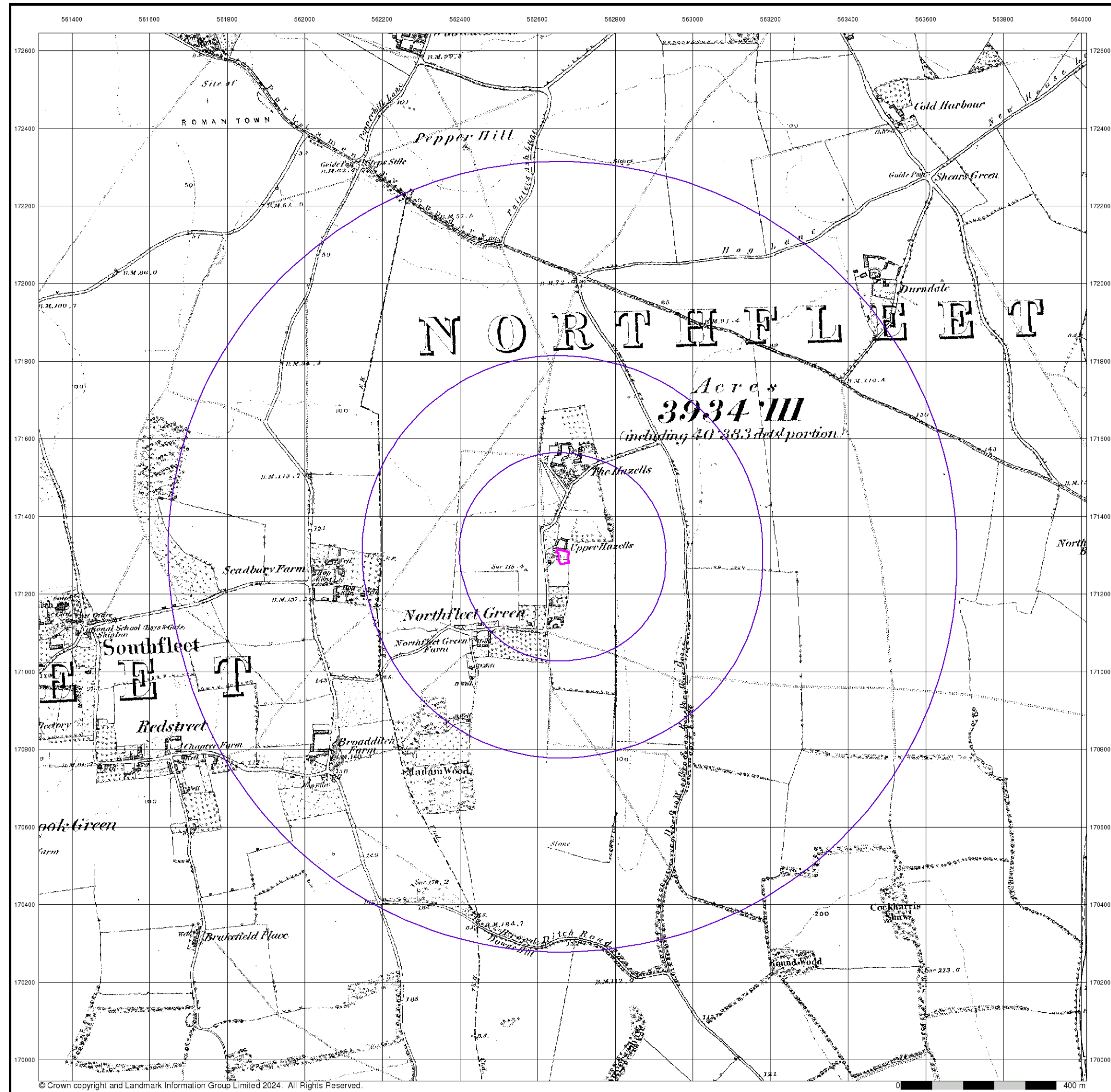
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Fax: 0844 844 9951

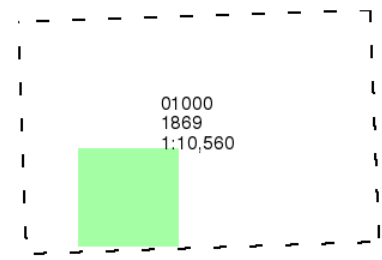
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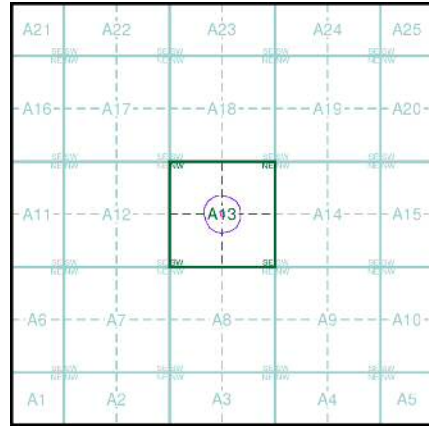
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Map Name(s) and Date(s)



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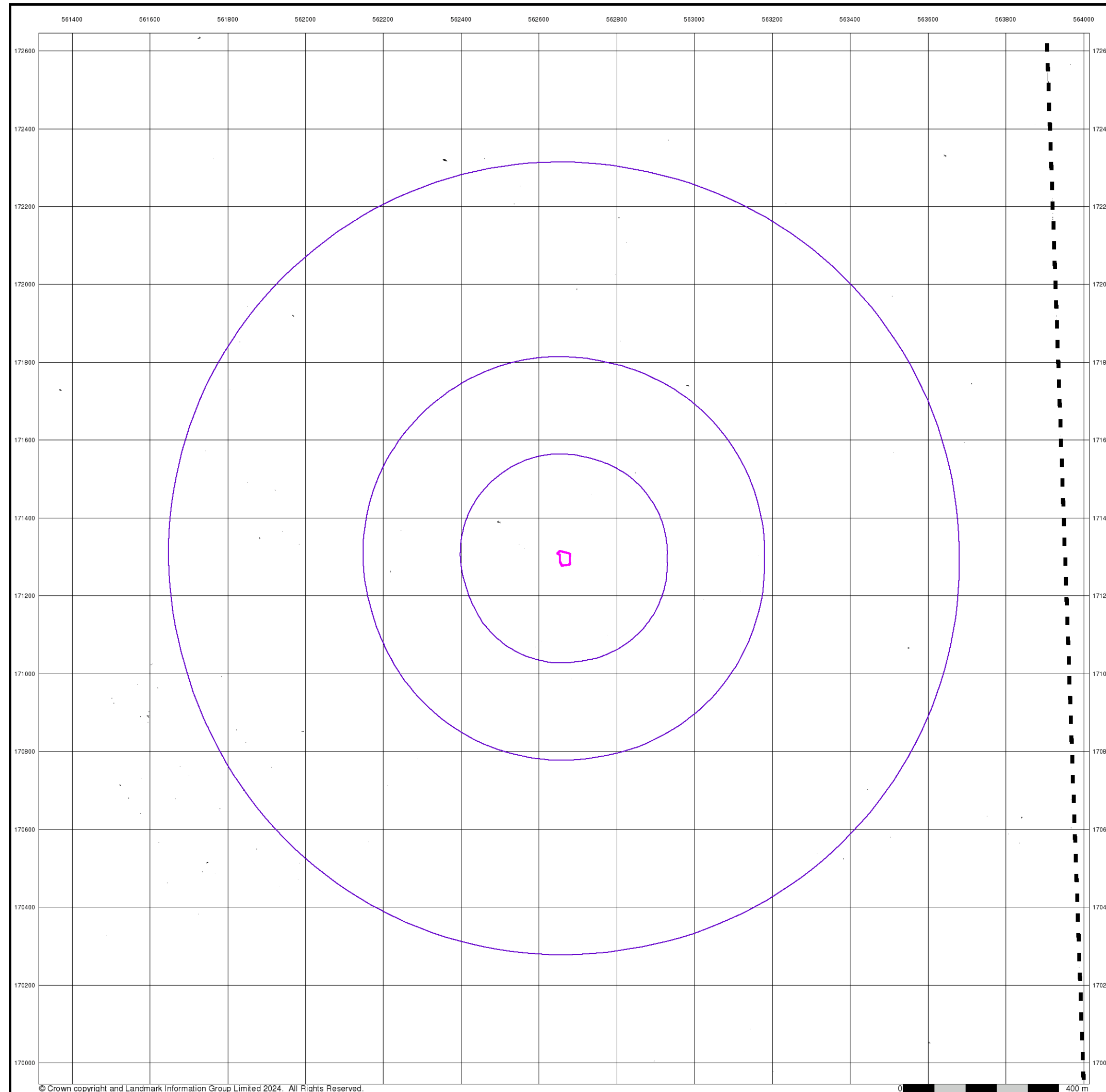
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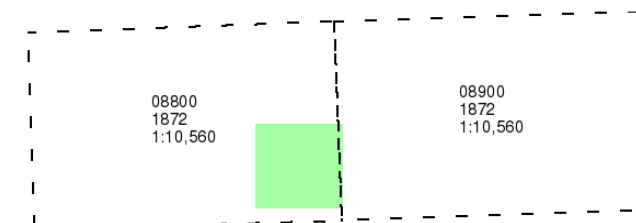
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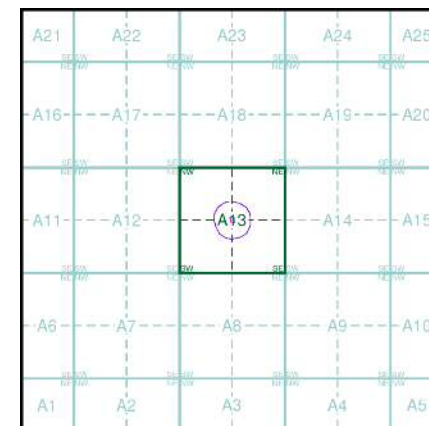
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Map Name(s) and Date(s)



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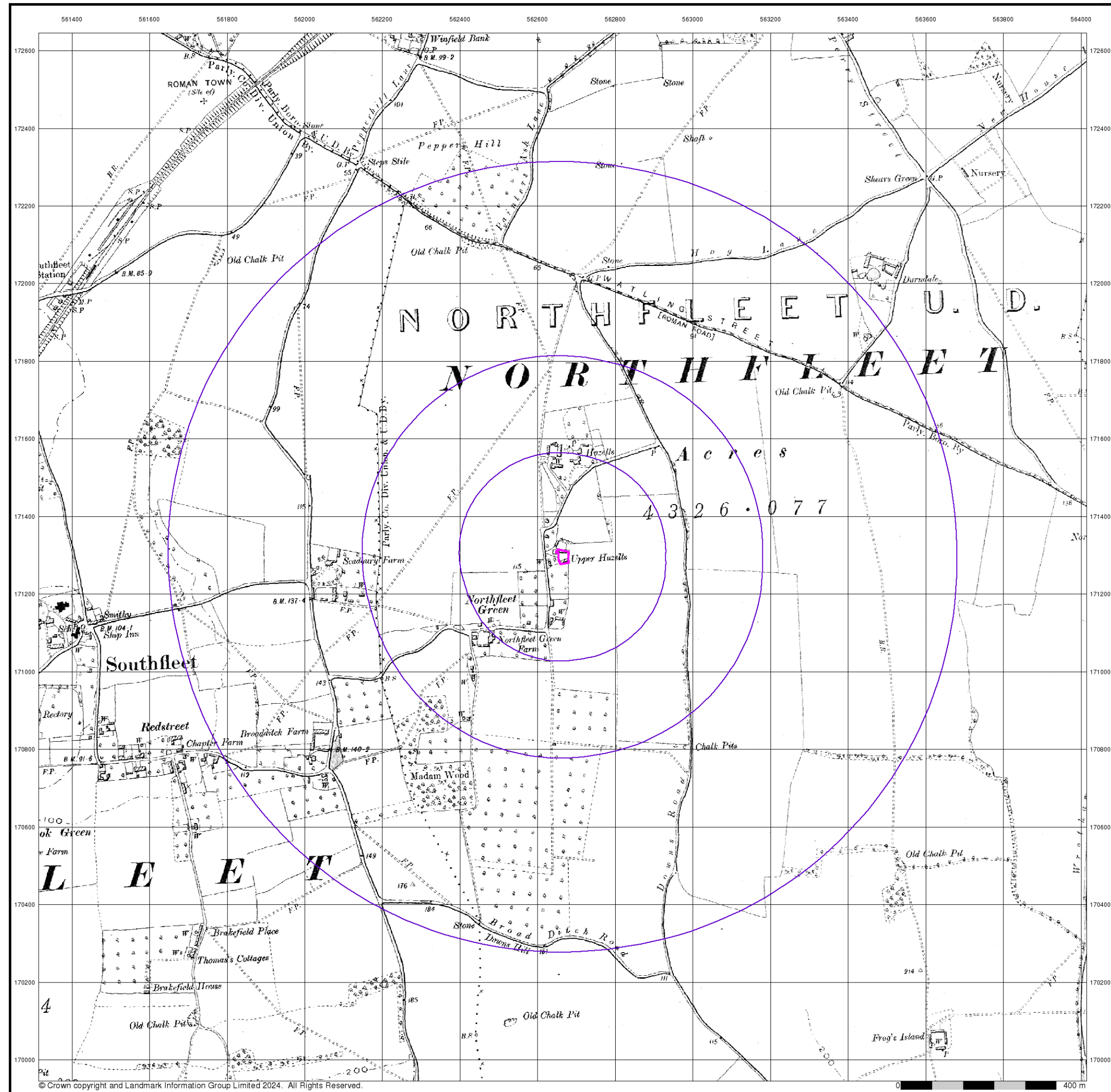
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Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



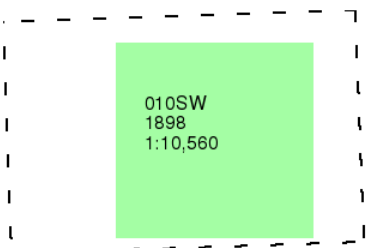
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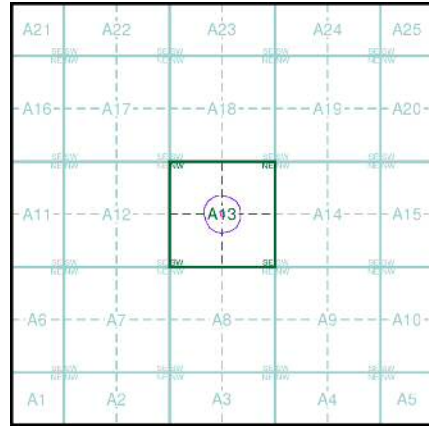
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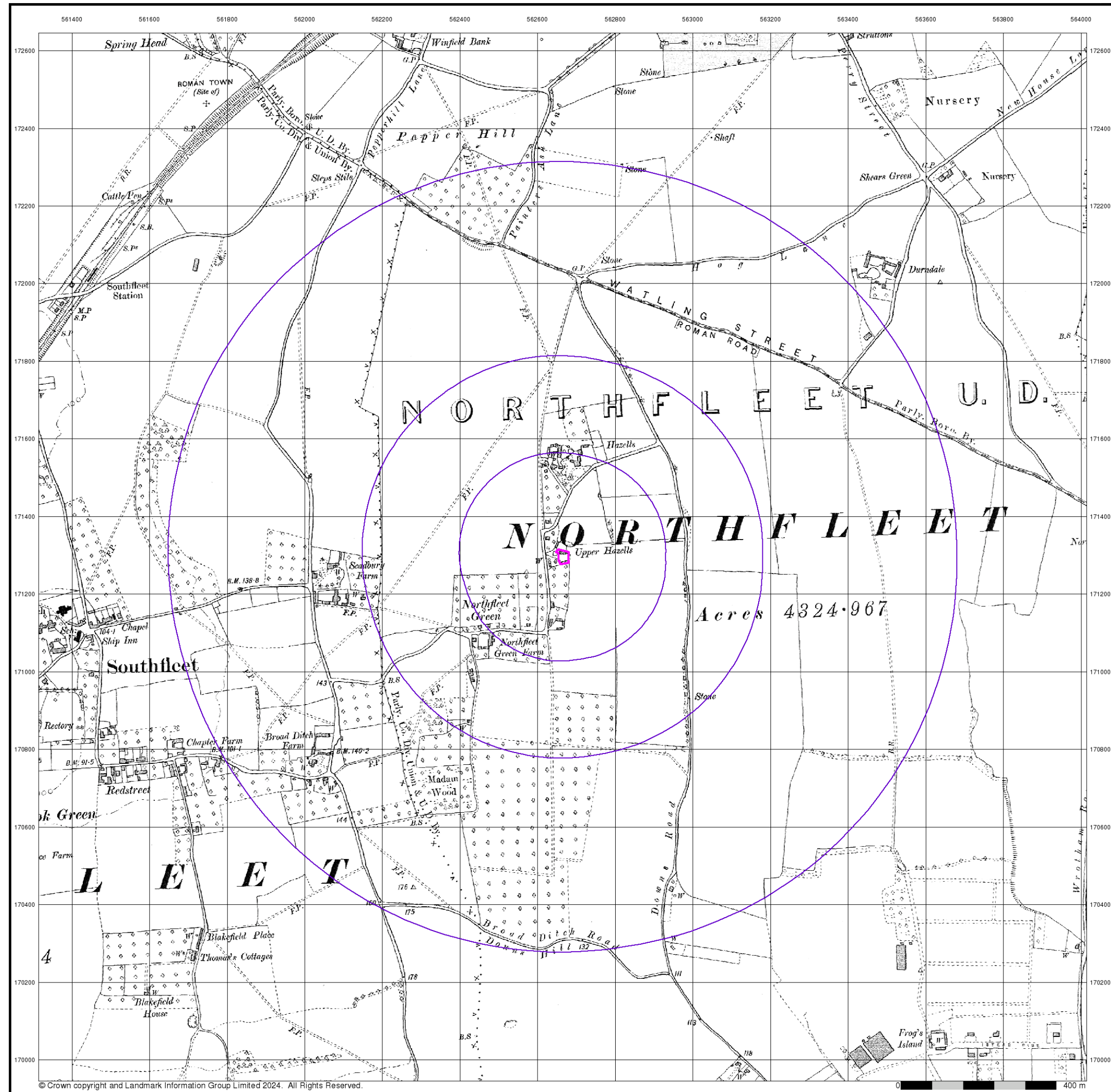


Historical Map - Slice A



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National Grid Reference: 562670, 171300
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Site Details
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Kent

Published 1909

Source map scale - 1:10,560

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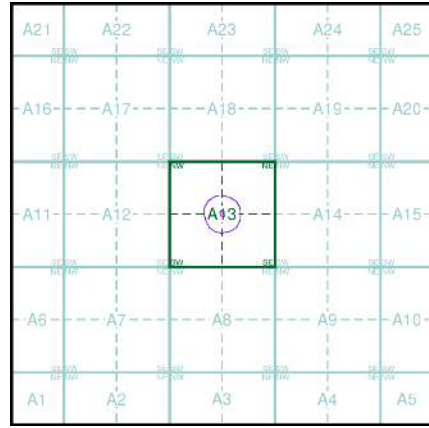
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1909

1:10,560

Historical Map - Slice A



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National Grid Reference:	562670, 171300
Slice:	A
Site Area (Ha):	0.09
Search Buffer (m):	1000

Site Details

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A Landmark Information Group Service v50.0 03-Apr-2024 Page 6 of 19



soils
L I M I T E D
Geotechnical & Environmental
Consultants

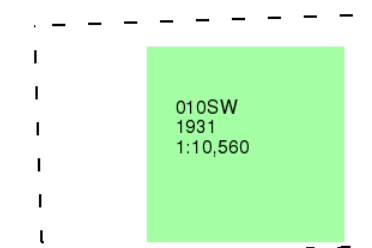
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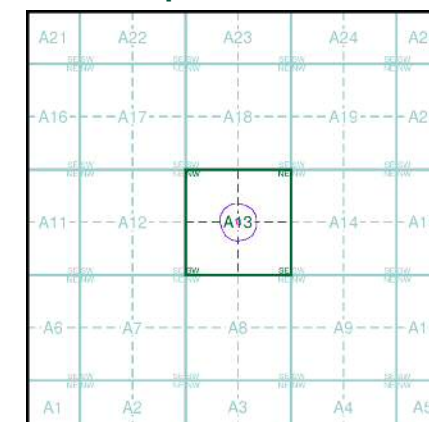
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN

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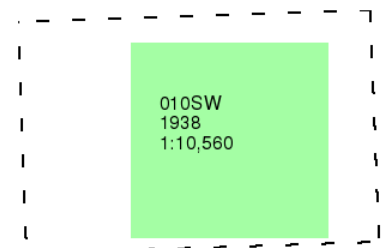
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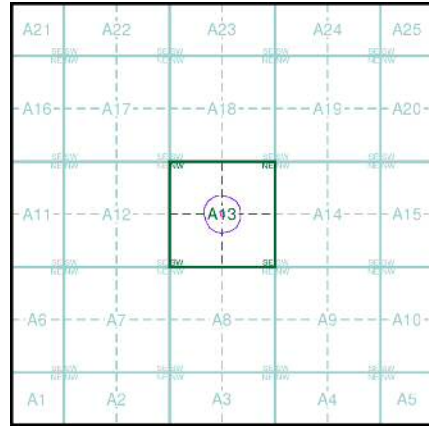
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

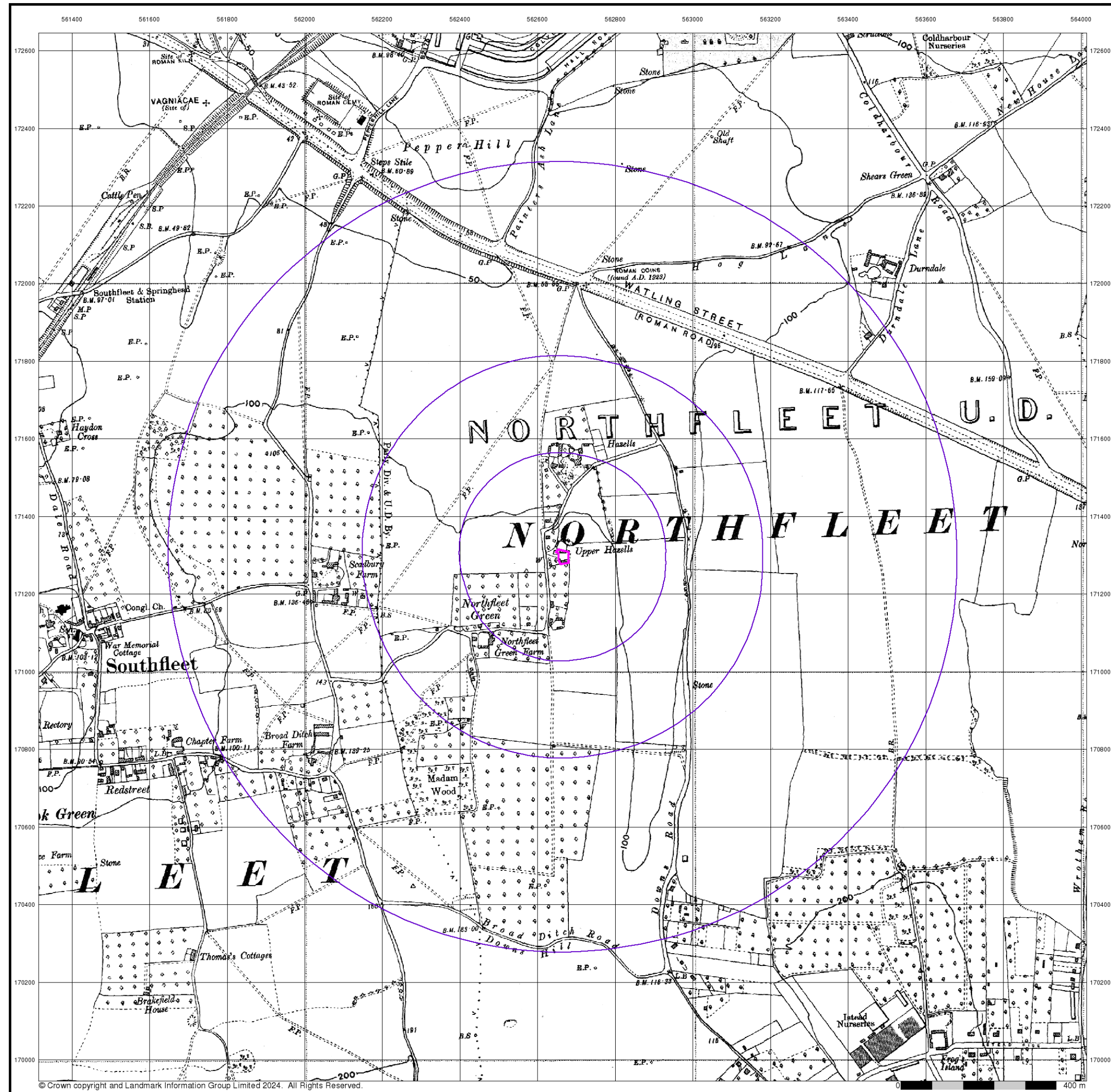
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



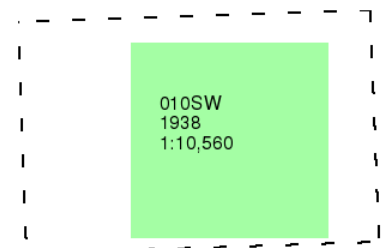
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



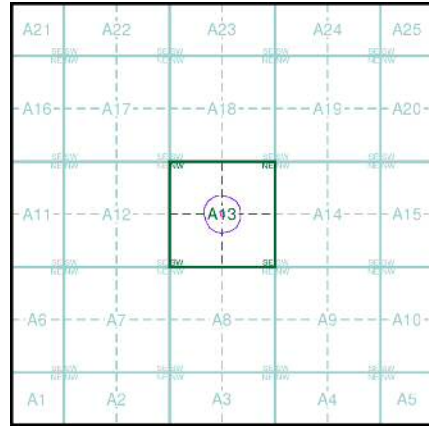
Kent
Published 1938
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details
Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



Historical Aerial Photography

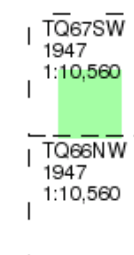
Published 1947

Source map scale - 1:10,560

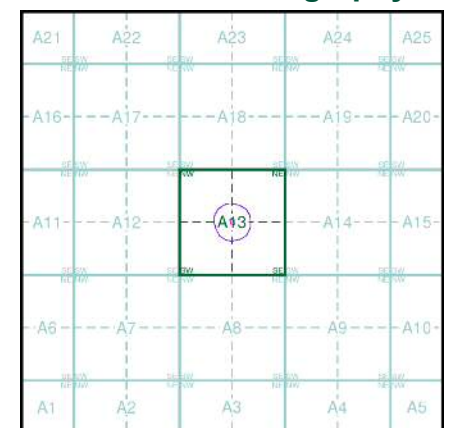
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the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

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Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



Order Details

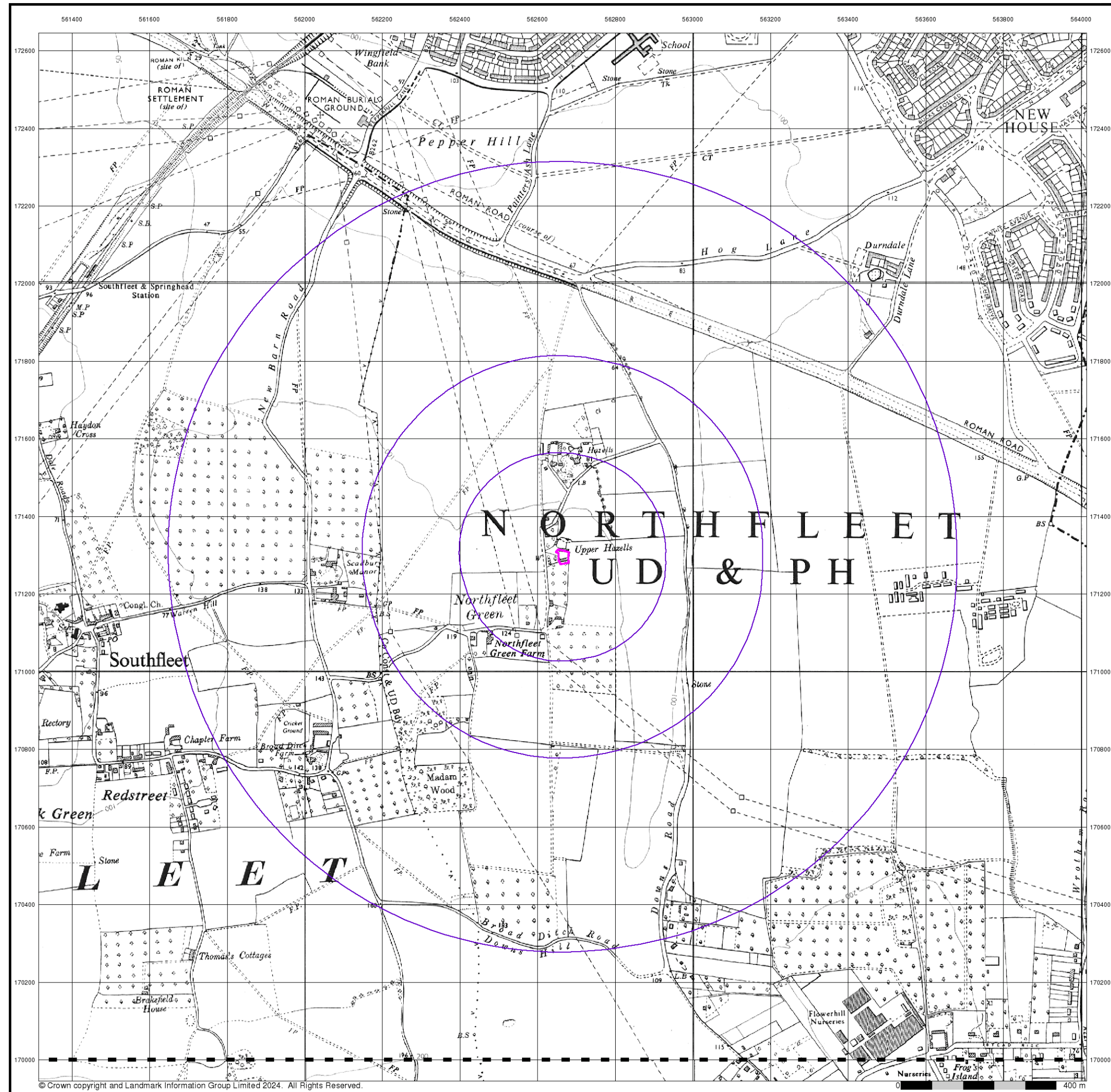
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

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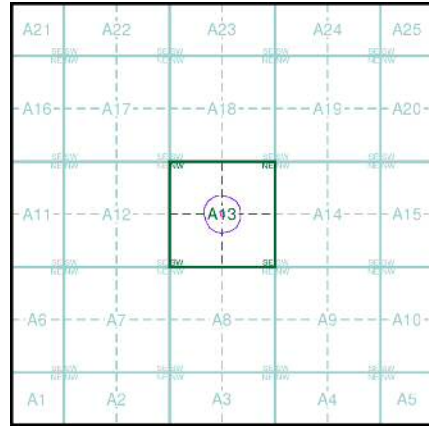
Ordnance Survey Plan
Published 1961 - 1962
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

TQ67SW	1962
1:10,560	
TQ66NW	1961
1:10,560	

Historical Map - Slice A



Order Details

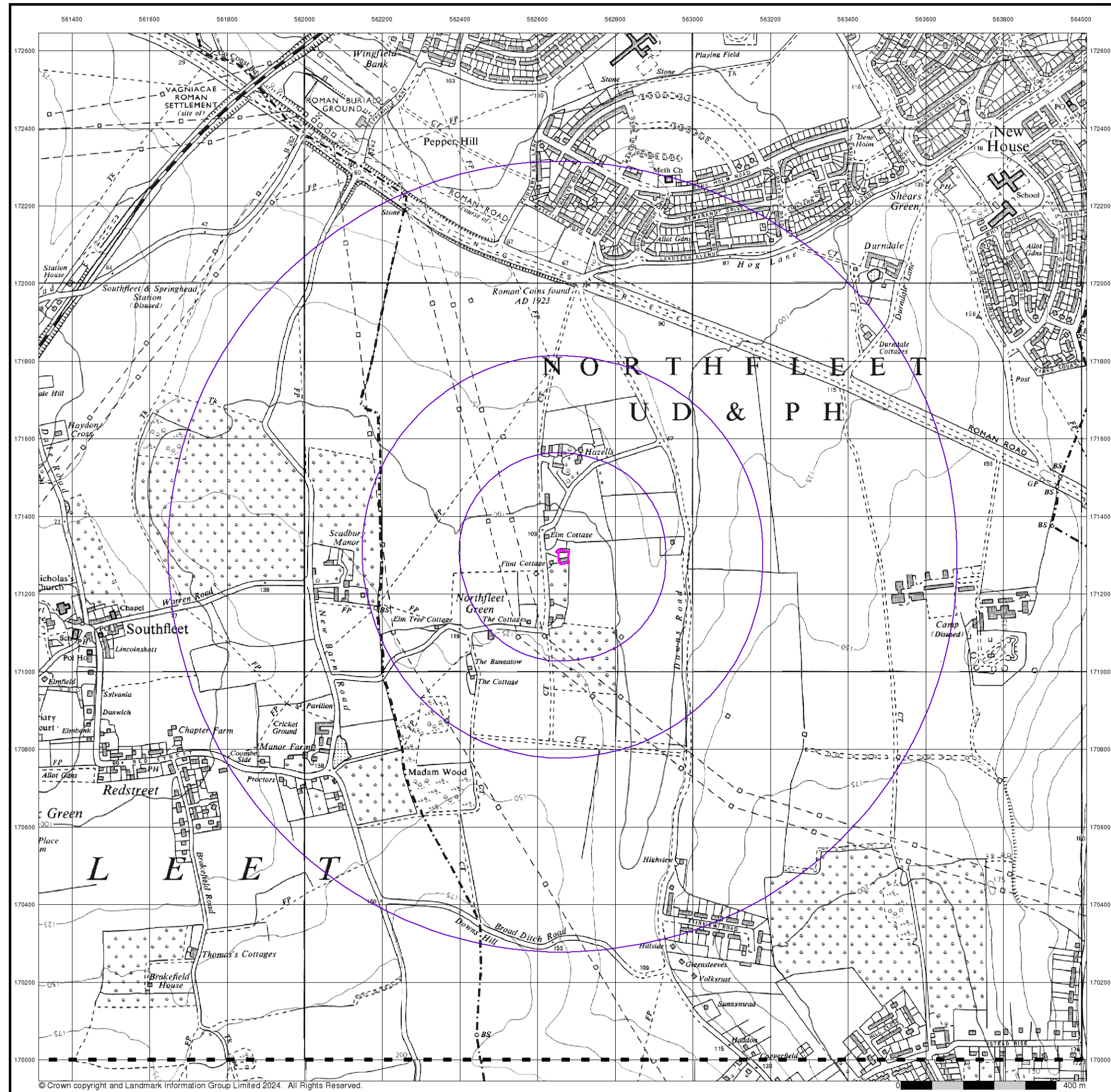
Order Number:	341438964_1_1
Customer Ref:	21397SAN
National Grid Reference:	562670, 171300
Slice:	A
Site Area (Ha):	0.09
Search Buffer (m):	1000

Site Details

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Ordnance Survey Plan

Published 1965 - 1966

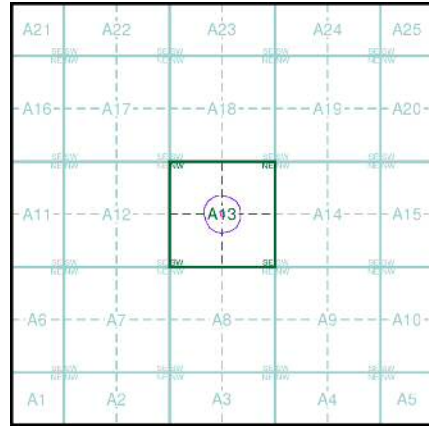
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

TQ67SW	1966
1:10,560	
TQ66NW	1965
1:10,560	

Historical Map - Slice A



Order Details

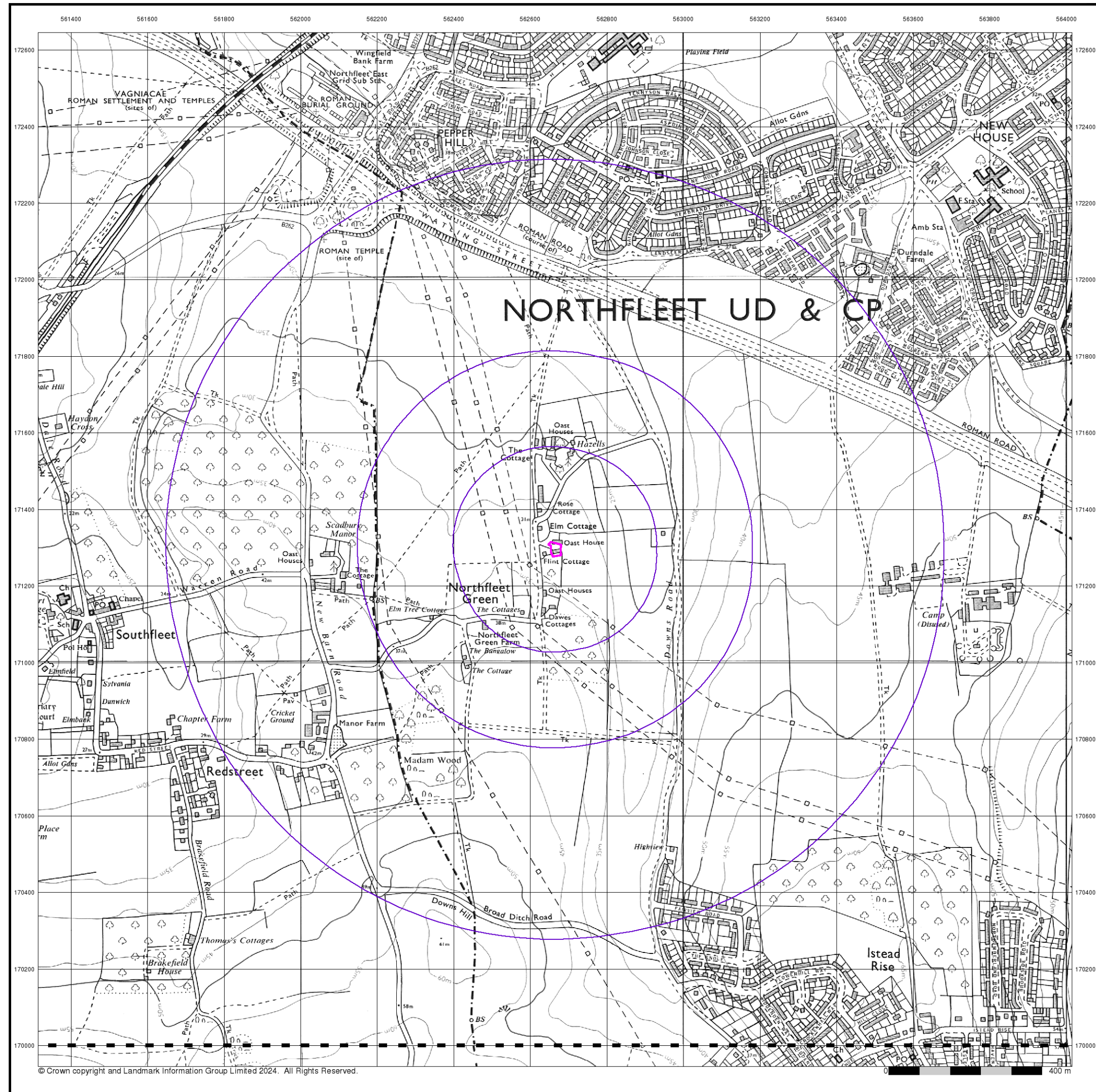
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan

Published 1973 - 1975

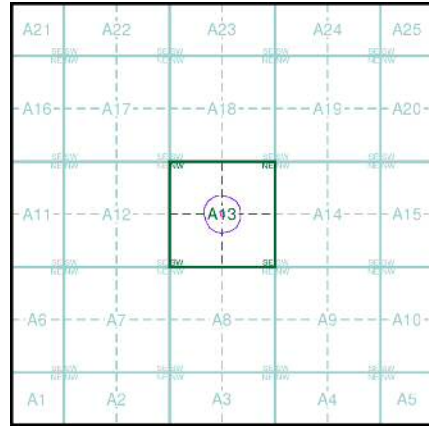
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

TQ67SW	1973
1:10,000	
TQ66NW	1975
1:10,000	

Historical Map - Slice A



Order Details

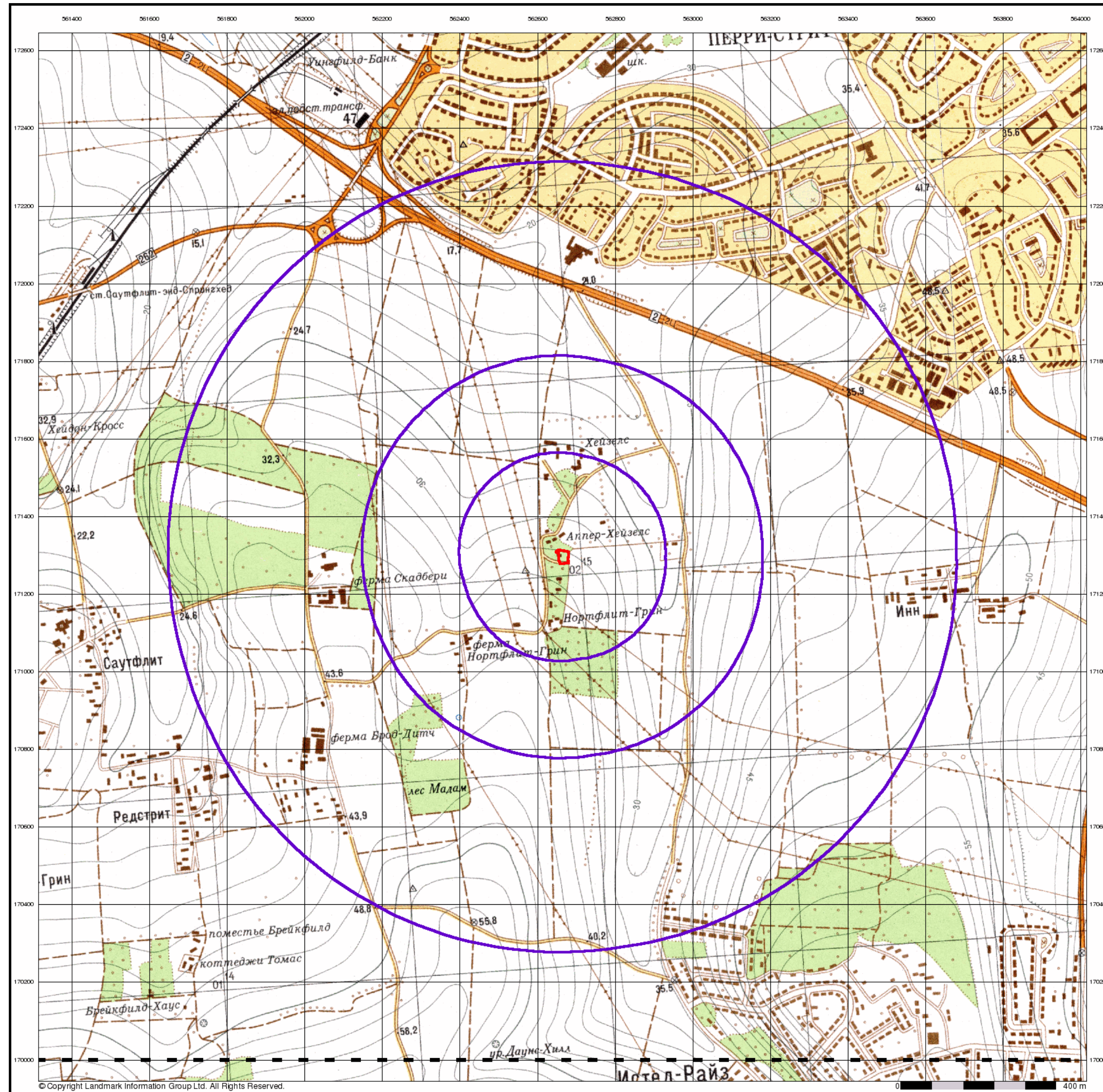
Order Number:	341438964_1_1
Customer Ref:	21397SAN
National Grid Reference:	562670, 171300
Slice:	A
Site Area (Ha):	0.09
Search Buffer (m):	1000

Site Details

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Gravesend

Published 1977

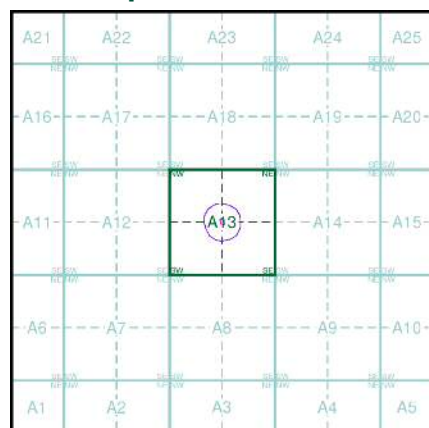
Source map scale - 1:10,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use. They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

TQ67SW
1977
1:10,000
TQ66NW
1977
1:10,000

Russian Map - Slice A



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan

Published 1980 - 1981

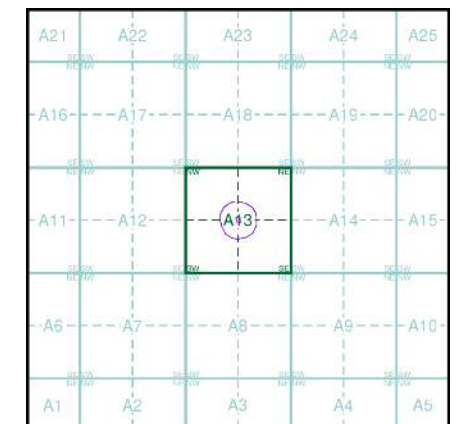
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

TQ67SW	1980
1:10,000	
TQ66NW	1981
1:10,000	

Historical Map - Slice A

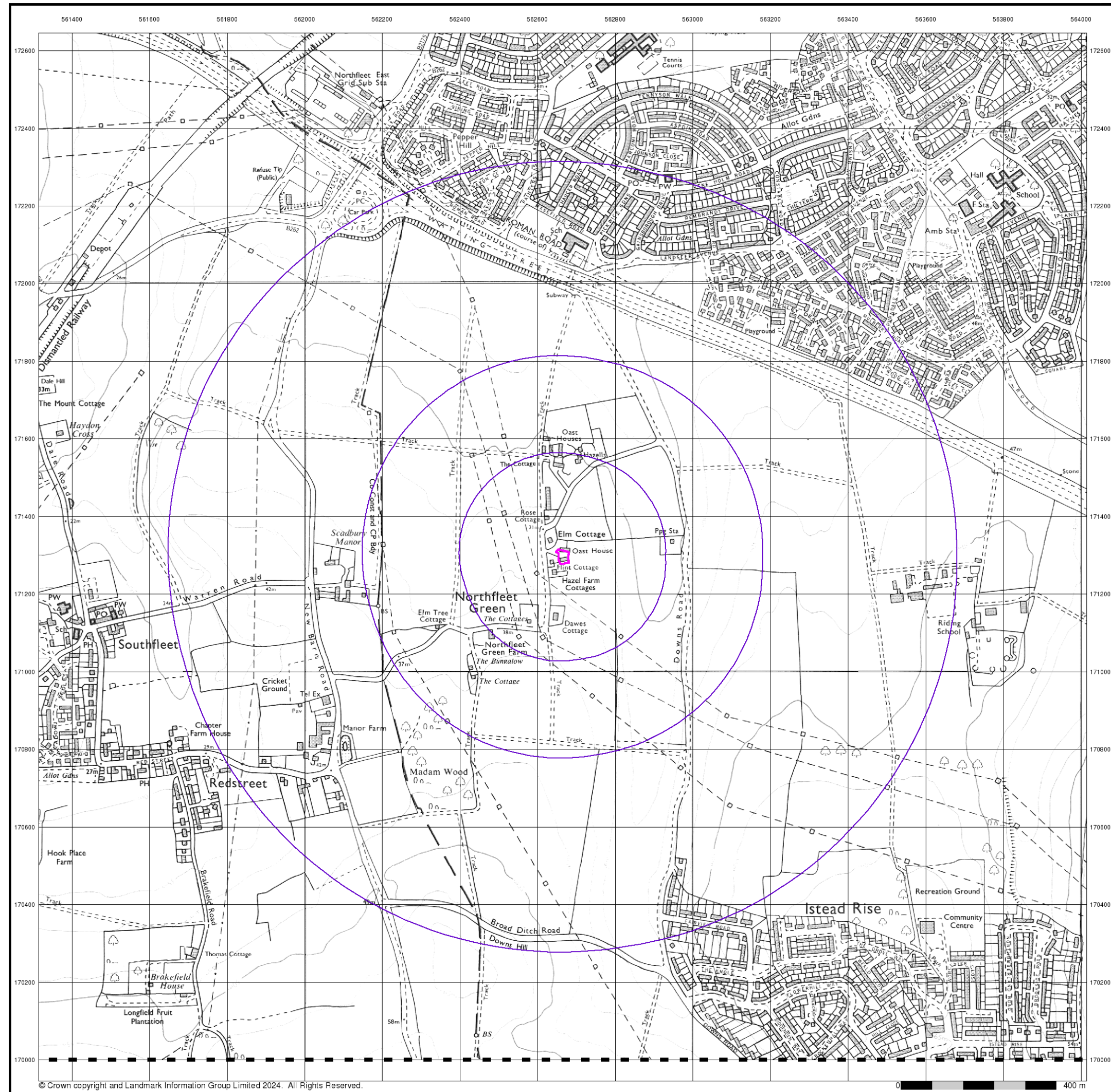


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



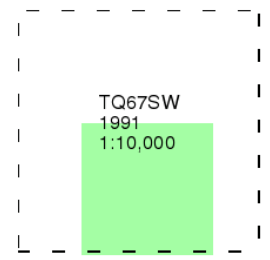
Ordnance Survey Plan

Published 1991

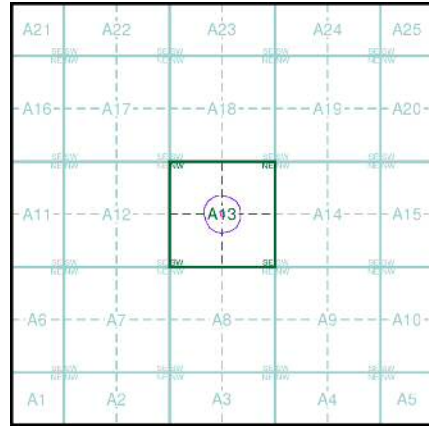
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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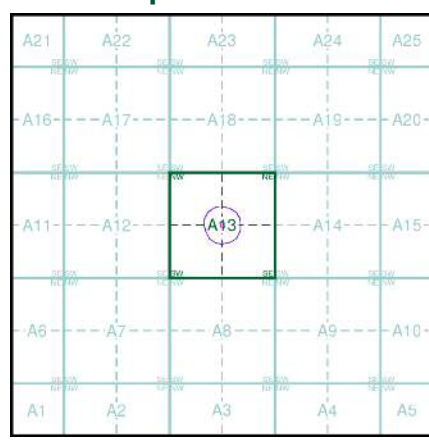
10k Raster Mapping
Published 1999
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

TQ67SW	1999	1:10,000
TQ66NW	1999	1:10,000

Historical Map - Slice A



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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10k Raster Mapping

Published 2006

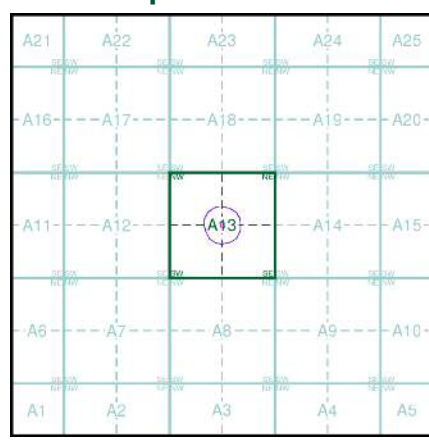
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

TQ67SW	2006	1:10,000
TQ66NW	2006	1:10,000

Historical Map - Slice A



Order Details

Order Number:	341438964_1_1
Customer Ref:	21397SAN
National Grid Reference:	562670, 171300
Slice:	A
Site Area (Ha):	0.09
Search Buffer (m):	1000

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VectorMap Local

Published 2024

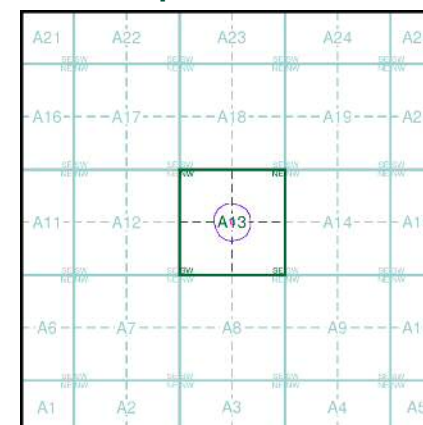
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

TQ67SW
2024
Variable
TQ66NW
2024
Variable

Historical Map - Slice A



Order Details

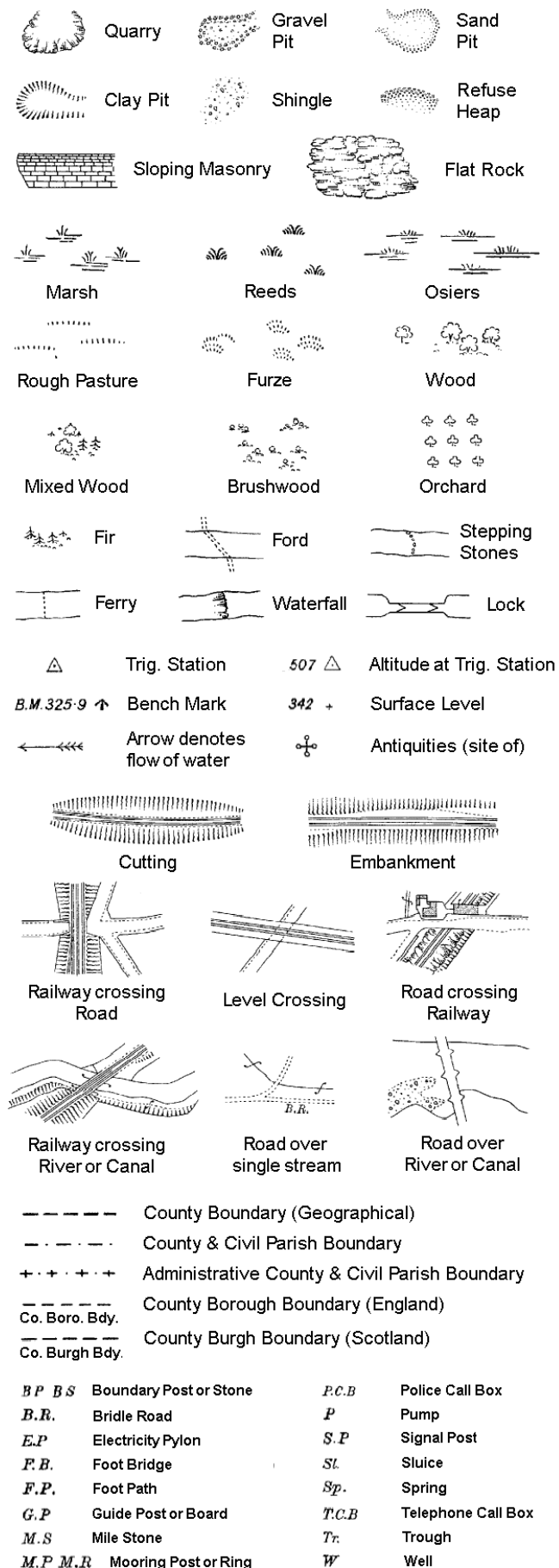
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN

Historical Mapping Legends

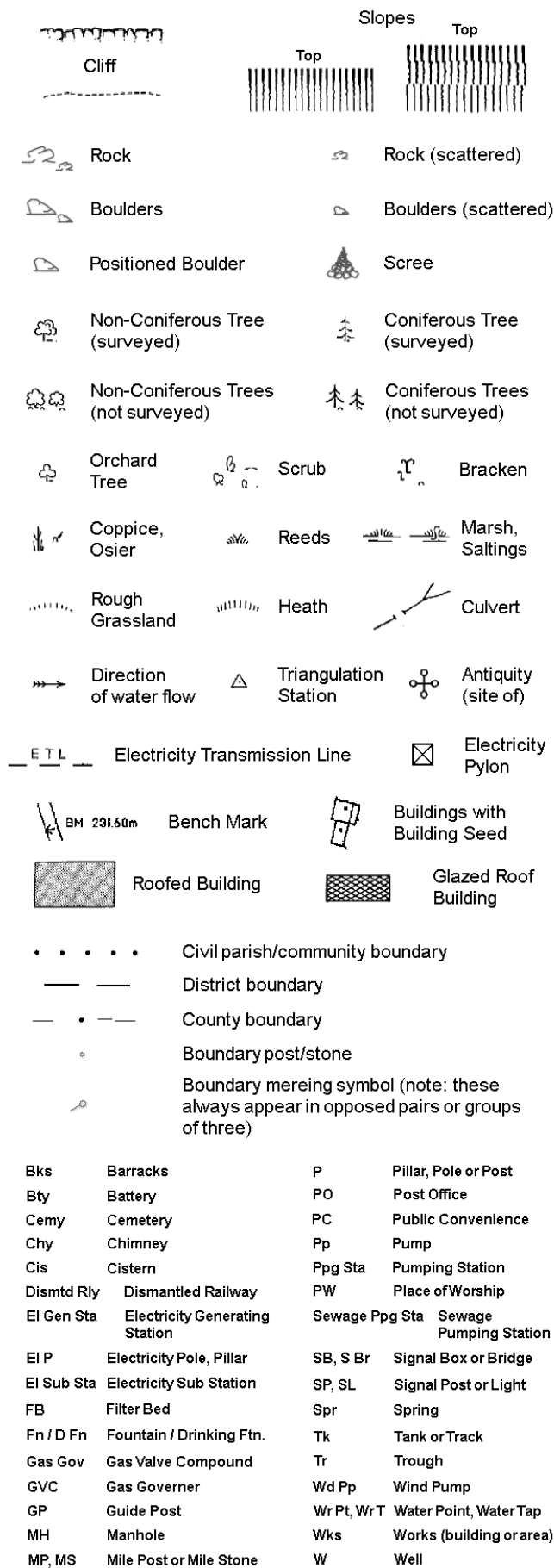
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



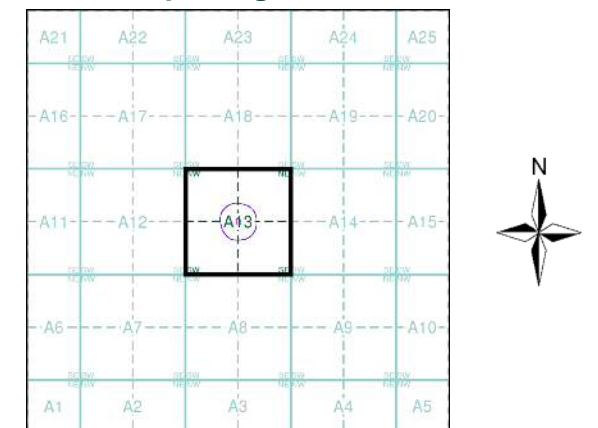
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Kent	1:2,500	1874 - 1882	2
Kent	1:2,500	1896	3
Kent	1:2,500	1908	4
Kent	1:2,500	1938	5
Ordnance Survey Plan	1:2,500	1961 - 1962	6
Ordnance Survey Plan	1:2,500	1966 - 1974	7
Supply of Unpublished Survey Information	1:2,500	1973	8
Additional SIMs	1:2,500	1974 - 1982	9
Ordnance Survey Plan	1:2,500	1976	10
Additional SIMs	1:2,500	1985	11
Ordnance Survey Plan	1:1,250	1988	12
Large-Scale National Grid Data	1:1,250	1992	13
Large-Scale National Grid Data	1:2,500	1992	14
Historical Aerial Photography	1:2,500	1999	15

Historical Map - Segment A13



Order Details

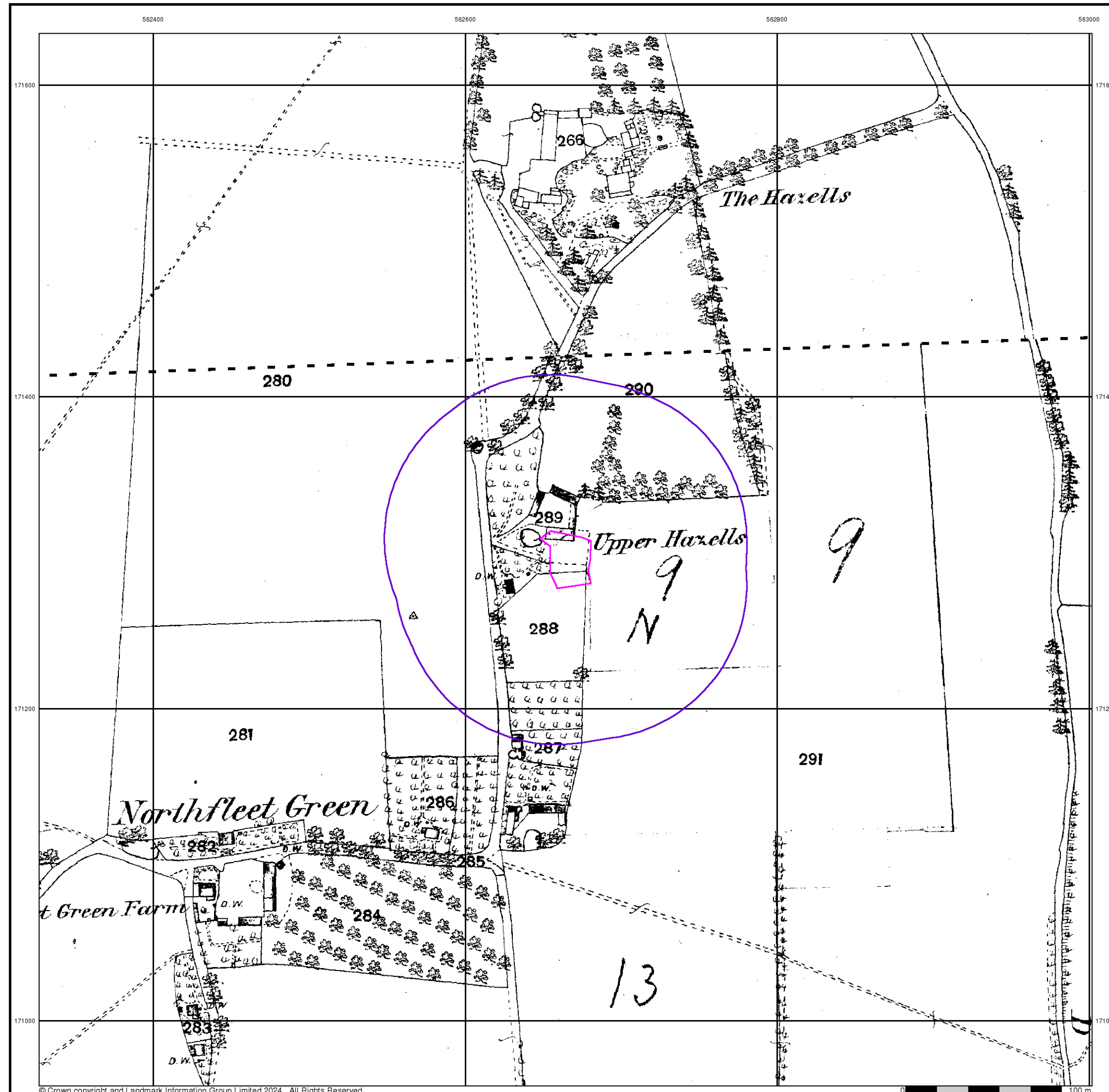
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

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Kent

Published 1874 - 1882

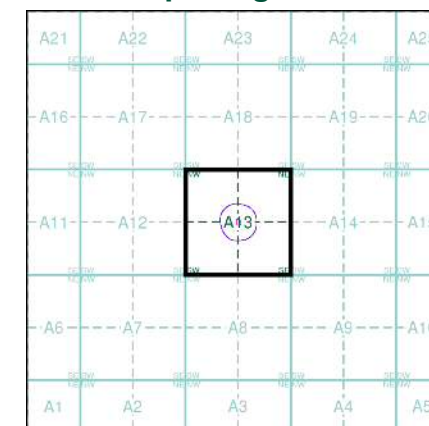
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

010_10 1882 1:2,500
010_14 1874 1:2,500

Historical Map - Segment A13



Order Details

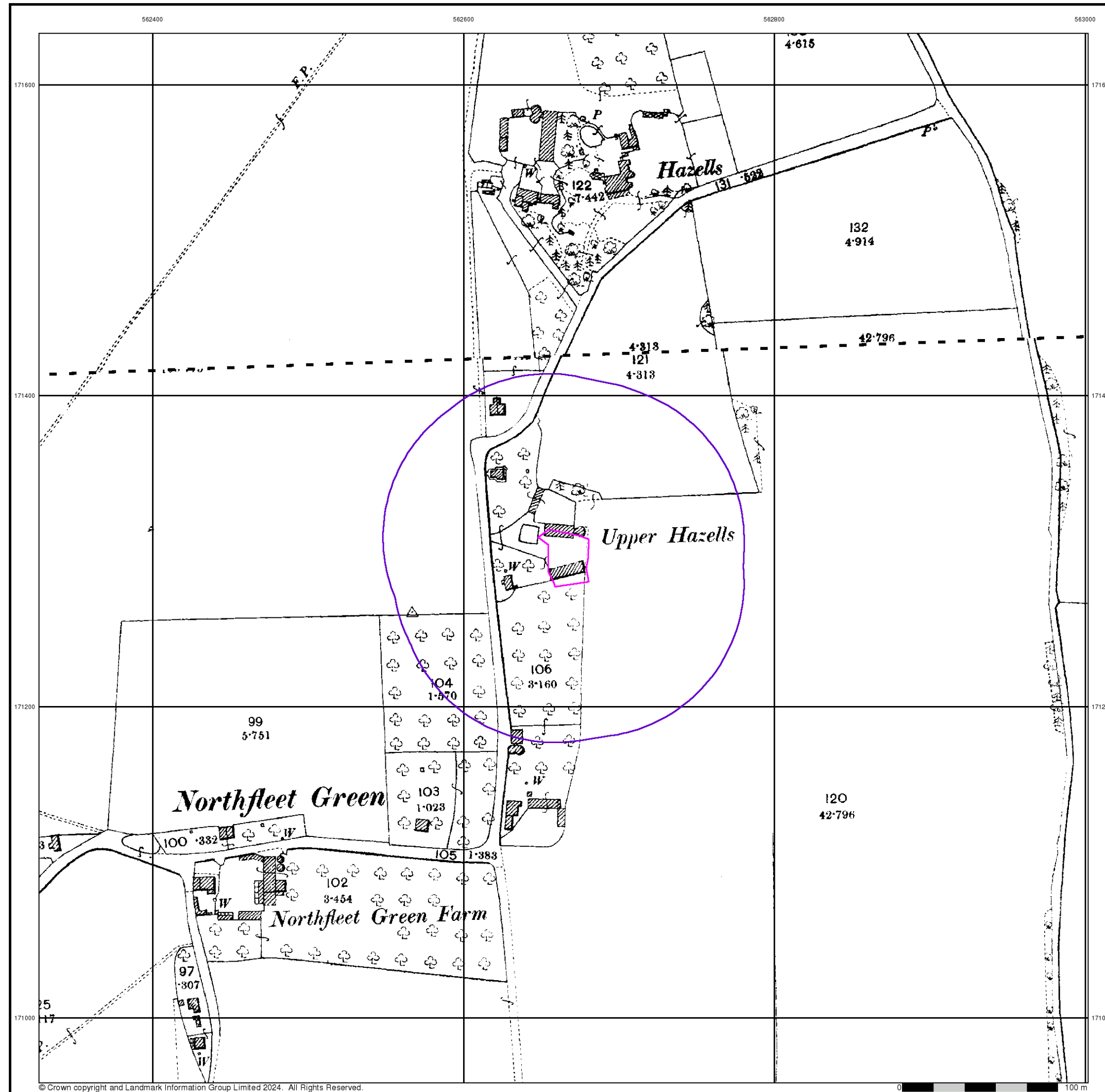
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

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Kent

Published 1896

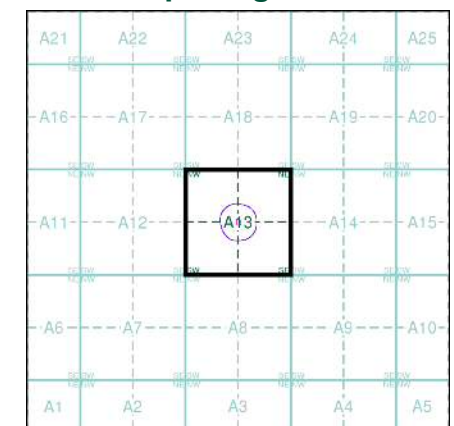
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

010_10 1896 1:2,500
010_14 1896 1:2,500

Historical Map - Segment A13



Order Details

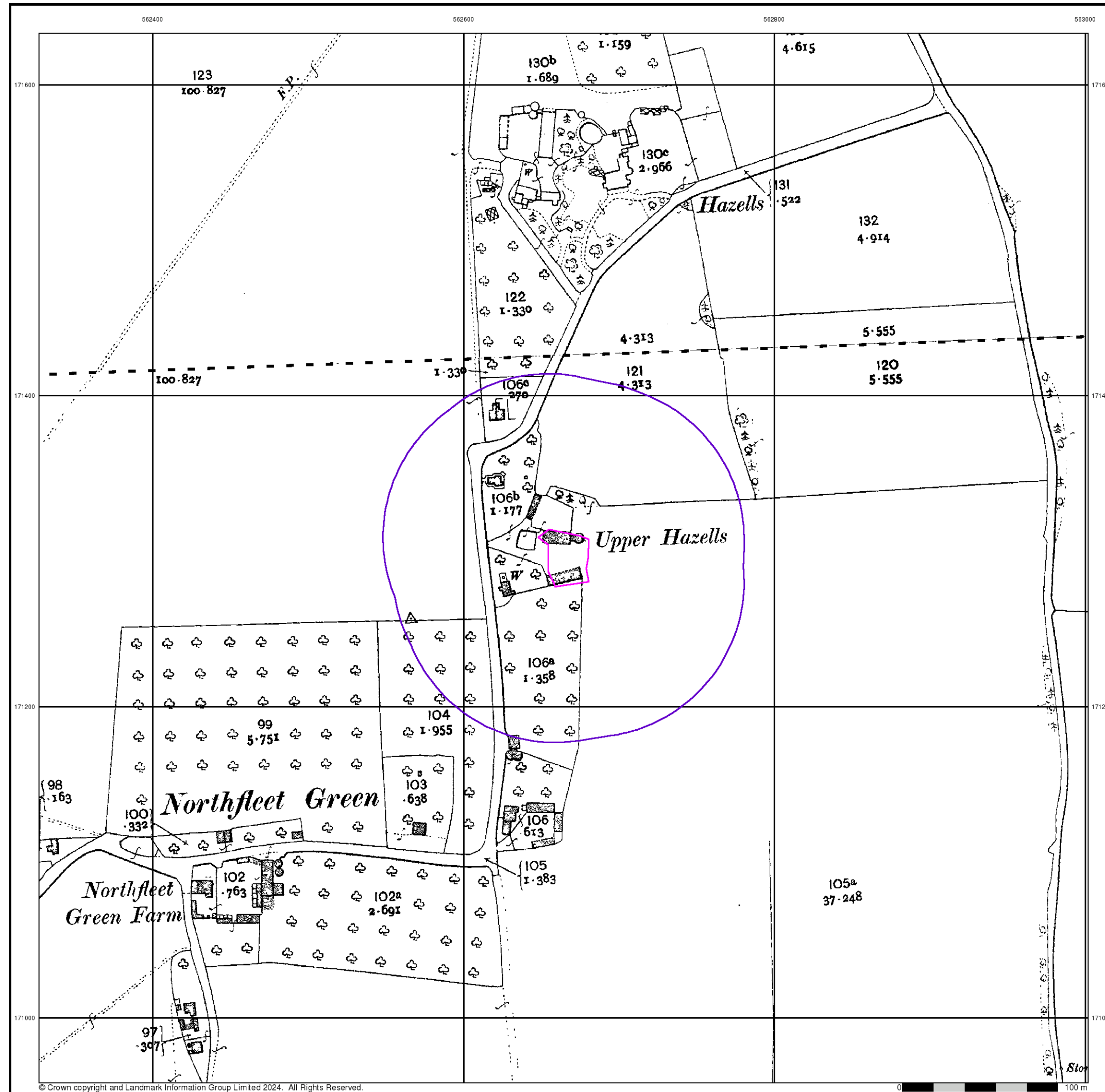
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

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soils
LIMITED
Geotechnical & Environmental
Consultants

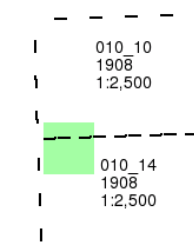
Kent

Published 1908

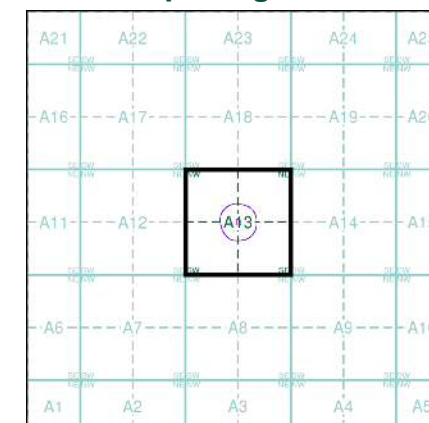
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

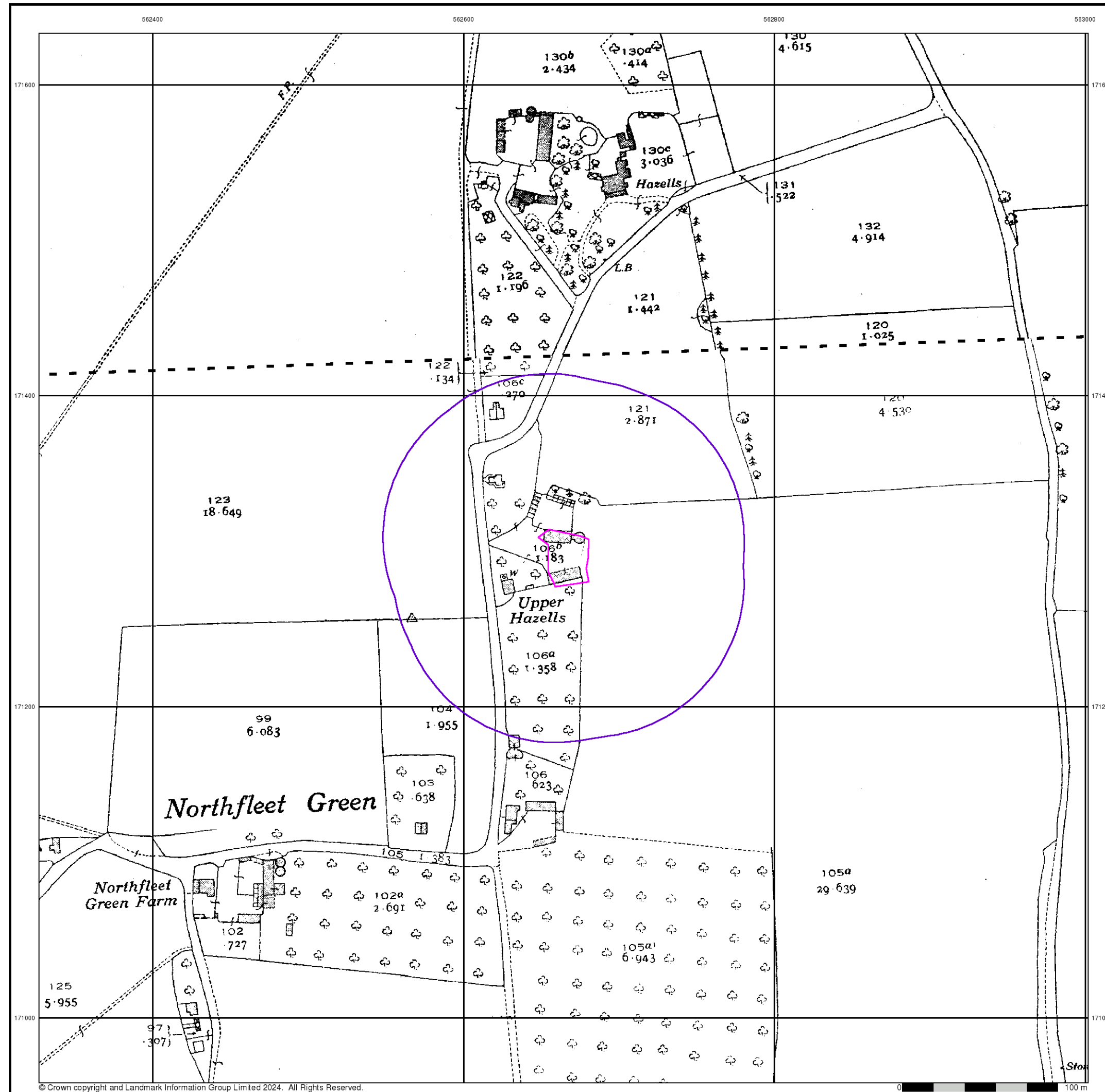
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN

Landmark
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



soils
LIMITED
Geotechnical & Environmental
Consultants

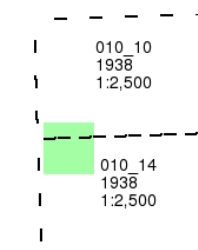
Kent

Published 1938

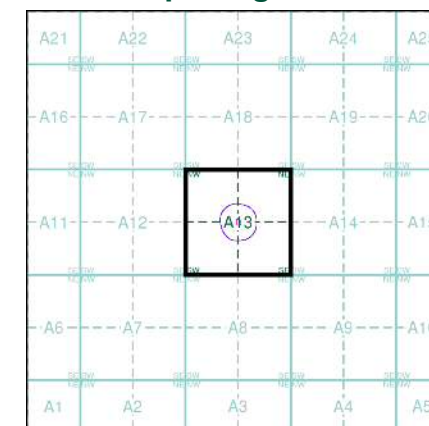
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

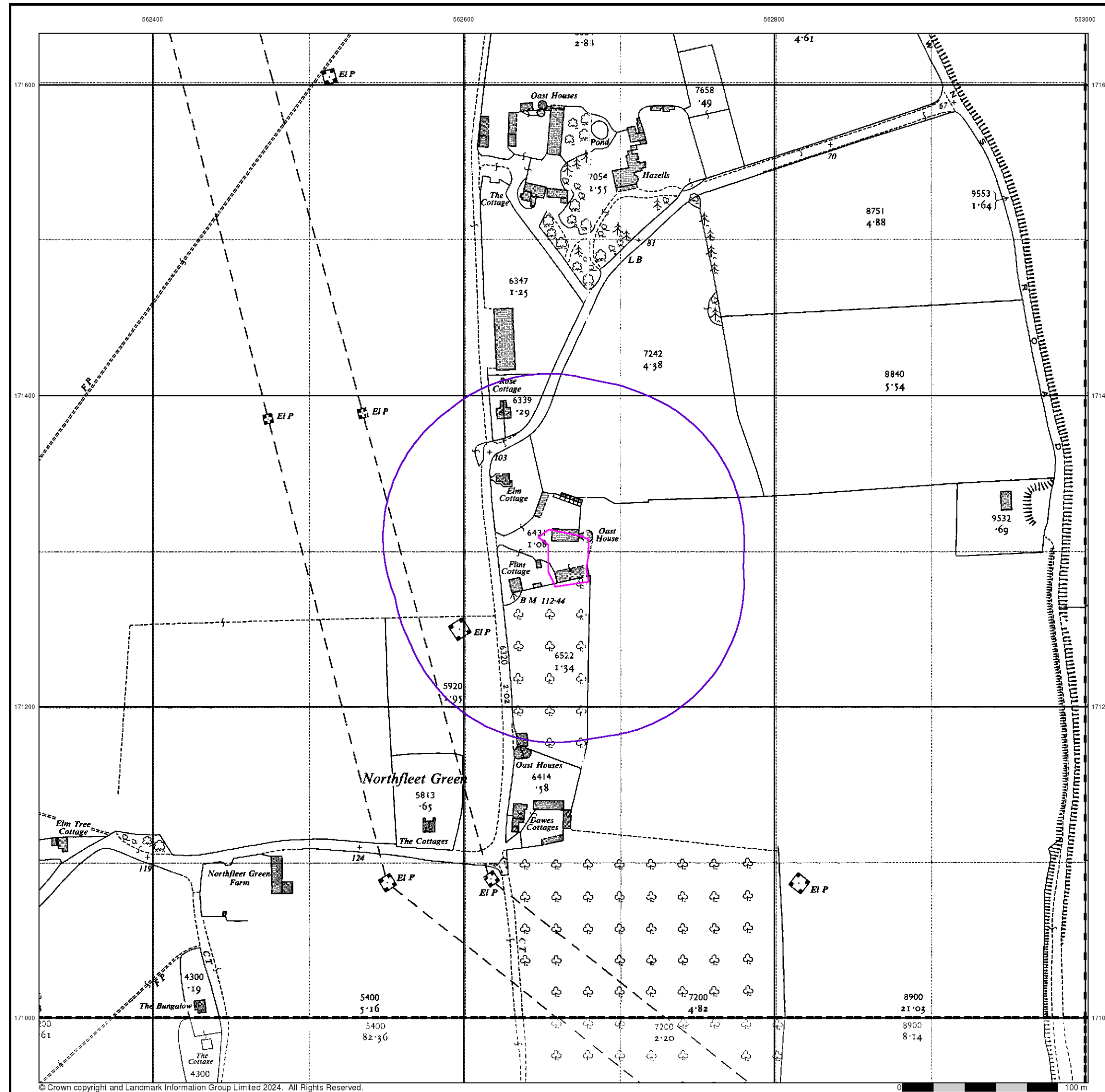
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

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Ordnance Survey Plan

Published 1961 - 1962

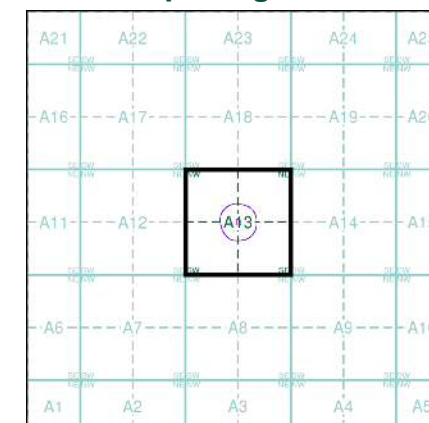
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

TQ6271 1962 1:2,500	TQ6371 1962 1:2,500
TQ6270 1961 1:2,500	TQ6370 1961 1:2,500

Historical Map - Segment A13

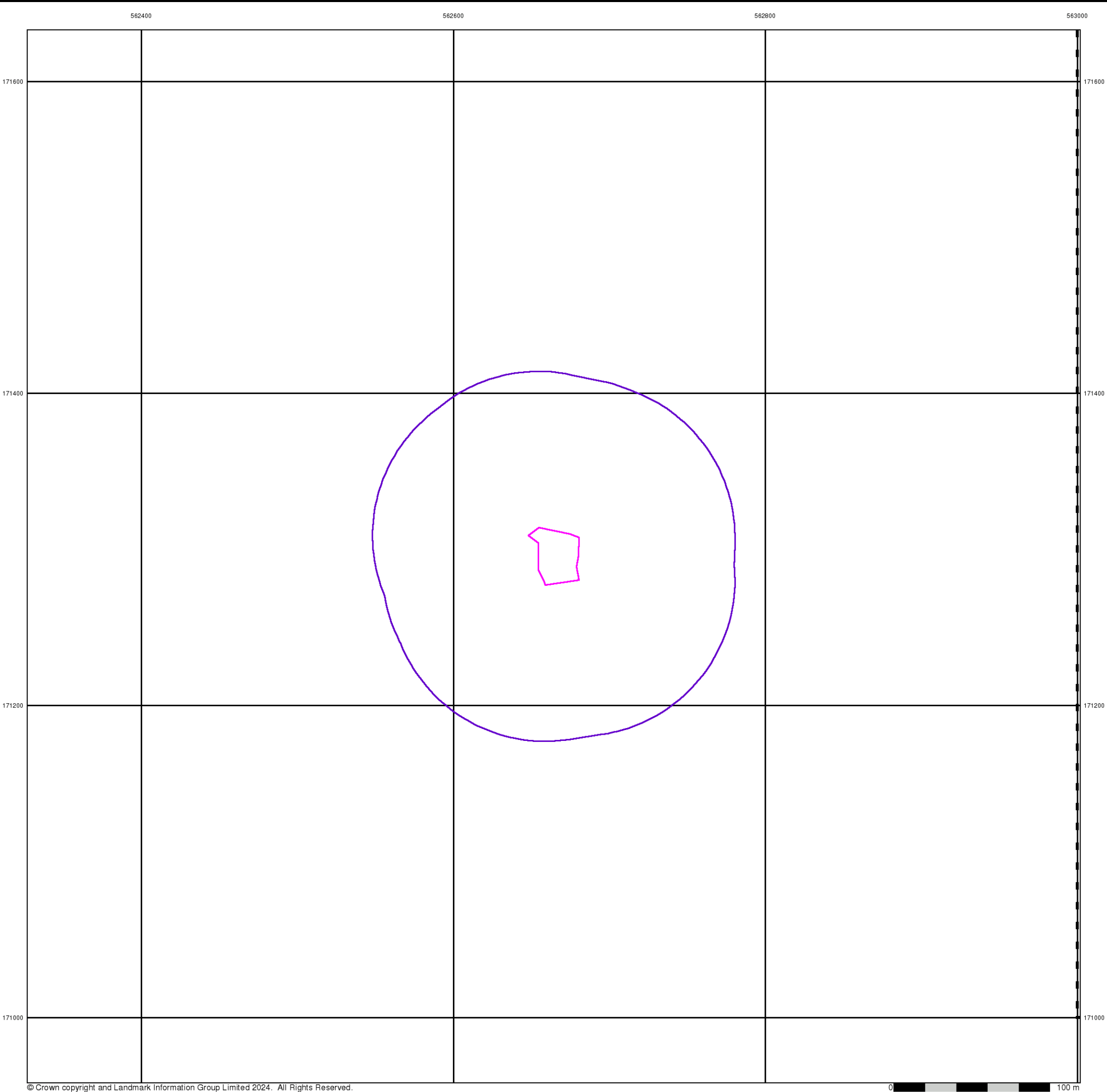


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



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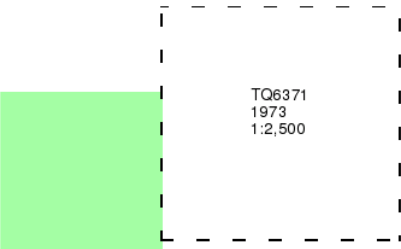
Supply of Unpublished Survey Information

Published 1973

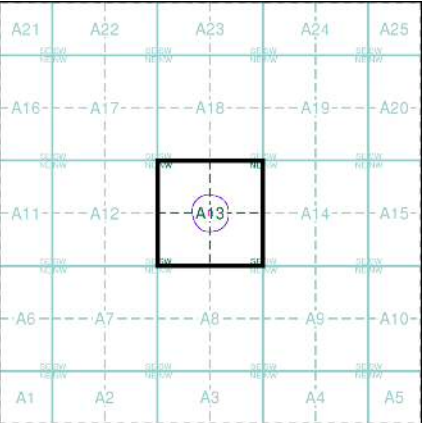
Source map scale - 1:2,500

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

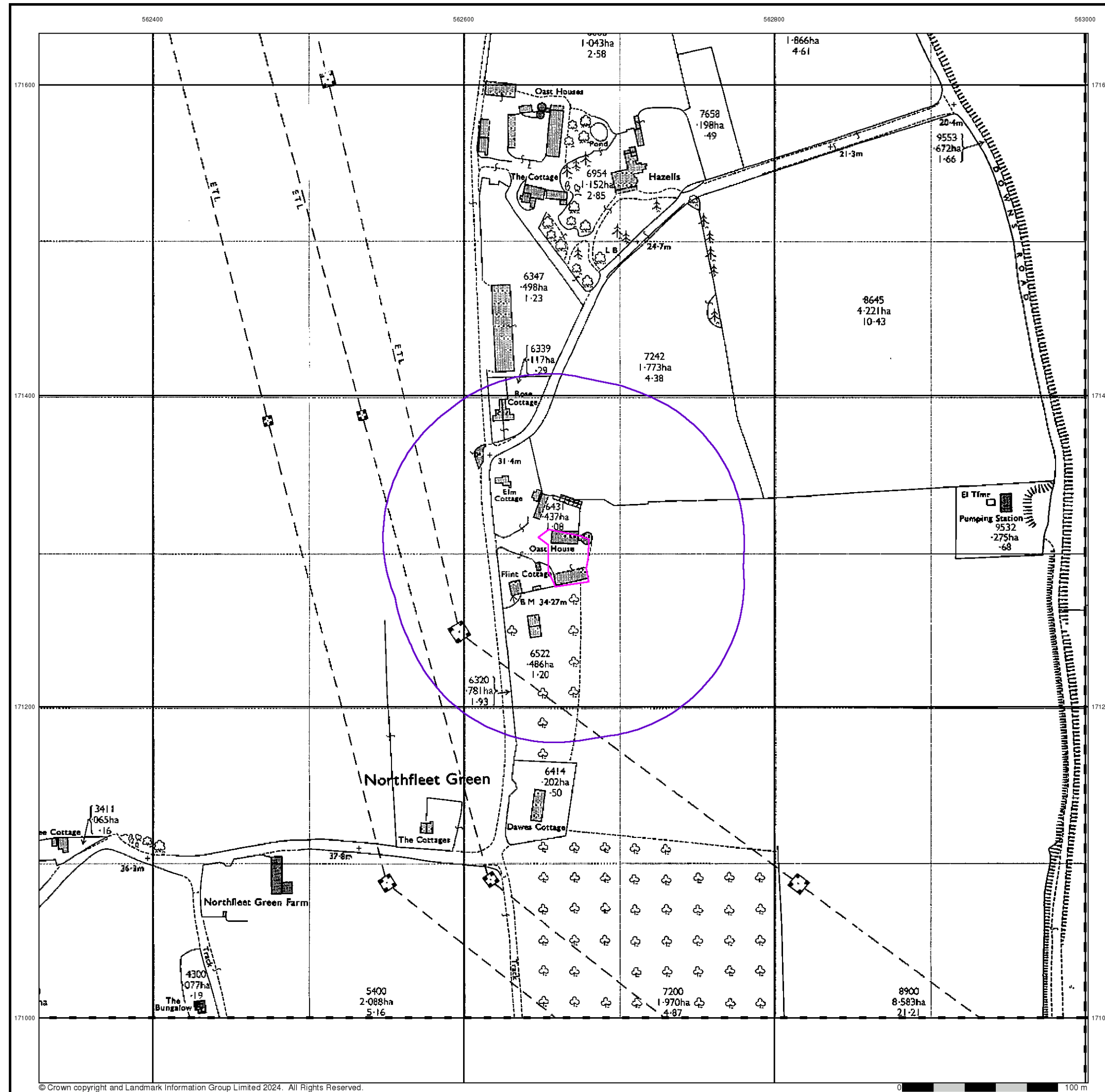
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

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Additional SIMs

Published 1974 - 1982

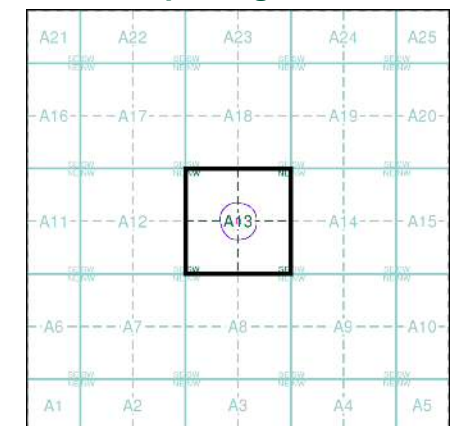
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

TQ6271 1974 12,500	TQ6371 1978 12,500
	TQ6370 1982 12,500

Historical Map - Segment A13



Order Details

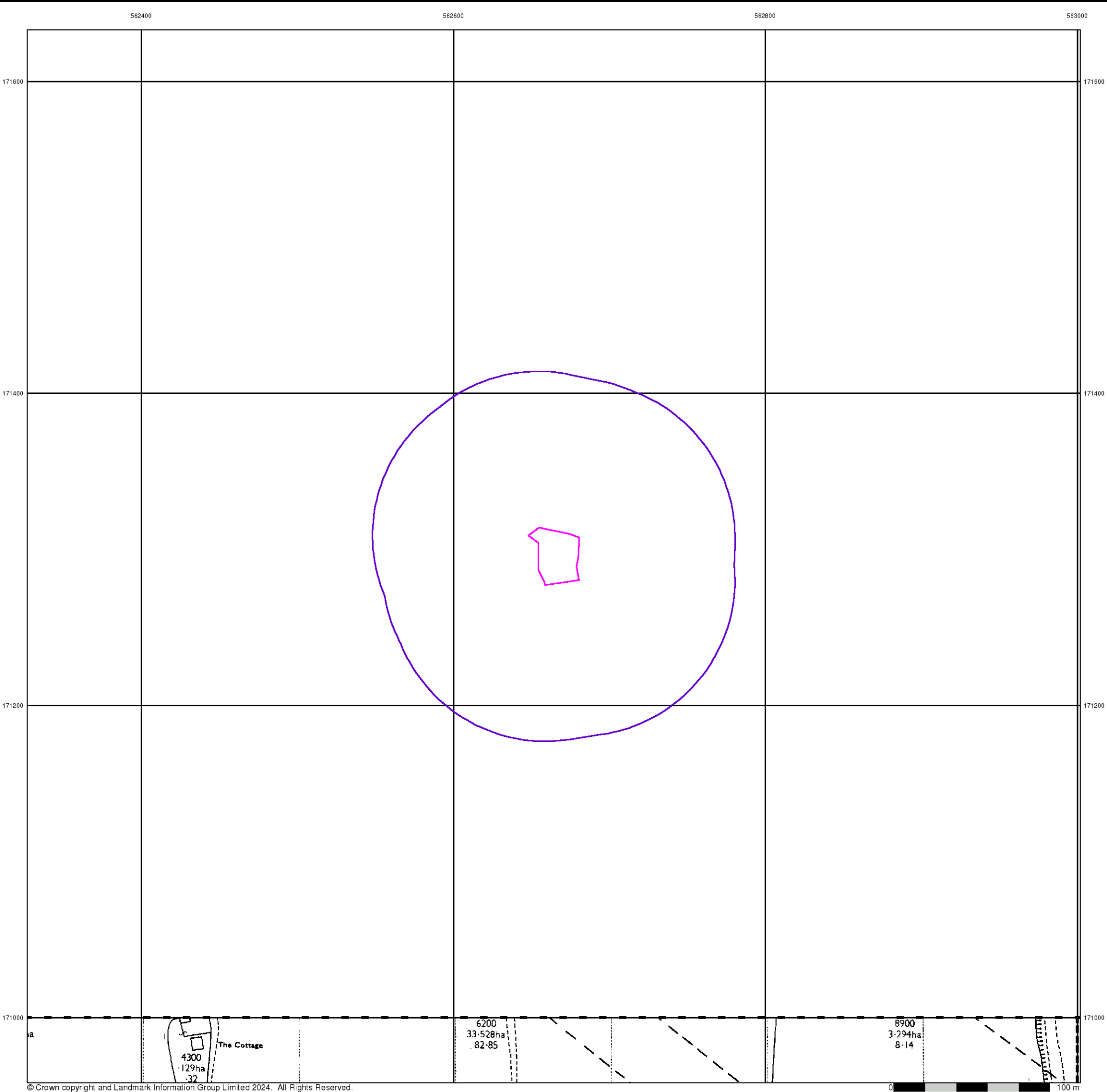
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



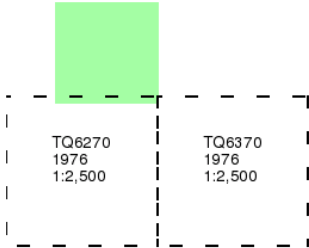
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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



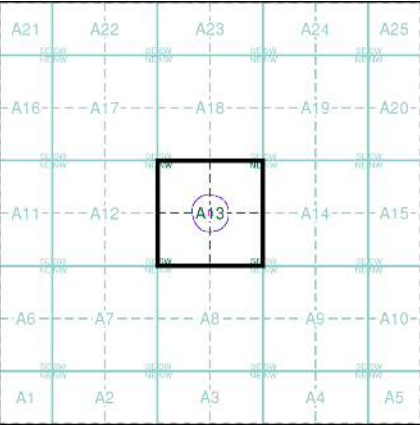
Ordnance Survey Plan
Published 1976
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

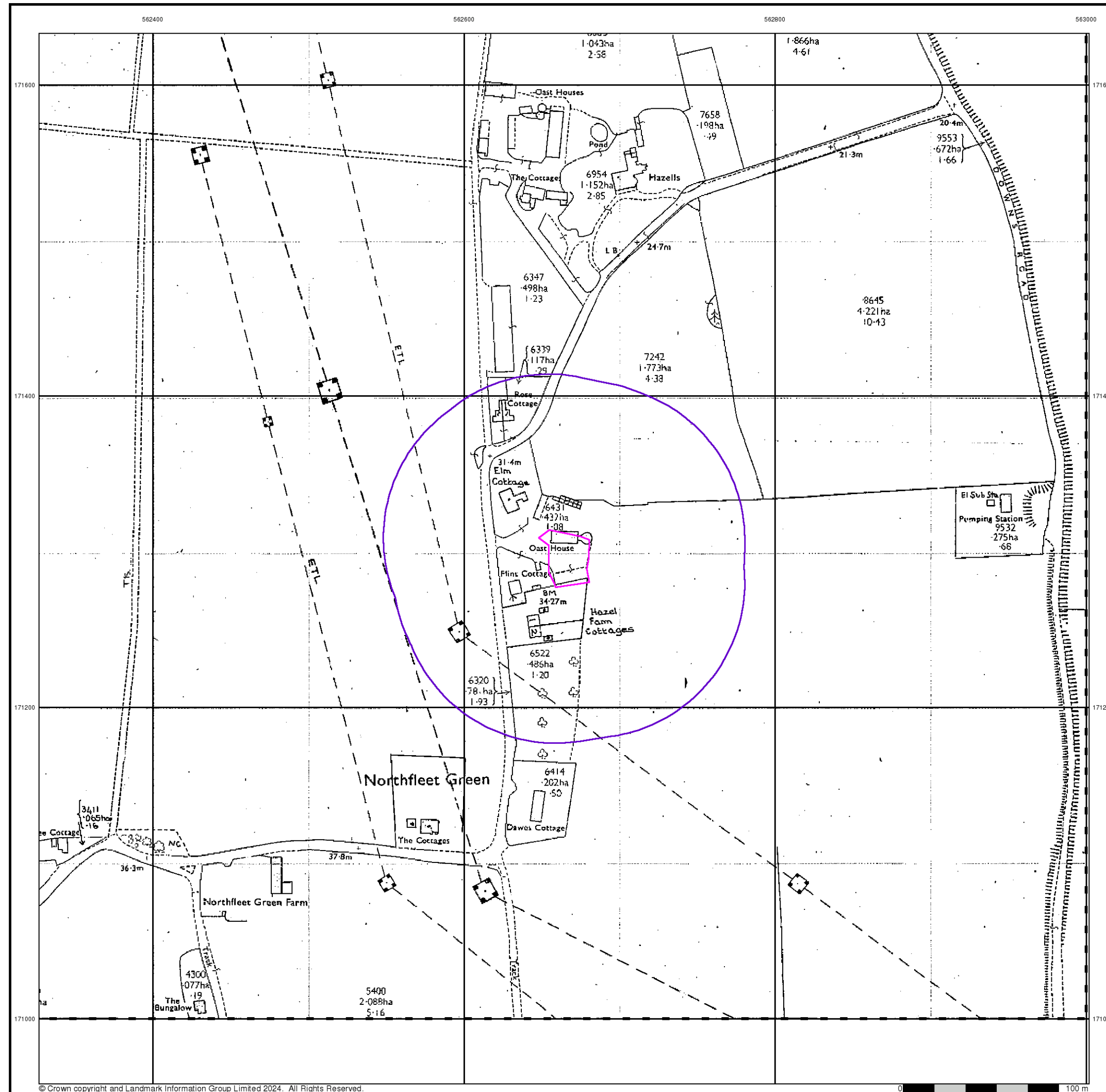
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

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0 100 m



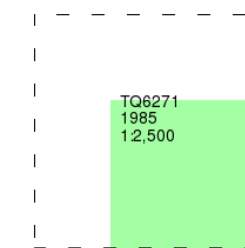
Additional SIMs

Published 1985

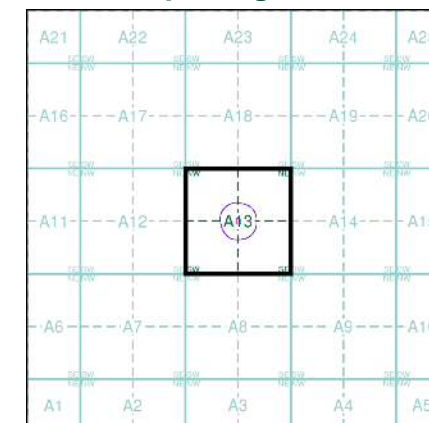
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

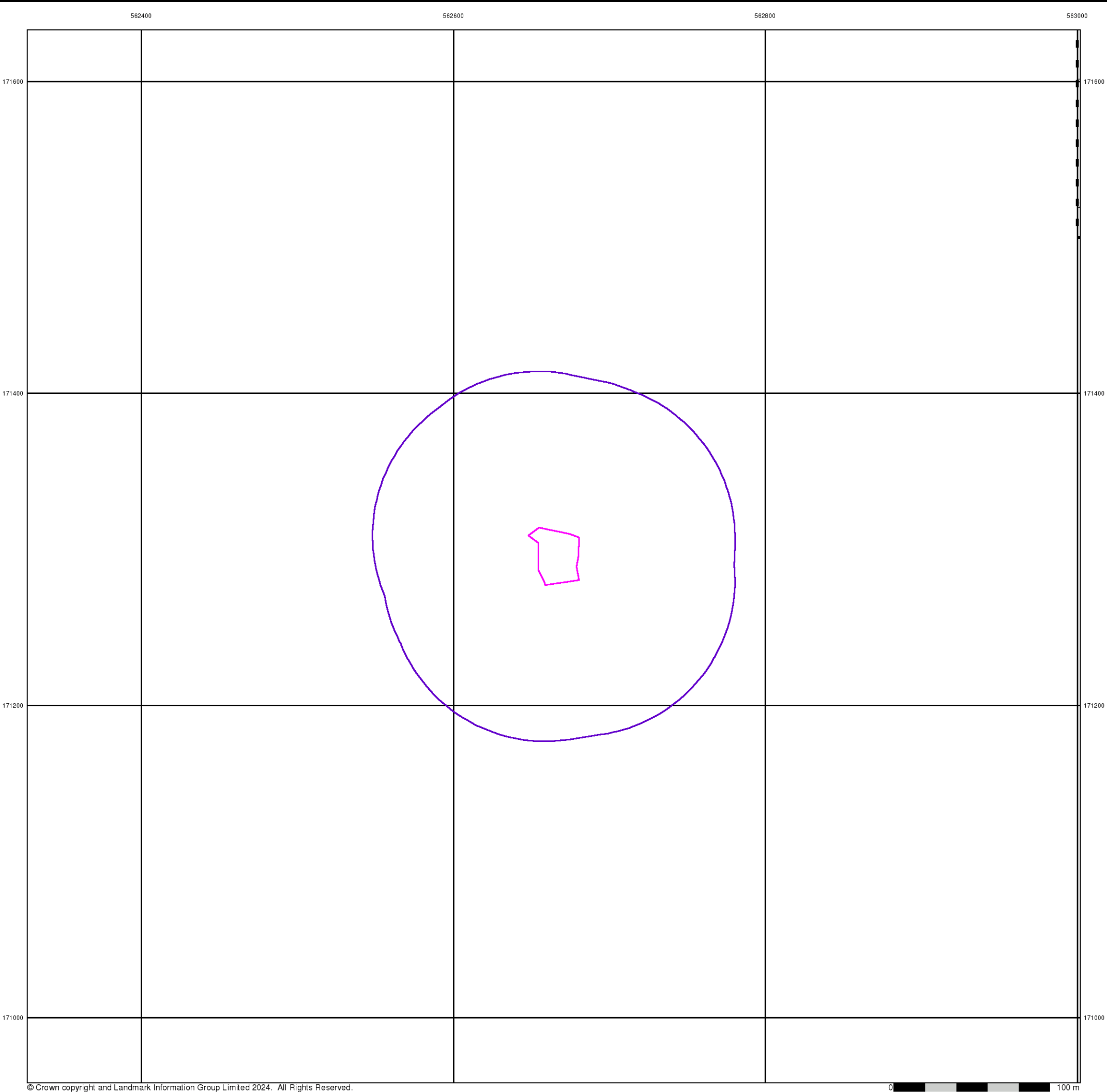
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

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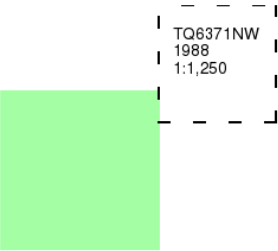
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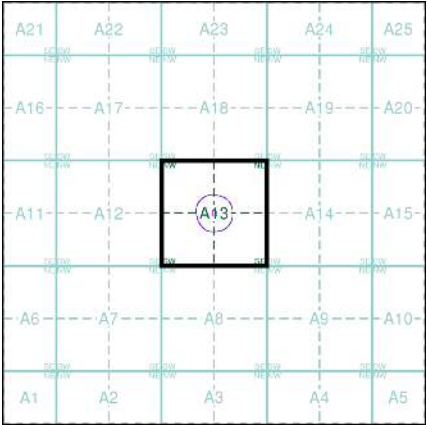
Ordnance Survey Plan
Published 1988
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

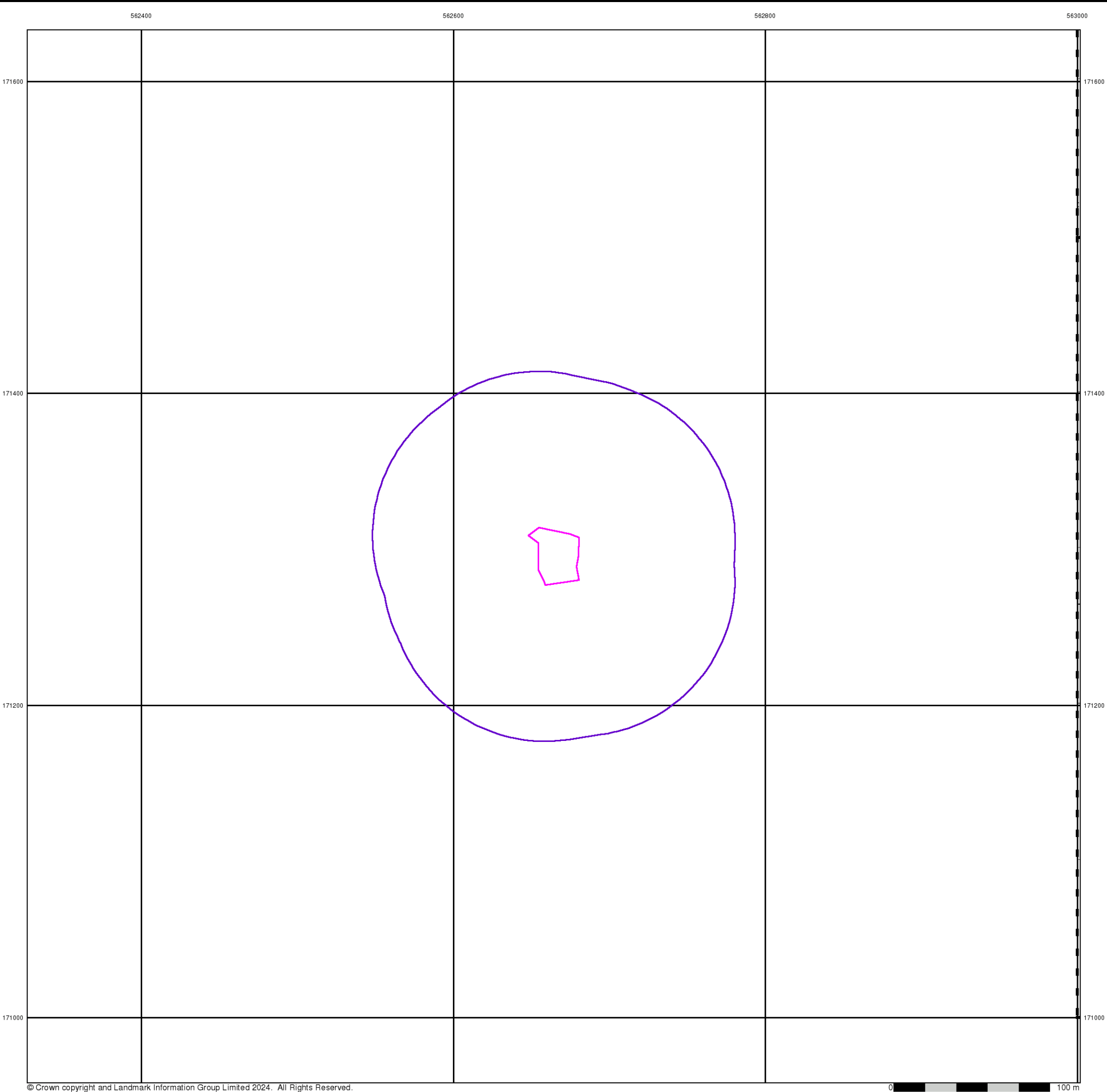


Order Details
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details
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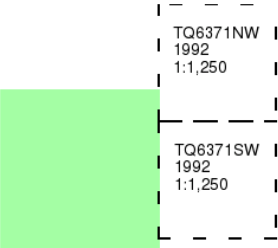
Large-Scale National Grid Data

Published 1992

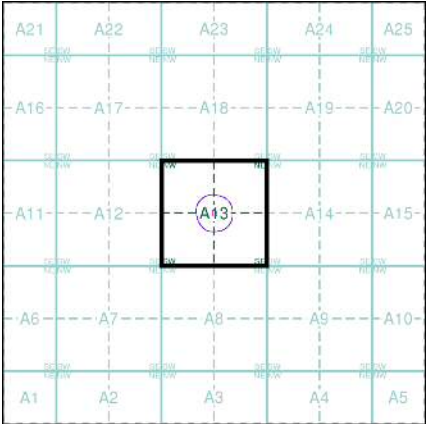
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

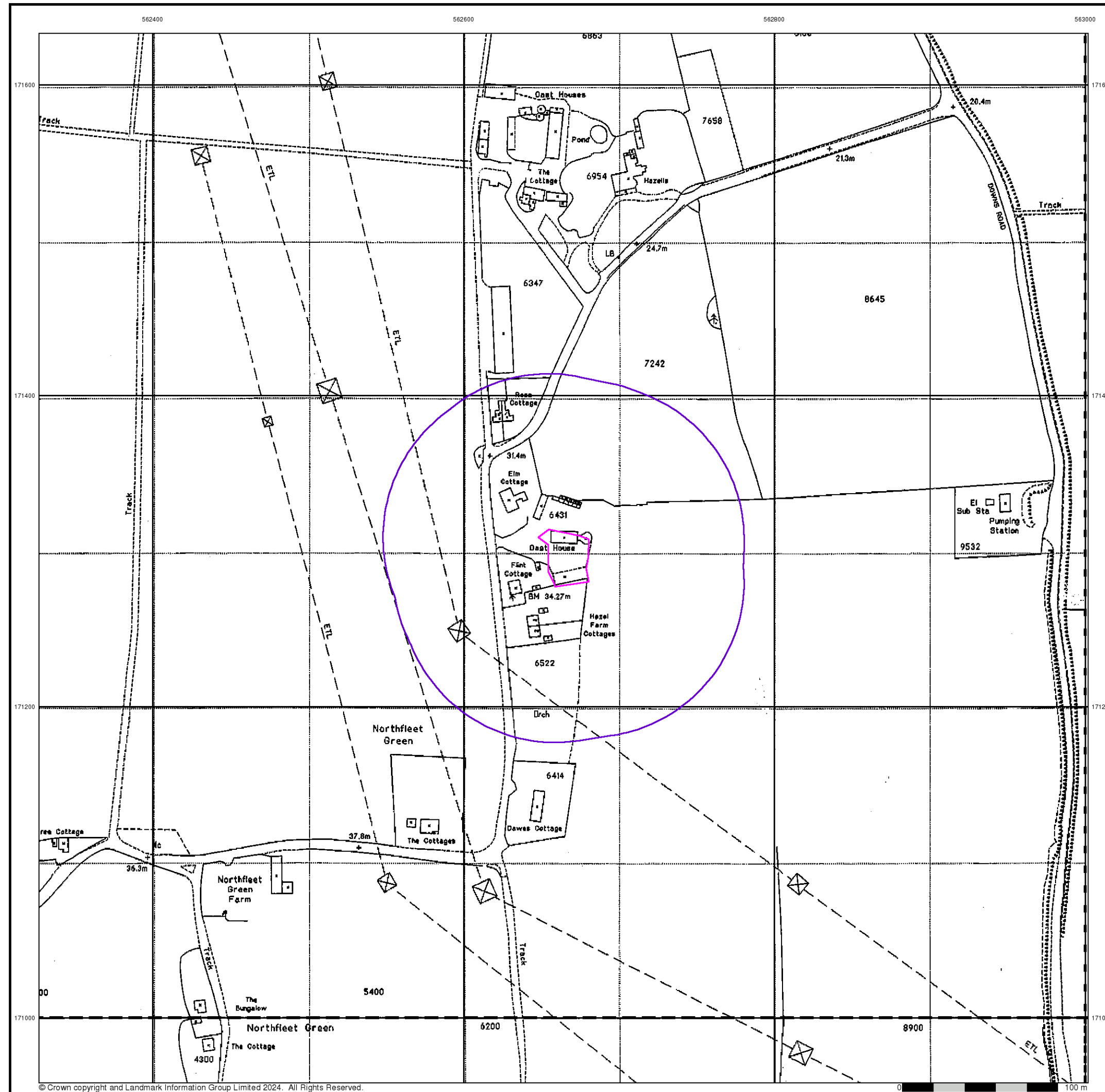
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

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Large-Scale National Grid Data

Published 1992

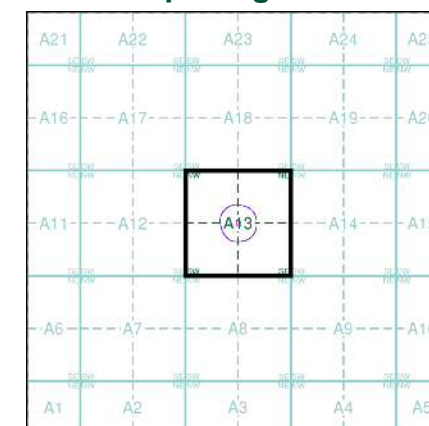
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

TQ6271 1992 1:2,500	
TQ6270 1992 1:2,500	TQ6370 1992 1:2,500

Historical Map - Segment A13



Order Details

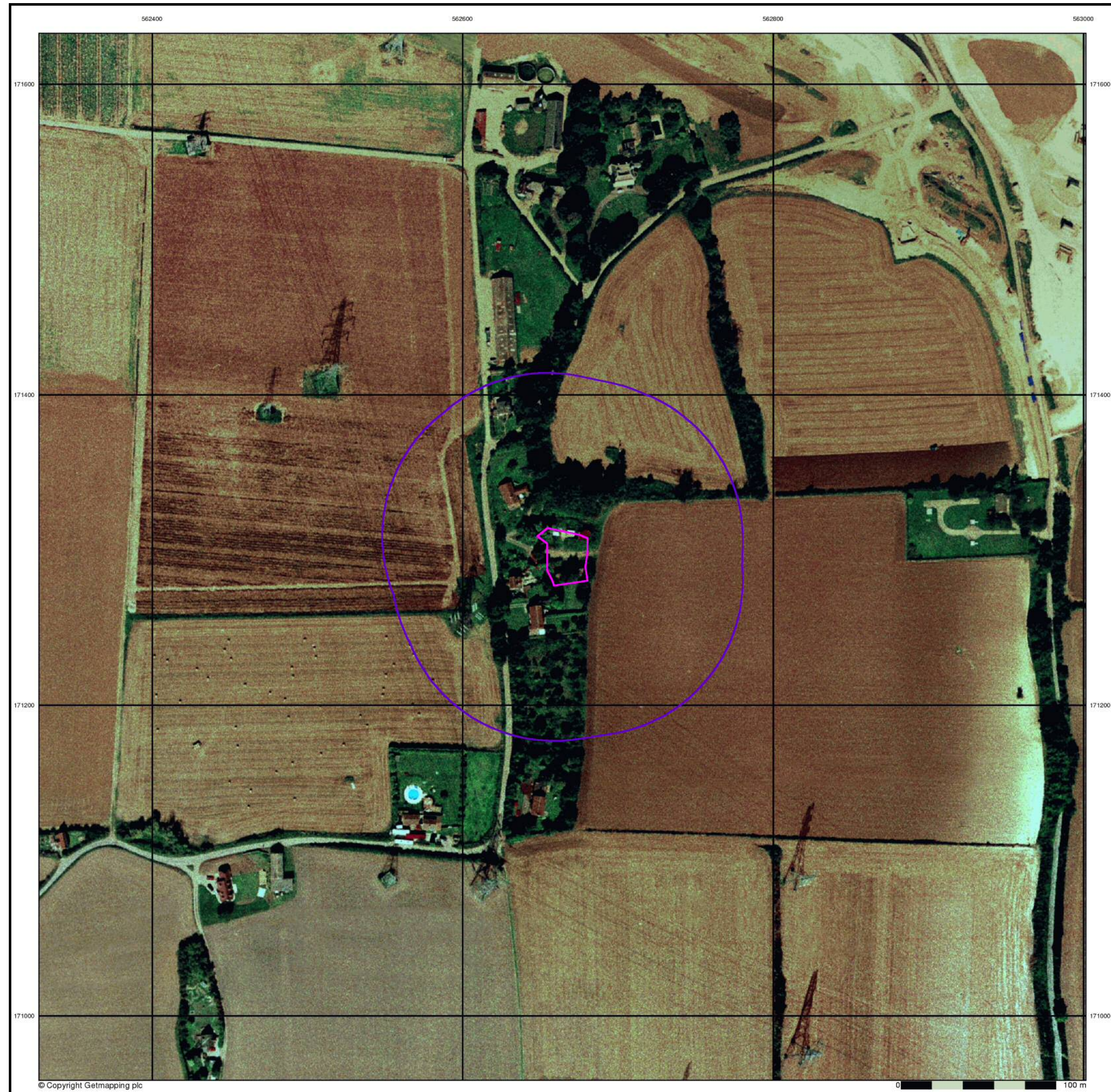
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

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0 100 m

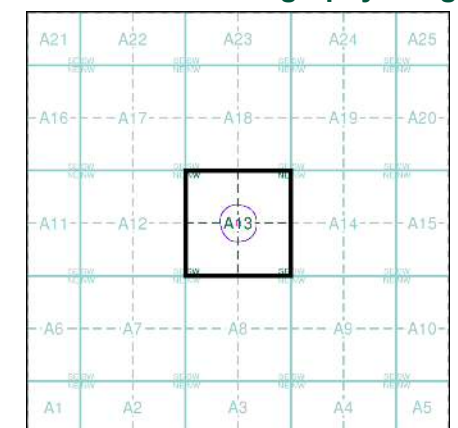


Historical Aerial Photography

Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 100

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



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Web: www.envirocheck.co.uk

Appendix B Landmark Envirocheck Report

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

341438964_1_1

Customer Reference:

21397SAN

National Grid Reference:

562670, 171300

Slice:

A

Site Area (Ha):

0.09

Search Buffer (m):

1000

Site Details:

Flint Cottage, Northfleet Green

GRAVESEND

DA13 9PN

Client Details:

Mr N Lambert

Soils Ltd

Newton House

Cross Road

Tadworth

Surrey

KT20 5SR

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	12
Hazardous Substances	-
Geological	13
Industrial Land Use	18
Sensitive Land Use	20
Data Currency	21
Data Suppliers	28
Useful Contacts	29

Introduction

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

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Radon Potential dataset Copyright Notice

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes			n/a
Contaminated Land Register Entries and Notices					
Discharge Consents					
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 1			Yes	
Pollution Incidents to Controlled Waters	pg 1				1
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 1		2	1	(*33)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 10	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 10	1	n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones	pg 10	3			
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 11				2

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage		2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 12				3
Potentially Infilled Land (Water)	pg 12		1	1	
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 13	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 13	Yes		Yes	Yes
BGS Recorded Mineral Sites	pg 13		1	1	8
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities	pg 15		1		3
Natural Cavities	pg 16				1
Non Coal Mining Areas of Great Britain	pg 16	Yes	Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 16	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 16	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 16		Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 18		1		4
Fuel Station Entries					
Points of Interest - Commercial Services					
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 18			3	2
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental	pg 18		1		4
Gas Pipelines	pg 19				2
Underground Electrical Cables					

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

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NW)	0	1	562666 171296
	Nearest Surface Water Feature	A13NE (N)	253	-	562686 171564
1	Pollution Incidents to Controlled Waters Property Type: Arable Location: New Barn Road, Pond By Side Of Road, LONGFIELD Authority: Environment Agency, Southern Region Pollutant: Crude Sewage Note: Sewer Overflow; Due To Blockage; Flowing Into Pond Incident Date: 31st July 1998 Incident Reference: 197266 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leaking Underground Pipe Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	674	2	562130 170860
2	Water Abstractions Operator: Southern Water Services Ltd Licence Number: 01/026 Permit Version: Not Supplied Location: Hazells Ps, SOUTHFLEET Authority: Environment Agency, Southern Region Abstraction: Public Water Supply Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 9000 Yearly Rate (m3): 3294000 Details: H5 Chalk; Licence Status: Revoked; Lapsed Or Cancelled Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13NE (E)	220	2	562900 171300
2	Water Abstractions Operator: Southern Water Services Ltd Licence Number: 1/0511/F/G Permit Version: Not Supplied Location: Hazells Pumping Station Authority: Environment Agency, Southern Region Abstraction: Agriculture (General) Abstraction Type: Not Supplied Source: Pond or Lake Daily Rate (m3): 9000 Yearly Rate (m3): 3294000 Details: Additional Purpose: Public Water Supply Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SE (E)	225	2	562905 171295
3	Water Abstractions Operator: Southern Water Services Ltd Licence Number: 9/40/01/0511/G Permit Version: 100 Location: Boreholes, Wells And Adits At Hazells Ps, Northfleet Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from any point within an area Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: N/A Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13NE (E)	272	2	562950 171340

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Skanska Civil Engineering Licence Number: 01/164 Permit Version: 1 Location: Tollgate Junction Authority: Environment Agency, Southern Region Abstraction: Extractive: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 1st November 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SW (E)	1220	2	563900 171250
	Water Abstractions Operator: D & M Gedney Ltd Licence Number: 9/40/01/0500/G Permit Version: 102 Location: Borehole At Court Lodge Farm Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 30 November Permit Start Date: 8th December 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1415	2	561241 171449
	Water Abstractions Operator: D & M Gedney Ltd Licence Number: 9/40/01/0500/G Permit Version: 102 Location: Borehole At Court Lodge Farm Authority: Environment Agency, Southern Region Abstraction: Agricultural Vegetable Wash Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 8th December 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1415	2	561241 171449
	Water Abstractions Operator: D & M Gedney Ltd Licence Number: 9/40/01/0500/G Permit Version: 102 Location: Borehole At Court Lodge Farm Authority: Environment Agency, Southern Region Abstraction: Trickle Irrigation Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 30 November Permit Start Date: 8th December 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1415	2	561241 171449

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: D & M Gedney Ltd Licence Number: 9/40/01/0500/G Permit Version: 101 Location: Point A, Borehole, Nr. Court Lodge Farm, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 April Authorised End: 30 November Permit Start Date: 19th November 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1419	2	561240 171480
	Water Abstractions Operator: D & M Gedney Ltd Licence Number: 9/40/01/0500/G Permit Version: 101 Location: Point A, Borehole, Nr. Court Lodge Farm, Southfleet. Authority: Environment Agency, Southern Region Abstraction: Agricultural Vegetable Wash Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 19th November 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1419	2	561240 171480
	Water Abstractions Operator: D & M Gedney Ltd Licence Number: 9/40/01/0500/G Permit Version: 100 Location: Point A, Borehole, Nr. Court Lodge Farm, Southfleet. Authority: Environment Agency, Southern Region Abstraction: Agricultural Vegetable Wash Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 23rd November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1419	2	561240 171480
	Water Abstractions Operator: D & M Gedney Ltd Licence Number: 9/40/01/0500/G Permit Version: 100 Location: Point A, Borehole, Nr. Court Lodge Farm, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 April Authorised End: 30 November Permit Start Date: 23rd November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1419	2	561240 171480

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Beslee Farms Licence Number: 9/40/01/0523/G Permit Version: 101 Location: Point C, Borehole, Joyce Hall Farm In Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 27th November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NW (NW)	1507	2	561310 172000
	Water Abstractions Operator: Beslee Farms Licence Number: 9/40/01/0523/G Permit Version: 100 Location: Point C, Borehole, Joyce Hall Farm In Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 12th March 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NW (NW)	1507	2	561310 172000
	Water Abstractions Operator: John Arthur Beslee & Penelope Gaye Beslee Licence Number: 1/0523/A/G Permit Version: Not Supplied Location: SOUTHFLEET Authority: Environment Agency, Southern Region Abstraction: Public Water Supply Abstraction Type: Not Supplied Source: Pond or Lake Daily Rate (m3): 900 Yearly Rate (m3): 36360 Details: Additional Purpose: Spray Irrigation Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A16NE (NW)	1509	2	561320 172025
	Water Abstractions Operator: Watts Farms Fresh Produce Holdings Limited Licence Number: 9/40/01/0518/G Permit Version: 103 Location: Point A, Borehole At Hook Place Farm, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 March Authorised End: 30 November Permit Start Date: 15th November 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	1700	2	561180 170440

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Sandfields Farms Limited Licence Number: 9/40/01/0518/G Permit Version: 102 Location: Point A, Borehole At Hook Place Farm, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 March Authorised End: 30 November Permit Start Date: 19th June 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	1700	2	561180 170440
	Water Abstractions Operator: Mr D W Langmead Licence Number: 9/40/01/0518/G Permit Version: 101 Location: Point A, Borehole At Hook Place Farm, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 March Authorised End: 30 November Permit Start Date: 29th September 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	1700	2	561180 170440
	Water Abstractions Operator: Jj Barker Ltd Licence Number: 9/40/01/0518/G Permit Version: 100 Location: Point A, Borehole At Hook Place Farm, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 March Authorised End: 30 November Permit Start Date: 27th November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	1700	2	561180 170440
	Water Abstractions Operator: D.T.G. Elliott & Son Ltd. Licence Number: 9/40/01/0504/G Permit Version: 100 Location: Point A, Borehole, H5 Chalk, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Outlined Red On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th May 1978 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1700	2	561700 172720

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: D.T.G. Elliott & Son Ltd. Licence Number: 9/40/01/0504/G Permit Version: 100 Location: Point A, Borehole, H5 Chalk, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: General Washing/Process Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 455 Yearly Rate (m3): 4137 Details: As Outlined Red On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th May 1978 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1700	2	561700 172720
	Water Abstractions Operator: D T G Elliott & Son Ltd Licence Number: 9/40/01/0504/G/R01 Permit Version: 1 Location: Point A, Borehole, H5 Chalk, Southfleet Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Springhead Nurseries, Gravesend Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1714	2	561660 172710
	Water Abstractions Operator: D T G Elliott & Son Ltd Licence Number: 9/40/01/0504/G/R01 Permit Version: 1 Location: Point A, Borehole, H5 Chalk, Southfleet Authority: Environment Agency, Southern Region Abstraction: General Agriculture: General Washing/Process Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Springhead Nurseries, Gravesend Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1714	2	561660 172710
	Water Abstractions Operator: D T G Elliott & Son Ltd Licence Number: 9/40/01/0504/G Permit Version: 101 Location: Point A, Borehole, H5 Chalk, Southfleet Authority: Environment Agency, Southern Region Abstraction: General Agriculture: General Washing/Process Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Outlined Red On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1714	2	561660 172710

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: D T G Elliott & Son Ltd Licence Number: 9/40/01/0504/G Permit Version: 101 Location: Point A, Borehole, H5 Chalk, Southfleet Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Outlined Red On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1714	2	561660 172710
	Water Abstractions Operator: Mid Kent Golf Club Limited Licence Number: So/040/0001/019 Permit Version: 1 Location: Mid Kent Golf Club Borehole Authority: Environment Agency, Southern Region Abstraction: Sports Grounds/Facilities: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Mid Kent Golf Course, Gravesend Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 29th October 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A20SE (E)	1738	2	564325 171869
	Water Abstractions Operator: D T G Elliot & Son Ltd Licence Number: 1/0504/A/G Permit Version: Not Supplied Location: Springhead Nurseries, SOUTHFLEET Authority: Environment Agency, Southern Region Abstraction: Agriculture (General) Abstraction Type: Not Supplied Source: Pond or Lake Daily Rate (m3): 455 Yearly Rate (m3): 4137 Details: Additional Purpose: Spray Irrigation Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A22NW (NW)	1746	2	561685 172765
	Water Abstractions Operator: D T G Elliott & Son Ltd Licence Number: 9/40/01/0504/G Permit Version: 101 Location: Point B, Borehole, H5 Chalk, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: General Washing/Process Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Outlined Red On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1797	2	561660 172810

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: D T G Elliott & Son Ltd Licence Number: 9/40/01/0504/G Permit Version: 101 Location: Point B, Borehole, H5 Chalk, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Outlined Red On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th November 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1797	2	561660 172810
	Water Abstractions Operator: D.T.G. Elliott & Son Ltd. Licence Number: 9/40/01/0504/G Permit Version: 100 Location: Point B, Borehole, H5 Chalk, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: General Washing/Process Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 455 Yearly Rate (m3): 4136.9 Details: As Outlined Red On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th May 1978 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1797	2	561660 172810
	Water Abstractions Operator: D.T.G. Elliott & Son Ltd. Licence Number: 9/40/01/0504/G Permit Version: 100 Location: Point B, Borehole, H5 Chalk, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Outlined Red On Licence Map. Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th May 1978 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1797	2	561660 172810
	Water Abstractions Operator: D T G Elliott & Son Ltd Licence Number: 9/40/01/0504/G/R01 Permit Version: 1 Location: Point B, Borehole, H5 Chalk, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: General Washing/Process Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Springhead Nurseries, Gravesend Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1798	2	561660 172811

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: D T G Elliott & Son Ltd Licence Number: 9/40/01/0504/G/R01 Permit Version: 1 Location: Point B, Borehole, H5 Chalk, Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Springhead Nurseries, Gravesend Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1798	2	561660 172811
	Water Abstractions Operator: John Arthur Beslee & Penelope Gaye Beslee Licence Number: 1/0523/B/G Permit Version: Not Supplied Location: SOUTHFLEET Authority: Environment Agency, Southern Region Abstraction: Agriculture (General) Abstraction Type: Not Supplied Source: Pond or Lake Daily Rate (m3): 682 Yearly Rate (m3): 27270 Details: Additional Purpose: Spray Irrigation Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NW)	1835	2	561920 172995
	Water Abstractions Operator: Ebbsfleet Investment (Gp) Limited Licence Number: 01/0157 Permit Version: 2 Location: Point A, Wingfield Park Farm In Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldy Out Lined On Licence Map Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 18th July 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NW)	1848	2	561900 173000
	Water Abstractions Operator: Land Securities Trading Ltd Licence Number: 01/0157 Permit Version: 1 Location: Point A, Wingfield Park Farm In Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldy Out Lined On Licence Map Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 17th October 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NW)	1848	2	561900 173000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Beslee Farms Licence Number: 9/40/01/0523/G Permit Version: 100 Location: Point A, Wingfield Park Farm In Southfleet. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: As Boldly Outlined On Licence Map. Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 12th March 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NW)	1848	2	561900 173000
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (NW)	0	3	562666 171296
	Groundwater Vulnerability - Soluble Rock Risk Classification: Very Significant Risk - High Possibility	A13NE (NW)	0	3	562666 171296
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (NW)	0	3	562666 171296
	Superficial Aquifer Designations No Data Available				
4	Source Protection Zones Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	A13NE (NW)	0	2	562666 171296
5	Source Protection Zones Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A13NE (NW)	0	2	562666 171296
6	Source Protection Zones Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	A13NE (NW)	0	2	562666 171296
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 230.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Medway Primacy: 1	A17SE (NW)	726	4	562301 171948
8	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 521.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Medway Primacy: 1	A17NE (NW)	943	4	562132 172098

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Gravesham Borough Council - Has no landfill data to supply		0	5	562666 171296
	Local Authority Landfill Coverage Name: Kent County Council - Had landfill data but passed it to the relevant environment agency		0	6	562666 171296
	Local Authority Landfill Coverage Name: Dartford Borough Council - Has no landfill data to supply		452	7	562197 171295
9	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A8NE (SE)	562	10	562979 170805
10	Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A19SE (NE)	802	10	563371 171715
11	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A18NW (N)	813	10	562437 172097
12	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1869	A13NW (NW)	13	10	562636 171311
13	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1869	A13NE (N)	255	10	562679 171568

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Thanet Sand Formation	A13NE (NW)	0	1	562666 171296
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NW)	0	1	562666 171296
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NE (E)	320	1	563000 171296
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NE (W)	649	1	562000 171296
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NE (N)	686	1	562666 172000
14	BGS Recorded Mineral Sites Site Name: Northfleet Green Road Denehole Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220939 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A13NE (E)	136	1	562815 171320
15	BGS Recorded Mineral Sites Site Name: Northfleet Green Denehole Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220941 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	408	1	562498 171690

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	BGS Recorded Mineral Sites Site Name: Northfleet Green Chalk Pit Location: Southfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 131065 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A8NE (SE)	562	1	562977 170804
17	BGS Recorded Mineral Sites Site Name: Istead Rise Chalkwell Location: Southfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220328 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	711	1	563280 170900
18	BGS Recorded Mineral Sites Site Name: New House Denehole Location: New House, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220377 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18NE (NE)	744	1	562997 171980
19	BGS Recorded Mineral Sites Site Name: Dumdale Chalk Pit Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 131061 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	801	1	563369 171715
20	BGS Recorded Mineral Sites Site Name: Pepper Hill Chalk Pit Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 131062 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18NW (N)	810	1	562443 172096
21	BGS Recorded Mineral Sites Site Name: Warren Road Denehole Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220782 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A12NW (W)	904	1	561800 171620

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	BGS Recorded Mineral Sites Site Name: New Barn Road Denehole Location: Redstreet, Southfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220938 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	945	1	562143 170486
23	BGS Recorded Mineral Sites Site Name: Stanhill Farm Denehole Location: Southfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220783 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A8SW (S)	978	1	562640 170300
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Man-Made Mining Cavities Easting: 562900 Northing: 171300 Distance: 220 Quadrant Reference: A13 Quadrant Reference: NE Bearing Ref: E Cavity Type: Chalkwell/Denehole Commodity: Chalk Solid Geology Detail: Thanet Sand Formation, Chalk Group Superficial Geology No Details Detail:	A13NE (E)	220	8	562900 171300
	Man-Made Mining Cavities Easting: 563300 Northing: 170900 Distance: 728 Quadrant Reference: A9 Quadrant Reference: NW Bearing Ref: SE Cavity Type: Chalkwell Commodity: Chalk Solid Geology Detail: Chalk Group Superficial Geology No Details Detail:	A9NW (SE)	728	8	563300 170900
	Man-Made Mining Cavities Easting: 563000 Northing: 172000 Distance: 763 Quadrant Reference: A18 Quadrant Reference: NE Bearing Ref: NE Cavity Type: Adit Entry Pillar and Stall Chalk Mine Commodity: Chalk Solid Geology Detail: Chalk Group Superficial Geology No Details Detail:	A18NE (NE)	763	8	563000 172000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Man-Made Mining Cavities Easting: 562600 Northing: 170300 Distance: 979 Quadrant Reference: A8 Quadrant Reference: SW Bearing Ref: S Cavity Type: Denehole:- vertical shaft having chambers at the base Commodity: Chalk Solid Geology Detail: Thanet Sand Formation, Chalk Group Superficial Geology No Details Detail:	A8SW (S)	979	8	562600 170300
	Natural Cavities Easting: 563400 Northing: 171900 Distance: 933 Quadrant Reference: A19 Quadrant Reference: SE Bearing Ref: NE Cavity Type: Solution Pipe x 6 Solid Geology Detail: Chalk Group Superficial Geology No Details Detail:	A19SE (NE)	933	8	563400 171900
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Non Coal Mining Areas of Great Britain Risk: Likely Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	36	1	562717 171304
	Non Coal Mining Areas of Great Britain Risk: Highly Likely Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	86	1	562766 171311
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	196	1	562876 171307
	Potential for Ground Dissolution Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	208	1	562889 171287
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	196	1	562876 171307
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	196	1	562876 171307
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	208	1	562889 171287
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	208	1	562889 171287
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	Contemporary Trade Directory Entries Name: Ultimate Industrial Cleaning Location: Dawes Cottage, Northfleet Green, Gravesend, Kent, DA13 9PN Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (S)	141	-	562647 171137
25	Contemporary Trade Directory Entries Name: Original Mobile Mechanic Location: 3, Landseer Avenue, Northfleet, Gravesend, Kent, DA11 8NN Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NE (N)	781	-	562767 172087
26	Contemporary Trade Directory Entries Name: A S A P Domestic Location: 23, Masefield Road, Northfleet, Gravesend, Kent, DA11 8EL Classification: Washing Machines - Servicing & Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A18NE (N)	835	-	562712 172147
27	Contemporary Trade Directory Entries Name: P J Office Services Ltd Location: 42f, Mulberry Road, Northfleet, Gravesend, DA11 8PP Classification: Office Equipment Servicing & Maintenance Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SE (NE)	927	-	563368 171929
28	Contemporary Trade Directory Entries Name: Plaster Decoration Company Ltd Location: 2a, Pickwick Gardens, Northfleet, Gravesend, DA11 8EJ Classification: Plaster Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NE (N)	930	-	562815 172230
29	Points of Interest - Manufacturing and Production Name: Tank Location: DA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13NW (N)	287	9	562654 171601
29	Points of Interest - Manufacturing and Production Name: Tank Location: DA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13NW (N)	290	9	562642 171603
29	Points of Interest - Manufacturing and Production Name: Tanks Location: DA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	299	9	562647 171613
30	Points of Interest - Manufacturing and Production Name: W E Harris & Sons Ltd Location: Manor Farm, New Barn Road, Southfleet, Gravesend, DA13 9PU Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A7NE (SW)	810	9	562025 170774
30	Points of Interest - Manufacturing and Production Name: W E Harris & Sons Ltd Location: Manor Farm, New Barn Road, Southfleet, Gravesend, DA13 9PU Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A7NE (SW)	810	9	562024 170775
31	Points of Interest - Recreational and Environmental Name: Play Area Location: DA13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	178	9	562621 171488
32	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	760	9	563190 171871

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	Points of Interest - Recreational and Environmental Name: Playground Location: Brightlands, DA11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A19SW (NE)	767	9	563209 171863
33	Points of Interest - Recreational and Environmental Name: Cyclopark Bmx Location: DA11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	874	9	563517 171560
34	Points of Interest - Recreational and Environmental Name: Play Area Location: DA11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	986	9	563628 171578
35	Gas Pipelines Name: SHORNE TO FARNINGHAM Nat Grid: Owned By National Grid Diameter (mm): 750 Building Proximity: Not Supplied Distance (m): Status: Active Pipe Length (m): 15540.1 Pipe Number: Not Supplied	A8NE (S)	600	10	562782 170690
36	Gas Pipelines Name: GRAVESEND THAMES SOUTH TO TATSFIELD Nat Grid: Owned By National Grid Diameter (mm): 750 Building Proximity: Not Supplied Distance (m): Status: Active Pipe Length (m): 41265.75 Pipe Number: Not Supplied	A8SE (S)	706	10	562760 170579

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	Areas of Adopted Green Belt Authority: Gravesham Borough Council Plan Name: Gravesham Local Plan - Core Strategy Status: Adopted Plan Date: 30th September 2014	A13NE (NW)	0	12	562666 171296
38	Areas of Adopted Green Belt Authority: Dartford Borough Council Plan Name: Proposal Map Status: Adopted Plan Date: 17th July 2017	A12NE (W)	450	13	562199 171301
39	Nitrate Vulnerable Zones Name: North Kent Description: Groundwater Source: Environment Agency, Head Office	A13NE (NW)	0	3	562666 171296

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Environment Agency - Head Office Sevenoaks District Council - Environmental Health Department Thurrock Borough Council - Environmental Health Department Dartford Borough Council - Environmental Health Department Gravesham Borough Council - Public Health Services	November 2023 October 2017 October 2017 September 2017 September 2017	Annually Annual Rolling Update Annually Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Anglian Region Environment Agency - Southern Region	January 2024 January 2024	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Anglian Region Environment Agency - Southern Region	March 2013 March 2013	
Integrated Pollution Controls Environment Agency - Anglian Region Environment Agency - Southern Region	January 2009 January 2009	
Integrated Pollution Prevention And Control Environment Agency - Anglian Region Environment Agency - South East Region - Kent & South London Area Environment Agency - Southern Region	October 2023 October 2023 October 2023	Quarterly Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Thurrock Borough Council - Environmental Health Department Gravesham Borough Council - Environmental Health Department London Port Health Authority - Environmental Services Dartford Borough Council - Environmental Health Department Sevenoaks District Council - Environmental Health Department	February 2015 October 2014 October 2014 September 2014 September 2014	Variable Variable Variable Variable Variable
Local Authority Pollution Prevention and Controls London Port Health Authority - Environmental Services Thurrock Borough Council - Environmental Health Department Gravesham Borough Council - Environmental Health Department Dartford Borough Council - Environmental Health Department Sevenoaks District Council - Environmental Health Department	December 2020 February 2015 October 2014 September 2014 September 2014	Annual Rolling Update Not Applicable Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Thurrock Borough Council - Environmental Health Department Gravesham Borough Council - Environmental Health Department London Port Health Authority - Environmental Services Dartford Borough Council - Environmental Health Department Sevenoaks District Council - Environmental Health Department	February 2015 October 2014 October 2014 September 2014 September 2014	Variable Variable Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	February 2024	
Pollution Incidents to Controlled Waters Environment Agency - Southern Region Environment Agency - Anglian Region	December 1999 September 1999	
Prosecutions Relating to Authorised Processes Environment Agency - Anglian Region Environment Agency - Southern Region	July 2015 July 2015	
Prosecutions Relating to Controlled Waters Environment Agency - Anglian Region Environment Agency - Southern Region	March 2013 March 2013	
Registered Radioactive Substances Environment Agency - Anglian Region Environment Agency - Southern Region Environment Agency - Head Office	June 2016 June 2016 May 2023	As notified As notified Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable

Agency & Hydrological	Version	Update Cycle
River Quality Biology Sampling Points Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register Environment Agency - Anglian Region - Eastern Area Environment Agency - South East Region - Kent & South London Area Environment Agency - Southern Region - Kent Area Environment Agency - Southern Region - Kent and East Sussex	January 2024 January 2024 January 2024 January 2024	Quarterly Quarterly Quarterly Quarterly
Water Abstractions Environment Agency - Anglian Region Environment Agency - Southern Region	October 2023 October 2023	Quarterly Quarterly
Water Industry Act Referrals Environment Agency - Anglian Region Environment Agency - Southern Region	October 2017 October 2017	
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Groundwater Vulnerability - Soluble Rock Risk Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	As notified
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	As notified
Source Protection Zones Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2023	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2023	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2023	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	January 2024	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	Quarterly
OS Water Network Lines Ordnance Survey	January 2024	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites Environment Agency - Head Office	July 2023	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Anglian Region Environment Agency - Southern Region	January 2009 January 2009	Not Applicable Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Anglian Region - Eastern Area Environment Agency - South East Region - Kent & South London Area Environment Agency - Southern Region - Kent Area Environment Agency - Southern Region - Kent and East Sussex	January 2024 January 2024 January 2024 January 2024	Quarterly Quarterly Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Anglian Region - Eastern Area Environment Agency - South East Region - Kent & South London Area Environment Agency - Southern Region - Kent Area Environment Agency - Southern Region - Kent and East Sussex	January 2023 January 2023 January 2023 January 2023	Quarterly Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Dartford Borough Council - Environmental Health Department Gravesham Borough Council Kent County Council - Waste Management Group Sevenoaks District Council Thurrock Borough Council - Environmental Health Department	February 2003 February 2003 February 2003 February 2003 February 2003	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Dartford Borough Council - Environmental Health Department Gravesham Borough Council Kent County Council - Waste Management Group Sevenoaks District Council Thurrock Borough Council - Environmental Health Department	October 2018 October 2018 October 2018 October 2018 October 2018	
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	
Registered Landfill Sites Environment Agency - Anglian Region - Eastern Area Environment Agency - Southern Region - Kent Area Environment Agency - Southern Region - Kent and East Sussex	March 2006 March 2006 March 2006	Not Applicable Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - Anglian Region - Eastern Area Environment Agency - Southern Region - Kent Area Environment Agency - Southern Region - Kent and East Sussex	April 2018 April 2018 April 2018	
Registered Waste Treatment or Disposal Sites Environment Agency - Anglian Region - Eastern Area Environment Agency - Southern Region - Kent Area Environment Agency - Southern Region - Kent and East Sussex	June 2015 June 2015 June 2015	

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	January 2024	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements Thurrock Borough Council - Development Control London Port Health Authority - Environmental Services Dartford Borough Council Sevenoaks District Council Kent County Council Gravesham Borough Council	December 2015 January 2008 June 2023 June 2023 May 2023 October 2015	Variable Annual Rolling Update Variable Variable Variable Variable
Planning Hazardous Substance Consents Thurrock Borough Council - Development Control Sevenoaks District Council London Port Health Authority - Environmental Services Dartford Borough Council Kent County Council Gravesham Borough Council	December 2015 February 2016 January 2008 January 2016 January 2016 October 2015	Variable Variable Annual Rolling Update Variable Variable Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	October 2023	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	October 2023	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	October 2023	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2024	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	March 2024	Quarterly
Points of Interest - Education and Health PointX	March 2024	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2024	Quarterly
Points of Interest - Public Infrastructure PointX	March 2024	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2024	Quarterly
Underground Electrical Cables National Grid	February 2023	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	October 2023	Bi-Annually
Areas of Adopted Green Belt Dartford Borough Council Gravesham Borough Council Sevenoaks District Council Thurrock Borough Council - Development Control	February 2024 February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly Quarterly
Areas of Unadopted Green Belt Dartford Borough Council Gravesham Borough Council Sevenoaks District Council Thurrock Borough Council - Development Control	February 2024 February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly Quarterly
Areas of Outstanding Natural Beauty Natural England	November 2023	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2023	
Forest Parks Forestry Commission	May 2023	Not Applicable
Local Nature Reserves Natural England	February 2024	Bi-Annually
Marine Nature Reserves Natural England	February 2024	Bi-Annually
National Nature Reserves Natural England	February 2024	Bi-Annually
National Parks Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas Natural England	April 2023	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 March 2023	Bi-Annually
Ramsar Sites Natural England	February 2024	Bi-Annually
Sites of Special Scientific Interest Natural England	November 2023	Bi-Annually
Special Areas of Conservation Natural England	October 2023	Bi-Annually
Special Protection Areas Natural England	October 2023	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	Gravesham Borough Council Cygnet House, 132 Windmill Street, Gravesend, Kent, DA12 1AU	Telephone: 01474 564422 Fax: 01474 337546 Website: www.gravesham.gov.uk
6	Kent County Council - Waste Management Group Block H, The Forstal, Beddow Way, Aylesford, Kent, ME20 7BT	Telephone: 01622 605976 Website: www.kent.gov.uk
7	Dartford Borough Council - Environmental Health Department Civic Centre, Home Gardens, Dartford, Kent, DA1 1DR	Telephone: 01322 343233 Fax: 01322 343963 Website: www.dartford.gov.uk
8	Stantec UK Ltd Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
9	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
10	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9966 Fax: 0844 844 9951 Email: helpdesk@landmark.co.uk Website: www.landmark.co.uk
11	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
12	Gravesham Borough Council Cygnet House, 132 Windmill Street, Gravesend, Kent, DA12 1BQ	Telephone: 01474 564422 Fax: 01474 337546 Website: www.gravesham.gov.uk
13	Dartford Borough Council Civic Centre, Home Gardens, Dartford, Kent, DA1 1DR	Telephone: 01322 343434 Fax: 01322 343047 Website: www.dartford.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

Envirocheck[®] Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:

341438964_1_1

Customer Reference:

21397SAN

National Grid Reference:

562670, 171300

Slice:

A

Site Area (Ha):

0.09

Search Buffer (m):

1000

Site Details:

Flint Cottage, Northfleet Green

GRAVESEND

DA13 9PN

Client Details:

Mr N Lambert

Soils Ltd

Newton House

Cross Road

Tadworth

Surrey

KT20 5SR

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	-
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	4
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	5
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
Historical Map List	6
The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
Data Currency	7
Data Suppliers	8
Useful Contacts	9

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The brine subsidence data relating to the Droitwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1		1	1	8
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities	pg 2		1		3
Mining Instability			n/a	n/a	n/a
Natural Cavities	pg 3				1
Non Coal Mining Areas of Great Britain	pg 3	Yes	Yes	n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)				n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents					
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits	pg 4				3
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 4				3
Potentially Infilled Land (Water)	pg 4		1	1	
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Salt Mining Related Features					

Report Version v53.0

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	BGS Recorded Mineral Sites Site Name: Northfleet Green Road Denehole Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220939 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A13NE (E)	136	1	562815 171320
2	BGS Recorded Mineral Sites Site Name: Northfleet Green Denehole Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220941 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	408	1	562498 171690
3	BGS Recorded Mineral Sites Site Name: Northfleet Green Chalk Pit Location: Southfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 131065 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A8NE (SE)	562	1	562977 170804
4	BGS Recorded Mineral Sites Site Name: Istead Rise Chalkwell Location: Southfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220328 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	711	1	563280 170900
5	BGS Recorded Mineral Sites Site Name: New House Denehole Location: New House, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220377 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18NE (NE)	744	1	562997 171980
6	BGS Recorded Mineral Sites Site Name: Durmdale Chalk Pit Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 131061 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	801	1	563369 171715

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	BGS Recorded Mineral Sites Site Name: Pepper Hill Chalk Pit Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 131062 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18NW (N)	810	1	562443 172096
8	BGS Recorded Mineral Sites Site Name: Warren Road Denehole Location: Northfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220782 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A12NW (W)	904	1	561800 171620
9	BGS Recorded Mineral Sites Site Name: New Barn Road Denehole Location: Redstreet, Southfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220938 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	945	1	562143 170486
10	BGS Recorded Mineral Sites Site Name: Stanhill Farm Denehole Location: Southfleet, Gravesend, Kent Source: British Geological Survey, National Geoscience Information Service Reference: 220783 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A8SW (S)	978	1	562640 170300
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Man Made Mining Cavities Cavity Type: Chalkwell/Denehole Commodity: Chalk Solid Geology Detail: Thanet Sand Formation, Chalk Group Superficial Geology: No Details Detail:	A13NE (E)	220	2	562900 171300
	Man Made Mining Cavities Cavity Type: Chalkwell Commodity: Chalk Solid Geology Detail: Chalk Group Superficial Geology: No Details Detail:	A9NW (SE)	728	2	563300 170900
	Man Made Mining Cavities Cavity Type: Adit Entry Pillar and Stall Chalk Mine Commodity: Chalk Solid Geology Detail: Chalk Group Superficial Geology: No Details Detail:	A18NE (NE)	763	2	563000 172000

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Man Made Mining Cavities Cavity Type: Denehole:- vertical shaft having chambers at the base Commodity: Chalk Solid Geology Detail: Thanet Sand Formation, Chalk Group Superficial Geology No Details Detail:	A8SW (S)	979	2	562600 170300
	Natural Cavities Cavity Type: Solution Pipe x 6 Solid Geology Detail: Chalk Group Superficial Geology No Details Detail:	A19SE (NE)	933	2	563400 171900
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Non Coal Mining Areas of Great Britain Risk: Likely Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	36	1	562717 171304
	Non Coal Mining Areas of Great Britain Risk: Highly Likely Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	86	1	562766 171311

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1898	A8NE (SE)	561	-	562974 170803
12	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1898	A19SE (NE)	805	-	563373 171717
13	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1869	A18NW (N)	814	-	562444 172100
14	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A8NE (SE)	562	-	562979 170805
15	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A19SE (NE)	802	-	563371 171715
16	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A18NW (N)	813	-	562437 172097
17	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1869	A13NW (NW)	13	-	562636 171311
18	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1869	A13NE (N)	255	-	562679 171568

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
19	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
20	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
21	Potential for Ground Dissolution Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	196	1	562876 171307
22	Potential for Ground Dissolution Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	208	1	562889 171287
23	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	196	1	562876 171307
24	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296
25	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	208	1	562889 171287
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	196	1	562876 171307
26	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	208	1	562889 171287
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NW)	0	1	562666 171296

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Kent	010_14	1874
Kent	010_10	1882
Kent	010_10	1896
Kent	010_14	1896
Kent	010_10	1908
Kent	010_14	1908
Kent	010_10	1938
Kent	010_14	1938
Ordnance Survey Plan	TQ6270	1961
Ordnance Survey Plan	TQ6370	1961
Ordnance Survey Plan	TQ6271	1962
Ordnance Survey Plan	TQ6371	1962

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Kent	010_00	1869
Essex	088_00	1872
Essex	089_00	1872
Kent	010_SW	1898
Kent	010_SW	1909
Kent	010_SW	1938
Ordnance Survey Plan	TQ66NW	1961
Ordnance Survey Plan	TQ67SW	1962
1:10,000	Mapsheet	Published Date
Ordnance Survey Plan	TQ66NW	1981
Ordnance Survey Plan	TQ67SW	1991

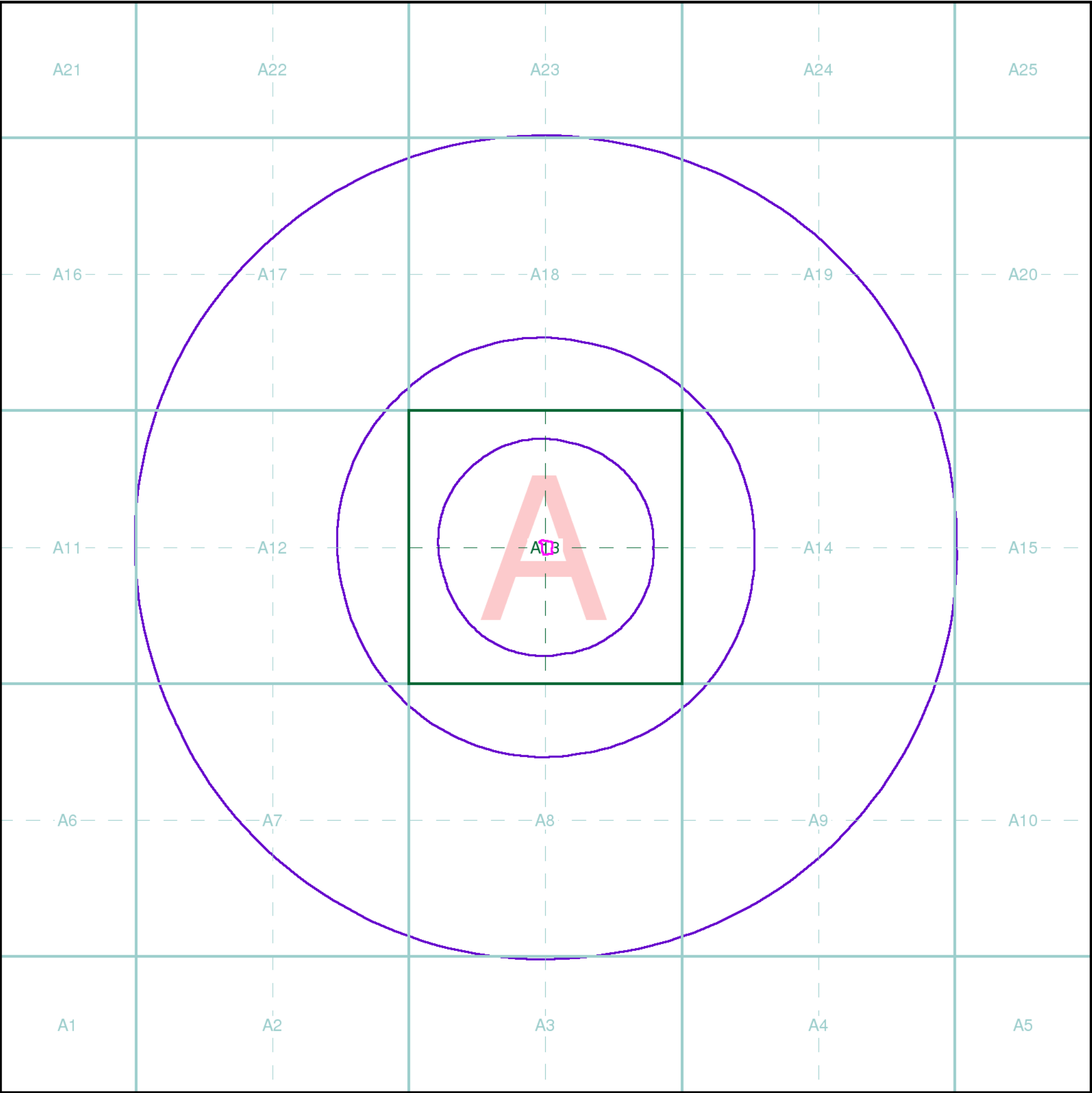
Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	December 2023	Bi-Annually
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Natural Cavities Stantec UK Ltd	December 2023	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	Version	Update Cycle
Subterranean Features Landmark Information Group Limited	July 2023	Bi-Annually
Ground Stability Data (1:50,000)	Version	Update Cycle
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Brine Subsidence Solution Area Johnson Poole & Bloomer	December 2020	

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	
Ove Arup	
Stantec UK Ltd	
Wardell Armstrong	
Johnson Poole & Bloomer	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Stantec UK Ltd Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
3	Ove Arup & Partners Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	Telephone: 0191 261 6080 Fax: 0191 261 7879
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Appendix C Site Sensitivity Maps



Index Map

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

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

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

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

A selection of organisations who provide data within this report:



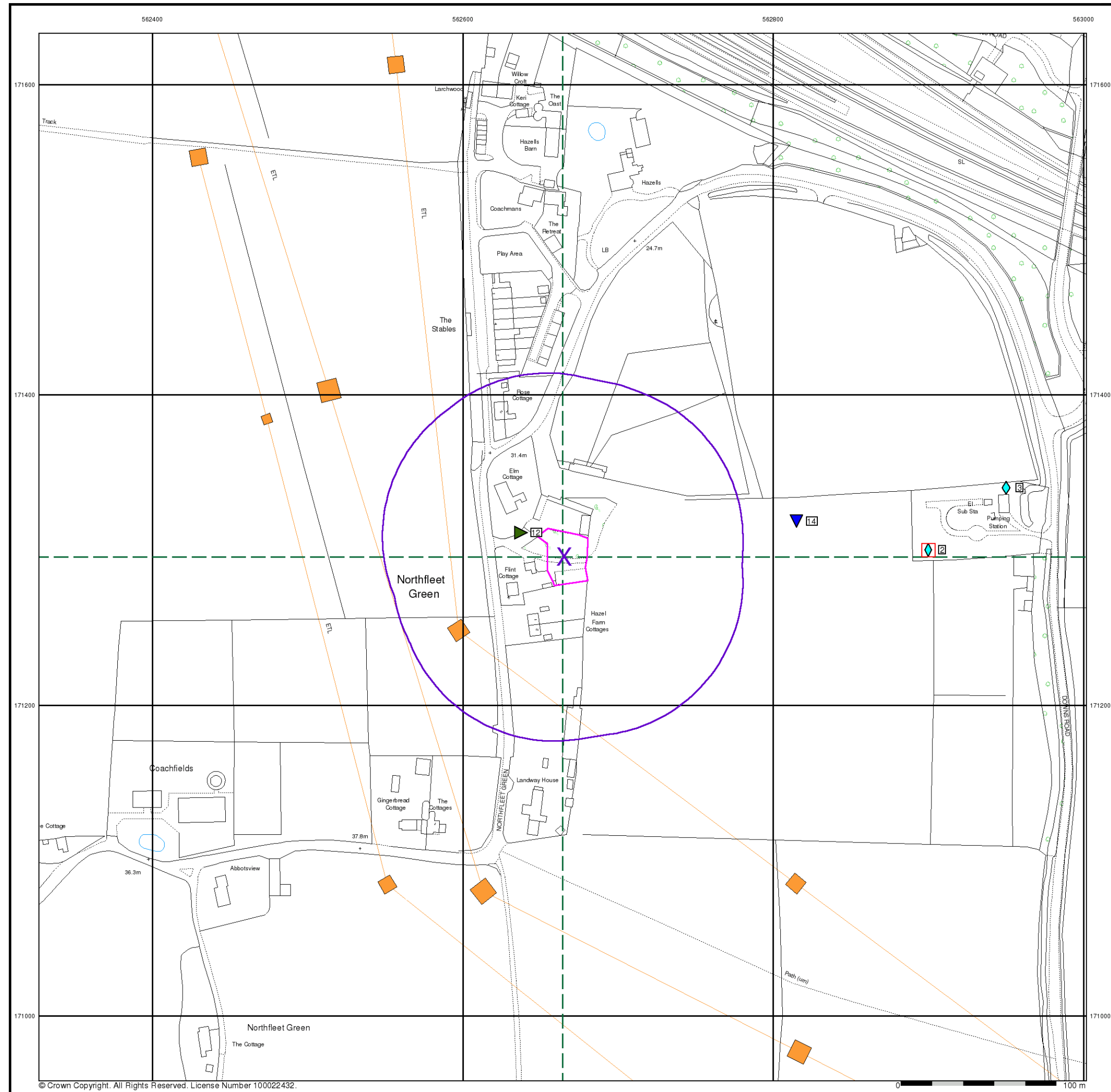
Envirocheck reports are compiled from 136 different sources of data.

Client Details
Mr N Lambert, Soils Ltd, Newton House, Cross Road, Tadworth, Surrey, KT20 5SR

Order Details
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details
Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN

Full Terms and Conditions can be found on the following link:
<http://www.landmarkinfo.co.uk/Terms/Show/515>



- ### General

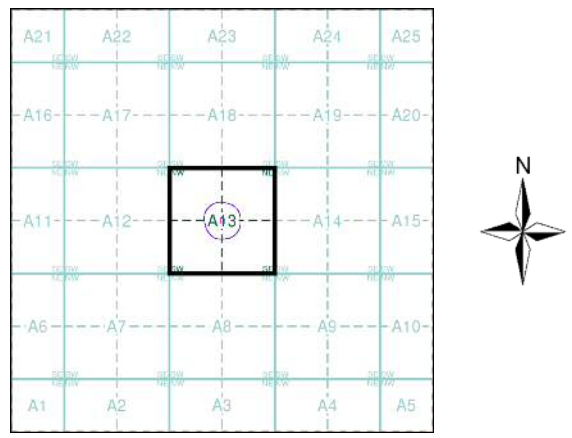
 - Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Types at Location
 - Pylon
 - Overhead Transmission Line
- ### Agency and Hydrological

 - Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- ### Hazardous Substances

 - COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - BGS Recorded Mineral Site
- ### Waste

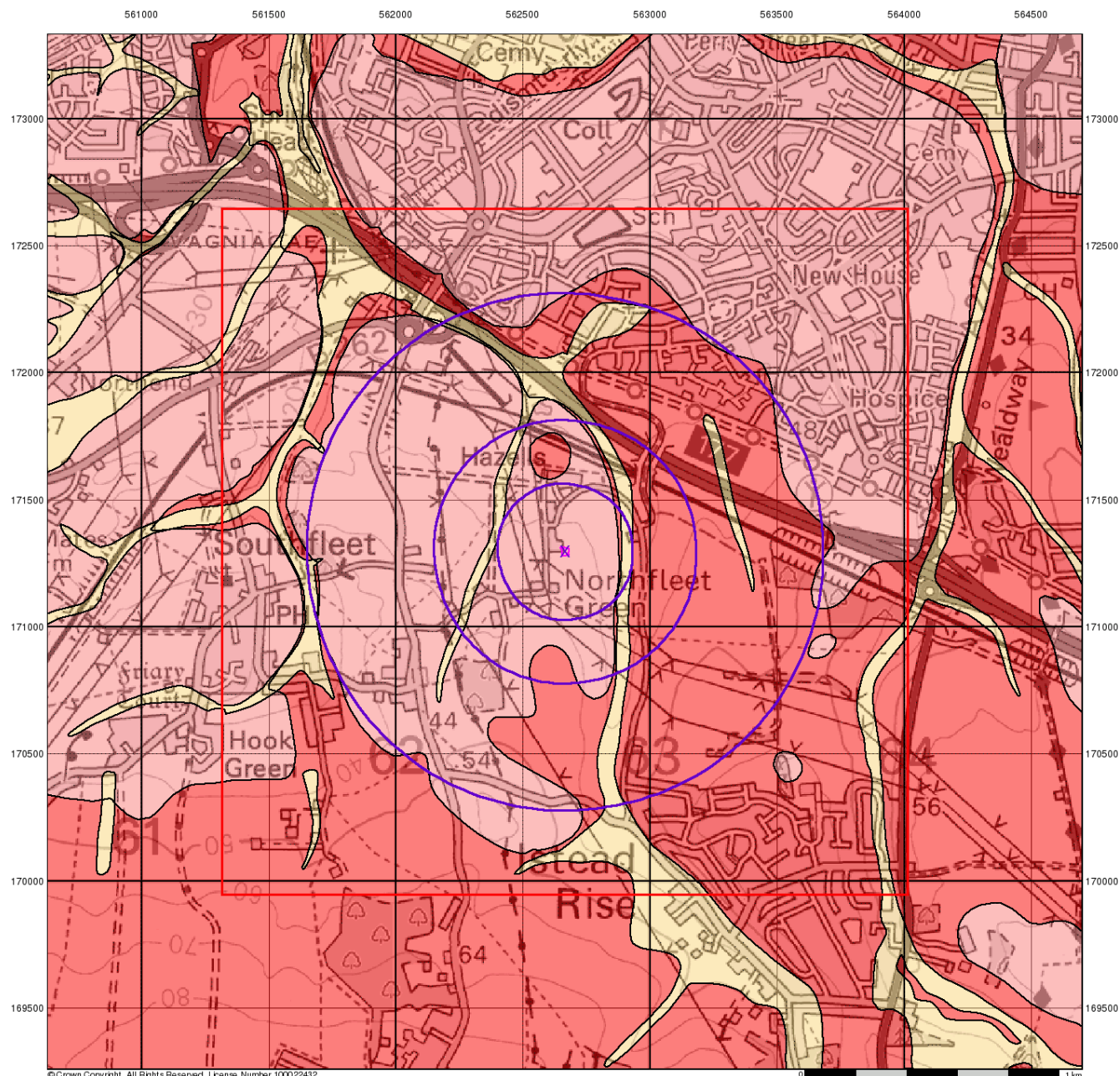
 - BGS Recorded Landfill Site (Location)
 - BGS Recorded Landfill Site
 - EA Historic Landfill (Buffered Point)
 - EA Historic Landfill (Polygon)
 - Integrated Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



Order Details
Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Plot Buffer (m): 100

Site Details
Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



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Groundwater Vulnerability

General

- X Specified Site ○ Specified Buffer(s) X Bearing Reference Point
- Slice 8 Map ID

Agency and Hydrological

Bedrock Aquifers

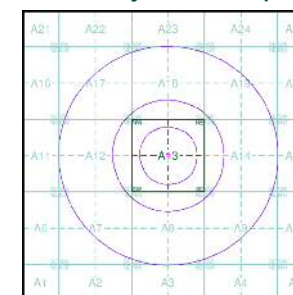
- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

- Unproductive Aquifer
- ⋯ Soluble Rock

Site Sensitivity Context Map - Slice A

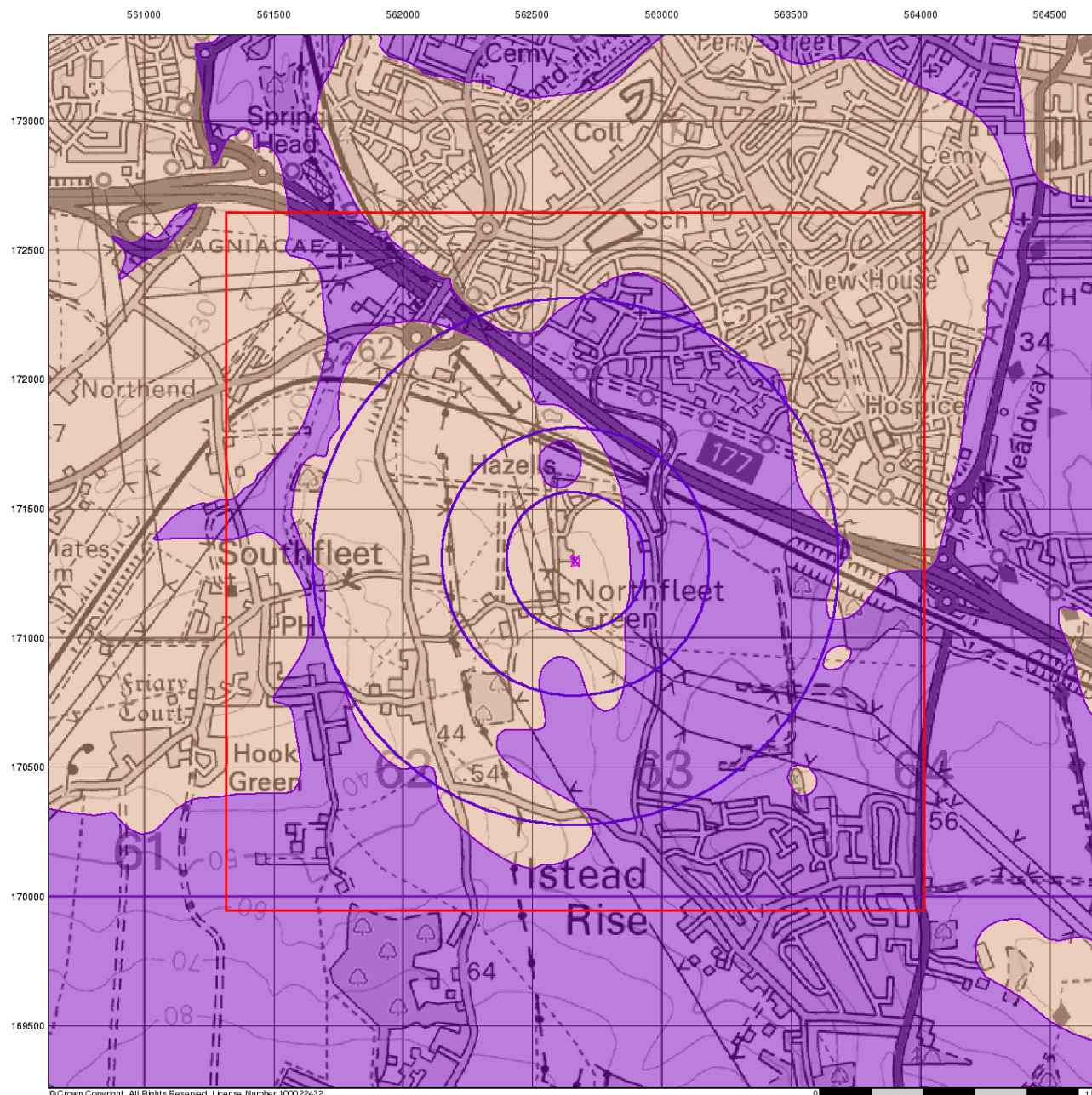


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



Bedrock Aquifer Designation

General

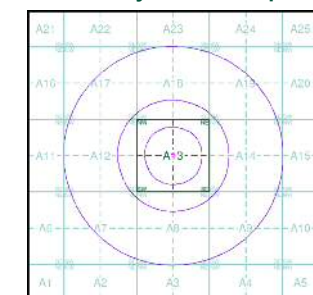
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A

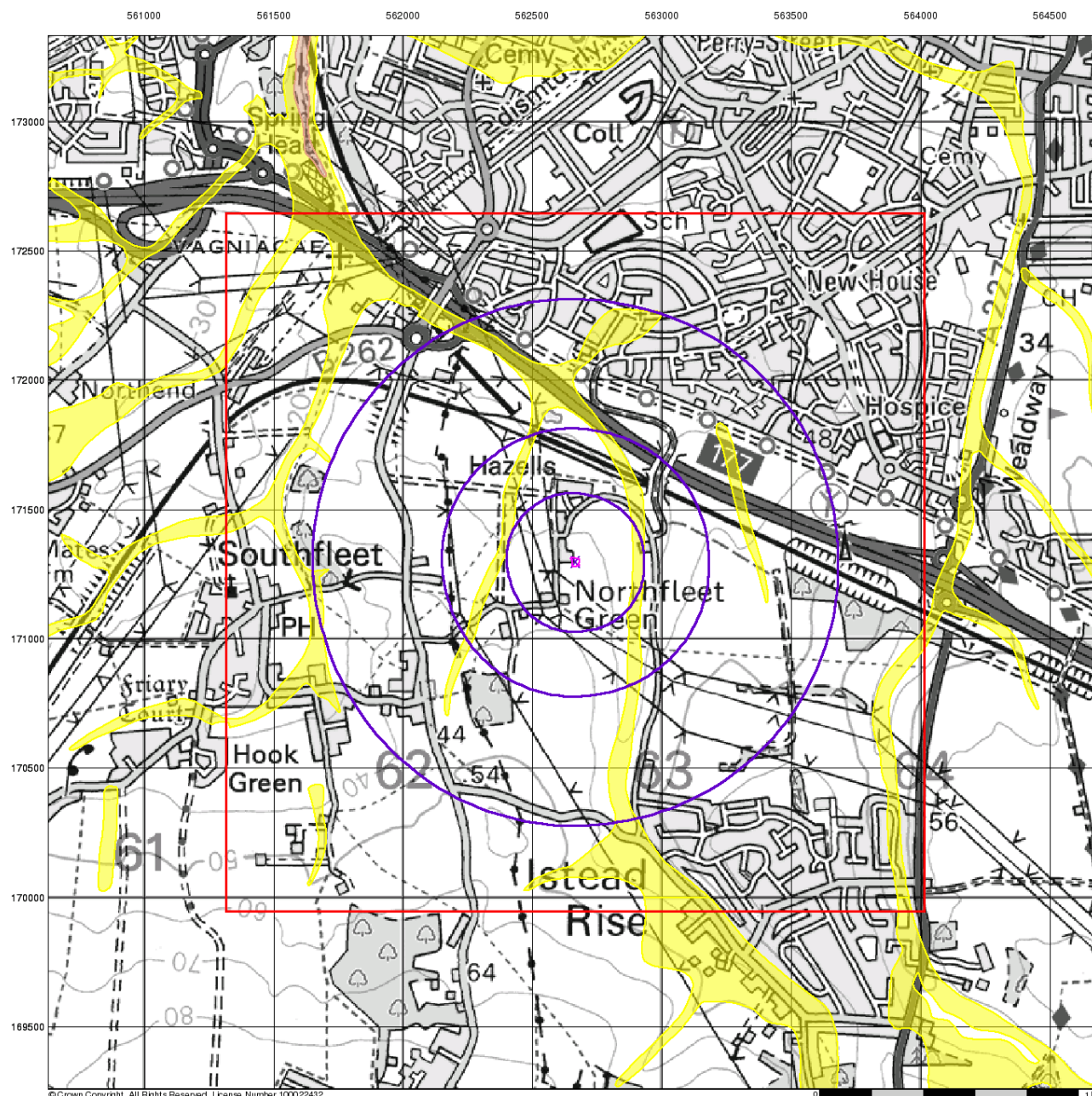


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



Superficial Aquifer Designation

General

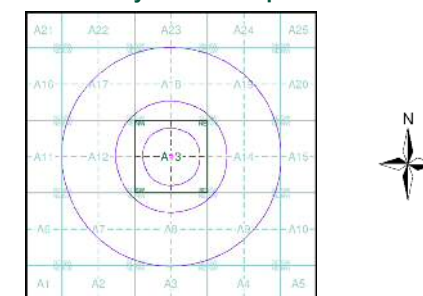
-  Specified Site
  Specified Buffer(s)
  Bearing Reference Point
 Slice
  Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

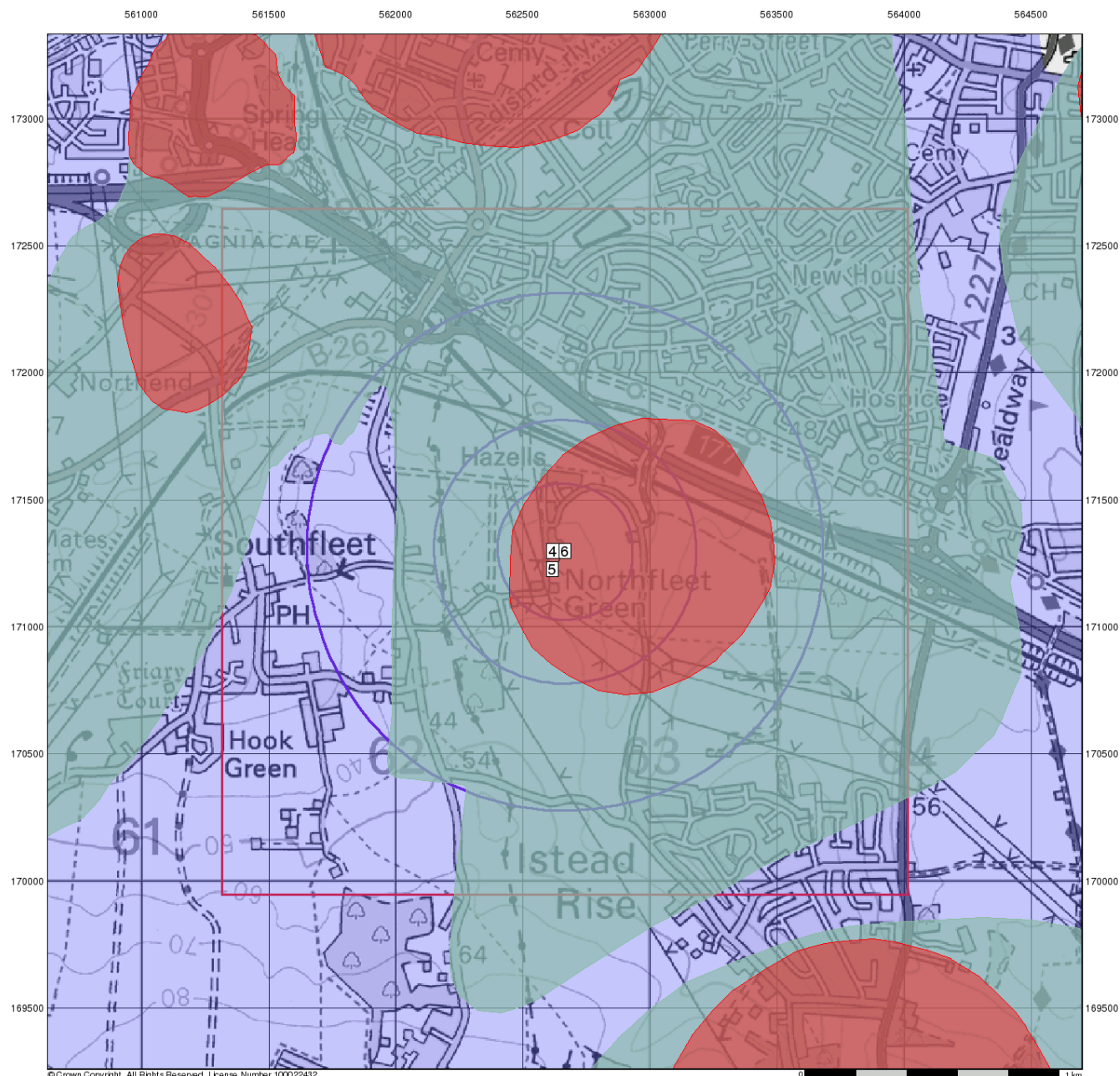
Order Number:	341438964_1_1
Customer Ref:	21397SAN
National Grid Reference:	562670, 171300
Slice:	A
Site Area (Ha):	0.09
Search Buffer (m):	1000

Site Details

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0 1 km



Source Protection Zones

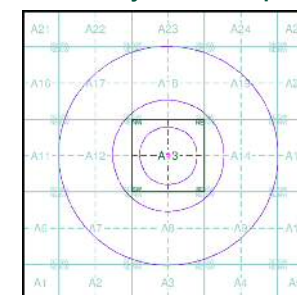
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



Order Details

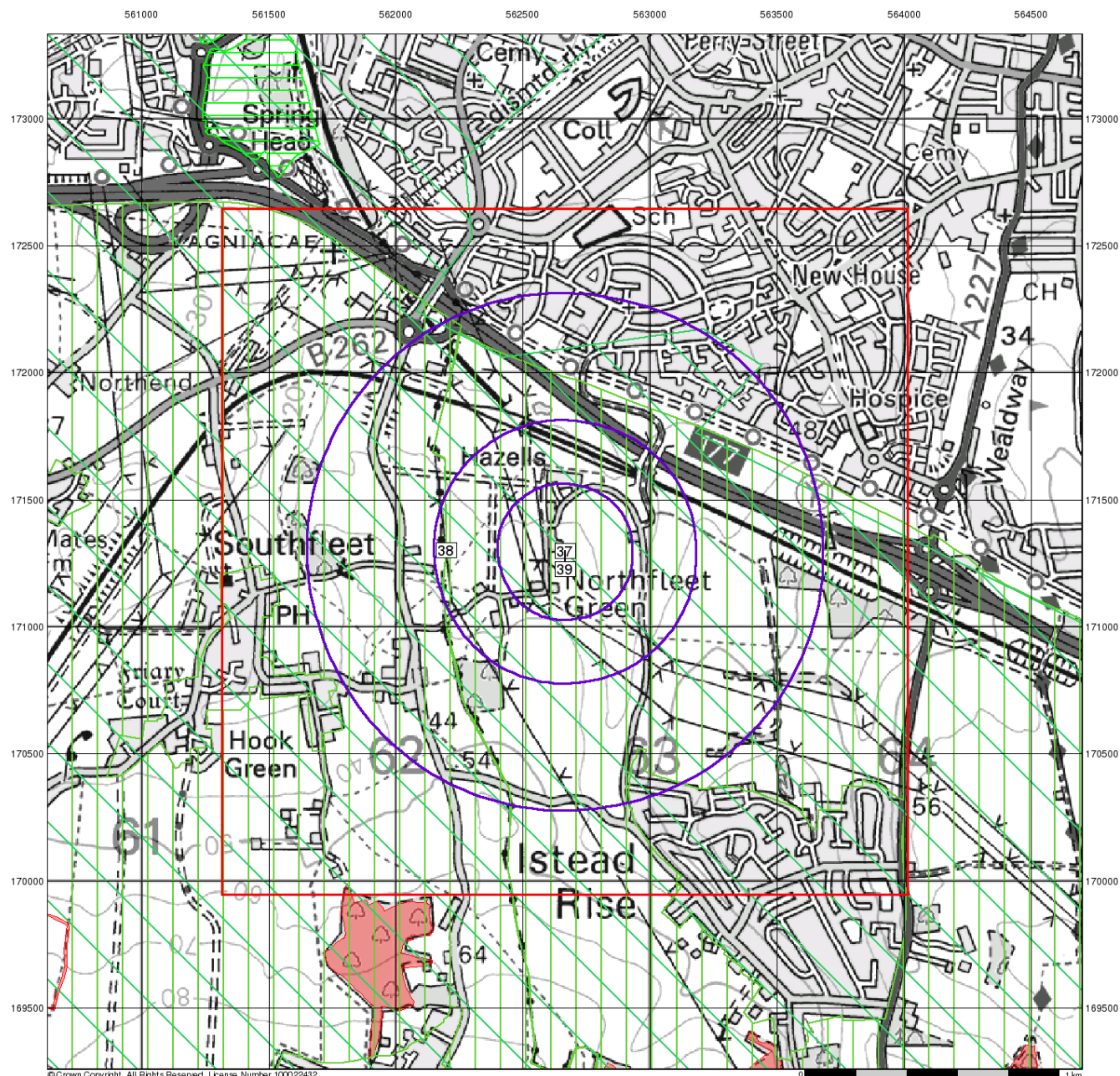
Order Number: 341438964_1_1
 Customer Ref: 21397SAN
 National Grid Reference: 562670, 171300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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Sensitive Land Uses

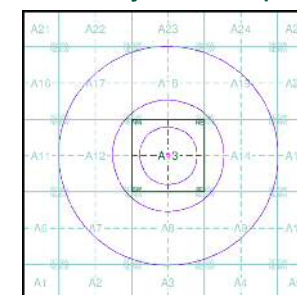
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

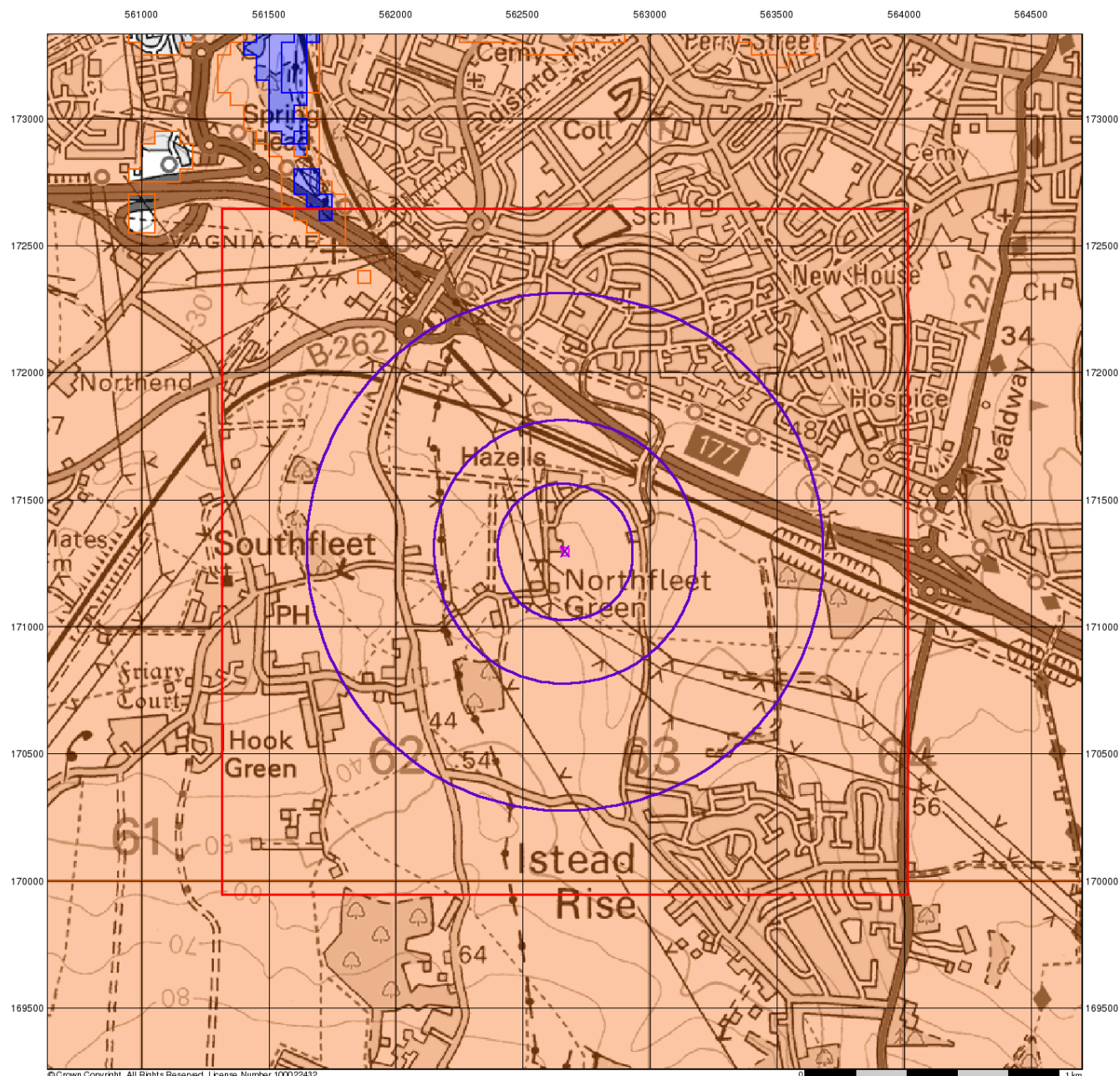
Order Number: 341438964_1_1
 Customer Ref: 21397SAN
 National Grid Reference: 562670, 171300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

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0 1 km



BGS Flood GFS Data

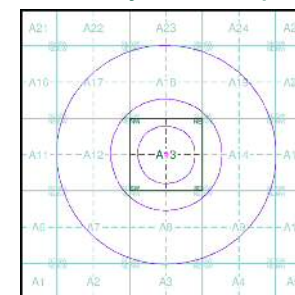
General

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

Agency and Hydrological (Flood)

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 341438964_1_1
 Customer Ref: 21397SAN
 National Grid Reference: 562670, 171300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



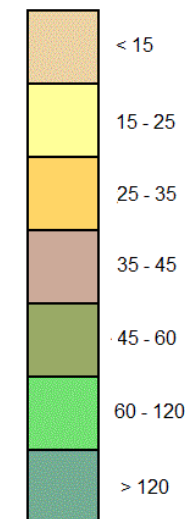
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

General

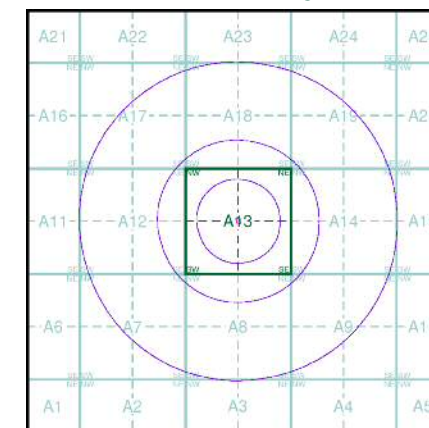
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

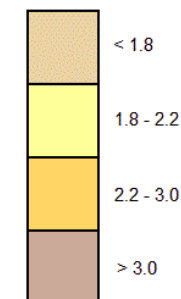
Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN

General

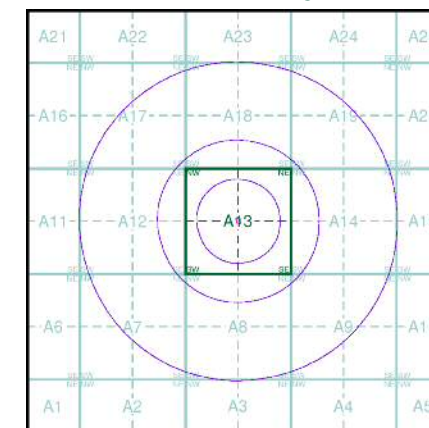
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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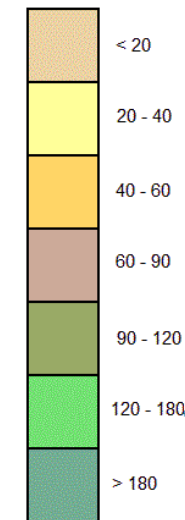


General

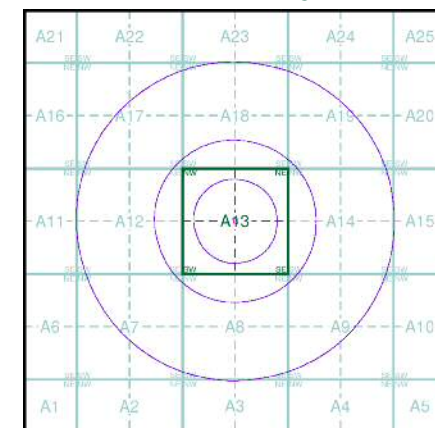
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details

Order Details: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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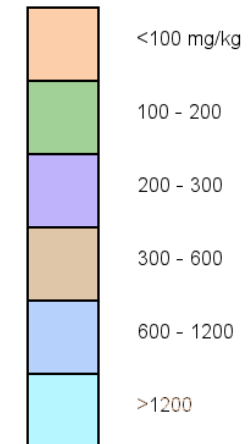
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

General

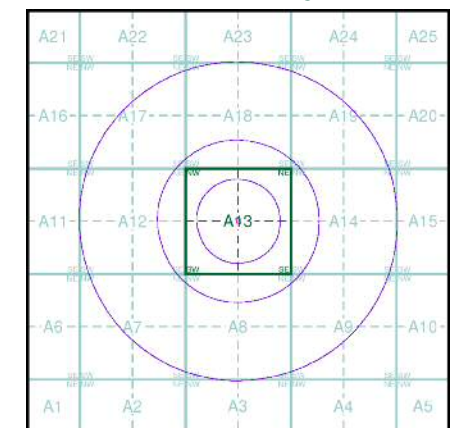
 Specified Site  Specified Buffer(s)  Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A



Order Details

Order Details: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

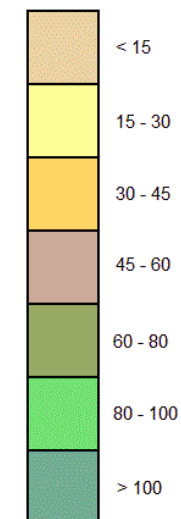
Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN

General

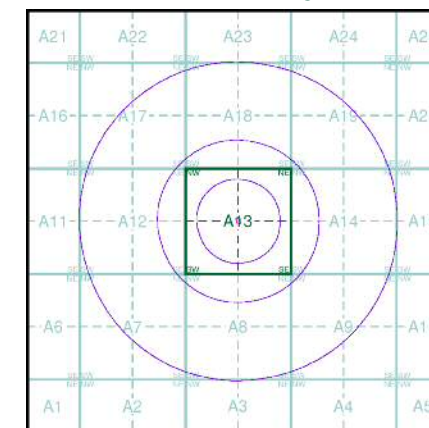
 Specified Site  Specified Buffer(s)  Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A

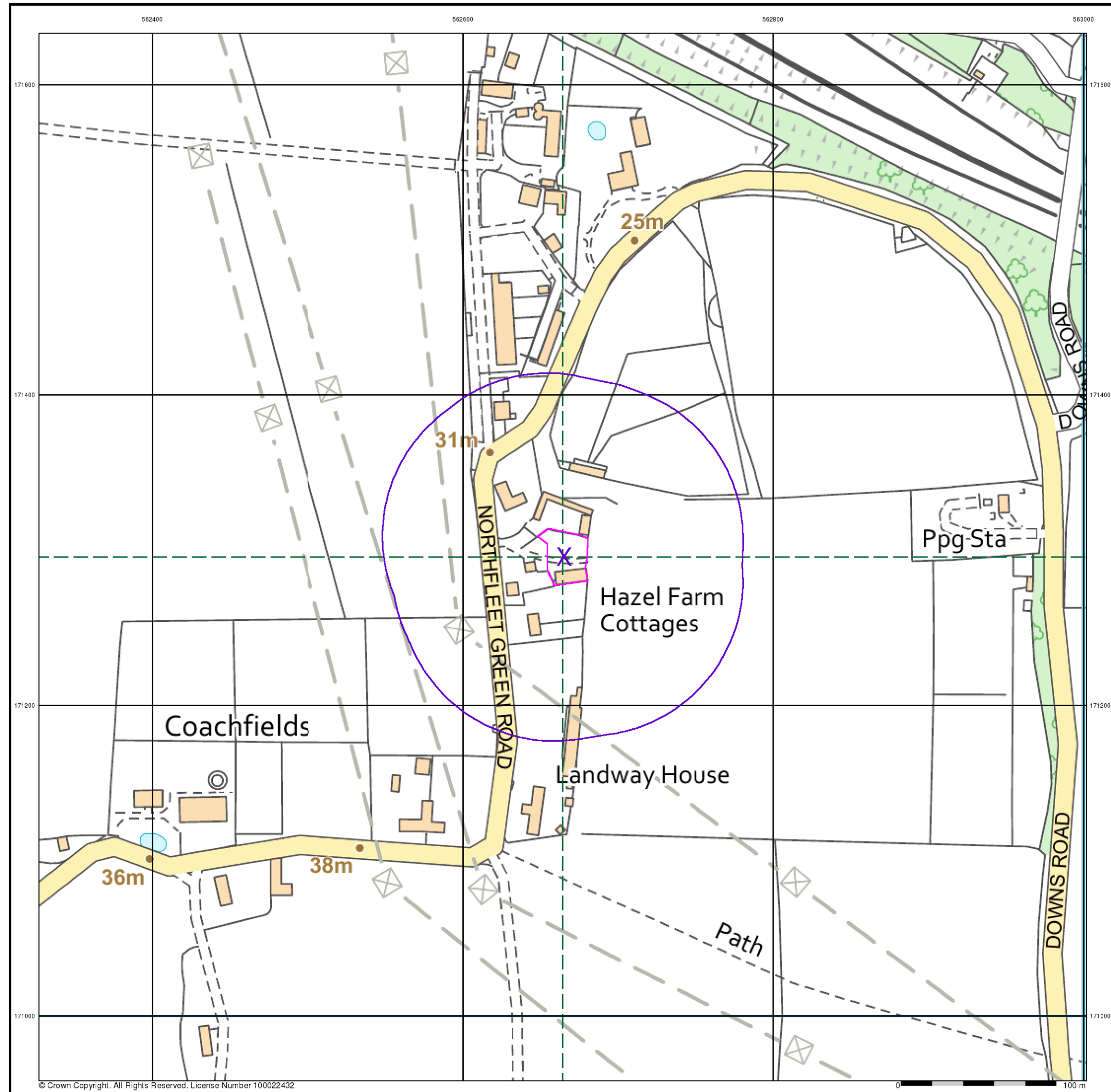


Order Details

Order Details: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



Historical Land Use Information (1:2,500)

General

Specified Site Specified Buffer(s) Bearing Reference Point Map ID
Several of Type at Location

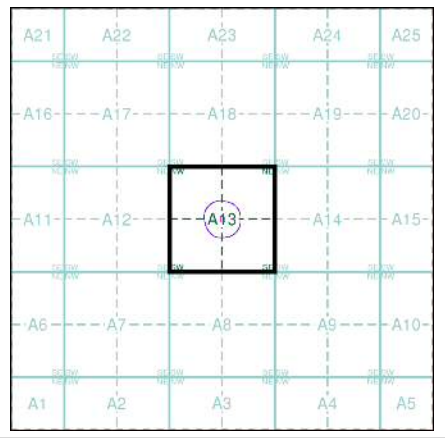
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	■
Extractive Industries Activity from 1893 - 1915	▲	—	▧
Extractive Industries Activity from 1906 - 1937	▲	—	▨
Extractive Industries Activity from 1924 - 1949	▲	—	▩
Extractive Industries Activity from 1950 - 1980	▲	—	▪

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	---	■

Mining and Ground Stability - Segment A13



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Plot Buffer (m): 100

Site Details

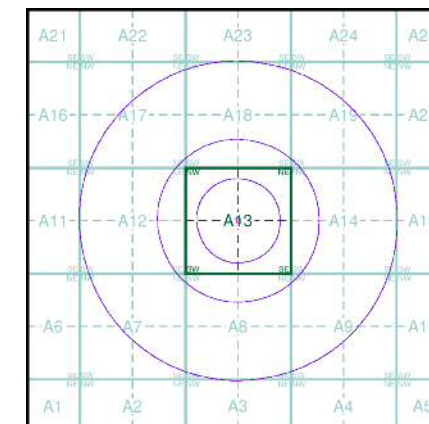
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Landmark
INFORMATION GROUP

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- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - BGS Recorded Mineral Site
- Waste**
- BGS Recorded Landfill Site (Location)
 - BGS Recorded Landfill Site
 - EA Historic Landfill (Buffered Point)
 - EA Historic Landfill (Polygon)
 - Integrated Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN

Industrial Land Use Map

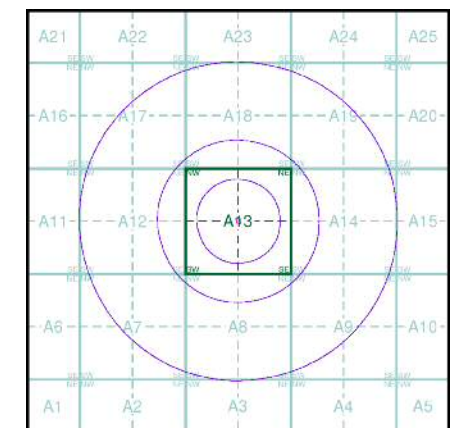
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A

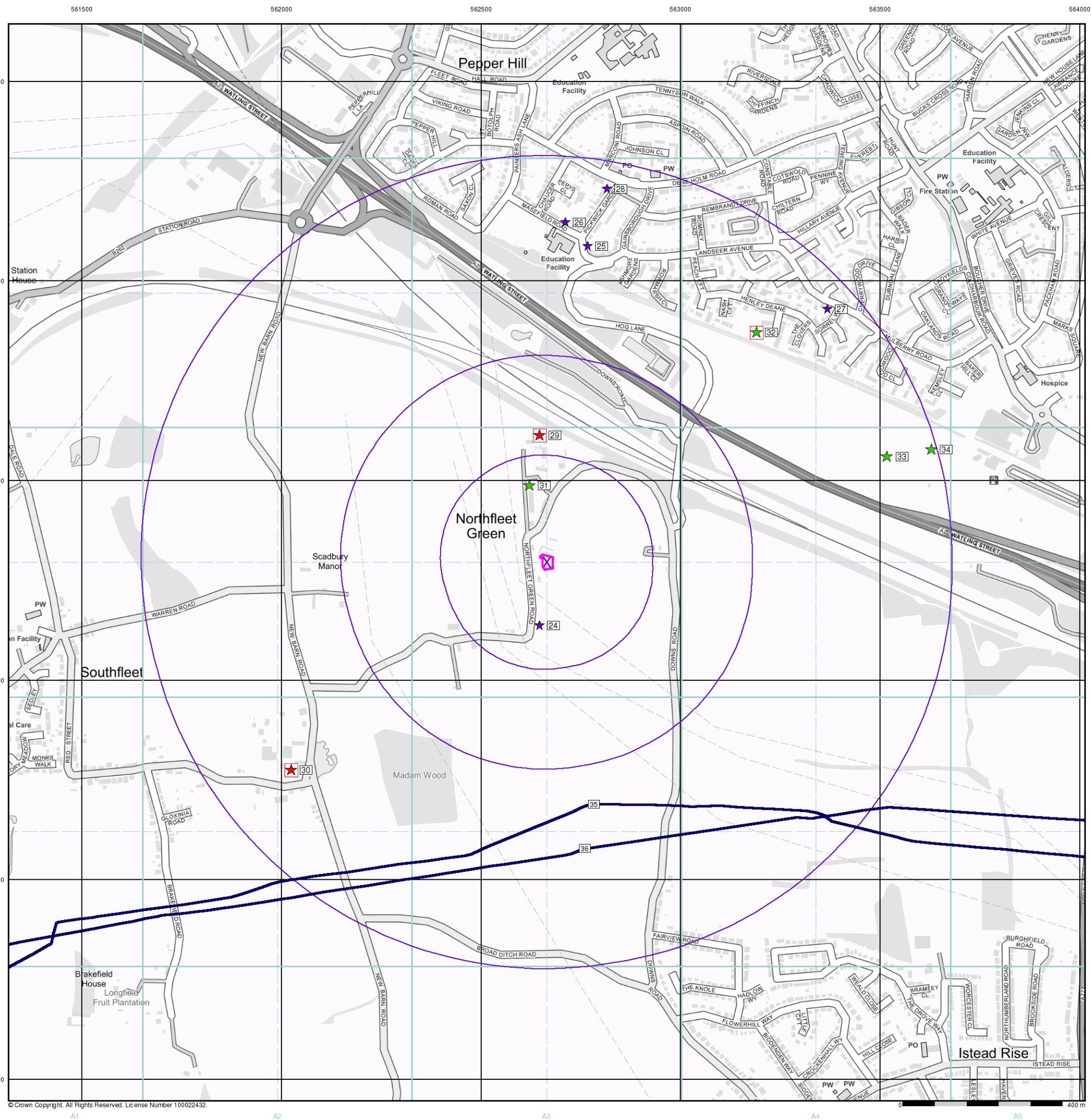


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



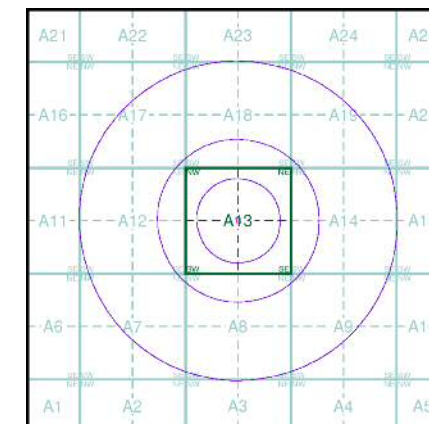
General

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

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A

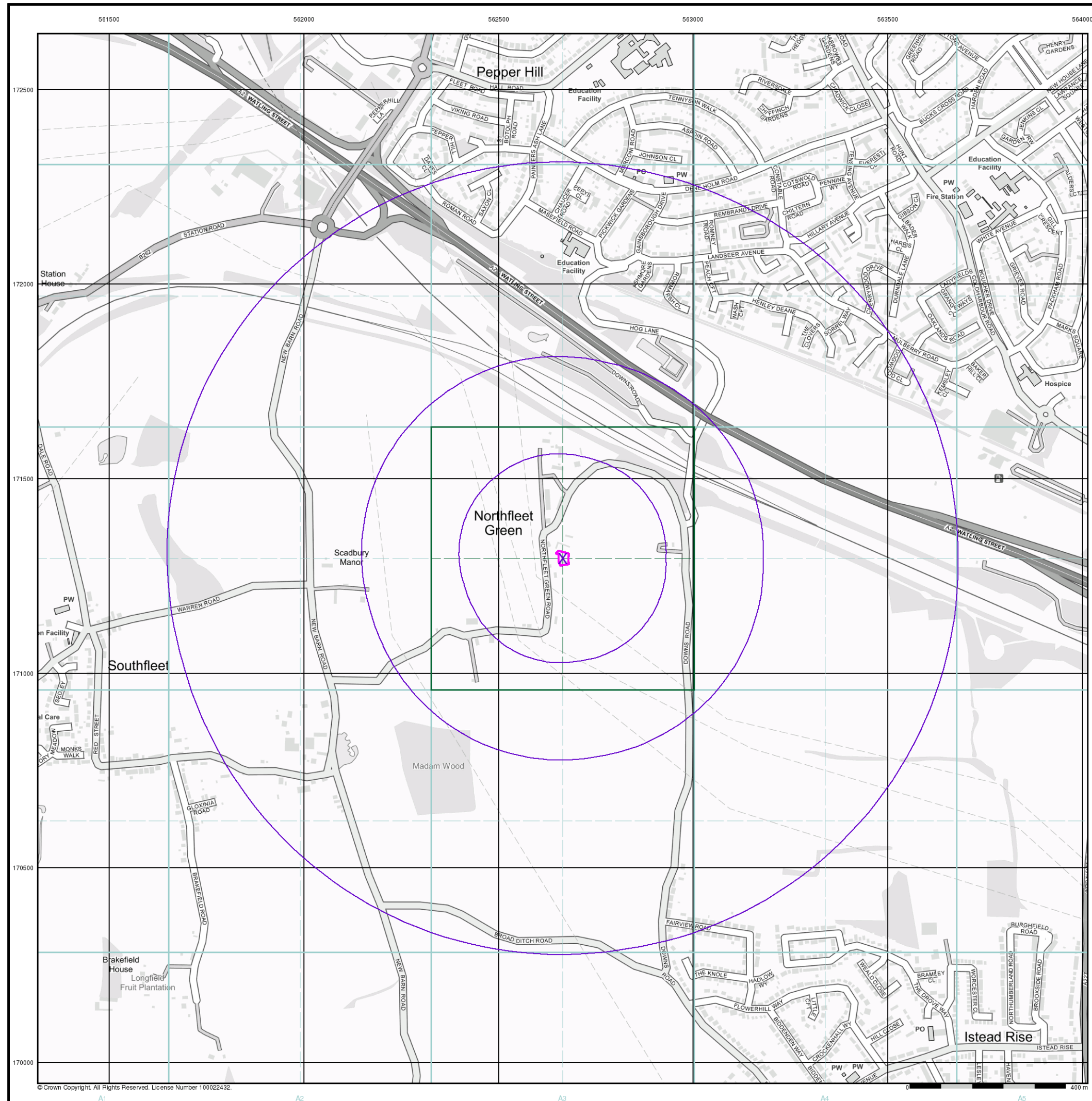


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

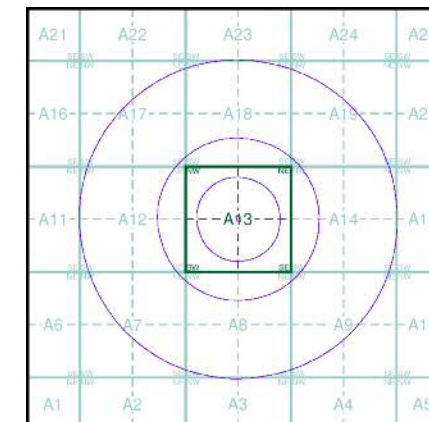
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A

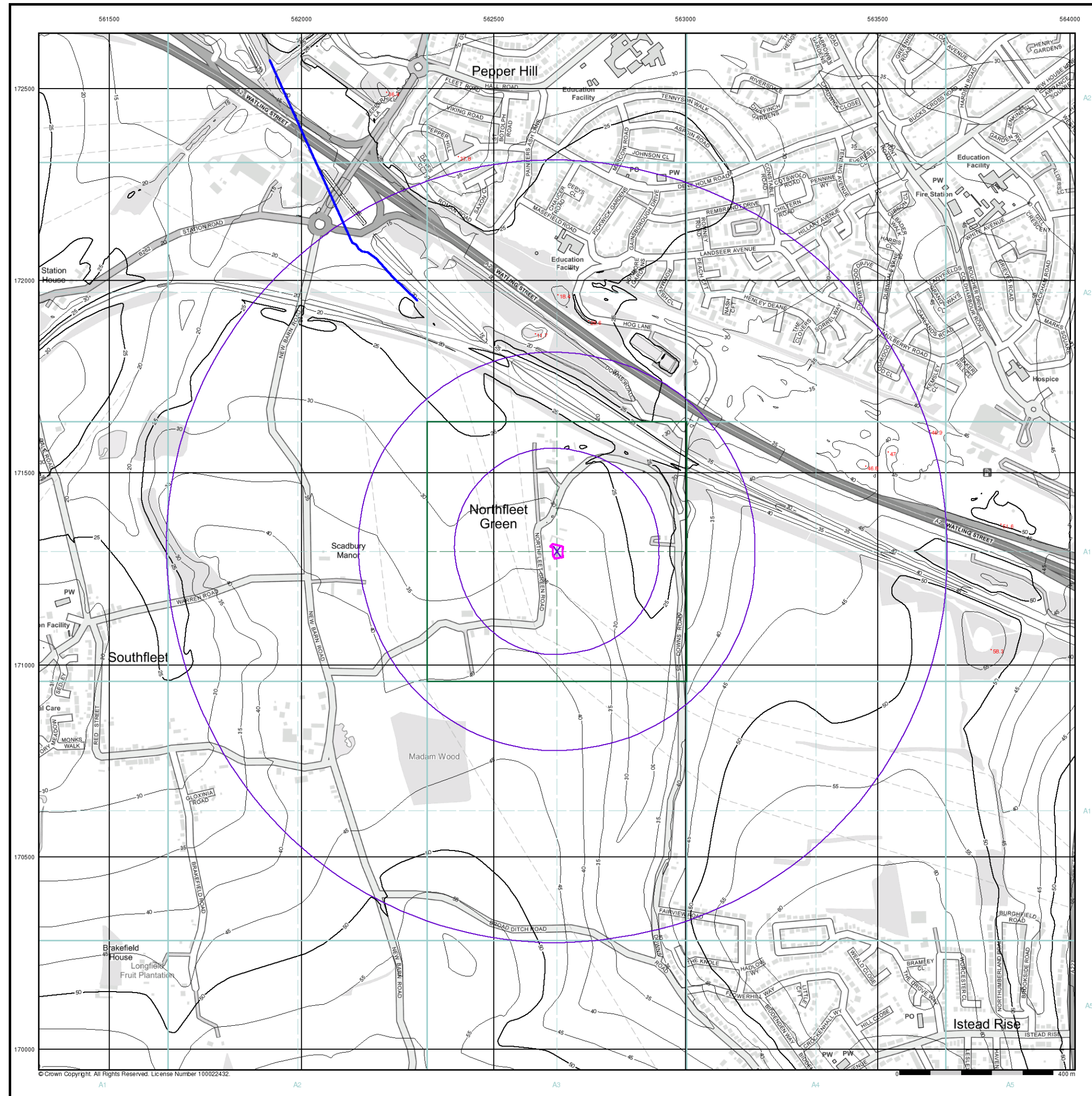


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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General

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

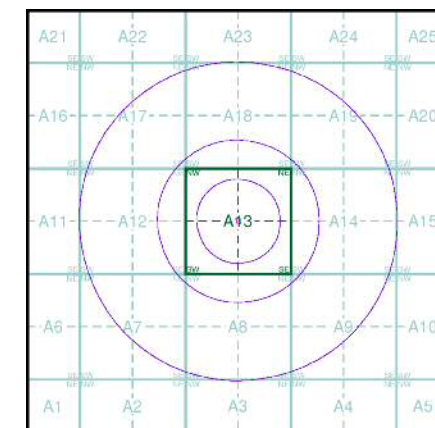
OS Water Network Data

- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |

Contours (height in meters)

- Standard Contour 105 100 95
- Master Contour 105 100 95
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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General

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

Risk of Flooding from Surface Water

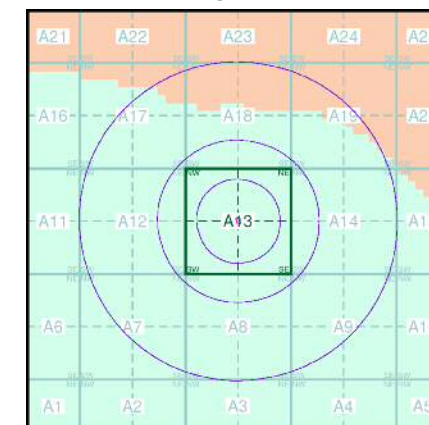
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

E/NRW Suitability Map - Slice A



Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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Historical Land Use Information (1:10,000)

General

- Specified Site Specified Buffer(s) Bearing Reference Point Map ID
Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

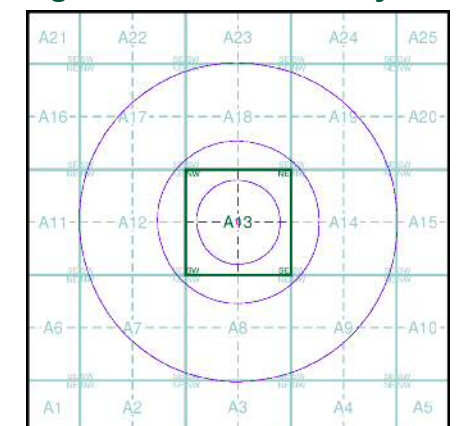
Historical Land Use

	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

Mining Data

- Potential Mining Area
BGS Recorded Mineral Site

Mining and Ground Stability - Slice A

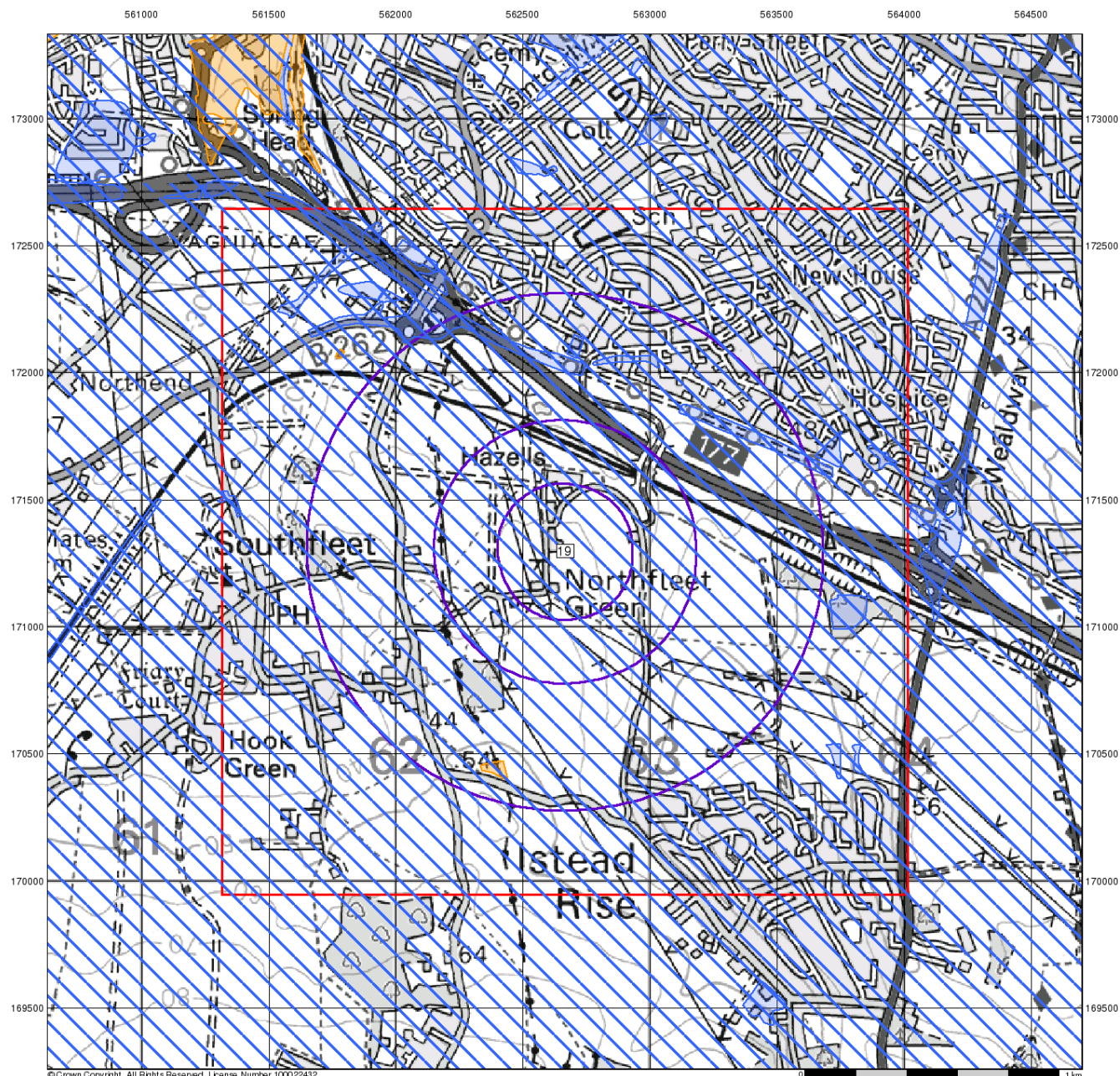


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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Ground Stability Data (1:50,000)

General

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

Potential for Compressible Ground Stability Hazards

- High
- Low
- Moderate
- Very Low

Potential for Collapsible Ground Stability Hazards

- High
- Low
- Moderate
- Very Low

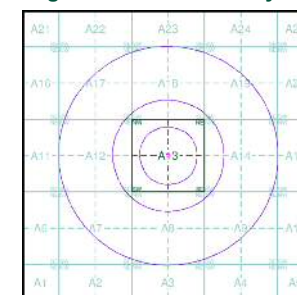
Brine Pumping and Salt Mining

Brine Pumping Related Feature

Salt Mining Related Feature

- | Point | Polygon |
|-------|---------|
| | |
| | |

Mining and Ground Stability - Slice A



Order Details

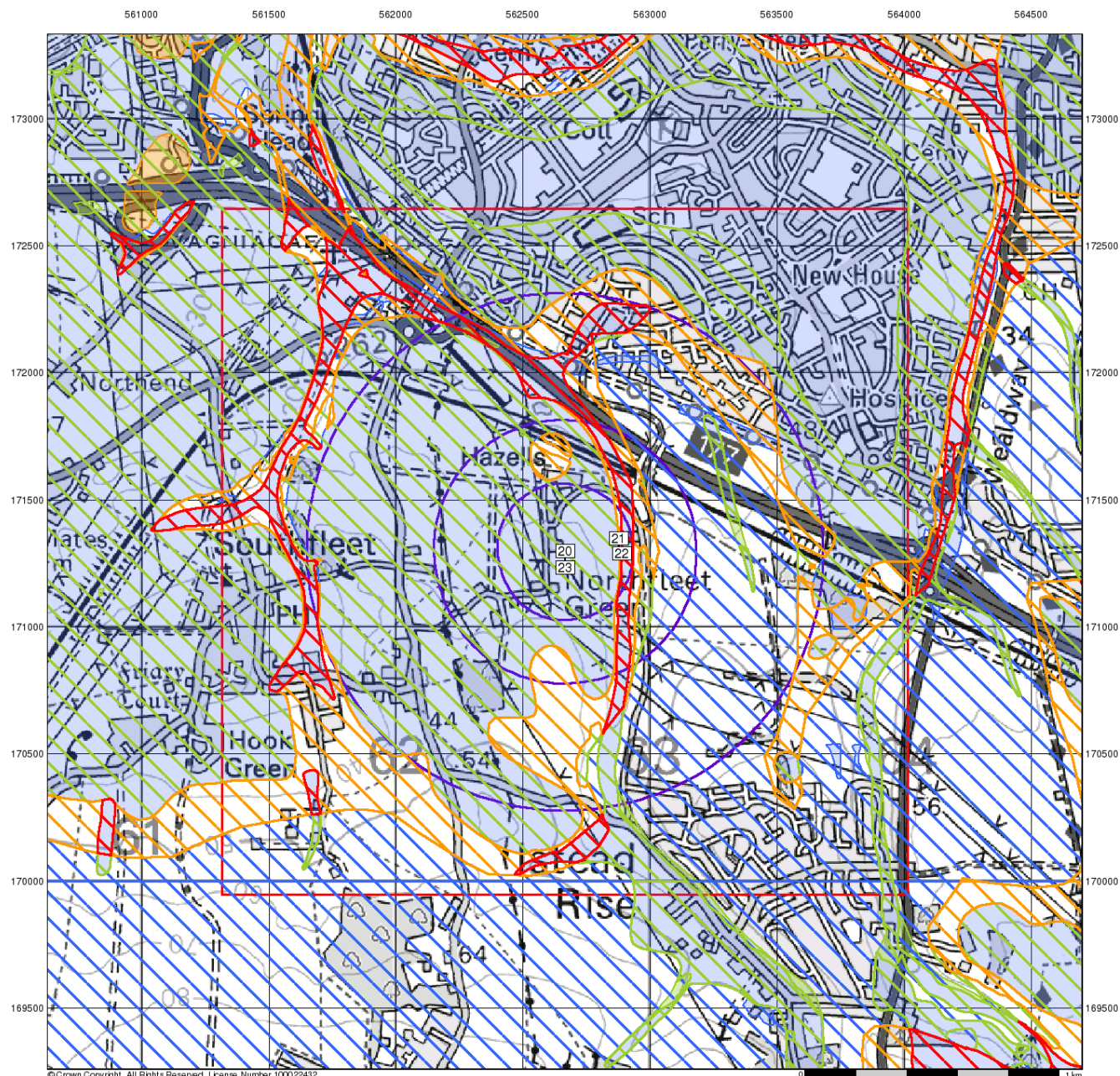
Order Number: 341438964_1_1
 Customer Ref: 21397SAN
 National Grid Reference: 562670, 171300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



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Ground Stability Data (1:50,000)

General

- ◇ Specified Site — Specified Buffer(s) X Bearing Reference Point
- Slice 8 Map ID

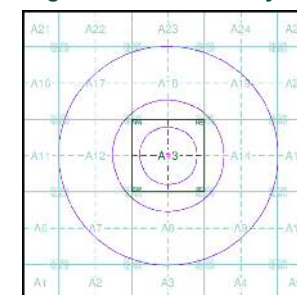
Potential for Landslide Ground Stability Hazards

- High ■ Low
- Moderate ■ Very Low

Potential for Ground Dissolution Stability Hazards

- ▨ High ▨ Low
- ▨ Moderate ▨ Very Low

Mining and Ground Stability - Slice A

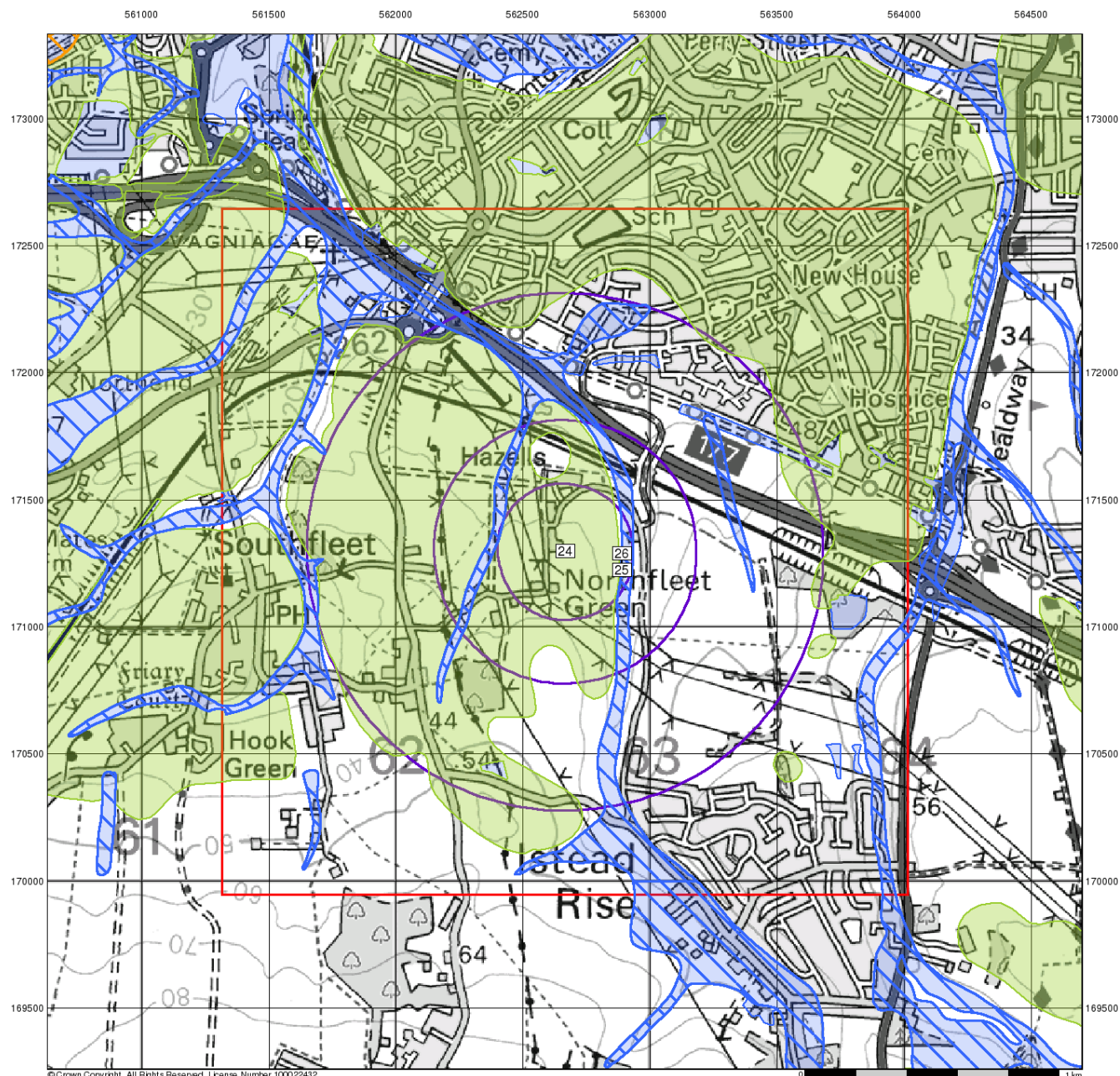


Order Details

Order Number: 341438964_1_1
Customer Ref: 21397SAN
National Grid Reference: 562670, 171300
Slice: A
Site Area (Ha): 0.09
Search Buffer (m): 1000

Site Details

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Ground Stability Data (1:50,000)

General

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

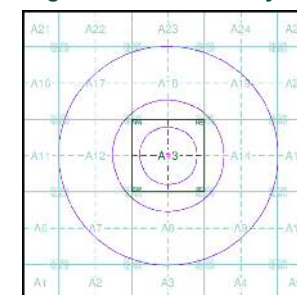
Potential for Running Sand Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number: 341438964_1_1
 Customer Ref: 21397SAN
 National Grid Reference: 562670, 171300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details

Flint Cottage, Northfleet Green, GRAVESEND, DA13 9PN



Tel: 0844 844 9952
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Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

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

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	TAB	Thanet Formation	Sand	Not Supplied - Thanetian
	LMBE	Lambeth Group	Sand, Silt and Clay	Not Supplied - Thanetian
	LSNCK	Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated)	Chalk	Not Supplied - Turonian



Geology 1:50,000 Maps

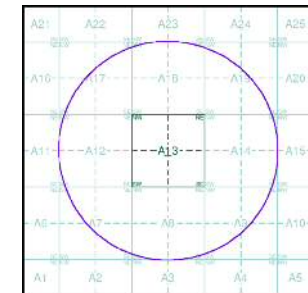
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published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

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

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	271
Map Name:	Dartford
Map Date:	1998
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A



Order Details:

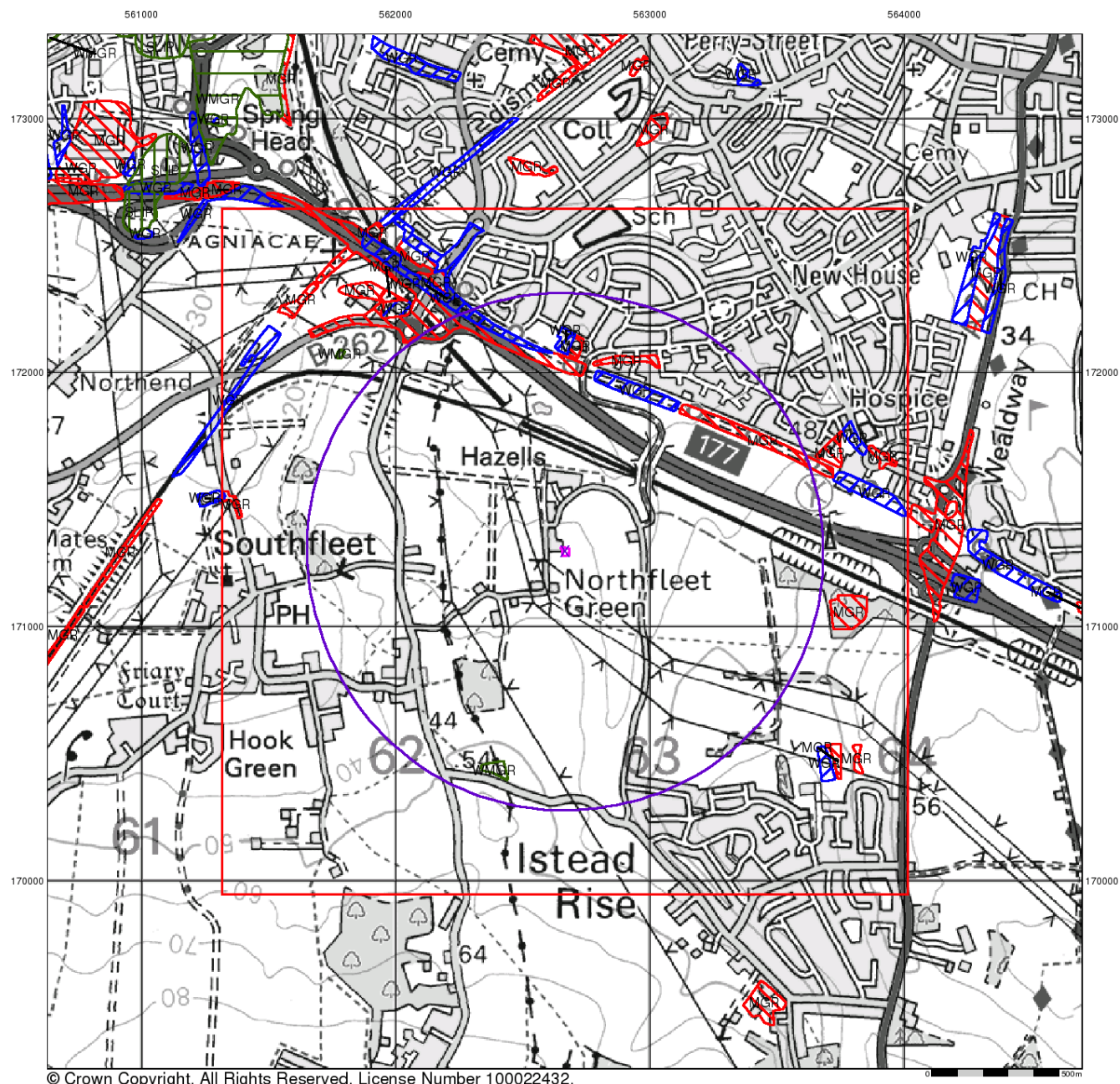
Order Number:	341438964_1_1
Customer Reference:	21397SAN
National Grid Reference:	562670, 171300
Slice:	A
Site Area (Ha):	0.09
Search Buffer (m):	1000

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Artificial Ground and Landslip

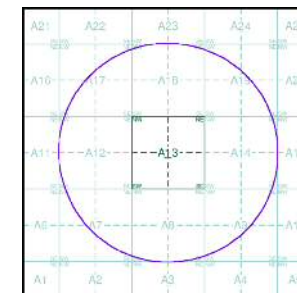
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

Artificial ground includes:

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

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

Artificial Ground and Landslip Map - Slice A



Order Details:

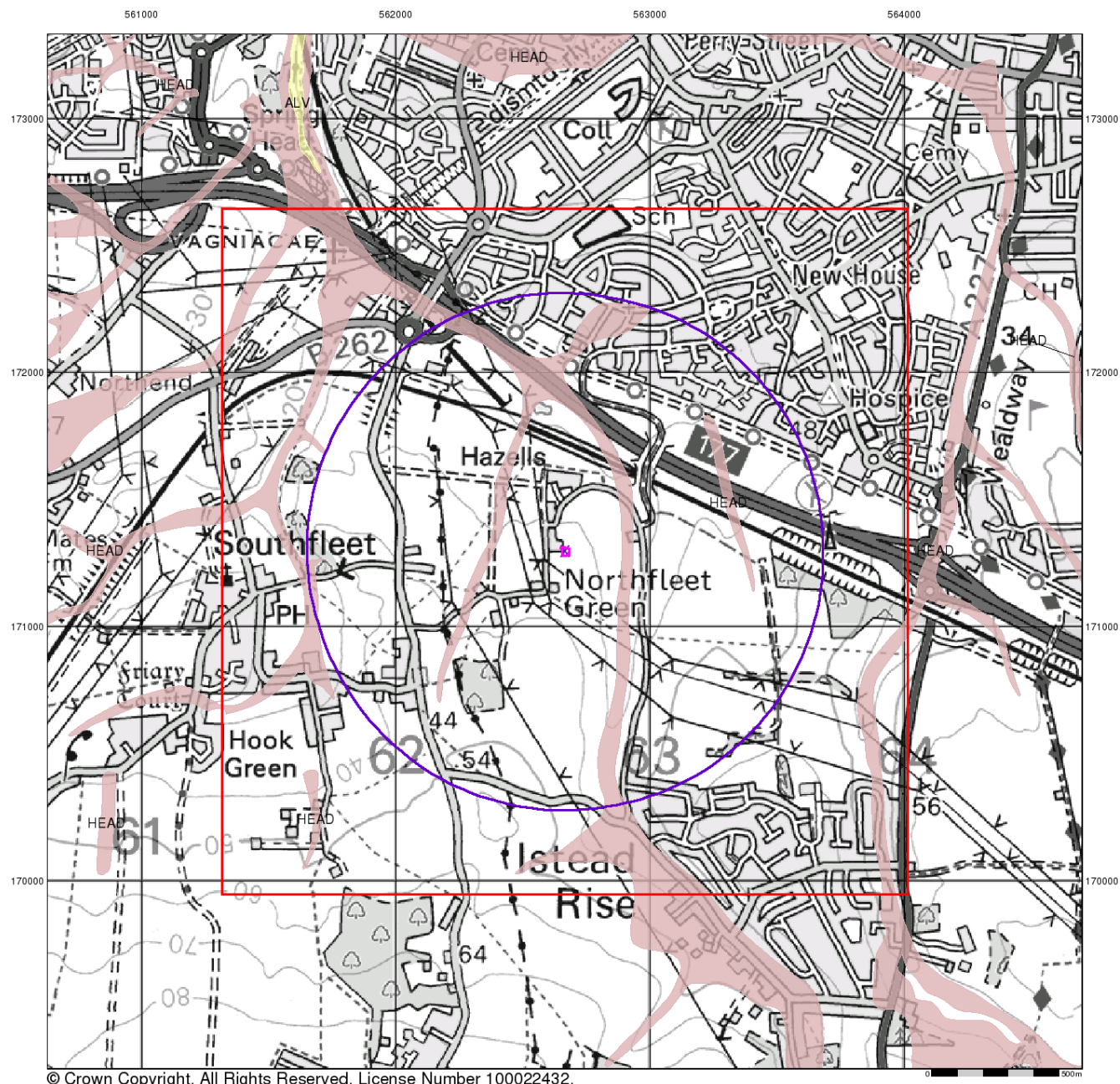
Order Number: 341438964_1_1
 Customer Reference: 21397SAN
 National Grid Reference: 562670, 171300
 Slice: A
 Site Area (Ha): 0.09
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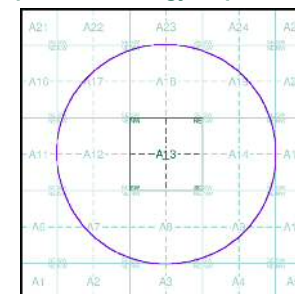
Superficial Geology

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

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

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

Superficial Geology Map - Slice A



Order Details:

Order Number: 341438964_1_1
 Customer Reference: 21397SAN
 National Grid Reference: 562670, 171300
 Slice: A
 Site Area (Ha): 0.09
 Search Buffer (m): 1000

Site Details:

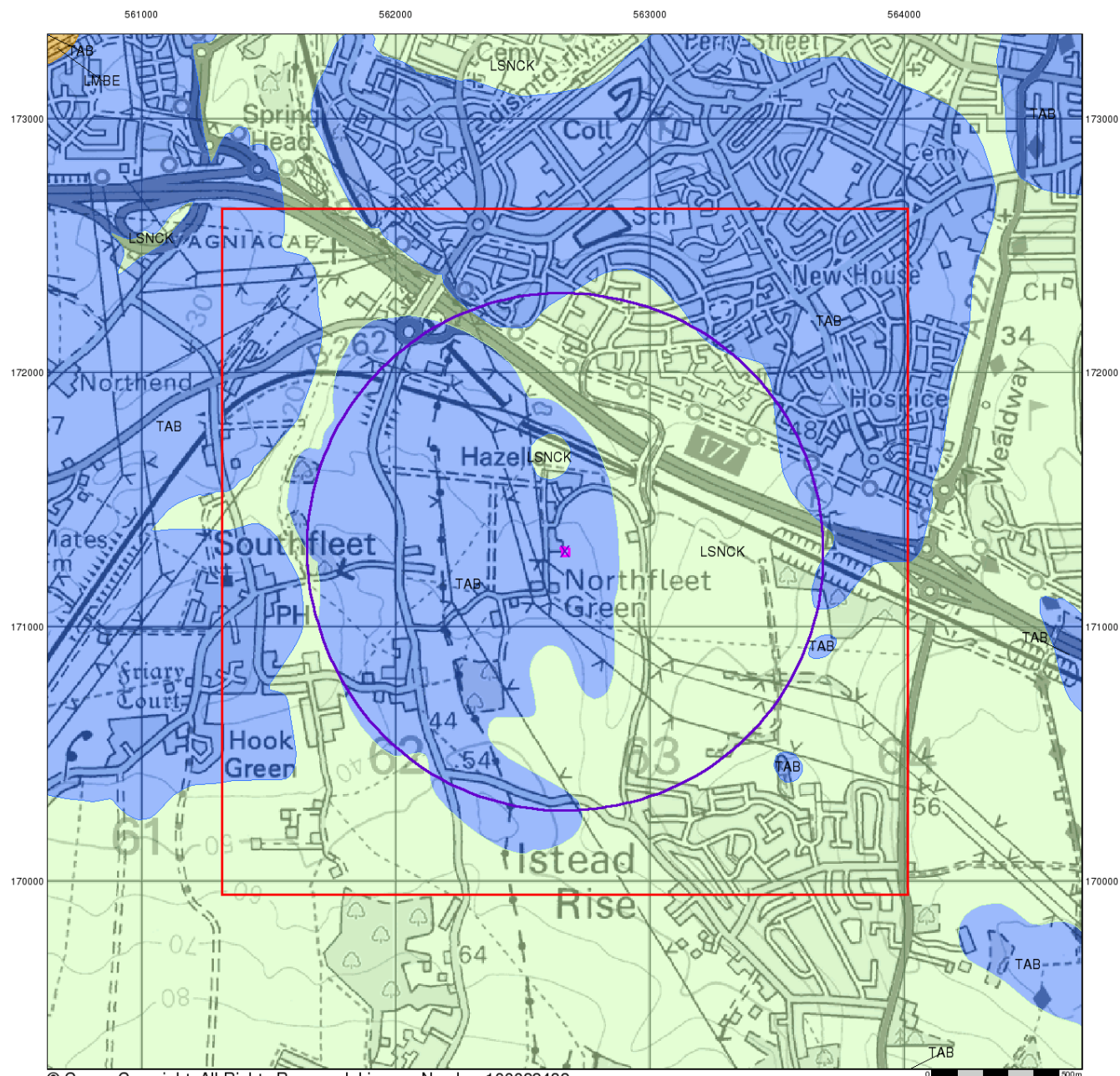
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v15.0 03-Apr-2024

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Bedrock and Faults

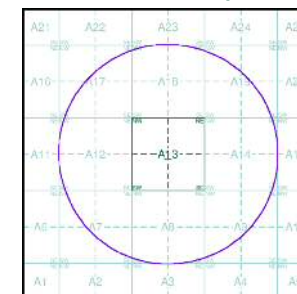
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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

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

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

Bedrock and Faults Map - Slice A



Order Details:

Order Number: 341438964_1_1
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Site Area (Ha): 0.09
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Site Details:

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Appendix D Local Authority Search Data

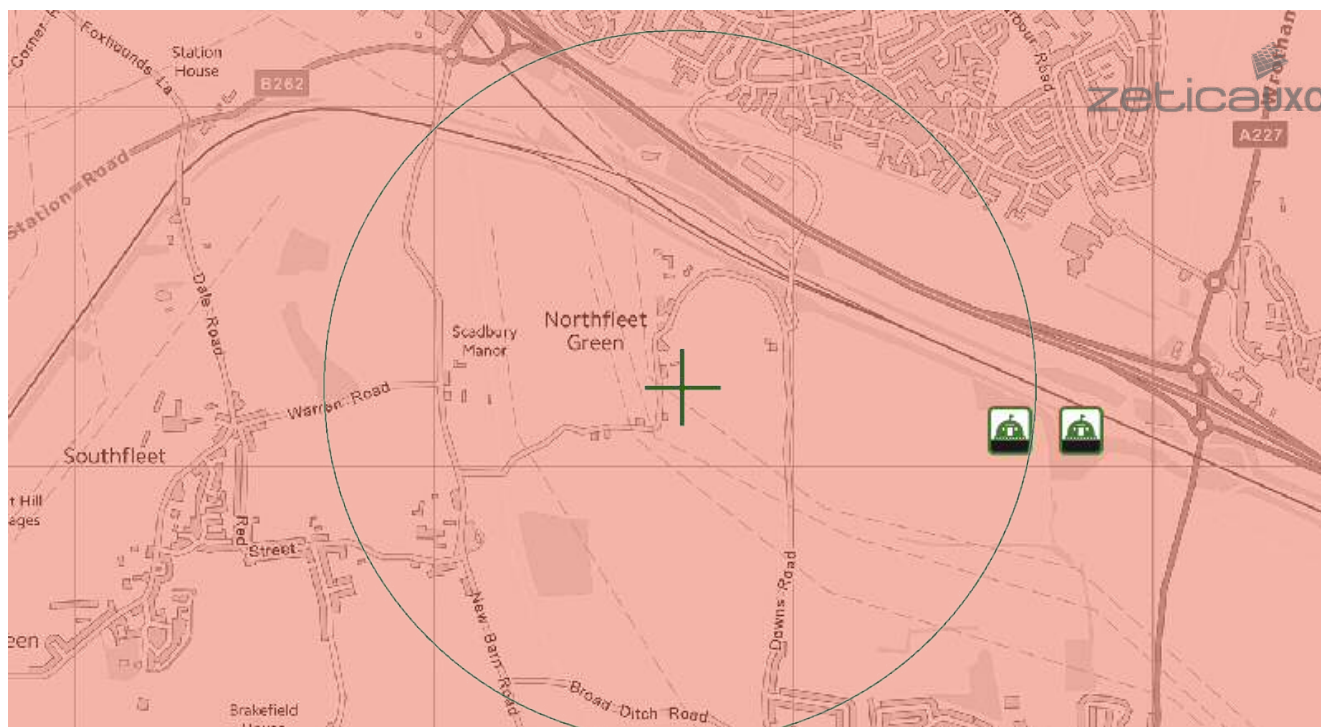
Appendix E UXO Information

UNEXPLODED BOMB RISK MAP



SITE LOCATION

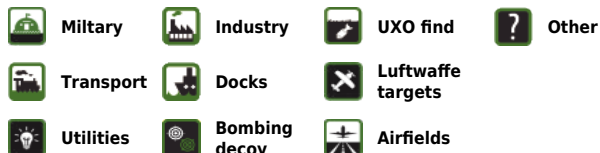
Map Centre: 562655,171270



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.



How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density. Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then [additional detailed research](#) is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our [pre-desk study assessments \(PDSA\)](#) by emailing a site boundary and location to uxo@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 email: uxo@zetica.com web: www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the [accompanying notes on our website](#).

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.

Appendix F Site Photographs



Photo 1: Cars and shipping containers along N boundary, photo taken facing NE



Photo 2: Barn along S boundary, photo taken facing W



Photo 3: Fuel barrels within the barn



Photo 4: Staining on barn floor from historic usage.



Photo 5: Inside of shipping container onsite

Appendix G Risk Assessment Criteria

The classification presented in Table G.1 to Table G.4 below are modified from, 'contaminated land risk assessment: A guide to good practice, 2001, CIRIA C552'.

Table G.1. Classification of Consequence

Classification	Definition
Severe	Short-term (acute) risk to human health likely to result in "significant harm" as defined by the Environmental Protection Act 1990, Part IIA. Short term risk of pollution (note: Water Recourses Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem (note: the definitions of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000.)
Medium	Chronic damage to Human Health ("significant harm" as defined in DETR, 2000). Pollution of sensitive water recourse (note: Water Recourses Act contains no scope for considering significance of pollution). A significant change in a particular ecosystem (note: the definitions of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000.)
Mild	Pollution of non-sensitive water recourses. Significant damage to crops, buildings, structures and services ("significant harm" as defined in the Draft Circular on Contaminated Land, DETR, 2000.)
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.)

Table G.2. Classification of Probability

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptors of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the short term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the long term.

Table G.3. Comparison of Consequence Against Probability

Probability	Consequence			
	Severe	Medium	Mild	Minor
High likelihood	Very high risk	High risk	Moderate risk	Moderate/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 risk	Low risk	Very low risk	Very low risk

Table G.4. Risk Classifications

Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.
High	Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remediation works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.
Very low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.
None	No potential risk if no pollution linkage has been established.

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