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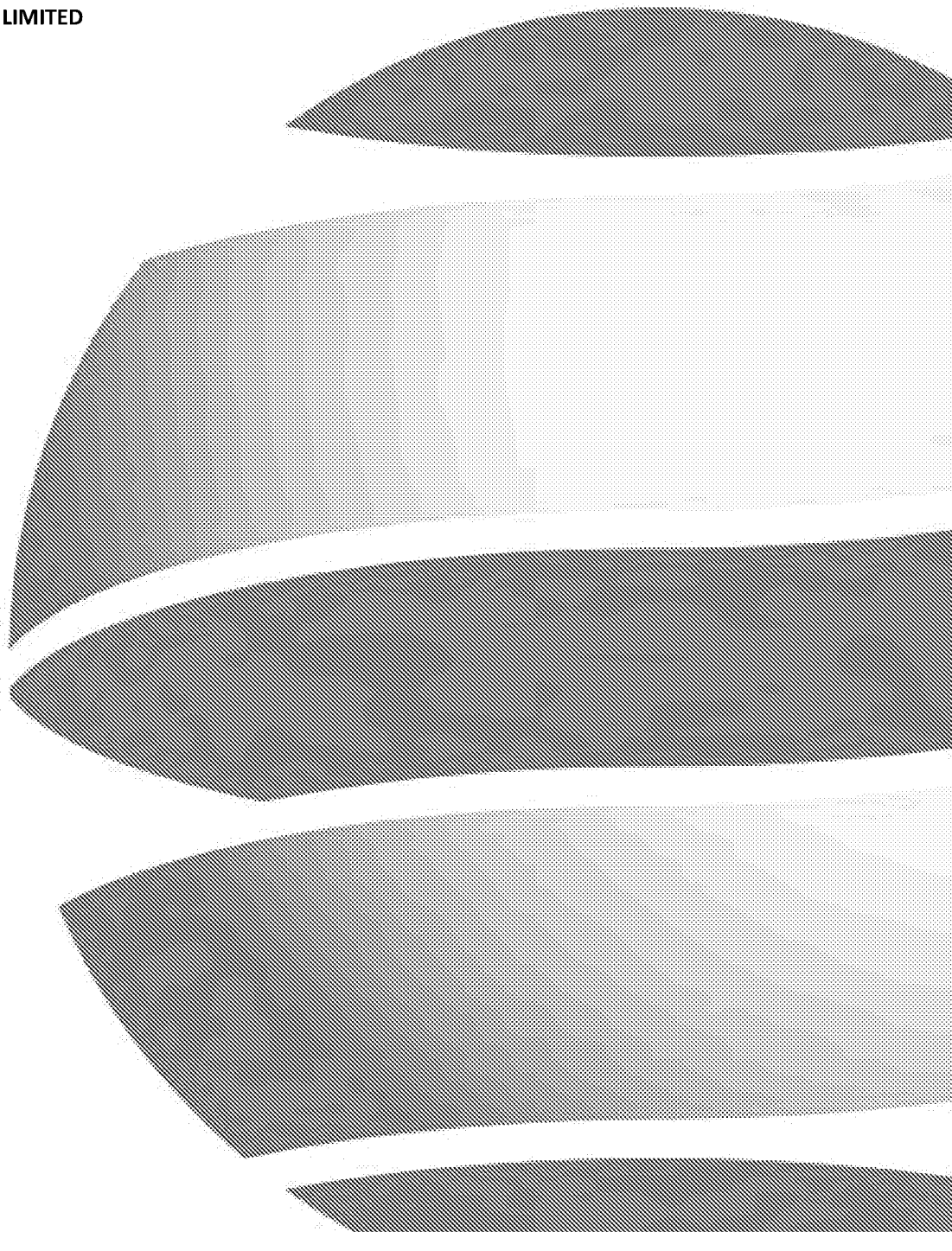
DESK STUDY & GROUND INVESTIGATION REPORT

for the land EAST of TYE LANE, WALBERTON,

WEST SUSSEX, BN18 OPS

on behalf of

WATES DEVELOPMENT LIMITED



ARUN DISTRICT COUNCIL WA/99/18/DOC

Report:	**DESK STUDY & GROUND INVESTIGATION REPORT**
Site:	**LAND EAST OF TYE LANE, WALBERTON, WEST SUSSEX, BN18 OPS.**
Client:	**WATES DEVELOPMENT LIMITED**
Engineer:	**GLYN EVANS**
Date:	**DECEMBER 2017**
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1.0 INTRODUCTION

1.1 General

Geo-Environmental Services Limited, 'Geo-Environmental', was instructed by Wates Developments Limited to undertake an investigation of the geotechnical and environmental factors pertaining to the proposed development of the land at Tye Lane, Walberton, West Sussex, BN18 0PS (Figure 1). The centre of the site was located at National Grid Reference 497330, 106210.

1.2 Form of Development

The investigation is understood to inform an outline for planning permission for proposed residential development comprising new dwellings together with private and communal gardens, public open space, access roads and other associated infrastructure.

1.3 Objectives

The investigation was undertaken to support assessment for the key development elements as described in Section 1.2, including:

- Foundation assessment and preliminary design
- Geotechnical assessment
- Soakage testing
- Pavement design
- Sub-surface concrete design
- Ground stability
- Ground gas hazard assessment
- Ground contamination assessment

As part of the geo-environmental investigation, a desk study was undertaken. The desk study has been used to form of a conceptual site model and a Preliminary Risk Assessment (PRA) in accordance with CLR11. The data from the ground investigation (Phase II) stage were then to form the basis of a subsequent Tier 1 Generic Quantitative Risk Assessment (GQRA) and clarification of the conceptual site model. The objective of the risk assessments was to evaluate the risks posed to the proposed redevelopment, adjacent land uses, and the wider environment, in the context of the existing planning regime.

1.4 Standards

Where practicable, the ground investigation and subsequent environmental assessments were undertaken in accordance with the following documents and guidance:

- British Standards Institute - Code of Practice for Site Investigations (BS5930:2015).
- British Standards Institute - Code of Practice for the Characterisation and Remediation from Ground Gas in Affected Developments (BS8485:2007).
- British Standards Institute - Eurocode 7 – Geotechnical Design - Parts 1 & 2 (BS EN1997-1:2004 & BS EN1997-2:2007).
- British Standards Institute - Investigation of Potentially Contaminated Sites - Code of Practice (BS10175:2011).
- British Standards Institute - Soils for Civil Engineering Purposes (BS1377:1990).

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- Building Research Establishment - The Performance of Building Materials in Contaminated Land (BRE255) (1994).
- Building Research Establishment – Soakaway Design (Digest 365) (1991).
- Construction Industry Research and Information Association - Assessing risks posed by hazardous ground gases to buildings (C665) (2007).
- Department for Communities and Local Government - National Planning Policy Framework (2012).
- Department for Environment Food and Rural Affairs and Environment Agency - Model Procedures for the Management of Contaminated Land (CLR11) (2004).
- Department of Environment - Industry Profiles (1995 - 1996).
- Environment Agency - Guidance for waste destined for disposal in landfills (2006).
- Environment Agency - Guidance on Requirements for Land Contamination Reports (2005).
- National House Building Council, Environment Agency & Chartered Institute of Environmental Health - Guidance for the Safe Development of Housing on Land Affected by Contamination (R&D Publication 66) (2008).
- National House Building Council - Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present (10627-R01[04]) (2007).
- National House Building Council – Standards, Chapter 4.1 Land Quality - Managing Ground Conditions (1999).

1.5 Conditions

This report does not purport to be a "Geotechnical Design Report" as defined in Clause 2.8 of Eurocode 7 (Geotechnical Design BS EN 1997-1:2004) and some of the data used to support this preliminary geotechnical assessment may not be fully compliant with that design code. It is considered possible that further detailed ground investigations could be required to facilitate the detailed geotechnical design process and should be carried out on a structure specific basis if necessary.

The data collected from the investigations have been used to provide an interpretation of the environmental conditions pertaining to the site. The recommendations and opinions expressed in this report are based on the data obtained. Geo-Environmental takes no responsibility for conditions that either have not been revealed in the available records, or that occurs between or under points of physical investigation. Whilst every effort has been made to interpret the conditions, such information is only indicative and liability cannot be accepted for its accuracy.

It should be noted that in particular the concentrations and levels of mobile liquid and gaseous materials are likely to vary with time. The results obtained may therefore only be representative of the conditions at the time of sampling. This report should not be taken as any guarantee that a site is free of hazardous or potentially contaminative materials.

Information contained in this report is intended for the use of the Client, and Geo-Environmental can take no responsibility for the use of this information by any party for uses other than that described in this report. Geo-Environmental makes no warranty or representation whatsoever expressed or implied with respect to the use of this information by any third party. However, it is acknowledged that the Client upon grant of planning permission, intends to dispose of all or part of the site(s), it is a condition of the appointment that Geo-Environmental must, at the appropriate time enter into an agreement for the assignment of full rights to copy and use together with full benefits of our work to whomsoever the Client chooses and this will be to more than one company at no cost to the Client. The benefits include any PI insurance cover or collateral warranty. Geo-Environmental does not indemnify the Client or any third parties against any dispute or claim arising from any finding or other result of this investigation report or any consequential losses.

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Assessment criteria or other parameters developed for the evaluation of contamination on this site are based on a number of assumptions regarding exposure and toxicology, and exposure to contaminants and levels of adverse effects may therefore vary. Whilst every care and expertise has been employed in the development of such criteria, no liability is accepted in this respect. Other criteria or guidance on the development of assessment criteria may be published in the future, and no liability is accepted in this respect.

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2.0 DESK STUDY

The findings of the Phase I desk study are presented in the following section. Copies of the historical maps and other information obtained as part of the desk study are presented in Appendix A. Comments made in the following section regarding possible ground conditions on the site are based on the dataset presented in Appendix A.

2.1 Site Walkover Survey

The site was situated to the north of the town of Walberton, between Tye Lane and Yapton Lane and comprised an approximately 11.27Ha irregularly shaped parcel of open farmland. At the time of the walkover and intrusive works, the main part of the site had been recently seeded, with new grass growing over the majority of the site. A cluster of mature and young trees was located in the south eastern corner of the site with a further mature tree located in the centre of the site close to the southern boundary. The site was bounded by a number of young and mature trees, ditches, shrubs and hedges as well as fencing surrounding the entire site. The site was generally flat land with no noticeable slopes.

Access to the site was through the adjacent Avisford Park Golf Course and through a gate on the north eastern corner of the site.

2.2 Historic Data

Historical maps dating back to 1875 were obtained as part of the desk study for the proposed development area and these are presented Appendix A. A summary of the apparent key features noted on the map extracts both on the site and within the local area is presented in Table 2.1.

Date	On-Site	Off-Site
1875z	The site was indicated to comprise open agricultural fields containing a number of trees, including a cluster of trees in the south western area of the site. The site was shown to have been separated into a number of smaller plots by boundaries in the south western area and in the eastern and south eastern areas of the site.	The surrounding area was mostly agricultural fields, open land and areas of forestry. Avisford House was located c. 10m north of the site boundary. A school was located c. 60m to the south of the site with some residential properties located adjacent. A church (St. Marys Church) and associated grave yard were located c. 350m to the south The built up residential area of Walberton was located c. 250m south and a brewery was located c. 200m south of the site.
1880	No significate changes noted.	A farm labelled Binsted Farm was mapped c. 490m E. A windmill (flour) was located c. 930m north-west of the site. A brick field was labelled c. 900m north-west of the site boundary.
1897z	A pathway was mapped which ran from the western area of the southern boundary through the centre of the site and out through the centre of the northern boundary. A tank was labelled in the north eastern area of the site, likely to be for water irrigation or	A farm labelled Pigeon House Farm was mapped c. 250m south-west of the site boundary. A pond was shown to have been constructed c. 20m north of the site boundary within the Avisford House property.

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	animal welfare purposes.	
1899	The site was shown to have been separated into three separate plots by a boundary in the south western corner and a second boundary running roughly north to south through the centre of the site. The tank is no longer indicated.	A farm labelled Walberton Farm was mapped c. 700m south-east of the site boundary. The brick field (c. 900m north-west on 1880 map) was labelled disused.
1912z	No on-site boundaries were mapped.	No significate changes noted.
1914	No significate changes noted.	Binsted Farm (c.490m E on 1880 map) was labelled as Church Farm.
1914	No significate changes noted.	No significate changes noted.
1914	No significate changes noted.	No significate changes noted.
1914	No significate changes noted.	No significate changes noted.
1938-1939z	The path through the centre of the site was no longer mapped.	Significant residential development was shown to have occurred immediately east and south east and south of the site as well as a number of residential properties constructed along Tye Lane to the west of the site.
1947 (Aerial)	No significate changes noted.	Residential development was shown to have occurred c.500m west of the site boundary.
1951	No significate changes noted.	No significate changes noted.
1961-1962	No significate changes noted.	No significate changes noted.
1967	Incomplete mapping. No significate changes noted.	Incomplete mapping. No significate changes noted.
1974z	No significate changes noted.	Arundel Road (A27) c. 500m North was shown to have undergone development to create a wider road. Further residential development was shown to have occurred c. 100m south, south-east and south-west of the site within the built up area of Walberton. A farm labelled Hooe Farm was mapped c. 300m north-west of the site boundary. The school (c. 60m S on 1875 map) was shown to have moved into the larger plot of land immediately south of the site boundary.
1979	No significate changes noted.	A caravan park was mapped c. 100m north-east of the site boundary.
1980	Incomplete mapping. No significate changes noted.	Incomplete mapping. No significate changes noted.
1977-1984z	No significate changes noted.	No significate changes noted.
1989-1990z	Incomplete mapping. No significate changes noted.	Incomplete mapping. No significate changes noted.
1992	Incomplete mapping. No significate changes noted.	Incomplete mapping. No significate changes noted.
1992z	Incomplete mapping. No significate changes noted.	Incomplete mapping. No significate changes noted.
1994z	No significate changes noted.	No significate changes noted.
1999z (Aerial)	No significate changes noted.	No significate changes noted.

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2000	No significate changes noted.	No significate changes noted.
2006	No significate changes noted.	A plot of land c. 700m north-west of the site boundary was shown to have been divided into separate smaller plots.
2017	No significate changes noted.	No significate changes noted.

Table 2.1 Summary of Historical Map extracts

In summary, the site has been used for agricultural purposes from the earliest mapping period to the present day. No significant construction or development of the site was shown to have occurred with the exception of a pathway through the centre of the site and a number of site boundaries dividing the site into separate plots throughout the site's history. The historical maps indicated that there are unlikely to be any significant on-site sources of contamination. The nearest potentially contaminative sources have been identified within the area occupied by the farm buildings c.250m south-west of the site boundary (Pigeon House Farm) and c. 300m north-west of the site boundary (Hooe Farm).

2.3 Geology

With reference to British Geological Survey (BGS) mapping, the geology of the site was anticipated to comprise River Terrace Deposits (undifferentiated) and some Raised Beach Deposits (1) in the north-western corner over the London Clay Formation.

The rivers of the south-east of England, including the River Thames and its tributaries, have been subject to at least three changes of level since Pleistocene times. One result has been the formation of a complex series of **River Terrace Deposits**. The deposits are generally found at an elevation close to or higher than that of the existing rivers, and generally comprise sands and gravels of roughly bedded flint or chert gravels varying degrees of coarseness.

Raised Beach Deposits have been described as shingle, sand, silt and clay; may be bedded or chaotic; beach deposits may be in the form of dunes, sheets or banks - [generic description}; now above the level of the present shoreline as a result of earth movement or a general fall in sea level.

London Clay comprises a stiff grey fissured clay, weathering to brown near surface. Concretions of argillaceous limestone in nodular form (Claystones) occur throughout the formation. Crystals of gypsum (Selenite) are often found within the weathered part of the London Clay, and precautions against sulphate attack to concrete are sometimes required.

The lowest part of the formation is a sandy bed with black rounded gravel and occasional layers of sandstone and is known as the Basement Beds.

2.4 Hydrogeology

Aquifers

With reference to information obtained from the Environment Agency, the following aquifer designations were identified on site:

Deposit Type	Geological Formation	Aquifer Designation
Superficial	River Terrace Deposits	Secondary "A"
Bedrock	London Clay	Unproductive Strata

Table 2.2 Summary of Aquifer Designations

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Secondary 'A' aquifers comprise permeable layers which are 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.

Unproductive Strata comprise rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

Source Protection Zones

The Environment Agency website indicated that the site is situated outside of any Source Protection Zone (SPZ) with the nearest SPZ (Type: Zone III) located 931m NW of the site boundary.

An SPZ is a protection zone placed around a well or borehole that supplies groundwater of potable quality, and an SPZ is divided into three zones defined as follows:

- Zone I - Travel time (of water) of 50 days or less to the groundwater source.
- Zone II - Either 25% of the source area or a travel time of 400 days whichever is greater.
- Zone III - The total area needed to support the discharge and abstraction from the protected groundwater source.

Licensed Groundwater Abstractions

Six licensed groundwater abstractions were reported within a 1km radius of the site the details of which are outlined in Table 2.3.

Location	Use	Permit start date	Permit end date	Distance
W P Wyatt & Son Point A At Woodlands Farm, Slindon	General Agriculture: Spray Irrigation – Direct.	10th June 2009	not supplied	823m NW
W P Wyatt Point A At Woodlands Farm, Slindon	General Agriculture: Spray Irrigation – Direct.	2nd January 1979	not supplied	823m NW
Walberton Nursery Llp Point A At Walberton Nurseries, Walberton,	General Agriculture: Spray Irrigation – Direct.	1st April 2016	not supplied	849m S
Walberton Nursery Llp, Point A At Walberton Nurseries, Walberton,	General Agriculture: Spray Irrigation – Direct.	17th April 2014	not supplied	849m S
D Tristram T/A Walberton Nurseries, Point A At Walberton Nurseries, Walberton,	General Agriculture: Spray Irrigation – Direct.	16th June 2009	not supplied	849m S
D Tristram T/A Walberton Nurseries, Point A At Walberton Nurseries, Walberton,	General Agriculture: Spray Irrigation – Direct.	2nd April 1998	not supplied	849m S

Table 2.3 Groundwater Abstractions within 1km of the site

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2.5 Hydrology

Surface Water Features

According to the Envirocheck dataset the nearest water feature is located some 6m to the east of the site, though this remains unidentified.

Flood Risk

The Desk Study identified the site to be located in an area with the potential for groundwater flooding to occur at the surface, and of properties situated below ground level with some of the site classified as an area of limited potential for groundwater flooding to occur.

Licensed Surface Water Abstractions

There are no licenced surface water abstractions within 1km of the site boundaries.

Licensed Discharge Consents to Surface Water

There were three licensed discharge consents to surface waters recorded within a 500m radius of the site boundary:

- Mr A Breton, domestic property (single) (incl. farm house), Ryders',Hedgers Hill, Walberton Ryders, Hedgers Hill. Discharge type: Sewage Discharges - Final/Treated Effluent - Not Water Company into Freshwater Stream/River, issued date: 2nd July 2003, revocation date: not supplied. 263m NE.
- West Sussex County Council, property type undefined, Church Farm, Binstead. Discharge type: Other Matter-Surface Water into Freshwater Stream/River, issued date: 28th September 1962, revocation date: 11th May 1995. 396m E.
- L. Wishart Esq. property type undefined, Church Farm, Binsted. Discharge type: Trade Discharge - Process Water into Freshwater Stream/River, issued date: 2nd January 1985, revocation date: 20th March 1996, 406m E.

Pollution Incidents to Controlled Waters

The desk identified two pollution incidents to controlled water within 500m of the site boundary:

- Avisford Golf Club, BINSTEAD, Receiving water: Potential River. Pollutant: No Pollutant, 04th August 1999. Category 3 – Minor Incident. 217m E.
- Stream At, Walberton Mill Lane, Receiving water: not given. Pollutant: Oils Unknown (Note: Heating Oil), 10th November 1992. Category 3 – Minor Incident. 307m W.

Licensed Discharge Consents to Land

There are two recorded licensed discharge consents to land within 500m of the site:

- W W Smart, Land At Lazy W, Yapton Lane, Walberton, property type: sport, amusement & recreation. Discharge type: Sewage Discharges - Final/Treated Effluent - Not Water Company into land, 38m NE.
- St Mary's Church Council, Walberton, property type: Church. Discharge type: Sewage Discharges - Final/Treated Effluent - Not Water Company into land, 425m S.

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2.6 Sensitive Land Uses

A search of environmentally sensitive land uses including Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar Sites, World Heritage Sites, Environmentally Sensitive Areas, Areas of Outstanding Natural Beauty (AONB), National Parks, Nitrate Sensitive Areas (NSA), and Nitrate Vulnerable Zones (NVZ) were undertaken as part of the Desk Study.

Four environmentally sensitive areas were identified within 1km of the site:

- South Downs (National Park), 139m NE.
- South Downs (Environmentally Sensitive Areas), 605m N.
- West Stubbs Copse, Ancient Woodland (Plantation on Ancient Woodland). 933m N
- Threecorner Copse, Ancient Woodland (Ancient and Semi-Natural Woodland). 978m NE.

The site was indicated to occupy an area designated as a Nitrate Vulnerable Zone (Aldingbourne Rife Nvz). A Nitrate Vulnerable Zone is a conservation designation of the Environment Agency for areas of land that drain into nitrate polluted waters, or waters which could become polluted by nitrates.

2.7 Radon

With reference to the Envirocheck data report the site is indicated to be in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level), however, the BGS states that in this location, radon protection measures are not required in the construction of new dwellings or extensions.

2.8 Ground Gases

A search of historic and authorised landfill sites, waste treatment, transfer and disposal sites was undertaken as part of the Desk Study. Such sites may form an artificial source of ground gases, such as carbon dioxide and methane, where wastes are buried or disposed of to landfill. Four such sites were located within 500m of the site, details of which are outlined in Table 2.4.

Location	Type	Specified waste	Date	Distance
Tye Lane, Walberton, Sussex	Historical Landfill Sites	Deposited Waste included Inert, Commercial and Household Waste	31st December 1955 to 31st December 1960	375m NW
Fontwell, Sussex	Historical Landfill Sites	Deposited Waste included Inert Waste	3rd May 1988 to 15th July 1988	434m NW
Hooe Farm, Tye Lane, Walberton	Local Authority Recorded Landfill Sites	Not Supplied	Not Supplied	487m NW
Not supplied	Potentially Infilled Land (Water)	Unknown Filled Ground (Pond, marsh, river, stream, dock etc)	Not Supplied	421m E

Table 2.4 Summary of Historical and Authorised Landfill sites within 500m of the site

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2.9 Environmental Data

Searches of other various environmental databases were made as part of the desk study, including air pollution control sites, Part IIA contaminated land, Integrated Pollution Control (IPC) and Integrated Pollution Prevention and Control (IPPC) sites, registered radioactive substances, COMAH sites, explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS) sites, planning permissions for sites involving hazardous substances, contemporary trade directories and fuel station registers.

One Local Authority Pollution Prevention and Controls site was identified:

- Turnpike Motors, The Street, Walberton, ARUNDEL, West Sussex, BN18 0PG. Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input. 102m SW

In addition, the following potentially contaminative contemporary trade directory entries were identified within a 250m radius of the site boundary:

- Name: Cathedral Fire Ltd, Abbatoirs, Apple Acre, Avisford Park Road, Walberton, Distance from site: 19m SE. Status: Inactive.
- Name: Christine Llewellyn, Furniture - Repairing & Restoring, Rosslyn Cottage, The Street, Walberton, Arundel, Distance from site: 75m SW. Status: Inactive.
- Name: Art On Tiles, Tile Manufacturers, Hollytree Cottage, The Street, Walberton, Arundel, Distance from site: 81m SW. Status: Inactive.
- Name: Swanbourne Auto Works , Mot Testing Centres , The Street, Walberton, Arundel, Distance from site: 100m SW. Status: Active.
- Name: Turnpike Motors, Garage Services, The Street, Walberton, Arundel, Distance from site: 102m SW. Status: Inactive.
- Name: Universal Race Technology Ltd, Car Component Manufacturers , William Booker Yard,, The Street, Walberton, Arundel, Distance from site: 120m SW. Status: Inactive.
- Name: Bevis Digitech Ltd, Machinery - Industrial & Commercial Inactive , William Booker Yard, The Street, Walberton, Arundel, Distance from site: 120m SW. Status: Inactive.
- Name: Stephen Butler Blinds, William Booker Yard, The Street, Walberton, Arundel, Distance from site: 140m SW. Status: Inactive.
- Name: Poppies, Cleaning Services - Domestic, Avisford Park House, Tye Lane, Walberton, Arundel, Distance from site: 174m NW. Status: Active.

Furthermore, one Fuel Station Entry was identified within the Envirocheck datasheets within 250m of the site boundary: Turnpike Motors, The Street, Walberton, Arundel. Distance from site: 102m SW. Status: Obsolete.

2.10 Geotechnical Data

A mining and ground stability datasheet is included within the appended Envirocheck data.

The site lies within an area considered by the Coal Authority as being in an area that might not be affected by coal mining.

The nearest recorded natural cavities were a sinkhole and a solution pipe some 949m beyond the north-eastern boundary.

National databases for a number of different geological hazards have been compiled by the BGS, and a summary of the hazard data pertaining to the site itself is presented on Table 2.5, though due to the size of the site and the variation in lithologies of the formations present, the risk ratings within the following table should be treated with caution:

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Hazard	Designation
Collapsible Ground	Low
Compressible Ground	No Hazard
Ground Dissolution	No Hazard
Landslide	Very Low
Running Sand	Very Low
Swelling Clay	No Hazard

Table 2.5 Summary of BGS Geological Hazards

2.11 Generic Contamination

The site has a history of rural and agricultural land use and was located within a semi-rural/agricultural area. These land uses are not covered by the National House Building Council (NHBC), Environment Agency (EA) and Chartered Institute of Environmental Health (CIEH) publication '*Guidance for the Safe Development of Housing on Land Affected by Contamination*' (2008), which provides a summary of industrial profiles (1995 - 1996) published by the former Department of the Environment (DoE) (now part of the Department for Environment, Food and Rural Affairs [DEFRA]).

No significant potentially contaminative land uses were identified in the surrounding area. However, the near surface soils may have been impacted by heavy metals and organic pollutants such as poly-aromatic hydrocarbons (PAHs) through direct placement/introduction of materials such as ash, clinker or the like during the historic use of the site and through aerial deposition. Heavy metals may also be present due the possible placement of sewage sludge as part of agricultural fertilisation processes whilst pesticides may also be a potential hazard.

2.12 Previous Ground Investigations

Groundwater monitoring was undertaken by Geo-Environmental on the subject site between 30th January 2017 and 11th April 2017. During this investigation which consisted of seven site visits, groundwater was encountered within two out of eight monitoring locations at relatively shallow depths of around 0.61mbgl and 2.26mbgl and it was concluded that this represented trapped perched water bodies rather than the actual groundwater table.

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3.0 PRELIMINARY RISK ASSESSMENT

Based on the findings of the desk study the following sections summarise the anticipated geotechnical and environmental factors likely to impact the site.

3.1 Geotechnical Factors

The following factors that might impact the geotechnical condition of the site were:

- The possible presence of shrinkable soils on the site, which may affect foundation design and construction where trees are present.
- The possible presence of solution features within the chalk strata.
- The presence of shallow groundwater and/or perched water beneath the site.
- The presence of laterally and vertically variable strata.

3.2 Preliminary Environmental Conceptual Site Model & Risk Assessment

3.2.1 Methodology

A Preliminary Risk Assessment (PRA) and Conceptual Site Model (CSM) have been prepared in accordance with CLR11 based on information obtained as part of the Desk Study. Possible risks associated with potential sources of contamination and sensitive receptors identified have been qualitatively assessed following a source-pathway-receptor (pollutant linkage) approach in accordance with current UK protocols.

A risk may only exist where a plausible pollutant linkage is present, and where the quantity or concentration of a contaminant is sufficient so as to pose harm. Under the statutory definition, "Contamination" may only strictly exist where contaminants pose a risk of harm to a receptor. Risk may be defined as a function of the likelihood and severity of any adverse effects arising from contamination. The risk classification has been assessed in accordance with CIRIA C552 (Rudland *et al.*, 2001). A summary of how the risks are derived and their definitions are presented in Tables 3.1 and 3.2.

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**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/low risk	Low risk	Very low risk	Very low risk

Table 3.1 Risk Ratings Matrix

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Risk Rating	Definitions
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not already undertaken) is required and remediation works may be necessary in the short term and are likely over the longer term.
Moderate risk	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, or if any harm were to occur it is more likely that the harm would be relatively mild.
Moderate to low risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is unlikely that any such harm would be severe, or if any harm were to occur it is probable that the harm would be relatively mild.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Table 3.2 Risk Rating Definitions

3.2.2 Summary of Plausible Sources

Possible sources of contamination identified or discounted as part of the Desk Study are summarised in Table 3.3.

Source	Description	Contaminants	On/Off Site
Current land uses	Background chemical quality of near surface soils	Possible elevated metals, organic and inorganic contaminants, and pesticides	On
Offsite historical landfill sites.	Migration of associated , artificially generated ground gases.	Possible elevated methane, carbon dioxide and reduced oxygen.	Off

Table 3.3 Possible Sources of Contamination

3.2.3 Summary of Plausible Pathways

The plausible pathways are summarised in Table 3.4.

Pathway	Description
Direct Contact	Soil, dust and vegetable ingestion, dermal contact and dust inhalation.
Soil Gas Inhalation	Inhalation of soil gas both inside and outside of buildings.
Vertical & Lateral Migration	Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways or with groundwater.
Root Uptake	Uptake of soil and waterborne contaminants by plants.
Chemical Attack	Attack of buried plastics and concrete by aggressive ground conditions.

Table 3.4 Possible Contamination Pathways

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3.2.4 Summary of Plausible receptors

Potential receptors associated with the site and its development, identified or otherwise discounted, are summarised in Table 3.5.

Receptor	Description	Comments	Plausible
End Users	Residential end users of the proposed redevelopment	The proposed redevelopment includes private and communal gardens and areas of soft landscaping	***Yes***
Adjacent Land Users	Sensitive land uses identified within the immediate vicinity	Adjacent land uses to the south are predominantly residential with a school located immediately south of the site.	***Yes***
Soft Landscaping	Areas of planting including lawns, shrubs, trees, etc.	Areas of soft landscaping are proposed as part of the redevelopment	***Yes***
Water Supply Pipes	Plastics for potable water supply pipes may be laid in contact with contaminated soils	Significant depths of Made Ground are not expected across the site.	***Yes***
Building Materials	Buried concrete for foundations etc. may be laid in contact with contaminated soils	Significant depths of Made Ground are not expected across the site.	***Yes***
Groundwater	Controlled waters contained within the aquifer(s) beneath the site	The site lies upon a Secondary 'A' aquifer.	***Yes***
Surface Water	Controlled waters within lakes, rivers, and ponds, etc., or coastal waters	The nearest surface water feature is located c. 6m to the east of the site.	***No***
Sensitive Land Uses	Sensitive land uses or designations identified on site or in the vicinity	With the exception of an agricultural land designation (Eutrophic NVZ) on site, one such land use was identified within 500m of the site as part of the desk study (South Downs National Park, c. 139m NE).	***No***

Table 3.5 Possible Receptors of Contamination

Site workers involved in the preparation and construction of the development have not been considered in this assessment as the Principal Contractor is duty bound under the current CDM Regulations to undertake their own risk assessments with respect to their employees and develop safe systems of work.

Whilst the above sources and receptors have been identified, Table 3.6 (overleaf) summarises the identified plausible pollution linkages and a qualitative assessment of the risks based on the Desk Study research:

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Potential Source/media	Potential Receptors	Potential Pathways	Probability	Consequence	Risk and Justification
On Site near surface soils & Made Ground/soil	End users	Direct contact	Likely	Mild	**Moderate to Low** Future residents are likely to come into contact with soils via direct contact in the private garden or tracked back in to the home. The consequence is likely to be mild.
	Adjacent land users	Direct contact	Low	Mild	**Low** There is a low likelihood of adjacent site users coming into contact with affected soils. The consequence is likely to be mild.
	Soft Landscaping	Root uptake	Likely	Minor	**Low** Root uptake is likely for plants but any consequence is likely to be minor.
	Water supply pipes	Chemical attack	Likely	Mild	**Moderate to Low** Water supply pipes are likely to come into contact with soils though significant contamination is not anticipated. The consequence is likely to be mild.
	Buildings and infrastructure	Chemical attack	Likely	Minor	**Low** Foundations and utilities will be placed within soils. However, the consequence is anticipated to be minor.
	Groundwater	Vertical migration	Likely	Minor	**Low** Groundwater is likely to be found within the superficial deposits beneath the majority of the site. However, the soils are unlikely to be significantly impacted by on site sources of mobile contamination. The risk of soils impacting the groundwater is considered to be low.
Off Site sources of contamination including ground gas	End users	Inhalation	Unlikely	Mild	**Very Low** No significant sources of ground gases have been identified either on or off site, with the nearest historical landfill site being circa 350m remote from the site boundaries.
	Soft Landscaping	Root uptake	Likely	Minor	**Low** Root uptake is possible for plants but any consequence is likely to be minor.

Table 3.6 Plausible Pollutant Linkages & Qualitative Risk Assessment

3.3 Preliminary Risk Assessment Summary

The PRA and CSM developed from the information gathered as part of the desk study process has identified several plausible pollutant linkages that exist in relation to the proposed redevelopment of the site. However, the preliminary risk rating for each linkage has been classified as moderate to low or low, and as such the site is considered overall as low risk.

4.0 GROUND INVESTIGATION

4.1 Scope of Works

In summary, the following scope of works for the intrusive investigation was proposed.

- Undertake a desk study to determine the site's historic uses and environmental setting. The desk study findings would be used to inform a Preliminary Risk Assessment for the site on the context of the proposed development/use.
- Attendance of a Geo-Environmental Engineer and technician for two days to set out and supervise the intrusive investigation, undertake sampling, in-situ testing and logging of recovered soils from exploratory holes.
- The construction of 6No. machine excavated trial pits to a depth of up to 3.00m bgl.
- Attendance of a road towable 250-500gallon water bowser for four days to supply water and crew for trial pit soakage tests.
- Undertake trial pit soakage tests in general accordance with BRE Digest 365 within approximately 6No. trial pits situated across the site.
- Construction of 12No. dynamic sampler boreholes to depths of up to 4.0m bgl, depending on drilling conditions, using a self-propelled track mounted rig.
- Installation of 6No. dual purpose ground gas and groundwater monitoring wells to depths of 4.00m to facilitate return monitoring on six occasions. Further monitoring may be required based on the findings of the desk study and intrusive investigation. The wells would be completed with a lockable cover fitted flush with adjacent ground.
- Approximately 12No. Dynamic Cone Penetrometer (DCP) tests (equivalent to CBRs) across the site.
- Geotechnical laboratory testing to support the geotechnical assessment for foundations, ground floor construction and buried concrete design.
- Geochemical laboratory testing for a suite of commonly occurring brownfield contaminants. Additional targeted analysis for pesticides is also included.
- Provision of preliminary data following completion of the intrusive investigation. This will include an initial assessment.
- Provision of a Ground Investigation Report detailing the findings of the desk study and preliminary risk assessment; the ground and groundwater conditions encountered ; the results of in-situ and laboratory testing; a geotechnical assessment for foundations, drainage, pavement and buried concrete; contamination assessment and recommendations for further action (if required).

Due to access restraints at the time of the fieldworks, only five trial pits were excavated (TP3 was omitted) and an additional window sampling borehole (WS13) was added to the scope.

4.2 Investigation Strategy

The Desk Study and Preliminary Risk Assessment identified near surface soils, and ground gases as potential contamination sources. The exploratory holes were located to provide broad coverage across the proposed development area.

The following tables summarise the strategy of the environmental (Table 4.1) and geotechnical (Table 4.2) investigations.

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Environmental Area of Concern	Investigation	Positions
Arable fields	Windowless sampler boreholes and trial pits situated across the fields with regular sampling and laboratory analysis	All window sample boreholes and trial pits
Groundwater and ground gas. Potential off site sources of contaminants.	Groundwater and ground gas monitoring standpipes installed within a selection of window sample boreholes.	WS2, WS5, WS6, WS8, WS9 and WS11

Table 4.1 Summary of Environmental Investigation Strategy

Geotechnical Area of Concern	Investigation	Positions
Areas of proposed new buildings	Draft development proposals have been supplied and window sample boreholes and trial pits have been positioned to provide broad coverage of the scheme coupled with sampling and laboratory analysis.	All
Groundwater level	Standpipes installed within window sample boreholes across the site with three return monitoring visits. Groundwater observations made within all holes during drilling. Groundwater observations within the deep cable percussive boreholes.	WS2, WS5, WS6, WS8, WS9 and WS11
Drainage	Full scale BRE365 tests with trial pits	TP1-TP6 inclusive

Table 4.2 Summary of Geotechnical Investigation Strategy

A previous investigation carried out by GESL in January 2017, comprised the drilling of window sampling boreholes, together with the installation and monitoring of monitoring standpipes. The report is presented in Appendix A.

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4.3 Geotechnical Testing & Rationale

Table 4.3 summarised the geotechnical laboratory testing undertaken in order to assess the geotechnical properties of the soils to aid foundation design and concrete specification.

Geotechnical Test	Rationale
Atterberg Limit	Assess volume change potential of more cohesive soil to aid the design of foundations
Grading Analyses	Assess Particle size distribution of more granular soils for classification purposes.
pH & Sulphate	Assess aggressivity of soil to building materials.
In-situ DCP tests	CBR results for road design parameters.

Table 4.3: Summary of Geotechnical Testing Strategy

4.4 Geochemical Testing & Rationale

In order to assess the general chemical quality of the strata encountered, samples of soils recovered from the exploratory holes were submitted for analysis for a range of potential contaminants selected on the basis of the findings of the desk study and supported by the joint National House Building Council (NHBC), Environment Agency (EA) and Chartered Institute of Environmental Health (CIEH) publication, '*Guidance for the Safe Development of Housing on Land Affected by Contamination*' (2008).

All soils samples were tested for VOC's on site using head space techniques. Soil samples were placed into plastic containers for general inorganic analysis and into amber jars for organic analysis. Samples were stored in temperature controlled conditions from sampling until receipt at the laboratory from which time sample preparation and storage was determined by testing requirements and in line with the laboratory's protocols.

Stratum	Suite	No. of Samples Analysed
Topsoil/Made Ground and sub-soil	GESL/4 (heavy metals, inorganics, TPH, Speciated PAH, Speciated TPH with RBCA Banding.	20
	Pesticides (Topsoil only)	5

Table 4.4: Summary of Geochemical Testing

4.5 Ground Gas and Groundwater Monitoring

Six return monitoring visits are planned at regular intervals in order to record ground gas concentrations in the standpipes installed the boreholes to coincide with both high and low atmospheric pressure, together with the depth of any water. To date a single round of gas monitoring has been undertaken and the results are discussed in Sections 5.4 and 7.6 of this report. Five further rounds are programmed over the next three months and the results will be sent as an addendum to this report.

5.0 ENCOUNTERED CONDITIONS

A factual record of the conditions encountered during the physical investigations of the site is presented in the following sections. The exploratory hole locations are shown on Figure 2 of this report.

The physical ground investigation works were undertaken on 2nd November 2017. Laboratory testing was undertaken by a UKAS and MCERTs accredited laboratory.

Unless stated otherwise, all depths are reported as metres below ground level (mbgl).

5.1 Soils

The investigation confirmed the anticipated superficial ground conditions of River Terrace Deposits. However, soils resembling that of the London Clay were absent.

Topsoil was encountered within all locations to depths of between 0.25mbgl and 0.50mbgl and generally comprised dark brown or brown silty clayey silty sand with roots and occasional flints.

In general, the River Terrace Deposits comprised sandy silty CLAY, with occasional flint gravel, sometimes grading to a clayey or sandy well-graded flint gravel and a gravelly sandy clay at depth. In boreholes WS8, WS10, WS11 and WS12, flint cobbles with chalk fragments and off-white silty clay was encountered at depth that my represent raised beach deposits.

For further details of the ground conditions encountered, reference should be made to the exploratory hole logs presented in Appendix B.

5.2 In-situ Testing

5.2.1 Soakage Testing

Full scale BRE365 soakage tests were carried out within trial pits. The results are tabulated in Table 5.2 below:-

Position	Soakage Rate	Geological Stratum
TP1	Insufficient Head Drop (no soakage)	River Terrace Deposits
TP2	6.75×10^{-4}	River Terrace Deposits
TP4	Insufficient Head drop (No soakage)	River Terrace Deposits
TP5	7.67×10^{-5}	River Terrace Deposits
TP6	1.11×10^{-4}	River Terrace Deposits

Table 5.2: Soakage Rates from BRE365 tests.

The results of the tests are discussed further in Section 6.5 of this report.

5.2.2 Pocket Penetrometer

Pocket penetrometer tests were undertaken within the clayey strata to measure the in-situ unconfined compressive strength. Generally the results indicated the soils tested to be of medium to high strength, with a general trend of increasing strength with depth.

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5.2.3 DCP Tests

Dynamic Cone Penetrometer tests were undertaken at eight locations over the site to derive preliminary CBR values for road foundation design. The locations are as indicated in Figure 2. With a single exception, the results generally indicated CBR values ranging from 3% to 6% at an estimated formation level of 0.5mbgl.

These results are discussed further in Section 6.3 of this report.

5.3 Groundwater

Groundwater was not encountered within the window sampling boreholes or trial pits.

During the investigation undertaken in January 2017 where monitoring wells were installed across the site to depths of 4.0m, with the exception of isolated shallow perched groundwater bodies, groundwater was not encountered during the drilling or subsequent monitoring.

Monitoring standpipes were also constructed during the most recent phase of investigation and the initial monitoring visit has recorded standing water at depths of 2.44mbgl in WS2 and 3.37mbgl in WS9, though it is anticipated that this represents pockets of perched water within more gravelly River Terrace Deposits.

It should be noted that changes in groundwater levels do occur for a number of reasons including effects and variations in drainage. Such fluctuations may only be recorded by the measurement of the groundwater level within a standpipe or piezometer installed within appropriate response zones. Changes in groundwater level can have a direct effect on excavation stability and the more cohesive soils can soften under rising or high groundwater levels.

5.4 Ground Gases

Ground gas monitoring has been undertaken as part of the most recent investigation. The monitoring undertaken comprised spot sampling/measurement within six monitoring wells on a single occasion, with a further five planned to correspond with both high and low atmospheric pressure. The atmospheric pressure during the initial visit was 1010mb No detectable methane concentrations have been identified in any of the wells. Carbon dioxide concentrations ranged between 0.1% and 4.1%. Oxygen concentrations were within normal limits and no positive flow rates or concentrations of VOC's were recorded.

The implications of the gas monitoring data are considered in Section 7.6 of this report. For further details, reference should be made to the ground gas assessment sheets in Appendix C.

5.5 Obstructions

No natural or artificial obstructions were encountered during the intrusive investigation.

5.6 Soil Geochemical Analysis

The geochemical results indicated the concentrations of all determinands to be below the relevant SGV/GAC for the proposed end use. Further interpretations and comments are made in Section 7 in this respect.

For full details of the chemical test results reference should be made to the laboratory report in Appendix F.

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5.7 Geotechnical Laboratory Testing

Soil samples were selected for geotechnical testing depending on the proposed end use of the given area. The main elements of geotechnical testing were:

- Strength/stiffness profiling (in-situ testing)
- Soil Classification Tests
- Aggressive ground conditions

The results of the geotechnical testing are separated and presented in Table 5.7 into the key strata encountered, i.e. both cohesive and granular parts of the River Terrace Deposits.

Characteristic/Parameter	Laboratory Value
Plasticity Index (%)	13 - 26
Modified Plasticity Index (%)	3 - 22
Volume Change Potential [NHBC]	Low to medium *(en mass low)*
Grading Analyses Description	Silty sandy CLAY and very clayey silty sandy GRAVEL
pH	7.94 – 8.14
Water Soluble Sulphate	0.11 – 0.17

Table 5.7: Geotechnical test results for River Terrace Deposits

NOTE: Values are given for the full data range and should be reassessed for individual development or construction areas.

For full details of the geotechnical test results reference should be made to the laboratory report in Appendix E.

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6.0 ENGINEERING CONSIDERATIONS

6.1 Traditional Foundations

Based on the ground and groundwater conditions encountered in the exploratory holes, traditional foundations are considered suitable for the proposed low rise development.

It is recommended that the River Terrace Deposits are classified *en masse* as being of LOW Volume Change Potential as defined by the NHBC Standards, Chapter 4.2.

Remote from existing trees and bushes and in areas where clay desiccation has not occurred, it is recommended that shallow foundations terminate within the River Terrace Deposits at a minimum depth of 0.75m below existing or final ground level. Foundations should pass through any Made Ground, disturbed ground, soft or very loose soils, desiccated clay soils and terminate wholly within the River Terrace Deposits.

Within the zone of moisture demand of any current, proposed or recently felled trees foundation depths should be deepened in accordance with the NHBC Standards, Chapter 4.2 for low volume change soils. Where calculated foundation depths exceed 2.50m, they will be required to be designed by a structural engineer.

On the basis of the information gathered from the ground investigation, a net allowable bearing capacity of 125kPa has been calculated for these soils in order to maintain settlements within tolerable limits. Foundations should be no less than 450mm in width.

Foundation excavations should be concreted or blinded as soon after excavation as possible. Where concreting could take place the following day it is recommended that excavations are not taken to full depth overnight and that the final 0.5m of cover is only removed immediately prior to concreting.

Due to the presence of shrinkable clay soils it is recommended that ground slabs are fully suspended.

6.2 Excavations

Both shallow and deeper excavations into the more cohesive soils of the River Terrace Deposits should remain relatively stable in the short to medium term.

Shallow excavations within the more granular natural soils should remain relatively stable in the short term, though some localised spalling may be anticipated. Longer deeper excavations are likely to become unstable, and will therefore require either battering to a safe angle or some form of temporary support.

The need for man entry into excavations should where possible be designed out. However, where this cannot be achieved a full risk assessment should be undertaken and man entry only permitted in accordance with an approved risk assessment, method statement and safe system of work.

6.3 Pavements

Based on the results of the DCP tests, design CBR values in general across the site should be considered between %3 and 6% at an estimated formation level of 0.5m below existing ground level.

The Transport and Road Research Laboratory Report (LR1132) entitled '*The Structural Design of Bituminous Roads*' (1984) cites an estimated equilibrium suction index of 3 to 6% for sandy clays and 4% for silty clays with Plasticity Indices ranging between 10% and 30% such as those of the River Terrace Deposits, assuming average

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construction conditions and a low water table. It is recommended that a preliminary CBR value of 4% is adopted across the site.

Based on the results of the Atterberg Limit Tests, the soils at shallow depth should be generally considered as being non-frost susceptible for pavement design purposes.

It is possible that laboratory soaked CBR tests will be required by the local authority, with samples taken along the line of any proposed adoptable estate roads.

It is recommended that the formation level be proof rolled and any soft zones excavated and replaced with suitably compacted engineered granular or chalk fill.

6.4 Sub-Surface Concrete

The results of the tests carried out on the natural soils fell into Class DS-1. The results indicate that a site classification of ACEC class AC1 is applicable. The advice of this publication should be taken for the design and specification of all sub-surface concrete.

6.5 Soakaways

Full scale BRE365 soakage tests were carried out within the trial pits. The results are tabulated in Table 5.2 below:-

Position	Soakage Rate	Geological Stratum
TP1	Insufficient Head Drop (no soakage)	River Terrace Deposits
TP2	6.75×10^{-4}	River Terrace Deposits
TP4	Insufficient Head drop (No soakage)	River Terrace Deposits
TP5	7.67×10^{-5}	River Terrace Deposits
TP6	1.11×10^{-4}	River Terrace Deposits

Table 5.2: Soakage Rates from BRE365 tests.

The results of the tests carried out in the River Terrace Deposits were very variable. Caution should be taken when designing any shallow soakaways within the River Terrace Deposits, as the soakage rate will be very dependent on the clay content of the strata, which varied significantly both laterally and vertically across the site.

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7.0 QUANTITATIVE RISK ASSESSMENT

7.1 Introduction

A Generic Quantitative Risk Assessment (GQRA) has been undertaken in accordance with CLR11. A GQRA may involve either direct comparison of soil and ground gas results with generic assessment criteria appropriate to the SPR linkage being assessed or comparison following statistical analysis depending on whether a targeted or non-targeted sampling strategy was adopted.

7.2 Human Health

7.2.1 End Users

The presence of a possible contaminant does not necessarily imply that a site or area is contaminated or that there is any unacceptable risk to human health. A Generic Quantitative Risk Assessment has been undertaken in accordance with CLR11, in order to evaluate any unacceptable risks posed to human health with respect to the proposed use of the site. It should be noted that this assessment is protective of the chronic long-term effects of contaminants, which is also likely to be protective of any possible immediate acute effects.

A quantitative risk assessment has been undertaken by comparing the results of the laboratory chemical testing of shallow soils against Site Specific Assessment Criteria (SSAC) generated using the Contaminated Land Exposure Assessment (CLEA) model v1.06 published by the Environment Agency, or against Generic Assessment Criteria (GAC) for a residential end use with plant uptake (private gardens).

The assumptions made as part of the CLEA v1.06 calculations for a residential end use with plant uptake are presented in Table 7.1.

Assumptions for SSAC Calculation (CLEA v1.06 Software)

	Assumptions			Comments
Land Use	Residential with home grown produce			Commensurate with proposed redevelopment.
Receptor	Female (res)			Default setting for land use.
Receptor Age	1 to 6			Default setting for land use.
Building	Small/Medium Terraced House			A conservative assumption of the private residences proposed.
Soil Type	Silty sandy loam	pH 6.9	SOM 2.55%	Based on an average of the chemical laboratory results.
Exposure Pathways	Oral	Direct soil & dust ingestion; consumption of home grown produce; soil attached to home grown produce		Default setting for land use.
	Dermal	Indoor & outdoor		Default setting for land use.
	Inhalation	Indoor & outdoor dust & vapour		Default setting for land use.
Occupancy	days/year	hours/day (indoors)	hour/day (outdoors)	Default settings for the critical receptor.
	180 - 365	19 - 23	1	

Table 7.1: Parameters used in CLEA Model V1.06 to derive SSAC

Statistical analysis of the data set has been undertaken in accordance with guidance contained in the CIEH/CL:AIRE report 'Comparing Soil Contamination Data with a Critical Concentration' (May 2008). If the

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contamination status of the soils is considered in a planning context, the null hypothesis tested by the analysis is whether the true mean concentration is equal to or greater than the critical concentration for a given determinand, with the critical concentration being the relevant SSAC or GAC (the soil screening value) for that determinand in the context of the intended end use of the site. If the analysis shows that the true mean concentration is less than the critical concentration the null hypothesis can be rejected. The guidance recommends that for the null hypothesis to be rejected the analysis should show that there is a 95% (or higher) likelihood that the true mean concentration is below the critical concentration. Where this is the case the site is considered to be acceptable for the planned end use without the requirement for remediation.

The statistical analysis has found that for all of the determinands tested, the null hypothesis can be rejected with at least 95% confidence.

The guidance also provides an outlier test (Grubb's Test) which is undertaken prior to the statistical analysis in order to establish whether there are any anomalous results which could be 'hotspots'. Such results can be removed from the dataset prior to the statistical analysis, but only where there is evidence to support this from the conceptual site model.

Whilst the Grubb's Test revealed a number of statistical outliers, the concentrations were allow well below the relevant guide value.

Laboratory testing for the presence of asbestos has not recorded asbestos within any of the samples.

Targeted testing was also undertaken on the Topsoil for Pesticides, a potential contaminant of concern associated with the land use. The results revealed all of the results to be below the laboratory detection limits.

Targeted testing for speciated hydrocarbons with RBCA banding did not identify any concentrations of concern.

In summary, based on the results and the sites historical land use, together with the development proposals, it is considered that remedial works for the protection of the end user from contaminated soils are not warranted.

7.2.2 Adjacent Land Users

No evidence of any significant impact on the soil quality was revealed by the laboratory testing and therefore no significant pollutant linkage is considered to exist which would warrant remedial action to protect adjacent land users from soil based contamination within the subject site.

However, it is recommended that dust suppression techniques, e.g. damping down exposed soils, are employed during the demolition and construction phases on site in order to minimise the potential for airborne migration of specific hazards and to manage potential nuisance issues for adjacent land users.

7.3 Plant Uptake

Inter Departmental Committee for the Redevelopment of Contaminated Land (ICRCL) publication 70/90 entitled '*Notes on the Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing*' (1990) provides assessment criteria for a number of potentially phytotoxic contaminants in terms of new planting. Given that a suitable averaging area for soft landscaping may vary considerably between the root zones of grasses to that of a juvenile immature tree, no appropriate averaging area was applicable to this assessment. Therefore, the results of the chemical analysis were evaluated for this SPR linkage singularly.

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The results of the chemical analysis for determinands known to pose a potential phytotoxic risk to plant growth are summarised in Table 7.2, together with the respective adopted Generic Assessment Criteria (GAC) for plant growth.

Determinand	Phytotoxicity GAC Value (mg/kg)	In excess of GAC?
Zinc	1000	No
Cadmium	50	No
Copper	250	No
Arsenic	1000	No

Table 7.2: Summary of Potential Phytotoxicity for Soft Landscaping

Therefore, remedial measures to protect plants from phytotoxic effects are not considered necessary.

7.4 Water Supply Pipes

The current guidance on selection of materials for water supply pipes to be laid in contaminated land is contained in UKWIR Report 10/WM/03/02 (re-issued 2010). However, the guidance is not mandatory and there has been concerns raised by various industry technical associations regarding the document and the methodologies proposed.

Although there are concerns regarding the document, in lieu of any further guidance in the first instance the results of this investigation have been compared with the proposed thresholds published in UKWIR Table 3.1. All results were below their respective thresholds. It is therefore highly unlikely that barrier pipe will be required for this site. However, the presumption in the guidance is that barrier pipe will be adopted for any brownfield site therefore it is recommended that the results of this investigation be presented to the water utility company as soon as reasonably practical in order to confirm the pipe material.

As a matter of good practice, and to maximise the protection to utilities, it is recommended that clean, granular backfill is used in service runs and that marker tapes are used for all buried services.

7.5 Groundwater and Controlled Waters

The site was underlain by a Secondary A Aquifer and non-productive strata and was located outside of any Source Protection Zone.

Groundwater was not encountered during the investigation and only perched water bodies were recorded during subsequent monitoring and, therefore, based on the ground and groundwater conditions encountered, together with the results of the desk study and geochemical test results, it is considered that the risk to groundwater or controlled water is very low.

7.6 Ground Gases

To date, one monitoring visit has been completed. The gas assessment sheets are presented in Appendix C. Recommendations on acceptable gas levels recorded in the ground beneath or adjacent to buildings are given in a variety of publications. For the purpose of this assessment, the results have been evaluated in terms of CIRIA C665 [2007], BS8485 [2007] and NHBC 10627-R01 (04) [2007].

The gas assessment considers the impact of gas at pressure in the ground, since a low concentration coupled with a high flow could present a greater hazard than a high concentration with little or no flow. On the basis of

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the gas data collected to date and the gas assessment presented in Appendix C, it is considered that the site's gassing regime is preliminarily representative of Characteristic Situation 1 (BS8485 and CIRIA) and Green (NHBC). On this basis, gas protection measures are not required. A further five monitoring visits are planned over the next three months and the results will be sent as an addendum to this report.

7.7 Radon

Radon Protection measures are not required for any new structures at this site.

7.8 Environmental Assessment Conclusions

The results of the GQRA confirm that potential contaminants in the soil pose a very low risk to the human health of end users and adjacent site users.

The concentrations of potential phytotoxic contaminants in the soil pose no significant risk to plants.

The risk to groundwater and controlled waters from soil contamination is considered to be very low.

Based on the CSM and monitoring results to date, gas protection measures are unlikely to be required.

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8.0 REFINED CONCEPTUAL SITE MODEL

8.1 General

The initial conceptual site model identified potential risks to human health, adjacent land users, vegetation, groundwater, surface water, building infrastructure, and water supply pipes from potential contaminants in the near surface soils.

8.2 Sources

Based on the site investigation data and available geochemical test results no exceedances of site specific assessment criteria were identified in the Topsoil or sub-soil.

8.3 Pathways

When considering the final end use of the site the following pathways for human health are viable:

Pathway	Description
Direct Contact	Soil, dust and vegetable ingestion, dermal contact and dust inhalation
Soil Gas Inhalation	Inhalation of soil gas both inside and outside of buildings
Vertical & Lateral Migration	Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways or with groundwater.
Root Uptake	Uptake of soil and waterborne contaminants by plants
Chemical Attack	Attack of buried plastics and concrete by aggressive ground conditions.

Table 8.1: Plausible Pathways

8.4 Receptors

In terms of human health receptors the geochemical test data were assessed against SSAC for a residential end use with plant uptake.

The site was underlain by Secondary A aquifers and non-productive strata. The site was not located within an SPZ.

The development would require the laying of new water supply pipes within the near surface soils.

Parts of the development will be landscaped and contain soft planting areas.

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8.5 Risk Evaluation of the Proposed Development

The following evaluation of risk is based upon the current proposed development comprising a new housing estate.

8.5.1 Risk to Human Health: Soils/Ground Gases

The results of the GQRA indicate the soils pose a **Very Low** risk with respect to human health of both end users and adjacent site users. Therefore, no remedial measures are considered necessary for the site in this respect.

No significant concentrations of land gases have been encountered to date and based on the CSM and therefore preliminarily the site is therefore considered **Very Low** risk in this respect.

8.5.2 Risk to Groundwater

Therefore, based on the ground and groundwater conditions encountered, together with the results of the desk study and geochemical test results, it is considered that the risk to groundwater or controlled water is **Very Low**.

8.5.3 Risk to Building Materials & Services: Soils

The results of the chemical testing classified the soils as DS1 and AC-1 with respect to aggressive ground conditions. Therefore the site is considered **Low** risk with respect to buried concrete.

The presumption for brownfield sites is that a barrier pipe should be adopted, however the water utility company should be consulted regarding the findings of this investigation and the specification for the water pipes. The site is considered **Very Low** risk.

The refined conceptual site model is presented in Table 8.2, overleaf.

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Potential Source/media	Potential Receptors	Potential Pathways	Probability	Consequence	Risk and Justification
On Site near surface soils & Made Ground/soil	End users	Direct contact	Unlikely	Mild	Very Low Soil contamination was not identified and therefore future residents are unlikely to come into contact with soils via direct contact in the private garden or tracked back in to the home.
	Adjacent land users	Direct contact	Unlikely	Mild	Very Low Soil contamination was not identified on the site and therefore here is a very low likelihood of adjacent site users coming into contact with affected soils.
	Soft Landscaping	Root uptake	Unlikely	Minor	Very Low No phytotoxic contamination identified by the investigation
	Water supply pipes	Chemical attack	Unlikely	Mild	Very Low No contaminants of concern identified.
	Buildings and infrastructure	Chemical attack	Likely	Minor	Low Foundations and utilities will be placed within soils. However, the consequence is anticipated to be minor.
	Groundwater	Vertical migration	Unlikely	Minor	Very Low Groundwater was not identified as a continuous body across the site and was only found in a minimal number of exploratory holes as a slight localised seepage. The risk of soils impacting the groundwater is considered to be very low.
	Surface Water	Lateral migration	Unlikely	Minor	Very Low Water courses (ditches) present on and immediately adjacent to the site. These are very limited features and are unlikely to be a significant pollutant receptor.
Ground Gas	End users	Inhalation	Unlikely	Medium	Very Low No significant sources of ground gases have been identified either on or off site. Initial monitoring has

Potential Source/media	Potential Receptors	Potential Pathways	Probability	Consequence	Risk and Justification
					indicated that gas protection is not required
	Soft Landscaping	Root uptake	Unlikely	Minor	Very Low Root uptake is possible for plants but any consequence is likely to be minor. Monitoring has indicated that gas protection is not required

Table 8.2: Refined Conceptual Site Model

8.6 Waste

8.6.1 Reuse of Material

In accordance with CL:AIRE Code of Practice (2011) materials are only considered waste if 'they are discarded, intended to be discarded or required to be discarded by the holder'.

The Code of Practice therefore allows soils to be reused on site where the following criteria are met:

- Pollution of the environment and harm to human health is prevented in reusing the excavated materials
- The material are suitable for use (without any further processing)
- There is certainty of use and
- The quantity that is absolutely necessary (and no more) is used

In order to comply with the Code of Practice, a material management plan that confirms the above criteria are met has to be prepared. The material management plan must be reviewed by a 'Qualified Person' who then issues a declaration to the Environment Agency. Geo-Environmental can provide this service should it be required.

Where materials do not meet the required criteria, it may be possible to treat them under an environmental permit so that they made be re-used on site.

8.6.2 Reuse of Waste

Where material is discarded as waste, it may still be possible to reuse the waste on site under a standard rules environmental permit or a U1 waste exemption. However, strict limits on the volumes that can be reused apply in these cases.

8.6.3 Disposal to Landfill

Under current legislation, where wastes are to be disposed of to landfill they may depending on their classification require pre-treated. Pre-treatment shall comprise a chemical, physical (including sorting), thermal or biological process. The pre-treatment is required to change the characteristics of the waste, reduce its volume, reduce its hazardous nature, and facilitate its handling and enhance its recovery.

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8.6.4 Waste Acceptance

The following information has been provided with respect to the disposal of arisings generated as part of the proposed development.

The majority of arisings generated from the site are likely to be suitable for disposal at an inert landfill. However, where soils are to be disposed of off-site the results of the chemical analysis should be provided to the proposed landfill site for confirmation of the classification and it may be necessary to undertake Waste Acceptance Criteria (WAC) analysis.

8.7 Discovery Strategy

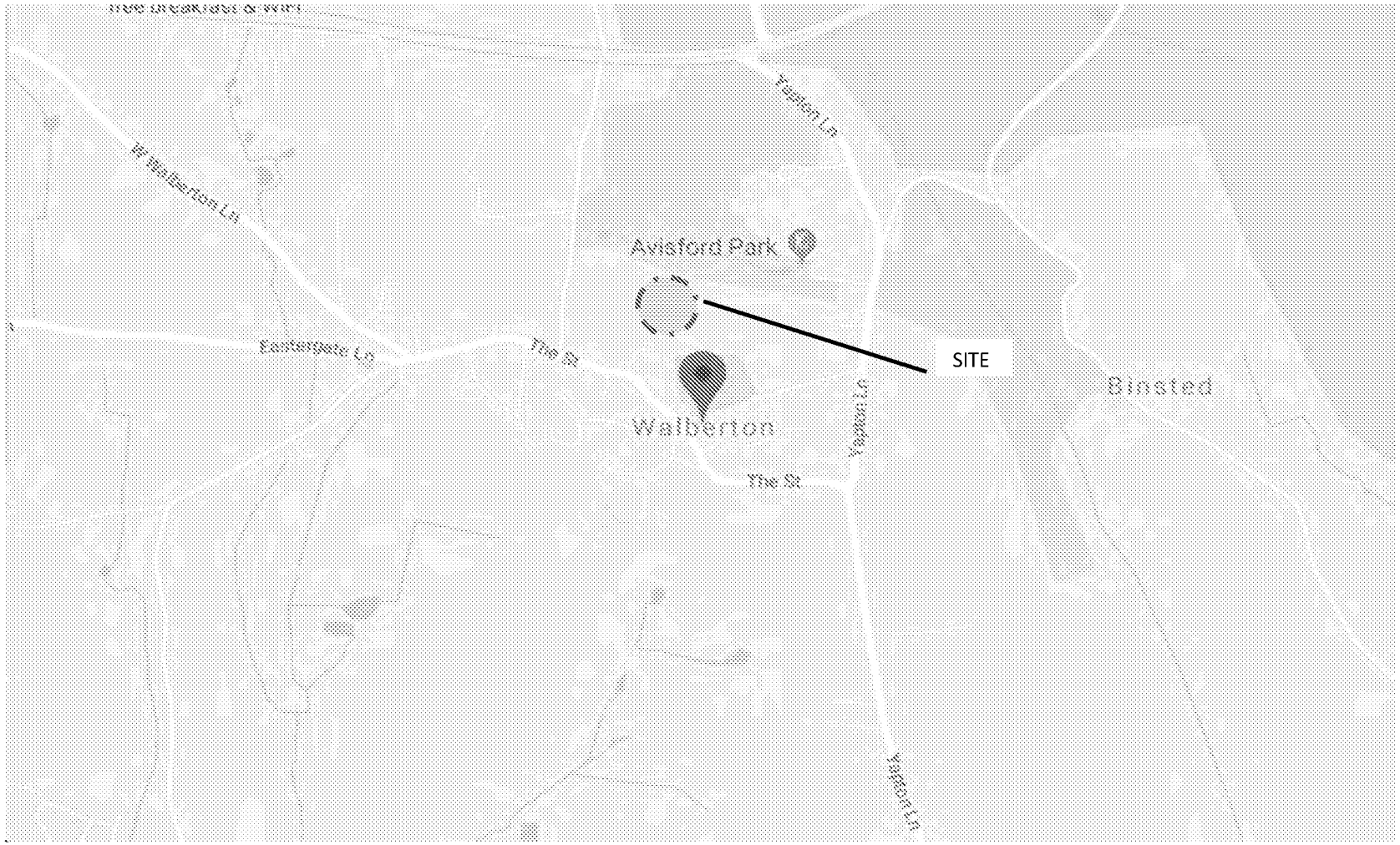
Whilst an investigation has been undertaken on the site, it remains possible that unexpected soil conditions may be encountered during the process of any site demolition, clearance and construction.

Examples may include oily pockets within the soil, pockets of cement boarding or fibrous materials within the soil, black ashy materials, soils exhibiting strong odours, brightly coloured materials and former structures or brickwork.

Should previously undiscovered contamination be encountered during construction by the ground workers, this should be reported to the Site Manager immediately in order that any necessary inspection may be made. Records should be kept and samples submitted for analysis where conditions encountered are not as anticipated. The results of any such testing should be sent to the authorities for consultation.

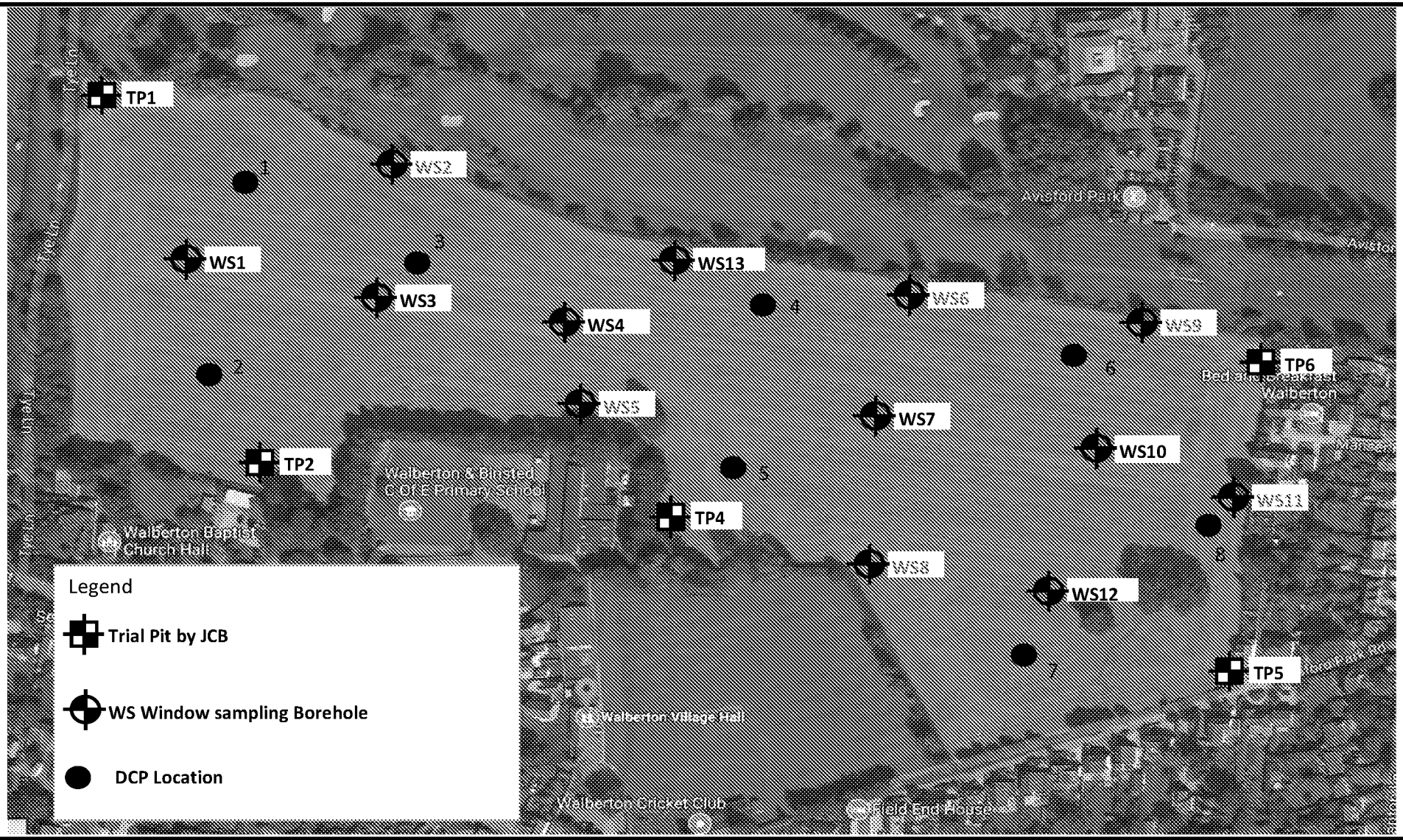
A copy of the discovery strategy should be lodged on site and provisions made to ensure that all workers are made aware of their responsibility to observe, report and act on any potentially suspicious or contaminated materials they may encounter.

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Project:	Tye Lane, Walberton, West Sussex.			**Title**	Site Location
Client:	Wates Developments			**Geo-Environmental Services Ltd** **Unit 7 Danworth Farm, Cuckfield Road** **Hurstpierpoint, West Sussex BN6 9GL** **+44(0)1273 832972 www.gesl.net**	Geo-Environmental
Ref No:		**Revision:**	0		
Drawn:	GR	**Date:**			
Figure:	1	**Scale:**	Not To Scale		

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Project:	Tye Lane, Walberton			**Title**	TRIAL HOLE and DCP LOCATIONS
Client:	Wates Developments			**Geo-Environmental Services Ltd** **Unit 7 Danworth Farm, Cuckfield Road** **Hurstpierpoint, West Sussex BN6 9GL** **+44(0)1273 832972 www.gesl.net**	Geo-Environmental
Ref No:	GE16861	**Revision:**	0		
Drawn:	GE	**Date:**			
Figure:	2	**Scale:**	Not To Scale		

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APPENDIX A

Desk Study Information



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0 1 km

Geo-Environmental
Groundwater Vulnerability

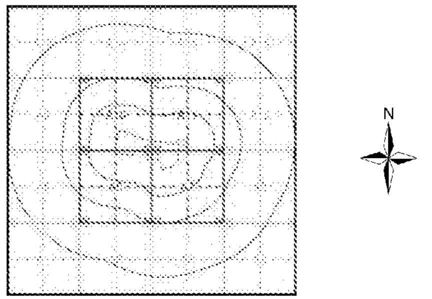
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



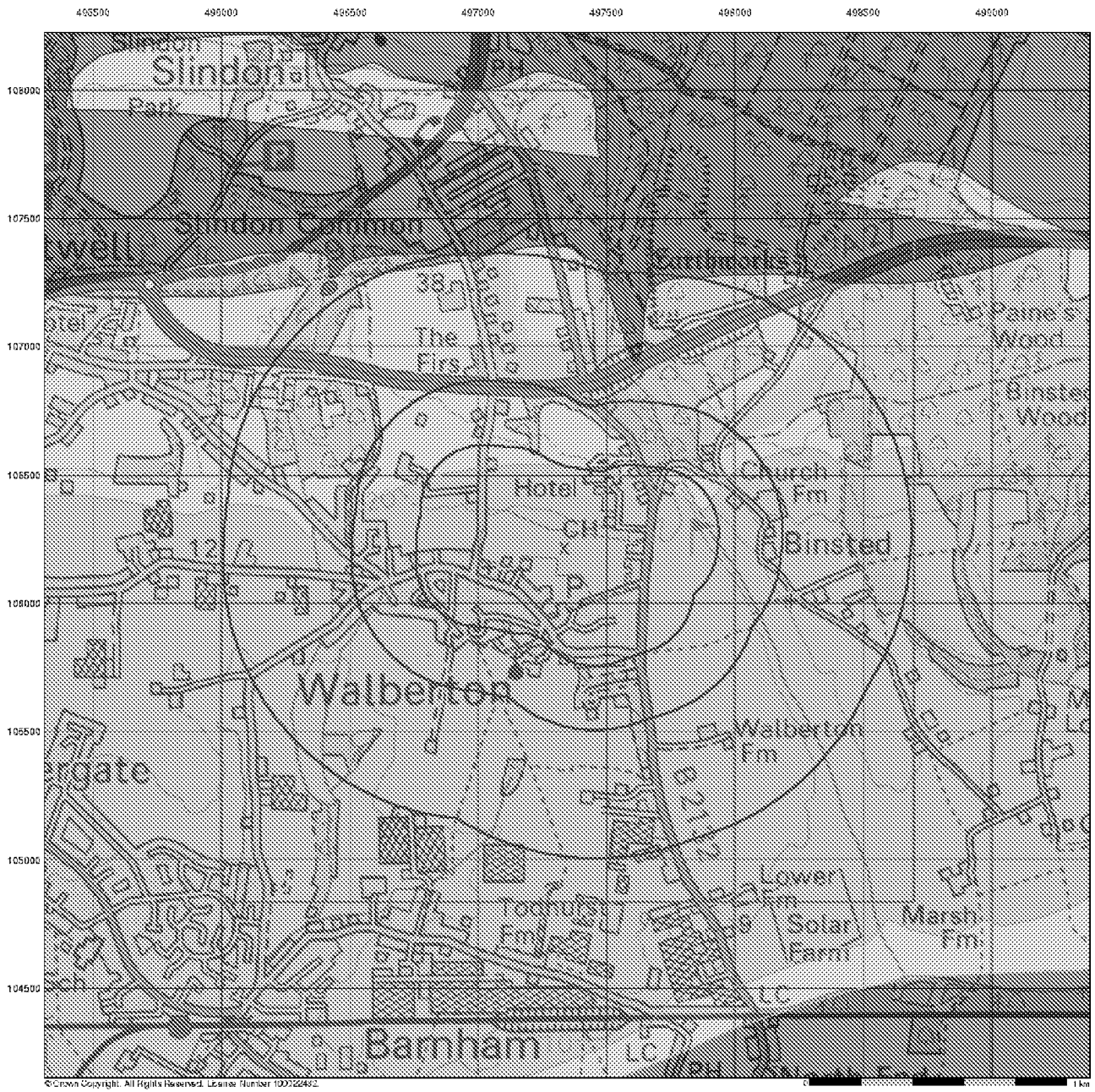
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Customer Ref: GE16861
National Grid Reference: 497330, 106210
Slice: A
Site Area (Ha): 11.27
Search Buffer (m): 1000

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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Web: www.envirocheck.co.uk
A Landmark Information Group Service v15.0 23-Oct-2017



Geo-Environmental
Bedrock Aquifer Designation

General

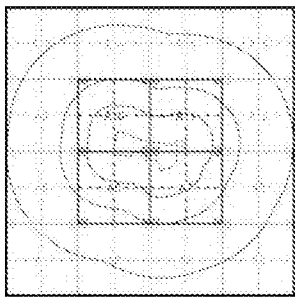
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



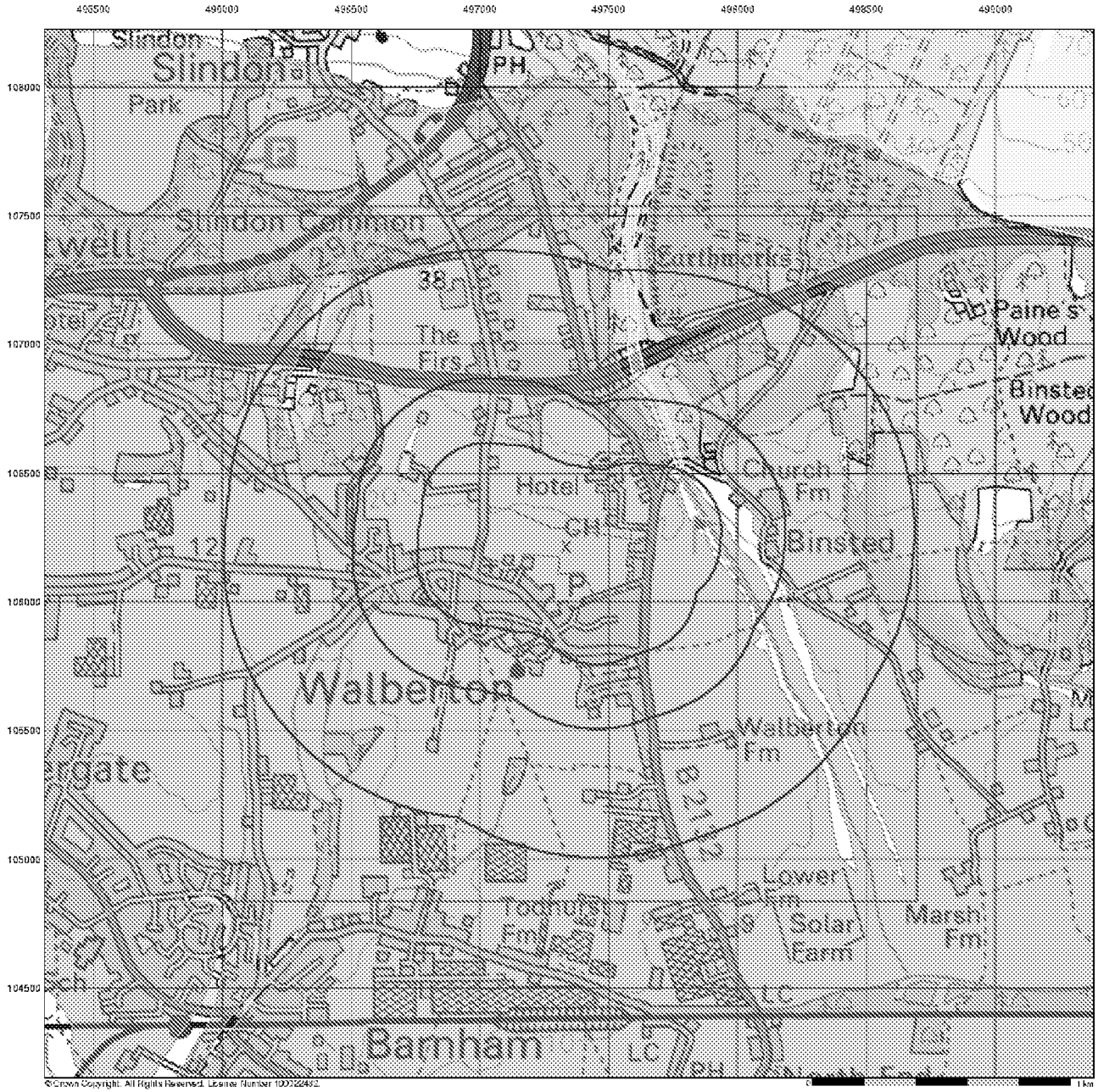
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Geo-Environmental
Superficial Aquifer Designation

General

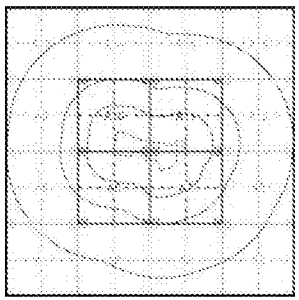
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Agency and Hydrological

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



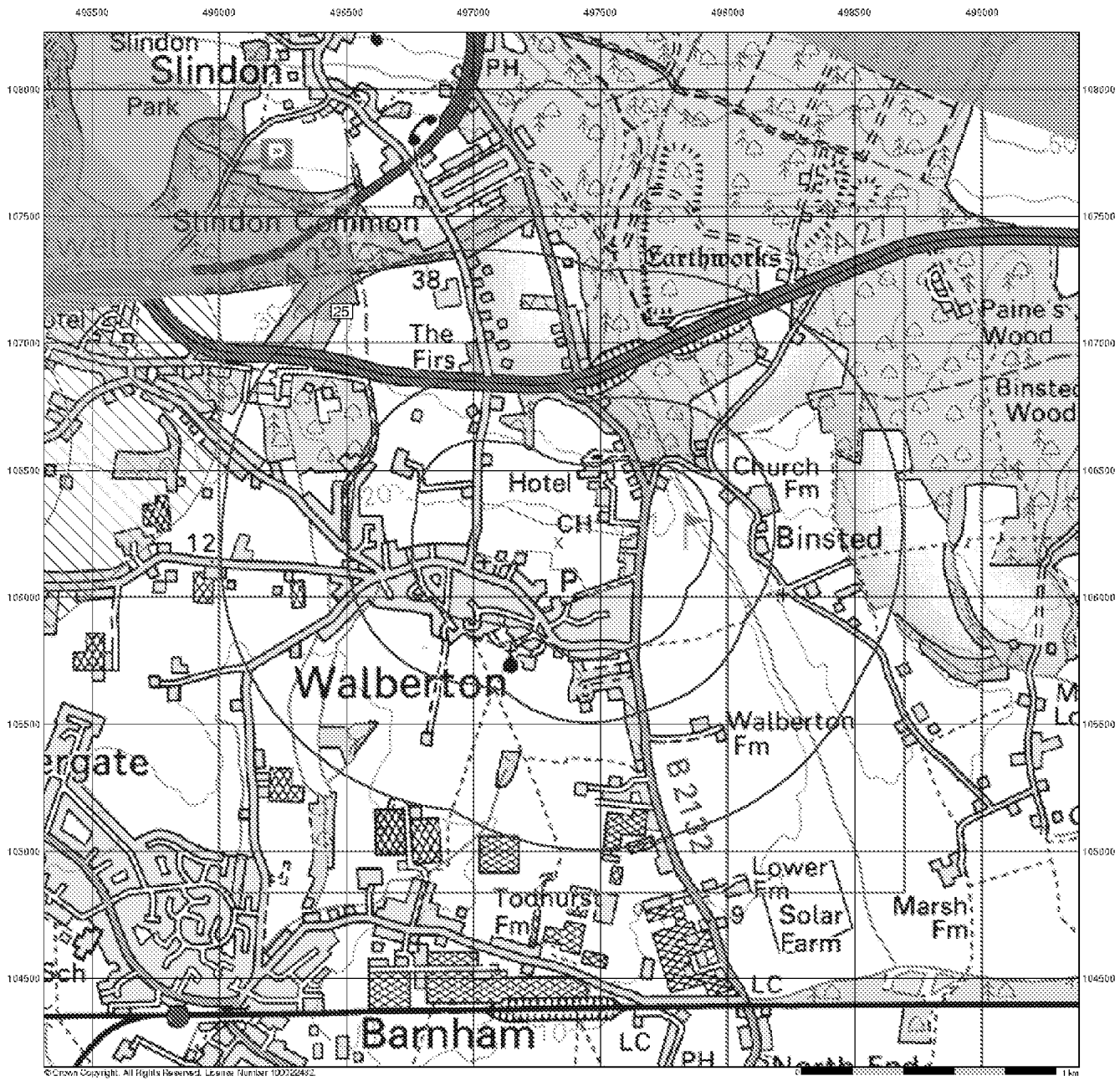
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Geo-Environmental
Source Protection Zones

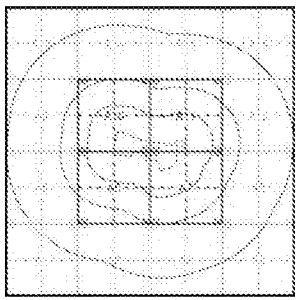
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



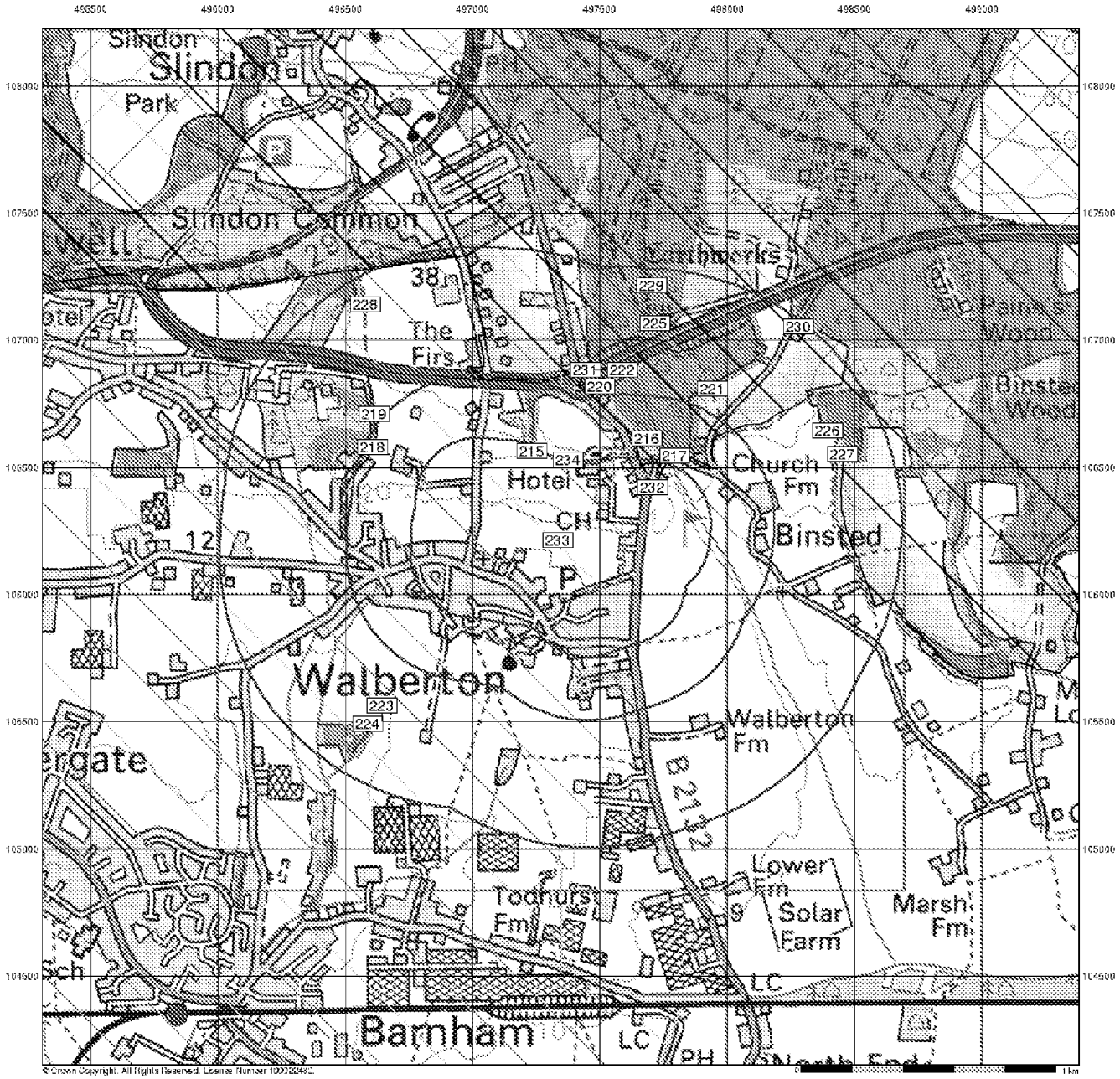
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Geo-Environmental Sensitive Land Uses

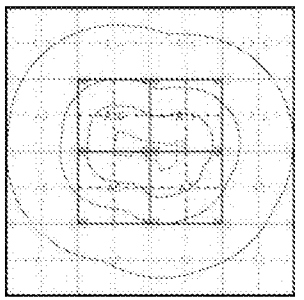
General

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



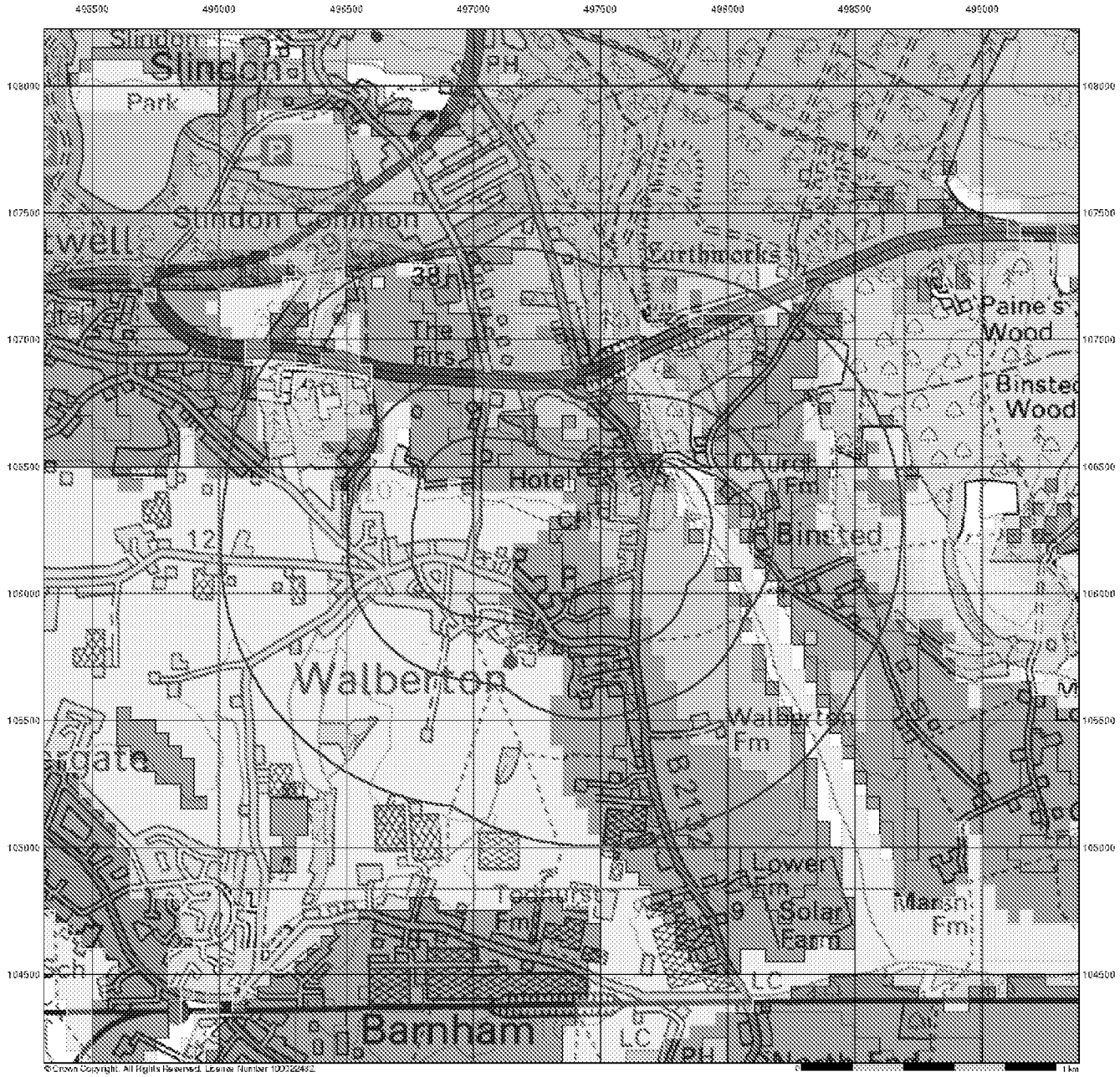
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Geo-Environmental

BGS Flood GFS Data

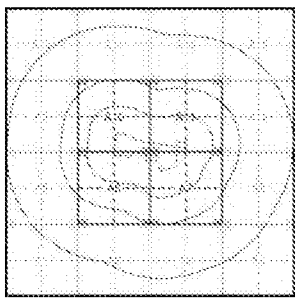
General

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:	143822756_1_1
Customer Ref:	GE16861
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Geo-Environmental

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
143822756_1_1

Customer Reference:
GE16861

National Grid Reference:
497330, 106210

Slice:
A

Site Area (Ha):
11.27

Search Buffer (m):
1000

Site Details:

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ARUNDEL
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Client Details:

Mr W Hughes
Geo Environmental Services Ltd
Unit 7 Danworth Farm
Cuckfield Road
Hurstpierpoint
West Sussex
BN6 9GL

Landmark INFORMATION GROUP

ARUN DISTRICT COUNCIL WA/99/18/DOC

Contents

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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 the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3		1	4	21
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	pg 9		1		
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 9		Yes		
Pollution Incidents to Controlled Waters	pg 9		1	1	3
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 10				6 (*20)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 16	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Source Protection Zones	pg 17				1
Extreme Flooding from Rivers or Sea without Defences	pg 17		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 17		Yes	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 17		33	26	74

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	pg 33			2	3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 34	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 34			1	3
Potentially Infilled Land (Non-Water)	pg 34				4
Potentially Infilled Land (Water)	pg 34			1	
Registered Landfill Sites	pg 35				1
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 36	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 36	Yes	Yes		Yes
BGS Recorded Mineral Sites	pg 36				3
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities	pg 37				1
Non Coal Mining Areas of Great Britain	pg 37		Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 37	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 37		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 37	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 37	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 37	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 38	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 39		9	14	13
Fuel Station Entries	pg 42		1		
Points of Interest - Commercial Services	pg 42		2	5	2
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 43	2	3	4	9
Points of Interest - Public Infrastructure	pg 44				1
Points of Interest - Recreational and Environmental	pg 44		2		
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 45		1	3	12
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas	pg 46				1
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks	pg 46		1		
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 46	1	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: Potential for Groundwater Flooding to Occur at Surface	A10SE (NW)	0	1	497300 106250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (W)	0	1	497334 106213
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (N)	0	1	497334 106250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (E)	0	1	497550 106300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (S)	0	1	497334 106200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (E)	0	1	497450 106213
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (NE)	28	1	497400 106300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (NE)	35	1	497450 106300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (NE)	111	1	497500 106400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (NE)	112	1	497600 106400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SW (N)	119	1	497350 106400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	138	1	497750 106400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (E)	167	1	497850 106300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (E)	168	1	497850 106213
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (E)	169	1	497800 106400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (NE)	216	1	497650 106500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (N)	230	1	497450 106500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (NE)	230	1	497750 106500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (E)	249	1	497900 106400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NW (NE)	261	1	497550 106550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (E)	276	1	497950 106350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (N)	284	1	497350 106600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (E)	293	1	497950 106400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (E)	300	1	497950 106100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NW (NE)	311	1	497600 106600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (E)	316	1	498000 106250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (NE)	316	1	497650 106600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (E)	317	1	497950 106450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NE (NE)	320	1	497700 106600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (E)	324	1	498000 106350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (E)	346	1	498000 106100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	347	1	497950 106500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NW (N)	362	1	497350 106650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	367	1	498050 106300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	367	1	498050 106213
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (NE)	381	1	497950 106550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (E)	394	1	498000 106000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	417	1	498100 106213
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (E)	428	1	498100 106150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NE (NE)	430	1	497900 106650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (E)	436	1	498050 106000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NE (NE)	453	1	497850 106700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NW (NE)	465	1	497650 106750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	488	1	498050 105900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NW (N)	496	1	497350 106800
1	**Discharge Consents** Operator: W W Smart Property Type: SPORT, AMUSEMENT+RECREATION/GOLF CLUB/GYM/THEME PK/SPA Location: Land At Lazy W, Yapton Lane, Walberton, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P03487 Permit Version: 1 Effective Date: 1st July 1991 Issued Date: 1st July 1991 Revocation Date: 28th February 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A11SW (NE)	38	2	497560 106310
2	**Discharge Consents** Operator: Mr A Breton Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Ryders',Hedgers Hill, Walberton Ryders, Hedgers Hill, Walberton, West Sussex, Bn18 0lr Authority: Environment Agency, Southern Region Catchment Area: Adur Estuary & Freshwater Tributaries Reference: P11135 Permit Version: 1 Effective Date: 2nd July 2003 Issued Date: 2nd July 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib. River Arun **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A11SE (NE)	263	2	497790 106520
3	**Discharge Consents** Operator: West Sussex County Council Property Type: Undefined Or Other Location: Church Farm, Binstead, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: S01123 Permit Version: 1 Effective Date: 28th September 1962 Issued Date: 28th September 1962 Revocation Date: 11th May 1995 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Freshwater River **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A12SW (E)	396	2	498080 106270
3	**Discharge Consents** Operator: L. Wishart Esq. Property Type: Undefined Or Other Location: Church Farm, Binsted, Arundel, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P11076 Permit Version: 1 Effective Date: 2nd January 1985 Issued Date: 2nd January 1985 Revocation Date: 20th March 1996 Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Freshwater River **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A12SW (E)	406	2	498090 106270

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: St Mary'S Church Council Property Type: CHURCH/MONASTERY/ABBEY/RELIGIOUS RETREAT/ASSOCIATION HQ Location: St Mary'S C Of E Church, Off The Street, Walberton, Arundel, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P04315 Permit Version: 1 Effective Date: 29th June 1992 Issued Date: 29th June 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A6SE (S)	425	2	497130 105710
5	**Discharge Consents** Operator: R Peterson Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: The Garden House, Firgrove, Mill Road, Slindon Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P03550 Permit Version: 1 Effective Date: 24th April 1991 Issued Date: 24th April 1991 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A14SW (NW)	543	2	497000 106910
5	**Discharge Consents** Operator: Mr And Mrs N Wingham Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: The Coach House, Firgrove, Mill Road, Slindon Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P03549 Permit Version: 1 Effective Date: 24th April 1991 Issued Date: 24th April 1991 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A14SE (NW)	552	2	497030 106920
6	**Discharge Consents** Operator: Mr William Hislop Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Potwell Copse Arundel Road, Walberton, West Sussex, ,, Bn18 0qp Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: Npswqd010194 Permit Version: 1 Effective Date: 1st April 2010 Issued Date: 1st April 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Groundwaters **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A9NE (NW)	561	2	496559 106682

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: Iqc International Ltd Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Stoneyfield Farm, Slindon Stoneyfield Farm, Shellbridge Rd, Slindon, W.Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P09118 Permit Version: 2 Effective Date: 21st December 2012 Issued Date: 21st December 2012 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	672	2	497380 106980
7	**Discharge Consents** Operator: Iqc International Ltd Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Stoneyfield Farm, Slindon Stoneyfield Farm, Shellbridge Rd, Slindon, W.Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P09118 Permit Version: 1 Effective Date: 11th May 2000 Issued Date: 11th May 2000 Revocation Date: 20th December 2012 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	672	2	497380 106980
7	**Discharge Consents** Operator: Omc Investments Limited Property Type: MAKING OF MOTOR VEHICLES+TRAILERS/CARS/CARAVANS Location: Camelia Court Shellbridge Road, Slindon Common, Arundel, West Sussex, Bn18 0lt Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: P12748 Permit Version: 2 Effective Date: 21st December 2012 Issued Date: 21st December 2012 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Groundwater Via A Soakaway **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	685	2	497390 106990
7	**Discharge Consents** Operator: Nissan (Uk) Limited Property Type: MAKING OF MOTOR VEHICLES+TRAILERS/CARS/CARAVANS Location: Camelia Court Shellbridge Road, Slindon Common, Arundel, West Sussex, Bn18 0lt Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: P12748 Permit Version: 1 Effective Date: 9th June 2006 Issued Date: 9th June 2006 Revocation Date: 20th December 2012 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Underground Water Receiving Water: Groundwater Via A Soakaway **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	685	2	497390 106990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Discharge Consents** Operator: B J E Weir Esq Property Type: Undefined Or Other Location: Spindlewood, Yapton Lane, WALBERTON, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N02731 Permit Version: 1 Effective Date: 25th June 1979 Issued Date: 25th June 1979 Revocation Date: 31st March 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Freshwater River **Status: Lapsed (under Environment Act 1995, Schedule 23)** Positional Accuracy: Located by supplier to within 100m	A3NE (S)	750	2	497700 105300
9	**Discharge Consents** Operator: Dr & Mg Tristan Property Type: Mixed Farming Location: Binsted Nursery, Binsted Lane, Binsted, Arundel West Sussex, Bn18 0ll Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: App/So/9su Permit Version: 1 Effective Date: 1st April 1999 Issued Date: 1st April 1999 Revocation Date: 1st April 1999 Discharge Type: Trade Discharge - Process Water Discharge Environment: Into Land Receiving Water: Into Land **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A8NE (E)	753	2	498390 105980
10	**Discharge Consents** Operator: Mr Richard Hubble Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Dale Cottage Shellbridge Road, Slindon Common, Arundel, West Sussex, Bn18 0lt Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: Npswqd005001 Permit Version: 1 Effective Date: 29th January 2009 Issued Date: 29th January 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Ground Waters Via Soakaway **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	807	2	497444 107100
11	**Discharge Consents** Operator: Walberton Nursery Property Type: Mixed Farming Location: Walberton Nursery, Yapton Lane, Walberton, Near Arundel West Sussex, Bn18 0as Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: App/So/34su Permit Version: 1 Effective Date: 1st April 1999 Issued Date: 1st April 1999 Revocation Date: Not Supplied Discharge Type: Trade Discharge - Process Water Discharge Environment: Into Land Receiving Water: Into Land **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A3NW (S)	819	2	497410 105190

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: Sequoia Properties Ltd. Property Type: CONSTRUCTION OF BUILDINGS Location: Estate Development, West Walberton Lane, Walberton West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: S01403 Permit Version: 1 Effective Date: 3rd September 1965 Issued Date: 3rd September 1965 Revocation Date: 1st July 1991 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Freshwater River **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A9SW (W)	822	2	496200 106400
13	**Discharge Consents** Operator: Mr & Mrs.S.Snel Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Potwell Copse, Arundel Road, Walberton, Arundel West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P02335 Permit Version: 2 Effective Date: 21st December 2012 Issued Date: 21st December 2012 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A9NW (NW)	842	2	496250 106700
13	**Discharge Consents** Operator: Mr & Mrs.S.Snel Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Potwell Copse, Arundel Road, Walberton, Arundel West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P02335 Permit Version: 1 Effective Date: 16th June 1989 Issued Date: 16th June 1989 Revocation Date: 20th December 2012 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A9NW (NW)	842	2	496250 106700
14	**Discharge Consents** Operator: West Sussex County Council Property Type: Undefined Or Other Location: A27 Trunk Road, Avisford/Potwell Copse, Fontwell , Nr Chichester West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01592 Permit Version: 1 Effective Date: 8th May 1979 Issued Date: 8th May 1979 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Freshwater River **Status: Lapsed (under Environment Act 1995, Schedule 23)** Positional Accuracy: Located by supplier to within 100m	A13SW (NW)	887	2	496300 106880

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Discharge Consents** Operator: Fordingbridge Plc Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Fordingbridge Plc, Fontwell Fordingbridge Plc, Arundel Road, Fontwell, Arundel, West Sussex, Bn18 0sd Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: P12382 Permit Version: 1 Effective Date: 29th April 2005 Issued Date: 29th April 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Ditch To Barnham Rife **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A9NW (NW)	935	2	496170 106750
15	**Discharge Consents** Operator: Fordingbridge Engineering Ltd Property Type: Undefined Or Other Location: Pencil Rough, FONTWELL, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N02647 Permit Version: 1 Effective Date: 2nd April 1984 Issued Date: 2nd April 1984 Revocation Date: 31st March 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Freshwater River **Status:** **Lapsed (under Environment Act 1995, Schedule 23)** Positional Accuracy: Located by supplier to within 100m	A9NW (NW)	935	2	496170 106750
15	**Discharge Consents** Operator: P.C.Fisher Esq. Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Pencil Rough, Arundel Road, Fontwell , Arundel West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P02117 Permit Version: 1 Effective Date: 24th January 1989 Issued Date: 24th January 1989 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A9NW (NW)	957	2	496170 106800
16	**Discharge Consents** Operator: S E Healey Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Gracelands Farm, Walberton Gracelands Farm, Walberton, Arundel, West Sussex, Bn18 0qp Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: P12674 Permit Version: 1 Effective Date: 6th March 2006 Issued Date: 6th March 2006 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Groundwater Via Soakaway **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A9NW (W)	982	2	496100 106700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Discharge Consents** Operator: Mrs M.G.Spofforth Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Danesfield, Shellbridge Road, Slindon , Arundel West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P03115 Permit Version: 1 Effective Date: 7th September 1990 Issued Date: 7th September 1990 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Into Land **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A15NW (N)	983	2	497410 107300
17	**Discharge Consents** Operator: Mr Clive Smith Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Oakwood Cottage, Slindon Oakwood Cottage, Shellbridge Road, Slindon, West Sussex, Bn18 0ne Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: P12580 Permit Version: 1 Effective Date: 9th December 2005 Issued Date: 9th December 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Groundwater Via Soakaway **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A15NW (N)	987	2	497390 107310
18	**Local Authority Pollution Prevention and Controls** Name: Turnpike Motors Location: The Street, Walburton, ARUNDEL, West Sussex, BN18 0PG Authority: Arun District Council, Environmental Health Department Permit Reference: 1887 Dated: 1st February 1992 Process Type: Local Authority Air Pollution Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Authorisation revokedRevoked** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	102	3	497051 106053
	Nearest Surface Water Feature	A11SW (E)	6	-	497495 106263
19	**Pollution Incidents to Controlled Waters** Property Type: Recreation & Sporting Location: Avisford Golf Club, BINSTEAD Authority: Environment Agency, Southern Region Pollutant: No Pollutant Note: Not Supplied Incident Date: 4th August 1999 Incident Reference: 2596 Catchment Area: Arun Receiving Water: Potential River Cause of Incident: Other Cause Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m	A11SE (E)	217	2	497900 106300
20	**Pollution Incidents to Controlled Waters** Property Type: Other General Premises Location: Stream At, Walberton Mill Lane Authority: Environment Agency, Southern Region Pollutant: Oils - Unknown Note: Heating Oil Incident Date: 10th November 1992 Incident Reference: 533 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Organic Industrial Waste Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A10SW (W)	307	2	496700 106200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**Pollution Incidents to Controlled Waters** Property Type: Industrial: Other Location: Discharge To Ditch At, Royal Oak Public House, Yapton Lane Authority: Environment Agency, Southern Region Pollutant: Sewage - Septic Tank Effluent Note: Overflowing Septic Tank Serving Public House Incident Date: 9th November 1993 Incident Reference: 773 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Sewage - Other Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A11NW (N)	515	2	497450 106785
21	**Pollution Incidents to Controlled Waters** Property Type: Industrial: Other Location: Discharge To Ditch At, Royal Oak Public House, Yapton Lane, WALBERTON Authority: Environment Agency, Southern Region Pollutant: Sewage - Septic Tank Effluent Note: Overflowing Septic Tank Serving Public House Incident Date: 3rd November 1993 Incident Reference: 522 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Sewage - Other Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A11NW (N)	520	2	497450 106790
22	**Pollution Incidents to Controlled Waters** Property Type: Horticultural Location: Location Description Not Avaliable Authority: Environment Agency, Southern Region Pollutant: Oils - Diesel (Including Agricultural) Note: Spillage Of Diesel Approx 1000 Litres Contained Incident Date: 8th September 1996 Incident Reference: 1874 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A2NW (SW)	913	2	496700 105300
23	**Water Abstractions** Operator: W P Wyatt & Son Licence Number: 10/41/542212 Permit Version: 101 Location: Point A At Woodlands Farm, Slindon 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: Water Abstracted May Be Used In Area Coloured On The Said Map Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (NW)	823	2	496840 107170
23	**Water Abstractions** Operator: W P Wyatt Licence Number: 10/41/542212 Permit Version: 100 Location: Point A At Woodlands Farm, Slindon 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: Water Abstracted May Be Used In Area Coloured On The Said Map Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 2nd January 1979 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14SW (NW)	823	2	496840 107170

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**Water Abstractions** Operator: Walberton Nursery Llp Licence Number: 27/194a/R01 Permit Version: 1 Location: Point A At Walberton Nurseries, Walberton 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: No Longer Applicable Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A3NW (S)	849	2	497640 105180
24	**Water Abstractions** Operator: Walberton Nursery Llp Licence Number: 27/194a Permit Version: 2 Location: Point A At Walberton Nurseries, Walberton 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: No Longer Applicable Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A3NW (S)	849	2	497640 105180
24	**Water Abstractions** Operator: D Tristram T/A Walberton Nurseries Licence Number: 27/194a Permit Version: 1 Location: Point A At Walberton Nurseries, Walberton 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: No Longer Applicable Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A3NW (S)	849	2	497640 105180
24	**Water Abstractions** Operator: D Tristram T/A Walberton Nurseries Licence Number: 27/194 Permit Version: 100 Location: Point A At Walberton Nurseries, Walberton Authority: Environment Agency, Southern Region Abstraction: Horticulture And Nurseries: 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: Shown Outlined Black On Attached Map Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 2nd April 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3NW (S)	849	2	497640 105180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Toddington Nurseries Limited Licence Number: 10/41/542209 Permit Version: 102 Location: At Lake Lane,Barnham Authority: Environment Agency, Southern Region Abstraction: Horticulture And Nurseries: 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: Water Abstracted Shall Only Be Used On Land And Buildings Marked In Pink On The Plan Accompanying The Licence Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th August 2013 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SW (SW)	1035	2	496740 105160
	Water Abstractions Operator: Kirin Agribo Toddington Ltd Licence Number: 10/41/542209 Permit Version: 101 Location: At Lake Lane,Barnham Authority: Environment Agency, Southern Region Abstraction: Horticulture And Nurseries: 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: Water Abstracted Shall Only Be Used On Land And Buildings Marked In Pink On The Plan Accompanying The Licence Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SW (SW)	1035	2	496740 105160
	Water Abstractions Operator: Southern Glasshouse Produce Ltd Licence Number: 10/41/542209 Permit Version: 100 Location: At Lake Lane,Barnham Authority: Environment Agency, Southern Region Abstraction: Horticulture And Nurseries: 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: Water Abstracted Shall Only Be Used On Land And Buildings Marked In Pink On The Plan Accompanying The Licence Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th June 1992 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2SW (SW)	1035	2	496740 105160
	Water Abstractions Operator: Walberton Nursery Llp Licence Number: 10/41/412006 Permit Version: 101 Location: Todhurst Barn, Yapton Lane, Walberton Authority: Environment Agency, Southern Region Abstraction: Agriculture: Horticultural Watering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: See Licence Map Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 24th January 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A3SW (S)	1049	2	497610 104970

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: D Tristram T/A Walberton Nurseries Licence Number: 10/41/412006 Permit Version: 100 Location: Todhurst Barn, Yapton Lane, Walberton Authority: Environment Agency, Southern Region Abstraction: Agriculture: Horticultural Watering Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: See Licence Map Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SW (S)	1049	2	497610 104970
	Water Abstractions Operator: Star Nurseries Ltd Licence Number: 27/176 Permit Version: 101 Location: Todhurst Rife At Star Nurseries, Barnham Authority: Environment Agency, Southern Region Abstraction: Horticulture and Nurseries: Spray Irrigation - Spray Irrigation Definition Order Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Outlined On Map Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 13th October 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1331	2	497700 104700
	Water Abstractions Operator: Star Nurseries Ltd Licence Number: 27/176 Permit Version: 100 Location: Todhurst Rife At Star Nurseries, Barnham Authority: Environment Agency, Southern Region Abstraction: Horticulture and Nurseries: Spray Irrigation - Spray Irrigation Definition Order Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Outlined On Map Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1331	2	497700 104700
	Water Abstractions Operator: Miss K H Fuente Licence Number: 10/41/542211 Permit Version: 101 Location: Point A At Stoneyfields Nurseries, Eastergate Lane,Walberton 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: Water Abstracted May Be Used On Land Coloured Pink On Said Map Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st March 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1436	2	495590 105920

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Mr P H C Fuente Licence Number: 10/41/542211 Permit Version: 100 Location: Point A At Stoneyfields Nurseries, Eastergate Lane,Walberton 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: Water Abstracted May Be Used On Land Coloured Pink On Said Map Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 3rd January 1978 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1436	2	495590 105920
	Water Abstractions Operator: Fresh Acres Nurseries Ltd Licence Number: 10/41/412002 Permit Version: 100 Location: Todhurst Rife At Yapton Lane, Walberton Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): 68 Yearly Rate (m3): 18181.6 Details: See Licence Map Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 29th June 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1454	2	497730 104580
	Water Abstractions Operator: Eric Wall Holdings Ltd Licence Number: 10/41/542208 Permit Version: 100 Location: Point B, Lake Lane,Barnham Authority: Environment Agency, Southern Region Abstraction: Horticulture And Nurseries: 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: The Water Abstracted Shall Only Be Used On Land And Buildings On The Occupation Of The Licence Holder At Lake Lane,Barnham Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1468	2	497110 104580
	Water Abstractions Operator: Holly Lodge (Kingswood) Ltd Licence Number: 10/41/412201 Permit Version: 101 Location: Havenwood Caravan Park, Paines Wood, Binsted Authority: Environment Agency, Southern Region Abstraction: Private Water Supply: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: See Licence Map Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th June 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1553	2	498940 107190

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Mr N P Bridge Licence Number: 10/41/412201 Permit Version: 100 Location: Havenwood Caravan Park, Paines Wood, Binsted Authority: Environment Agency, Southern Region Abstraction: Private Water Supply: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: See Licence Map Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th December 1992 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1553	2	498940 107190
	Water Abstractions Operator: Eric Wall Holdings Ltd Licence Number: 10/41/542208 Permit Version: 100 Location: Point A, Lake Lane,Barnham Authority: Environment Agency, Southern Region Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 545 Yearly Rate (m3): 100000 Details: The Water Abstracted Shall Only Be Used On Land And Buildings On The Occupation Of The Licence Holder At Lake Lane,Barnham Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1605	2	496740 104570
	Water Abstractions Operator: Adviserate T/A Southdown Flowers Licence Number: 412002 Permit Version: Not Supplied Location: Adviserate Limited Authority: Environment Agency, Southern Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 68 Yearly Rate (m3): 18181 Details: Todhurst Rife (Trib Arun) 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	(S)	1698	2	498000 104400
	Water Abstractions Operator: G S Sercombe Licence Number: 10/41/542210 Permit Version: 100 Location: Point A At Gaston Farm,Slindon 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: Water Abstracted To Be Used On Land Coloured Pink On The Said Map Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NW)	1759	2	496510 108050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: T Luckin & Son Licence Number: 10/41/411020 Permit Version: 100 Location: Binsted Rife Nr Priory Farm Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): 182 Yearly Rate (m3): 2500 Details: See Licence Map Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 8th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1879	2	499460 105630
	Water Abstractions Operator: Keith Langmead Ltd Licence Number: 27/190 Permit Version: 102 Location: Point A On Binstead Rife, Wicks Farm, Yapton Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Shown Outlined In Red On Licence Map Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 4th December 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(SE)	1969	2	498810 104510
	Water Abstractions Operator: Keith Langmead Ltd Licence Number: 27/190 Permit Version: 101 Location: Point A On Binstead Rife, Wicks Farm, Yapton Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Shown Outlined In Black On Licence Map Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st April 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(SE)	1969	2	498810 104510
	Water Abstractions Operator: A.C. Langmead Ltd Licence Number: 27/190 Permit Version: 100 Location: Point A On Binstead Rife, Wicks Farm, Yapton Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Shown Outlined In Black On Licence Map Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 16th August 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SE)	1969	2	498810 104510
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (H1) - Soils which readily transmit liquid discharges because they are either shallow, or susceptible to rapid by-pass flow directly to rock, gravel or groundwater Map Sheet: Sheet 45 West Sussex and Surrey Scale: 1:100,000	A10SE (NW)	0	2	497147 106342
	Groundwater Vulnerability Soil Classification: Soils of Intermediate Leaching Potential (I1) - Soils which can possibly transmit a wide range of pollutants Map Sheet: Sheet 45 West Sussex and Surrey Scale: 1:100,000	A10SE (W)	0	2	497334 106213

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A10SE (W)	0	1	497334 106213
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A10SE (W)	0	1	497334 106213
25	**Source Protection Zones** Name: Various 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.	A13SE (NW)	931	2	496482 107126
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A11SE (NE)	195	2	497810 106450
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A11SE (NE)	195	2	497810 106450
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (E)	6	4	497495 106263
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	11	4	497098 106380
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (E)	15	4	497495 106273
29	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 25.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	21	4	497113 106399
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (E)	21	4	497496 106278

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	30	4	497176 106374
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	31	4	497140 106386
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	33	4	497136 106390
34	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 46.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (NE)	40	4	497456 106316
35	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 20.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	41	4	497196 106374
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	49	4	497213 106375
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (NE)	51	4	497427 106329
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 74.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (N)	55	4	497288 106352
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	56	4	497219 106374

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (NE)	60	4	497421 106331
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (NE)	61	4	497405 106337
42	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 13.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (N)	63	4	497295 106351
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (N)	67	4	497368 106346
44	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 4.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (NE)	67	4	497399 106340
45	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 17.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (N)	68	4	497379 106344
46	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 2.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (NE)	69	4	497395 106343
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A11SW (NE)	72	4	497395 106345
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	72	4	497198 106401

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	85	4	497209 106409
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SE (NW)	90	4	497239 106402
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 569.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A11SE (NE)	222	4	497848 106439
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A11SE (E)	226	4	497875 106404
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 163.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A11SE (E)	226	4	497893 106365
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (E)	246	4	497873 106436
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	247	4	497868 106444
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	247	4	497872 106437
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	248	4	497866 106446

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	248	4	497866 106446
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	254	4	497855 106466
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	254	4	497853 106467
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	254	4	497855 106466
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	255	4	497857 106464
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	268	4	497888 106452
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A11SE (E)	290	4	497970 106221
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 552.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A11SE (E)	290	4	497970 106221
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	295	4	497906 106471

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	300	4	497909 106475
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 112.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	300	4	497911 106475
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	303	4	497910 106480
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 0	A11SE (NE)	305	4	497910 106482
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A11SE (E)	308	4	497989 106228
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A12SW (E)	348	4	498030 106240
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 73.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9SE (W)	362	4	496667 106434
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10SW (NW)	364	4	496687 106506
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 549.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A6SW (SW)	369	4	496912 105803

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A10NW (NW)	377	4	496700 106561
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 67.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	381	4	496645 106036
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 68.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	435	4	496595 106018
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	437	4	496570 106148
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	437	4	496569 106144
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	437	4	496570 106148
82	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 38.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	439	4	496579 106058
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 190.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	443	4	496596 105992
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	454	4	496558 106085

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 623.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	552	4	496458 106096
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2NE (S)	555	4	497209 105509
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2NE (S)	587	4	497200 105478
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 326.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A15SW (NE)	589	4	497646 106875
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 273.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2NE (S)	592	4	497200 105472
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 97.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NE (W)	607	4	496449 105917
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 359.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5SE (SW)	609	4	496492 105833
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 2	A5SE (SW)	609	4	496492 105833
93	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 37.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A3NW (S)	631	4	497411 105378

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 66.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9SE (W)	663	4	496376 106511
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9SE (W)	663	4	496377 106512
96	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 6.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NE (W)	686	4	496364 106556
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 699.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5SE (W)	686	4	496401 105836
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 113.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	699	4	498205 105727
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 70.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	699	4	498205 105727
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NE (W)	706	4	496347 106569
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 82.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9SW (W)	708	4	496323 106472
102	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 14.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (W)	736	4	496319 106580

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (W)	743	4	496304 106554
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (W)	743	4	496304 106553
105	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 52.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (W)	745	4	496309 106579
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (W)	745	4	496304 106562
107	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (W)	745	4	496309 106579
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 256.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A1NE (SW)	745	4	496651 105504
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 187.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (W)	746	4	496302 106559
110	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 33.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2NE (S)	764	4	497151 105306
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (W)	771	4	496298 106629

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2NE (S)	797	4	497137 105275
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	798	4	498263 105630
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 61.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	798	4	498263 105630
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (NW)	800	4	496284 106673
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 509.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A12SE (E)	809	4	498489 106360
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (NW)	813	4	496279 106694
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 2	A9NW (NW)	813	4	496279 106694
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 140.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2NE (S)	822	4	497120 105256
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	827	4	498253 105563

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 2	A9NW (NW)	831	4	496269 106716
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 305.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A16SW (NE)	834	4	498218 106918
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	841	4	498290 105593
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	841	4	498290 105593
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	841	4	498292 105594
126	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 329.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8NE (E)	842	4	498517 106142
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	847	4	498292 105584
128	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 31.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (NW)	849	4	496263 106746
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 96.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A8SW (SE)	849	4	498294 105583

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (NW)	852	4	496270 106764
131	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (NW)	853	4	496256 106738
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 166.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A12NE (E)	854	4	498453 106648
133	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 10.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (NW)	855	4	496253 106737
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (NW)	861	4	496244 106732
135	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 40.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2NE (S)	869	4	497177 105184
136	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A15SW (N)	872	4	497480 107156
137	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 69.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A1NE (SW)	876	4	496526 105427
138	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 16.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2NE (S)	885	4	497136 105182

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13SW (NW)	888	4	496299 106881
140	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 74.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2SE (S)	897	4	497141 105167
141	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 206.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13SE (NW)	898	4	496350 106962
142	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 90.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A1NE (SW)	901	4	496411 105483
143	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 35.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A4NW (SE)	914	4	498300 105482
144	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A1NE (SW)	932	4	496532 105358
145	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A4NW (SE)	932	4	498332 105495
146	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 25.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2SE (S)	960	4	497084 105121
147	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 178.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2SE (S)	964	4	497198 105068

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
148	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A1NE (SW)	965	4	496419 105394
149	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 125.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A1NE (SW)	967	4	496420 105391
150	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 294.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A4NW (SE)	969	4	498030 105192
151	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 156.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2SE (S)	974	4	497187 105069
152	**OS Water Network Lines** Watercourse Form: Reservoir Watercourse Length: 85.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2SE (S)	979	4	497211 105054
153	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2SE (S)	980	4	497290 105041
154	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 525.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A5NW (W)	982	4	496051 105932
155	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 28.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2SE (S)	982	4	497064 105106
156	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A4NW (SE)	985	4	498357 105440

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
157	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A4NW (SE)	985	4	498357 105440
158	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 276.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A2SE (S)	988	4	497206 105051

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
159	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Tye Lane, Walberton, Sussex Name: Hooe Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20130 First Input Date: 31st December 1955 Last Input Date: 31st December 1960 Specified Waste Type: Deposited Waste included Inert, Commercial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 3800/8065 BGS Ref: Not Supplied Other Ref: WD27/223	A10NW (NW)	375	2	496853 106703
160	**Historical Landfill Sites** Licence Holder: Wyatt of Snetterton Limited Location: Fontwell, Sussex Name: Days Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20370 First Input Date: 3rd May 1988 Last Input Date: 15th July 1988 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 3800/8136 BGS Ref: Not Supplied Other Ref: WD27/110, WA/10/87	A10NE (NW)	434	2	497049 106806
161	**Historical Landfill Sites** Licence Holder: J I Geall Location: Slindon, Sussex Name: Slindon Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20072 First Input Date: 10th September 1985 Last Input Date: 20th October 1986 Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 3800/8036 BGS Ref: Not Supplied Other Ref: 7-058, WD27/191, WD13/34	A15SW (N)	803	2	497361 107146
162	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Slindon, Sussex Name: Woodlands Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20071 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: WD27/192	A14NW (NW)	879	2	496839 107227
163	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Mill Road, Slindon, Sussex Name: Mill Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20070 First Input Date: 31st December 1985 Last Input Date: 31st December 1985 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 3800/8095 BGS Ref: Not Supplied Other Ref: WD27/190	A14NE (N)	918	2	497316 107293

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Arun District Council - Has no landfill data to supply		0	5	497334 106213
	Local Authority Landfill Coverage Name: West Sussex County Council - Has supplied landfill data		0	6	497334 106213
164	**Local Authority Recorded Landfill Sites** Location: Hooe Farm, Tye Lane, Walburton Reference: WA/10/87 Authority: West Sussex County Council, Environment & Development **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A10NW (NW)	487	6	496800 106800
165	**Local Authority Recorded Landfill Sites** Location: Wardfield, Mill Road, Slindon Reference: SL/8/85 Authority: West Sussex County Council, Environment & Development **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A14SE (N)	844	6	497200 107200
166	**Local Authority Recorded Landfill Sites** Location: Mill Farm, Mill Road, Slindon Reference: Not Supplied Authority: West Sussex County Council, Environment & Development **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A14NE (N)	957	6	497300 107300
167	**Local Authority Recorded Landfill Sites** Location: Woodlands Farm, Mill Road, Slindon Common Reference: Not Supplied Authority: West Sussex County Council, Environment & Development **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A14NW (NW)	959	6	496800 107300
168	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14SE (N)	811	-	497155 107171
169	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (NW)	879	-	496842 107228
170	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NE (N)	912	-	497125 107274
171	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (NW)	988	-	496486 107197
172	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A12SW (E)	421	-	498094 106375

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Registered Landfill Sites				
173	Licence Holder: J I Geall Licence Reference: 5/BK/85 Site Location: Pit To North Of Wardfield, Mill Road, Slindon, Arundel, West Sussex Licence Easting: 497180 Licence Northing: 107170 Operator Location: 5 Aigburt Avenue, Rose Green, Bognor Regis, West Sussex Authority: Environment Agency - Southern Region, Sussex Area Site Category: Landfill Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 19th September 1985 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Brick Rubble,Broken Concrete Stone,Chalk,Subsoil Totally Inert Solid Waste Prohibited Waste: Any Waste Not Totally Inert Asbestos Grass Cuttings Paper Vegetable Matter Waste Ex Sites Cont.Hazardous Material Waste Ex Sites Cont.Polluting Mater'L Wood	A14SE (N)	812	2	497180 107170

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Thames Group	A10SE (W)	0	1	497334 106213
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment 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	A10SE (W)	0	1	497334 106213
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (NE)	187	1	497797 106457
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9SW (W)	884	1	496134 106379
174	**BGS Recorded Mineral Sites** Site Name: Potwell Copse Gravel Pit Location: , Arundel, West Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 157616 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Palaeocene Geology: Lambeth Group Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A9NW (NW)	816	1	496324 106788
175	**BGS Recorded Mineral Sites** Site Name: Slindon Common Brick Field Location: , Slindon, Arundel, West Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 157578 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Palaeocene Geology: Lambeth Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14NW (NW)	911	1	496816 107255
176	**BGS Recorded Mineral Sites** Site Name: Slindon Common Location: , Slindon, Arundel, West Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 18266 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head (Head Gravel) Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A15NE (N)	992	1	497750 107270

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	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				
	Natural Cavities Easting: 498300 Northing: 107000 Distance: 949 Quadrant Reference: A16 Quadrant Reference: SW Bearing Ref: NE Cavity Type: Sinkhole x 1, Solution Pipe x 1 Solid Geology Detail: Chalk Group, Lambeth Group Superficial Geology Detail: No Details	A16SW (NE)	949	7	498300 107000
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	159	1	497375 106529
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	497334 106213
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (N)	0	1	497336 106308
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (NE)	184	1	497797 106457
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	497334 106213
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SE (NE)	184	1	497797 106457
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	497334 106213
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	497334 106213
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	137	1	497790 106378
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (N)	0	1	497336 106308
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	497334 106213
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	135	1	497790 106378
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NE)	184	1	497797 106457
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	231	1	497894 106374
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (N)	0	1	497336 106308

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	497334 106213
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	5	1	497366 106353
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	97	1	497781 106281
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	175	1	497649 106475
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10SW (NW)	176	1	496925 106513
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	497334 106213
	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	A10SE (W)	0	1	497334 106213

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
177	**Contemporary Trade Directory Entries** Name: Cathedral Fire Ltd Location: Apple Acre, Avisford Park Road, Walberton, Arundel, West Sussex, BN18 0AP Classification: Abattoirs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SE)	19	-	497536 106017
178	**Contemporary Trade Directory Entries** Name: Christine Llewellyn Location: Rosslyn Cottage, The Street, Walberton, Arundel, West Sussex, BN18 0PH Classification: Furniture - Repairing & Restoring **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	75	-	497164 106059
178	**Contemporary Trade Directory Entries** Name: Art On Tiles Location: Hollytree Cottage, The Street, Walberton, Arundel, West Sussex, BN18 0PH Classification: Tile Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	81	-	497181 106056
179	**Contemporary Trade Directory Entries** Name: Swanbourne Auto Works Location: The Street, Walberton, Arundel, West Sussex, BN18 0PG Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Manually positioned to the address or location	A6NE (SW)	100	-	497057 106055
179	**Contemporary Trade Directory Entries** Name: Turnpike Motors Location: The Street, Walberton, Arundel, West Sussex, BN18 0PG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	102	-	497051 106053
180	**Contemporary Trade Directory Entries** Name: Universal Race Technology Ltd Location: William Booker Yard, The Street, Walberton, Arundel, BN18 0PF Classification: Car Component Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	120	-	497098 106027
180	**Contemporary Trade Directory Entries** Name: Bevis Digitech Ltd Location: William Booker Yard, The Street, Walberton, Arundel, BN18 0PF Classification: Machinery - Industrial & Commercial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	120	-	497098 106027
180	**Contemporary Trade Directory Entries** Name: Stephen Butler Blinds Location: William Booker Yard, The Street, Walberton, ARUNDEL, West Sussex, BN18 0PF Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	140	-	497086 106009
181	**Contemporary Trade Directory Entries** Name: Poppies Location: Avisford Park House, Tye Lane, Walberton, Arundel, West Sussex, BN18 0LU Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	174	-	497066 106538
182	**Contemporary Trade Directory Entries** Name: K L Motors Location: Unit 12, Hooe Farm, Tye Lane, Walberton, Arundel, BN18 0LU Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (NW)	280	-	496782 106510
182	**Contemporary Trade Directory Entries** Name: Rhino Walling Location: Unit 9/10, Hooe Farm, Tye Lane, Walberton, Arundel, West Sussex, BN18 0LU Classification: Fencing Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A10SW (NW)	295	-	496770 106518

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
182	**Contemporary Trade Directory Entries** Name: Arun Electrical Ltd Location: Unit 5, Hooe Farm, Tye Lane, Walberton, Arundel, West Sussex, BN18 0LU Classification: Electrical Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (NW)	304	-	496756 106512
182	**Contemporary Trade Directory Entries** Name: Tompkins Joinery Location: Unit 2, Hooe Farm, Tye Lane, Walberton, Arundel, West Sussex, BN18 0LU Classification: Joinery Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SW (NW)	322	-	496733 106507
183	**Contemporary Trade Directory Entries** Name: Arun Electrical Ltd Location: Unit 15, Hooe Farm, Tye Lane, Walberton, Arundel, West Sussex, BN18 0LU Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (NW)	325	-	496753 106547
183	**Contemporary Trade Directory Entries** Name: County Stone Ltd Location: Unit 7, Hooe Farm, Tye Lane, Walberton, Arundel, West Sussex, BN18 0LU Classification: Fireplaces & Mantelpieces **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (NW)	338	-	496730 106536
183	**Contemporary Trade Directory Entries** Name: County Stone Ltd Location: Unit 4-7,Hooe Farm,Tye La, Walberton, Arundel, West Sussex, BN18 0LU Classification: Fireplaces & Mantelpieces **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A10NW (NW)	338	-	496730 106536
183	**Contemporary Trade Directory Entries** Name: A B Repairs Location: Unit 8, Hooe Farm, Tye Lane, Walberton, Arundel, BN18 0LU Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (NW)	346	-	496736 106560
183	**Contemporary Trade Directory Entries** Name: Keith Herbert Commercials Location: Unit 6, Hooe Farm, Tye Lane, Walberton, Arundel, BN18 0LU Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (NW)	356	-	496728 106567
184	**Contemporary Trade Directory Entries** Name: Dm Chainsaws Ltd Location: Walberton Place Farm, Yapton Lane, Walberton, Arundel, West Sussex, BN18 0AS Classification: Lawnmowers & Garden Machinery - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SW (SE)	358	-	497599 105679
185	**Contemporary Trade Directory Entries** Name: Base 2 Studio Location: Binsted, Arundel, West Sussex, BN18 0LP Classification: Digital Printing **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A12SW (E)	368	-	498028 106409
186	**Contemporary Trade Directory Entries** Name: Nicholas Harper Location: Friars Oak Cottage, Walberton Green, Walberton, Arundel, West Sussex, BN18 0AT Classification: Laundry Equipment Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A5NE (W)	396	-	496641 106007
187	**Contemporary Trade Directory Entries** Name: Parsec Electronics Location: The Barn,Arundel Road, Walberton, Arundel, West Sussex, BN18 0QP Classification: Automation Systems & Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A10NE (NW)	404	-	497102 106766

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
188	**Contemporary Trade Directory Entries** Name: Woodcraft Furniture Frames Location: Unit 16, Hooe Farm, Tye Lane, Walberton, ARUNDEL, West Sussex, BN18 0LU Classification: Seating Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (NW)	415	-	496796 106715
189	**Contemporary Trade Directory Entries** Name: Arundel Car Sales Location: Eastergate La, Walberton, Arundel, West Sussex, BN18 0BA Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A5NE (W)	527	-	496482 106108
190	**Contemporary Trade Directory Entries** Name: Somerford & Hudson Location: Walberton Farm, Yapton Lane, Walberton, Arundel, West Sussex, BN18 0AS Classification: Cabinet Makers **Status: Active** Positional Accuracy: Automatically positioned to the address	A3NE (SE)	672	-	497936 105480
191	**Contemporary Trade Directory Entries** Name: I Q C International Ltd Location: Stoneybridge Farm, Shellbridge Road, Slindon Common, Arundel, West Sussex, BN18 0LT Classification: Electronic Component Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (N)	703	-	497353 107024
191	**Contemporary Trade Directory Entries** Name: A D F Milking Ltd Location: 1 Camelia Court, Shellbridge Road, Slindon Common, Arundel, BN18 0LT Classification: Horticultural Equipment Manufacturers & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A15SW (N)	728	-	497347 107052
192	**Contemporary Trade Directory Entries** Name: Deborah Services Location: Yapton Lane, Walberton, Arundel, West Sussex, BN18 0AS Classification: Scaffolding & Work Platforms **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A3NW (S)	787	-	497493 105222
193	**Contemporary Trade Directory Entries** Name: Chartwell Wooden Windows Ltd Location: Yapton Lane, Walberton, Arundel, BN18 0AS Classification: Window Frame Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A3NW (S)	809	-	497596 105211
194	**Contemporary Trade Directory Entries** Name: Fibreglass Services Location: Yapton Lane, Walberton, Arundel, BN18 0AS Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A3NE (S)	815	-	497684 105226
194	**Contemporary Trade Directory Entries** Name: Fibreglass Services Location: Yapton Lane, Walberton, Arundel, West Sussex, BN18 0AS Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A3NE (S)	825	-	497709 105223
194	**Contemporary Trade Directory Entries** Name: Red Diamond Ltd Location: Yapton La, Walberton, Arundel, West Sussex, BN18 0AS Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A3NE (S)	836	-	497738 105222
194	**Contemporary Trade Directory Entries** Name: County Supplies Location: Yapton La, Walberton, Arundel, West Sussex, BN18 0AS Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A3NE (S)	836	-	497738 105222

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
195	**Contemporary Trade Directory Entries** Name: Fordingbridge Plc Location: Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SD Classification: Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (NW)	893	-	496257 106825
196	**Contemporary Trade Directory Entries** Name: T J R Cabinet Makers Location: Eastergate La, Walberton, Arundel, West Sussex, BN18 0BA Classification: Cabinet Makers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A5NW (W)	927	-	496079 106148
197	**Contemporary Trade Directory Entries** Name: Ian Anderson Location: Yapton La, Walberton, Arundel, West Sussex, BN18 0AS Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A3SE (S)	959	-	497740 105093
198	**Fuel Station Entries** Name: Turnpike Motors Location: The Street, Walberton, ARUNDEL, West Sussex, BN18 0PG Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A6NE (SW)	102	-	497050 106053
199	**Points of Interest - Commercial Services** Name: Swanbourne Auto Works Location: The Street, Walberton, Arundel, BN18 0PG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6NE (SW)	100	8	497057 106055
199	**Points of Interest - Commercial Services** Name: Turnpike Motors Location: The Street, Walberton, Arundel, BN18 0PG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A6NE (SW)	102	8	497051 106053
200	**Points of Interest - Commercial Services** Name: K L Motors Location: Unit 12 Hooe Farm, Tye Lane, Walberton, Arundel, BN18 0LU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SW (NW)	281	8	496782 106510
200	**Points of Interest - Commercial Services** Name: K L Motors Location: Unit 12 Hooe Farm, Tye Lane, Walberton, Arundel, BN18 0LU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10SW (NW)	281	8	496781 106510
200	**Points of Interest - Commercial Services** Name: A B Repairs Location: Unit 8 Hooe Farm, Tye Lane, Walberton, Arundel, BN18 0LU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NW (NW)	346	8	496736 106560
200	**Points of Interest - Commercial Services** Name: A B Repairs Location: Unit 8 Hooe Farm, Tye Lane, Walberton, Arundel, BN18 0LU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NW (NW)	346	8	496736 106560
200	**Points of Interest - Commercial Services** Name: Keith Herbert Commercials Location: Unit 6 Hooe Farm, Tye Lane, Walberton, Arundel, BN18 0LU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NW (NW)	356	8	496728 106566
201	**Points of Interest - Commercial Services** Name: Geoff Burse Trailers Ltd Location: Yapton Lane, Walberton, Arundel, BN18 0AS Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A3NW (S)	796	8	497564 105219

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
202	**Points of Interest - Commercial Services** Name: Fibreglass Services Location: Yapton Lane, Walberton, Arundel, BN18 0AS Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A3NE (S)	815	8	497683 105226
203	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (W)	0	8	497120 106149
203	**Points of Interest - Manufacturing and Production** Name: Works Location: BN18 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (W)	0	8	497121 106150
204	**Points of Interest - Manufacturing and Production** Name: W Forse Location: Barn Ends, Dairy Lane, Walberton, Arundel, BN18 0PT Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A6NW (W)	106	8	496908 106118
205	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	154	8	497115 105987
205	**Points of Interest - Manufacturing and Production** Name: Works Location: BN18 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	160	8	497112 105982
206	**Points of Interest - Manufacturing and Production** Name: Hooe Farm Industrial Estate Location: BN18 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A10NW (NW)	313	8	496776 106559
207	**Points of Interest - Manufacturing and Production** Name: M J Langmead Location: Hooe Farm House, Tye Lane, Walberton, Arundel, BN18 0LU Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A10NE (NW)	377	8	497015 106745
207	**Points of Interest - Manufacturing and Production** Name: M J Langmead Location: Hooe Farm House, Tye Lane, Walberton, Arundel, BN18 0LU Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A10NE (NW)	378	8	497016 106746
208	**Points of Interest - Manufacturing and Production** Name: L B Wishart Location: Church Farmhouse, Binsted, Arundel, BN18 0LN Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A12SW (E)	465	8	498131 106406
208	**Points of Interest - Manufacturing and Production** Name: Binsted Farms Ltd Location: Church Farm, Binsted Lane, Binsted, Arundel, BN18 0LN Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A12SW (E)	501	8	498173 106387
208	**Points of Interest - Manufacturing and Production** Name: L B Wishart Location: Church Farm, Binsted, Arundel, West Sussex, BN18 0LP Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A12SW (E)	509	8	498182 106384

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
209	**Points of Interest - Manufacturing and Production** Name: Tanks Location: BN18 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A3NW (S)	834	8	497605 105188
210	**Points of Interest - Manufacturing and Production** Name: Tank Location: BN18 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (E)	845	8	498466 105922
210	**Points of Interest - Manufacturing and Production** Name: Tank Location: BN18 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (E)	849	8	498468 105915
210	**Points of Interest - Manufacturing and Production** Name: Tanks Location: BN18 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NE (E)	854	8	498478 105927
211	**Points of Interest - Manufacturing and Production** Name: Walburton Nursery Location: Yapton Lane, Walberton, Arundel, BN18 0AS Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A3SE (S)	882	8	497721 105168
212	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NW (NW)	889	8	496257 106818
212	**Points of Interest - Manufacturing and Production** Name: Works Location: BN18 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NW (NW)	891	8	496256 106820
213	**Points of Interest - Public Infrastructure** Name: Sluice Location: BN18 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A1NE (SW)	829	8	496563 105459
214	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A6NE (S)	137	8	497317 105972
214	**Points of Interest - Recreational and Environmental** Name: Play Area Location: The Street, BN18 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A6NE (S)	137	8	497315 105972

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
215	**Ancient Woodland** Name: Not Supplied Reference: 1475964 Area(m²): 11414.9 Type: Ancient and Semi-Natural Woodland	A10NE (N)	231	9	497233 106563
216	**Ancient Woodland** Name: Not Supplied Reference: 1475920 Area(m²): 33033.75 Type: Ancient and Semi-Natural Woodland	A11NE (NE)	277	9	497684 106614
217	**Ancient Woodland** Name: Hundredhouse Copse Reference: 1475943 Area(m²): 73003.64 Type: Ancient and Semi-Natural Woodland	A11NE (NE)	287	9	497792 106545
218	**Ancient Woodland** Name: Potwell Copse Reference: 1475919 Area(m²): 27426.38 Type: Ancient and Semi-Natural Woodland	A9NE (NW)	469	9	496605 106580
219	**Ancient Woodland** Name: Potwell Copse Reference: 1475953 Area(m²): 8141.6 Type: Ancient and Semi-Natural Woodland	A9NE (NW)	534	9	496613 106709
220	**Ancient Woodland** Name: Danes Wood. Great Deans. West Stubbs Copse Reference: 1475968 Area(m²): 6187.9 Type: Ancient and Semi-Natural Woodland	A11NW (N)	537	9	497499 106818
221	**Ancient Woodland** Name: High Wood Reference: 1475921 Area(m²): 50220.72 Type: Ancient and Semi-Natural Woodland	A11NE (NE)	589	9	497941 106808
222	**Ancient Woodland** Name: Great Deans Reference: 1475945 Area(m²): 224758.41 Type: Ancient and Semi-Natural Woodland	A15SW (N)	606	9	497475 106883
223	**Ancient Woodland** Name: Not Supplied Reference: 1475950 Area(m²): 15403.76 Type: Ancient and Semi-Natural Woodland	A1NE (SW)	749	9	496643 105505
224	**Ancient Woodland** Name: Not Supplied Reference: 1475949 Area(m²): 566.21 Type: Ancient and Semi-Natural Woodland	A1NE (SW)	786	9	496589 105493
225	**Ancient Woodland** Name: Goblestubbs Copse Reference: 1475954 Area(m²): 93544.9 Type: Plantation on Ancient Woodland	A15SE (NE)	786	9	497716 107066
226	**Ancient Woodland** Name: Pedlers Croft Reference: 1475972 Area(m²): 25687.31 Type: Ancient and Semi-Natural Woodland	A12NE (E)	800	9	498394 106646
227	**Ancient Woodland** Name: Not Supplied Reference: 1475973 Area(m²): 11501.12 Type: Ancient and Semi-Natural Woodland	A12NE (E)	817	9	498454 106551
228	**Ancient Woodland** Name: Not Supplied Reference: 1475915 Area(m²): 21004.52 Type: Ancient and Semi-Natural Woodland	A13SE (NW)	892	9	496577 107140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
229	**Ancient Woodland** Name: West Stubbs Copse Reference: 1475966 Area(m²): 32760.3 Type: Plantation on Ancient Woodland	A15NE (N)	933	9	497703 107215
230	**Ancient Woodland** Name: Threecorner Copse Reference: 1475916 Area(m²): 8627.7 Type: Ancient and Semi-Natural Woodland	A16SW (NE)	978	9	498278 107054
231	**Environmentally Sensitive Areas** Name: South Downs Multiple Areas: N Total Area (m2): 690432994.81 Source: Natural England	A15SW (N)	605	9	497443 106884
232	**National Parks** Name: South Downs Multiple Area: N Area (m2): 1652679314.3 Source: Natural England **Status: Fully Designated - designated as a National Park** Designation Date: 2nd November 2009	A11SE (NE)	139	9	497705 106421
233	**Nitrate Vulnerable Zones** Name: Aldingbourne Rife Nvz Description: Surface Water Source: Environment Agency, Head Office	A10SE (W)	0	10	497334 106213
234	**Nitrate Vulnerable Zones** Name: Sussex Chalk Description: Groundwater Source: Environment Agency, Head Office	A11NW (N)	82	10	497375 106529

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Arun District Council - Environmental Health Department	July 2013	Annual Rolling Update
Chichester District Council - Environmental Health Department	July 2013	Annual Rolling Update
Discharge Consents		
Environment Agency - Southern Region	July 2017	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Southern Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Southern Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - South East Region - Solent & South Downs Area	July 2017	Quarterly
Environment Agency - Southern Region	July 2017	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Arun District Council - Environmental Health Department	December 2014	Annual Rolling Update
Chichester District Council - Environmental Health Department	October 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Arun District Council - Environmental Health Department	December 2014	Annual Rolling Update
Chichester District Council - Environmental Health Department	October 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Arun District Council - Environmental Health Department	December 2014	Annual Rolling Update
Chichester District Council - Environmental Health Department	October 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	May 2017	
Pollution Incidents to Controlled Waters		
Environment Agency - Southern Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Southern Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Southern Region	March 2013	As notified
Registered Radioactive Substances		
Environment Agency - Southern Region	January 2015	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - South East Region - Solent & South Downs Area	July 2017	Quarterly
Environment Agency - Southern Region - Solent and South Downs	July 2017	Quarterly
Environment Agency - Southern Region - Sussex Area	July 2017	Quarterly
Water Abstractions		
Environment Agency - Southern Region	July 2017	Quarterly
Water Industry Act Referrals		
Environment Agency - Southern Region	July 2017	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	August 2015	As notified

Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	July 2017	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2017	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2017	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2017	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2017	Quarterly
Flood Defences Environment Agency - Head Office	August 2017	Quarterly
OS Water Network Lines Ordnance Survey	July 2017	6 Weekly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Southern Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - South East Region - Solent & South Downs Area	July 2017	Quarterly
Environment Agency - Southern Region - Solent and South Downs	July 2017	Quarterly
Environment Agency - Southern Region - Sussex Area	July 2017	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - South East Region - Solent & South Downs Area	July 2017	Quarterly
Environment Agency - Southern Region - Solent and South Downs	July 2017	Quarterly
Environment Agency - Southern Region - Sussex Area	July 2017	Quarterly
Local Authority Landfill Coverage		
Arun District Council - Technical Support Unit	May 2000	Not Applicable
Chichester District Council - Environmental Health Department	May 2000	Not Applicable
West Sussex County Council - Environment & Development	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Arun District Council - Technical Support Unit	May 2000	Not Applicable
Chichester District Council - Environmental Health Department	May 2000	Not Applicable
West Sussex County Council - Environment & Development	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - Southern Region - Solent and South Downs	March 2003	Not Applicable
Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Southern Region - Solent and South Downs	March 2003	Not Applicable
Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Southern Region - Solent and South Downs	March 2003	Not Applicable
Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	September 2017	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Arun District Council - Technical Support Unit	February 2016	Annual Rolling Update
Chichester District Council - Planning Department	February 2016	Annual Rolling Update
West Sussex County Council - Environment & Development	October 2006	Annual Rolling Update
Planning Hazardous Substance Consents		
Arun District Council - Technical Support Unit	February 2016	Annual Rolling Update
Chichester District Council - Planning Department	February 2016	Annual Rolling Update
West Sussex County Council - Environment & Development	October 2006	Annual Rolling Update

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2017	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	September 2017	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2017	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	September 2017	Quarterly
Points of Interest - Education and Health PointX	September 2017	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2017	Quarterly
Points of Interest - Public Infrastructure PointX	September 2017	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2017	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually

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

Data Suppliers

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	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	
3	**Arun District Council - Environmental Health Department** Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF	
4	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	
5	**Arun District Council - Technical Support Unit** Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF	
6	**West Sussex County Council - Environment & Development** County Hall, Tower hall, Chichester, West Sussex, PO19 1RH	
7	**Peter Brett Associates** Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN	
8	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	
9	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	
10	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in pla

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	Holocene - Holocene
	SLIP	Landslide Deposit	Sandstone and Mudstone	Quaternary - Quaternary

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Flandrian
	RBD1	Raised Beach Deposits, 1	Sand and Gravel	Quaternary - Quaternary
	RTDU	River Terrace Deposits (Undifferentiated)	Sand, Silt and Clay	Quaternary - Quaternary
	HEAD	Head	Gravel, Sand, Silt and Clay	Quaternary - Quaternary
	HEAD	Head	Clay, Silt, Sand and Gravel	Quaternary - Quaternary
	RSB2	Raised Storm Beach Deposits, 2	Gravel	Quaternary - Quaternary
	RBD2	Raised Beach Deposits, 2	Sand and Gravel	Quaternary - Quaternary
	RMD	Raised Marine Deposits	Clay, Silt, Sand and Gravel	Quaternary - Quaternary
	RSB1	Raised Storm Beach Deposits, 1	Sand and Gravel	Quaternary - Quaternary
	CWF	Clay-with-flints Formation	Clay, Silt, Sand and Gravel	Quaternary - Pliocene

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	LC	London Clay Formation	Clay, Silt and Sand	Eocene - Eocene
	LMBE	Lambeth Group	Clay, Silt and Sand	Paleocene - Paleocene
	SPCH	Spetisbury Chalk Member	Chalk	Campanian - Campanian
	TACH	Tarrant Chalk Member	Chalk	Campanian - Campanian
	NCK	Newhaven Chalk Formation	Chalk	Campanian - Santonian
	LPCK	Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven	Chalk	Campanian - Turonian
		Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (Undifferentiated)		
		Faults		

Geo-Environmental

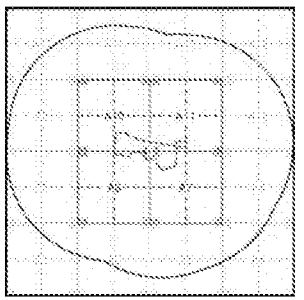
Geology 1:50,000 Maps

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:	317
Map Name:	Chichester and I
Map Date:	1996
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



N

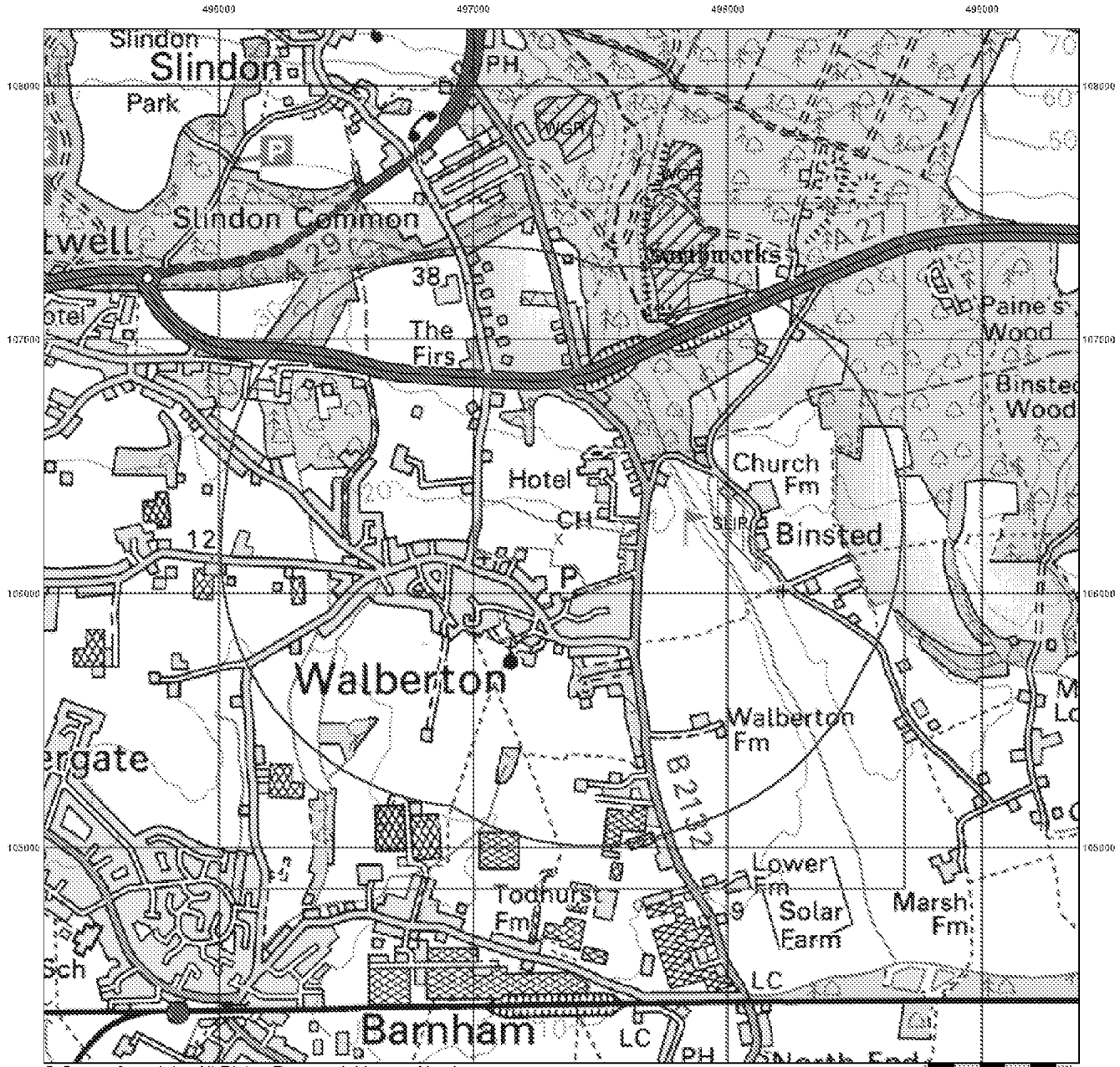
Order Details:

Order Number:	143822756_1_1
Customer Reference:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details:

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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



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Geo-Environmental

Artificial Ground and Landslip

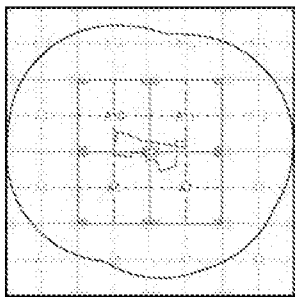
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

Artificial ground includes:

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

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

Artificial Ground and Landslip Map - Slice A



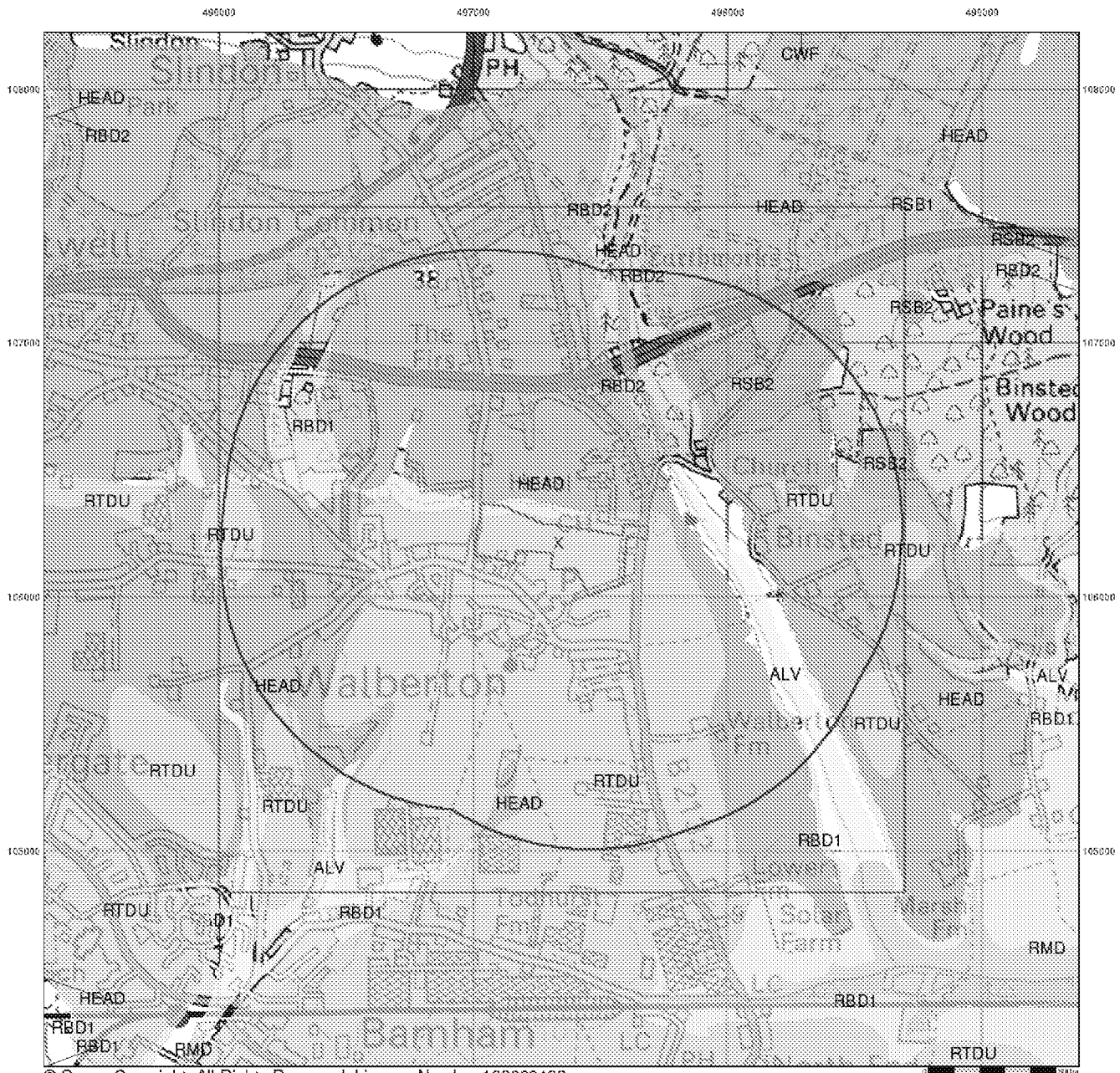
Order Details:

Order Number:	143822756_1_1
Customer Reference:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details:

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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



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Geo-Environmental

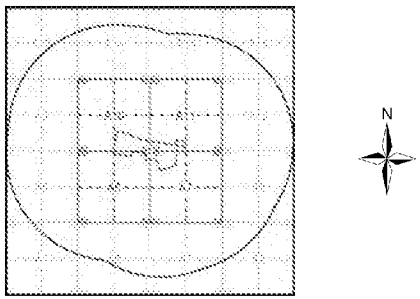
Superficial Geology

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



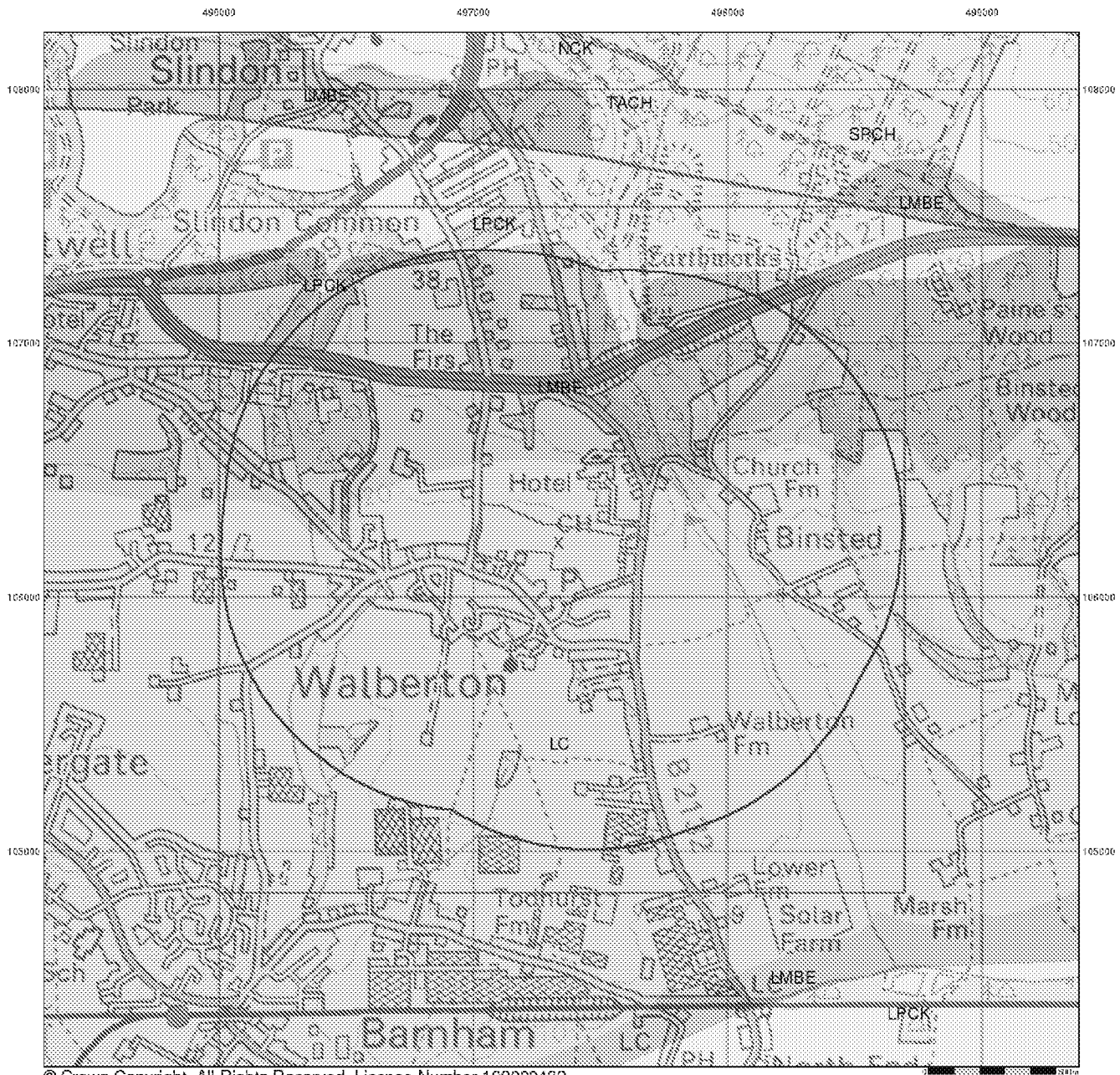
Order Details:

Order Number:	143822756_1_1
Customer Reference:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details:

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Geo-Environmental

Bedrock and Faults

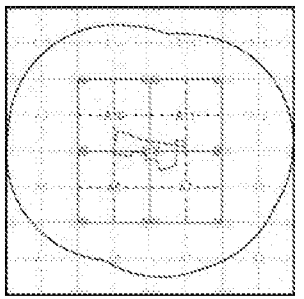
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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



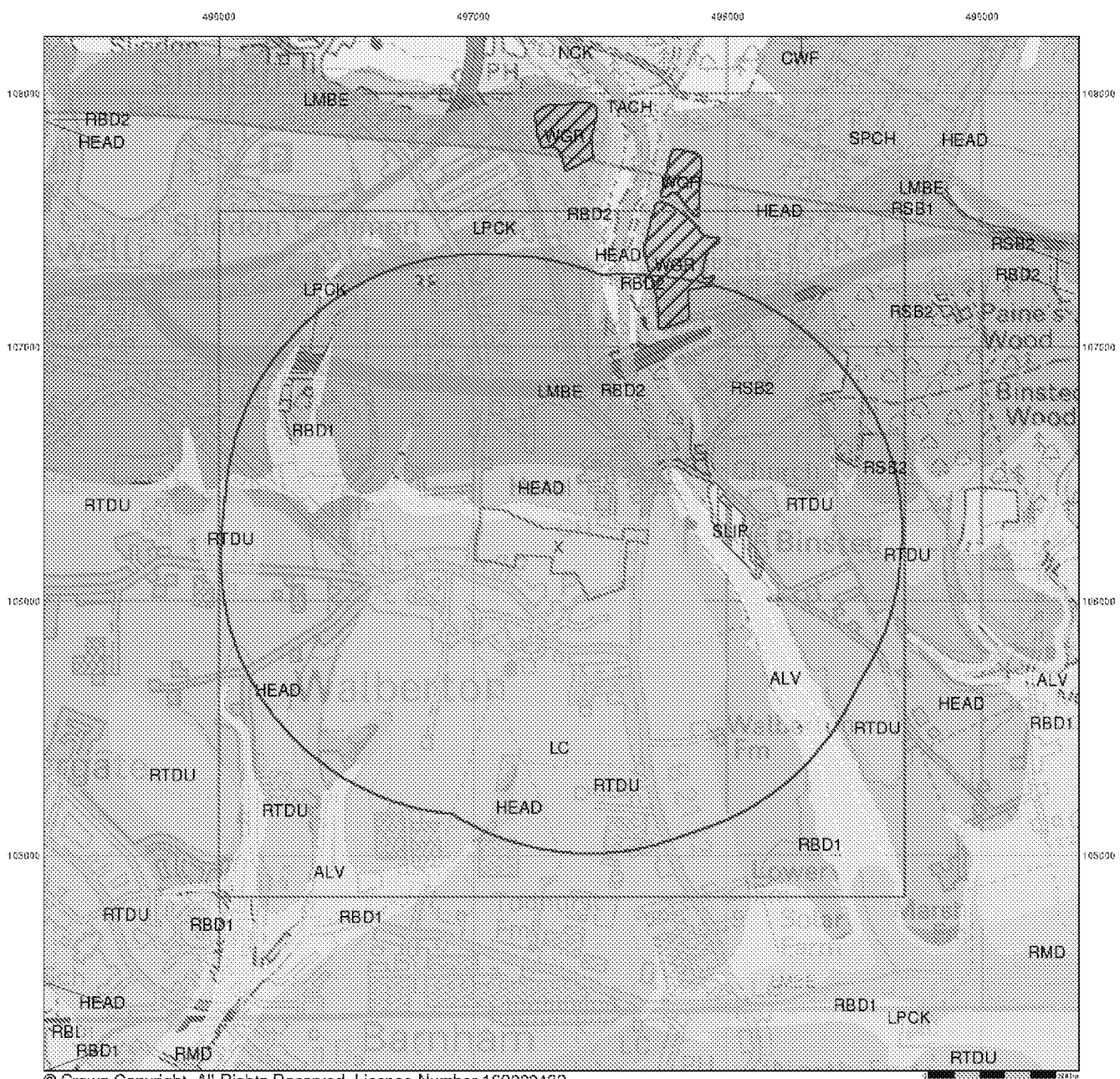
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Customer Reference:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details:

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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Information Group
Tel: 0844 844 9952
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Geo-Environmental

Combined Surface Geology

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

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

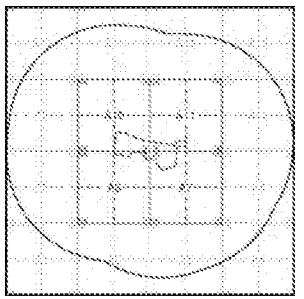
Additional Information

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

Contact

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

Combined Geology Map - Slice A



Order Details:

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v15.0 23-Oct-2017

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
285 Surface Level

Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream

County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Sloping Masonry
Electricity Transmission Line
Pole

Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge

Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

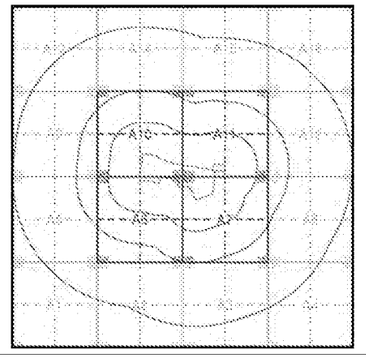
1:10,000 Raster Mapping

Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
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

Geo-Environmental
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Sussex	1:10,560	1880	2
Sussex	1:10,560	1899	3
Sussex	1:10,560	1914	4
Sussex	1:10,560	1914	5
Sussex	1:10,560	1914	6
Sussex	1:10,560	1914	7
Historical Aerial Photography	1:10,560	1947	8
Sussex	1:10,560	1951	9
Ordnance Survey Plan	1:10,000	1961 - 1962	10
Ordnance Survey Plan	1:10,000	1967	11
Ordnance Survey Plan	1:10,000	1979	12
Ordnance Survey Plan	1:10,000	1980	13
Ordnance Survey Plan	1:10,000	1992	14
10K Raster Mapping	1:10,000	2000	15
10K Raster Mapping	1:10,000	2006	16
VectorMap Local	1:10,000	2017	17

Historical Map - Slice A



Order Details

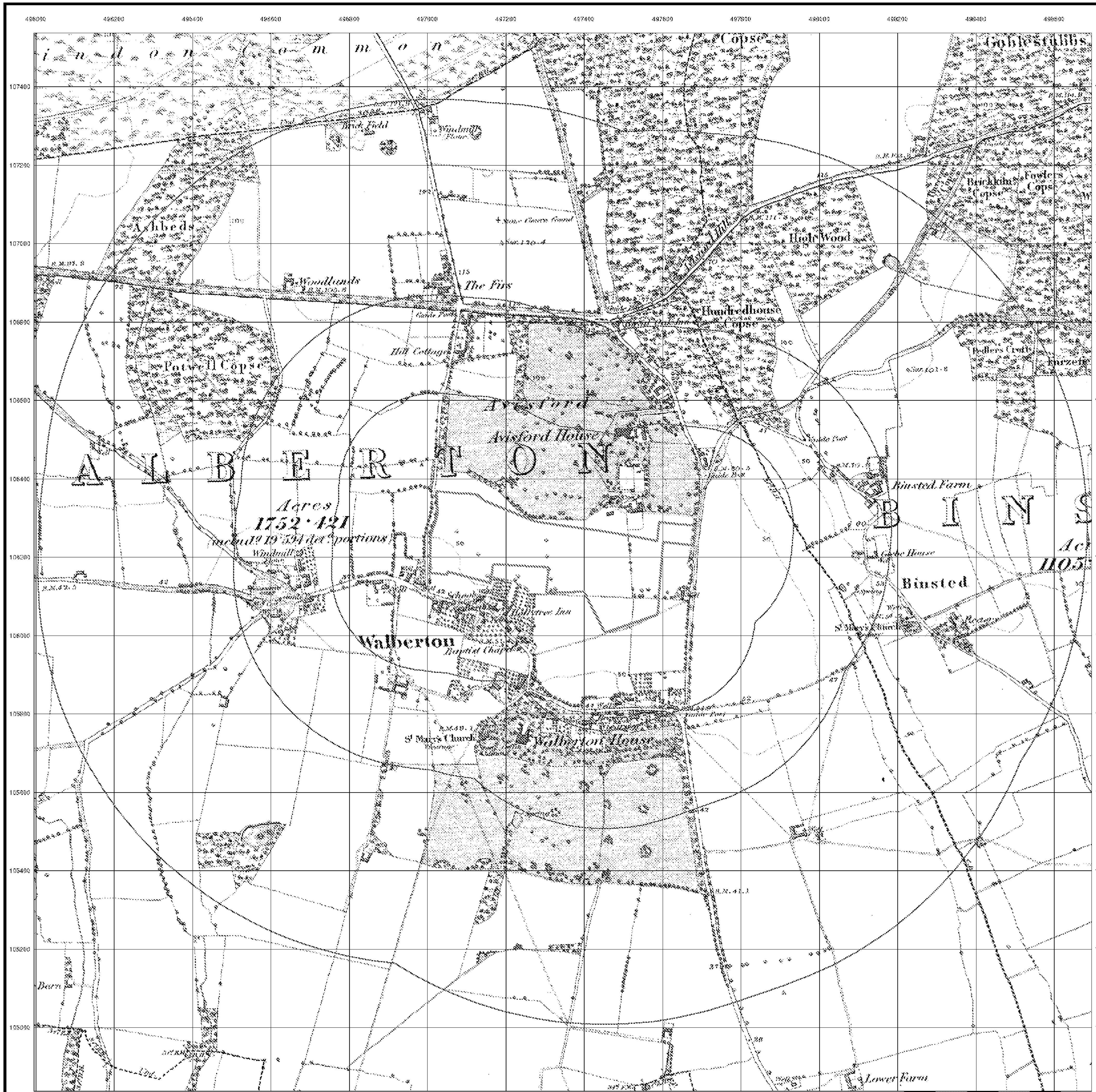
Order Number: 143822756_1_1
Customer Ref: GE16861
National Grid Reference: 497330, 106210
Slice: A
Site Area (Ha): 11.27
Search Buffer (m): 1000

Site Details

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0 400 m

Geo-Environmental

Sussex

Published 1880

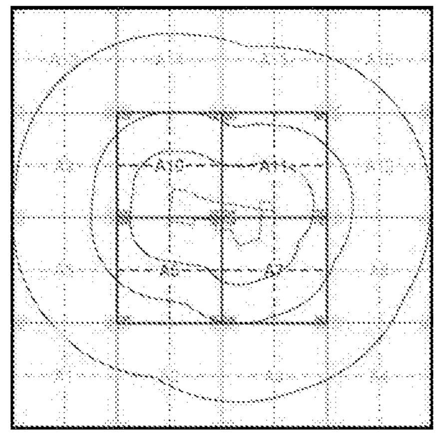
Source map scale - 1:10,560

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)

06200
1880
1:10,560

Historical Map - Slice A



N

Order Details

Order Number: 143822756_1_1
Customer Ref: GE16861
National Grid Reference: 497330, 106210
Slice: A
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Geo-Environmental

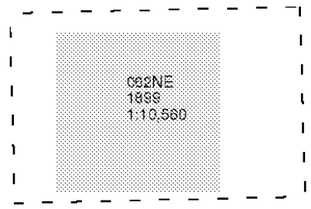
Sussex

Published 1899

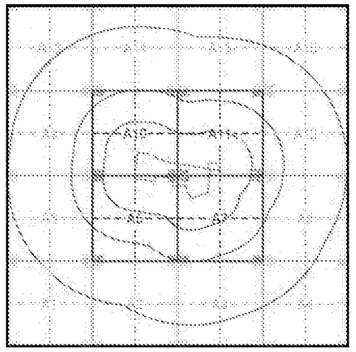
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Map Name(s) and Date(s)



Historical Map - Slice A



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0 400 m

Geo-Environmental

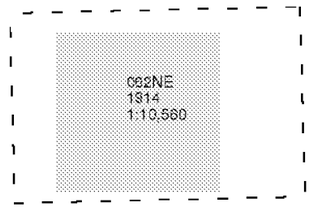
Sussex

Published 1914

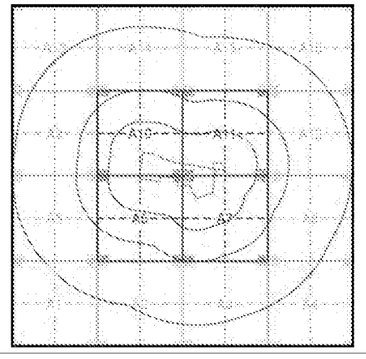
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Map Name(s) and Date(s)



Historical Map - Slice A



N

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Geo-Environmental

Sussex

Published 1914

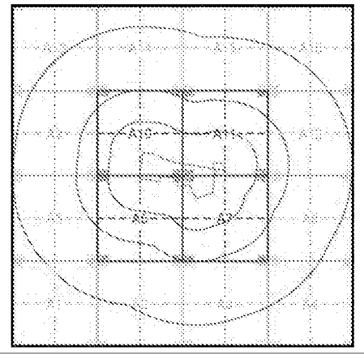
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Map Name(s) and Date(s)

092NE
1914
1:10,560

Historical Map - Slice A



N

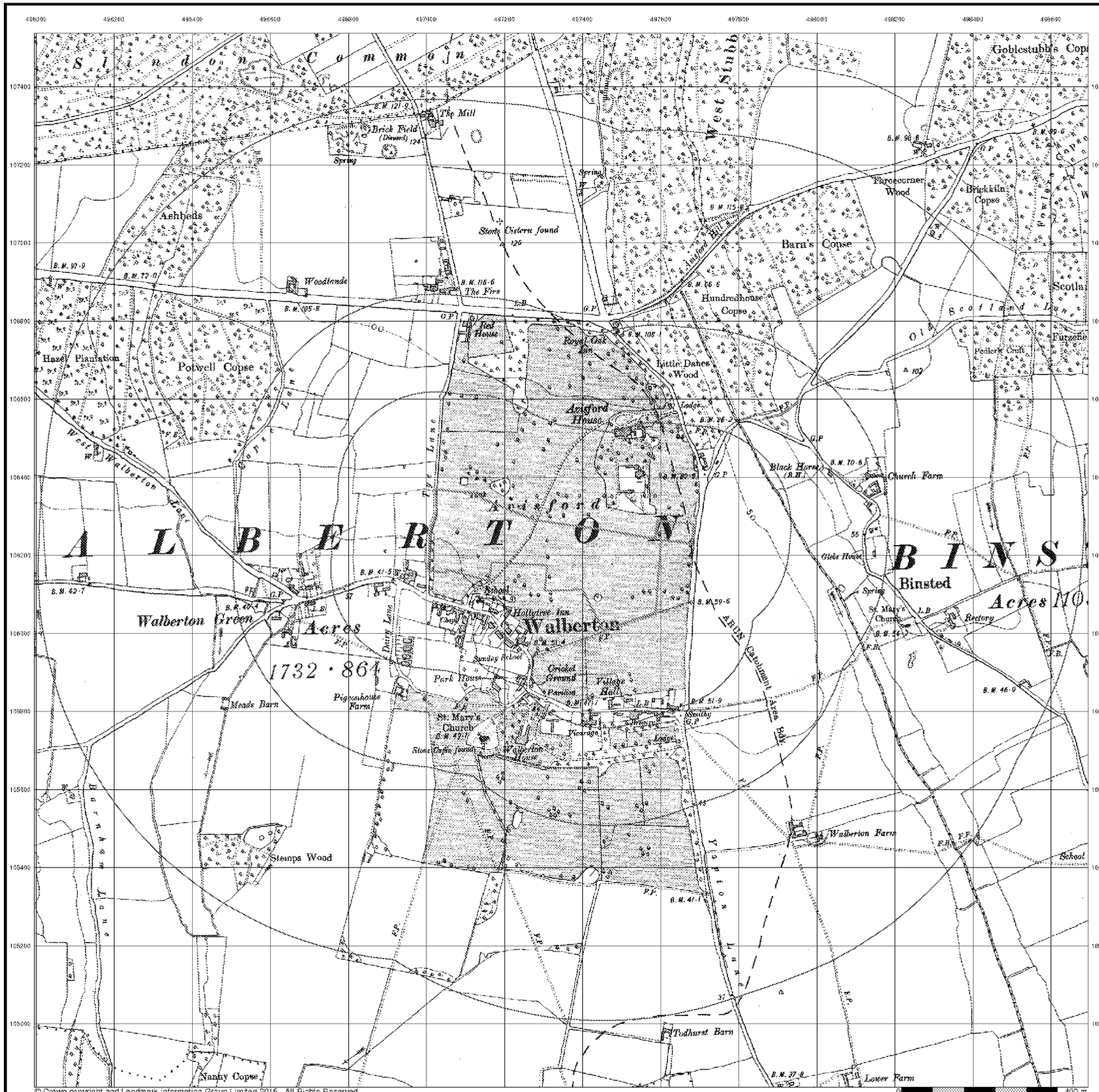
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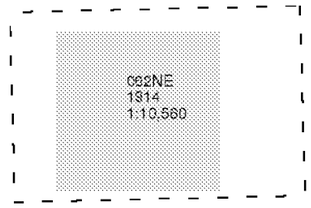
Sussex

Published 1914

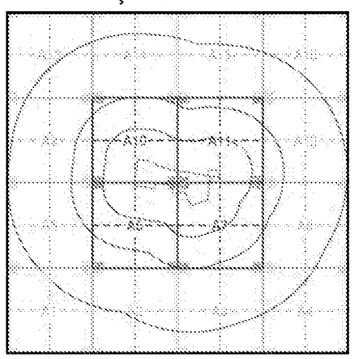
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Map Name(s) and Date(s)



Historical Map - Slice A



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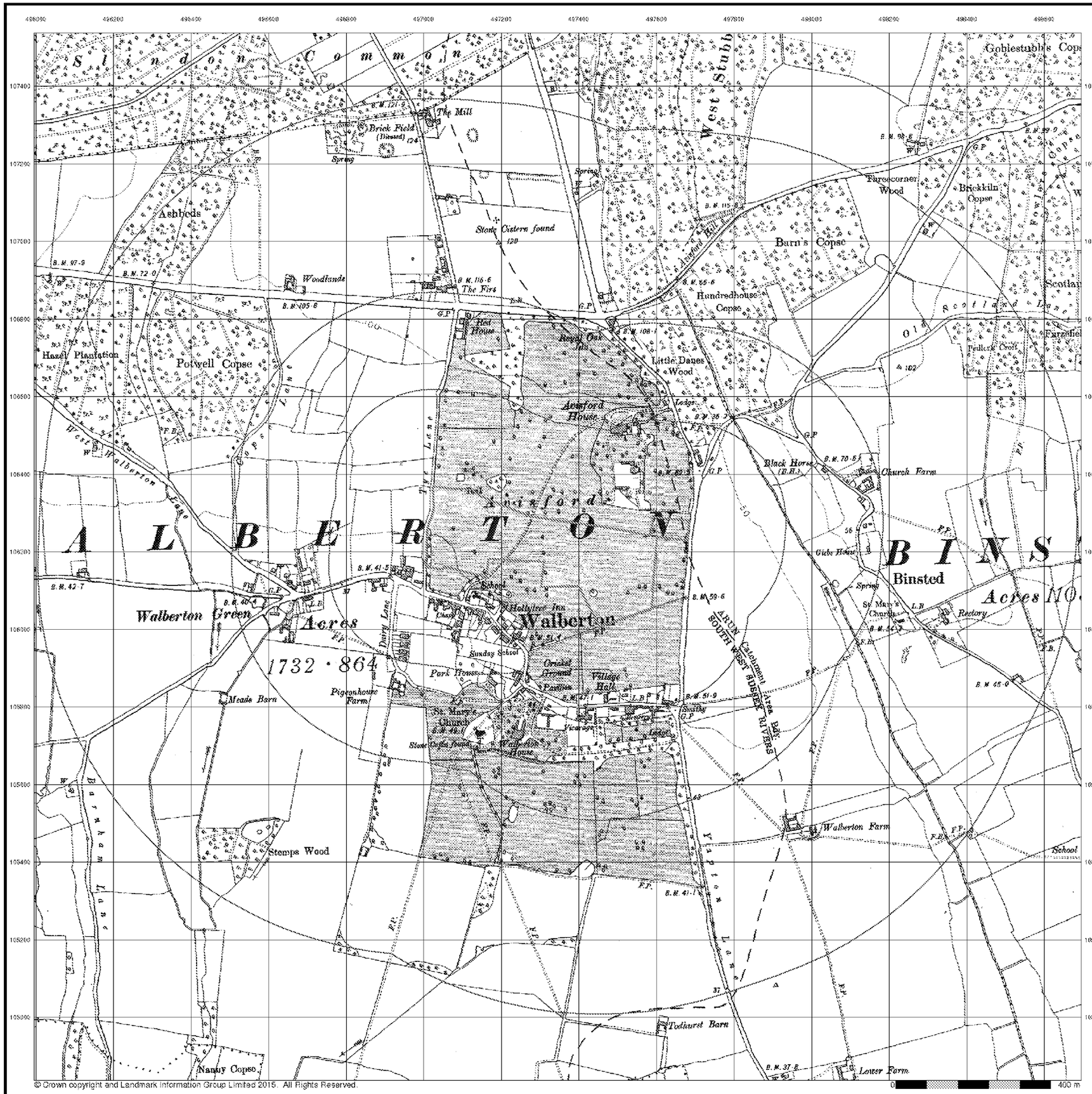
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Geo-Environmental

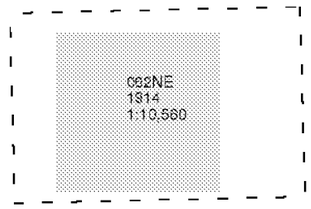
Sussex

Published 1914

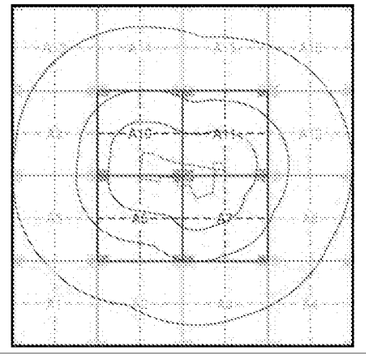
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Map Name(s) and Date(s)



Historical Map - Slice A



N

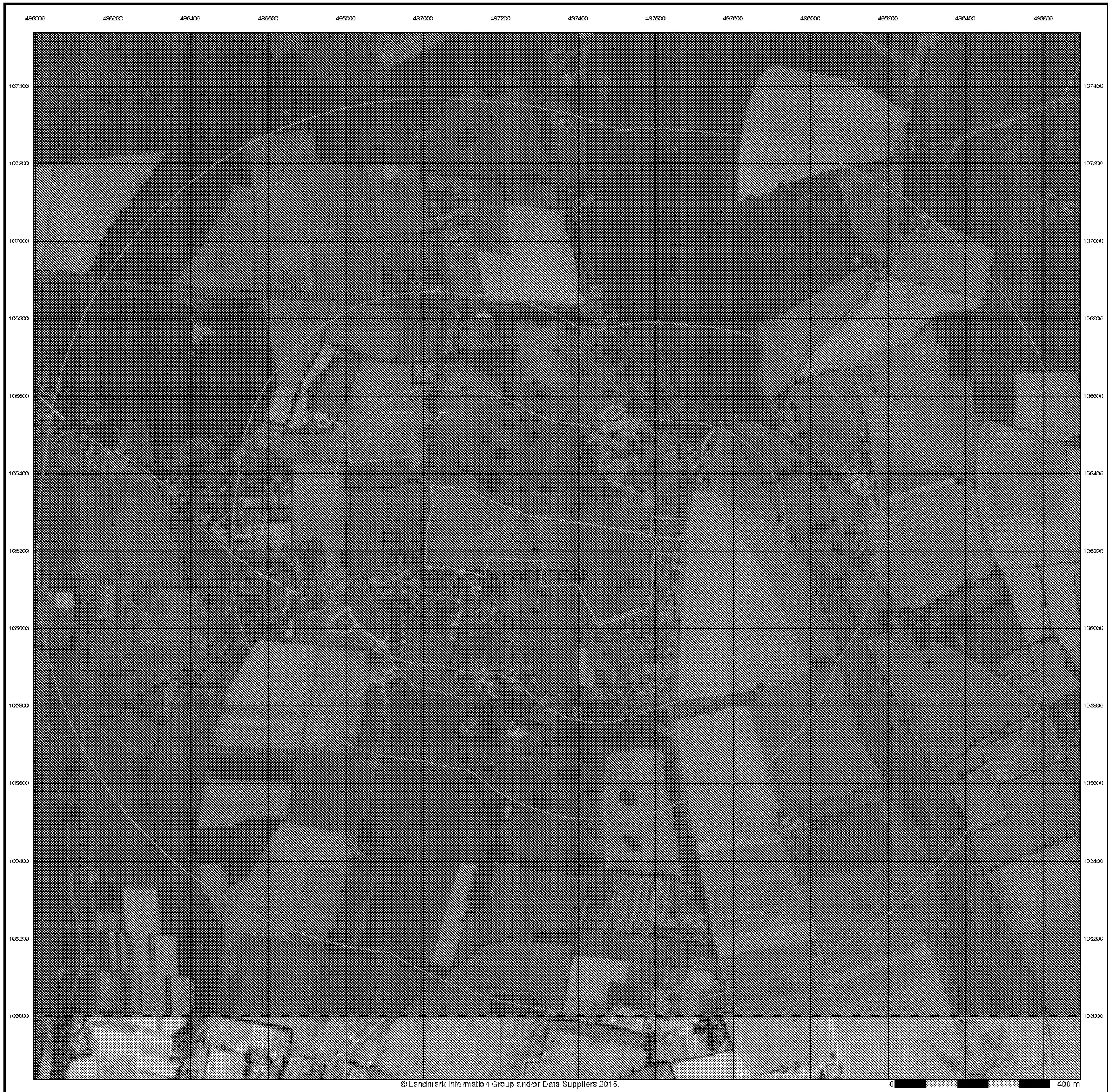
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Geo-Environmental
Historical Aerial Photography
Published 1947
Source map scale - 1:10,560

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.

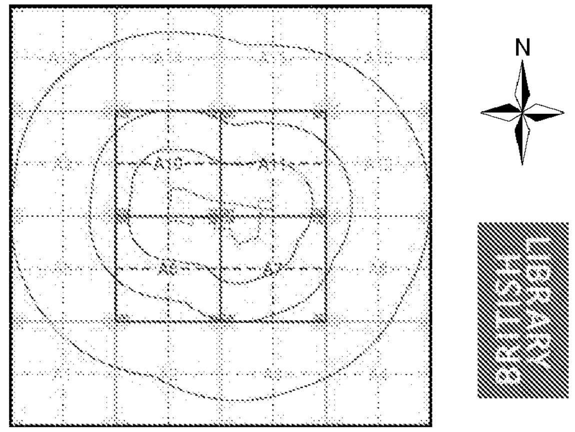
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Map Name(s) and Date(s)

SU90NE
1947
1:10,560

SU90SE
1947
1:10,560

Historical Aerial Photography - Slice A



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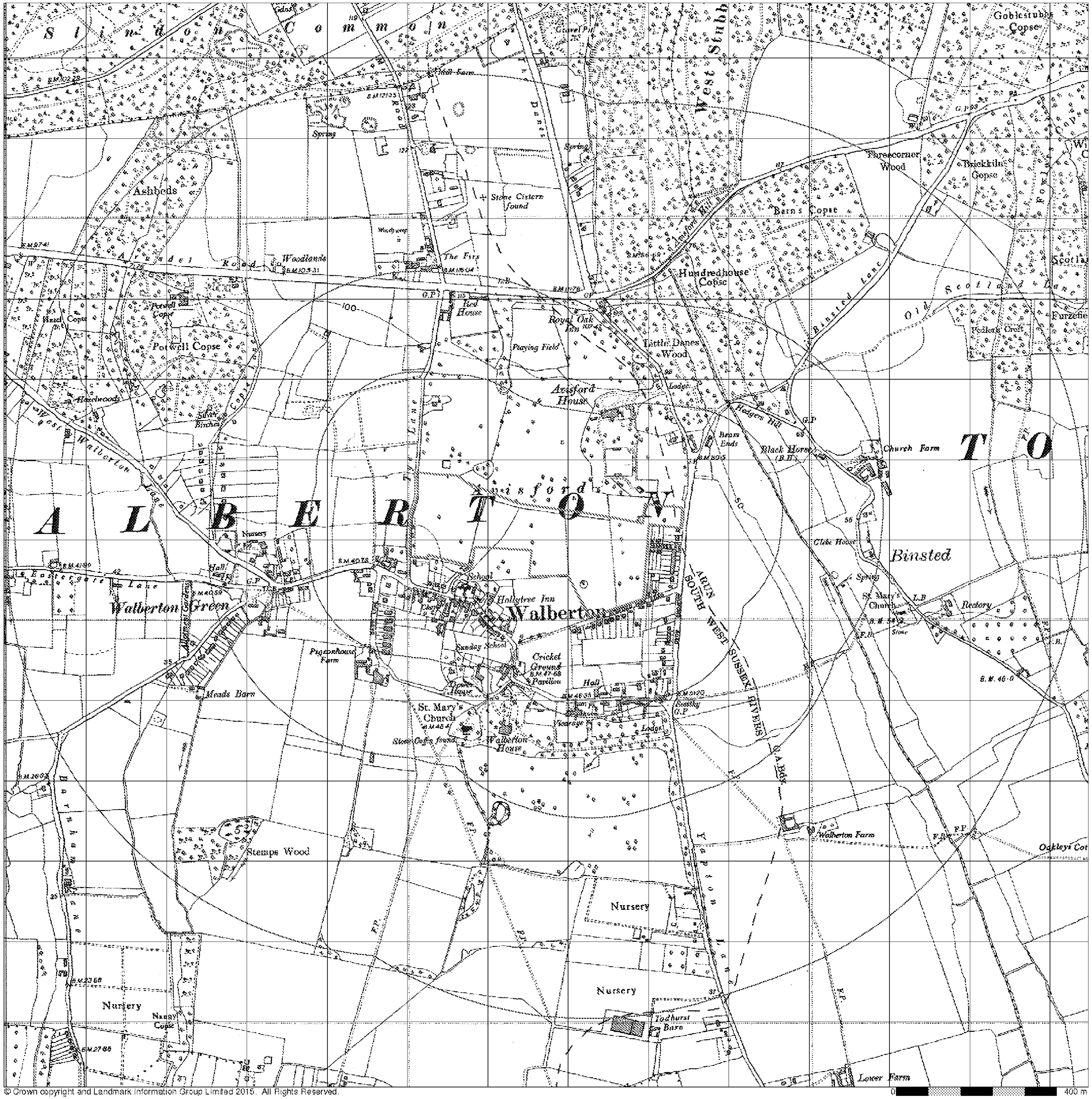
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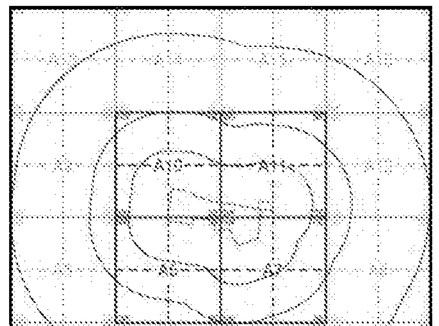
Geo-Environmental
Sussex
Published 1951
Source map scale - 1:10,560

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Map Name(s) and Date(s)

062NE
1951
1:10,560

Historical Map - Slice A



N

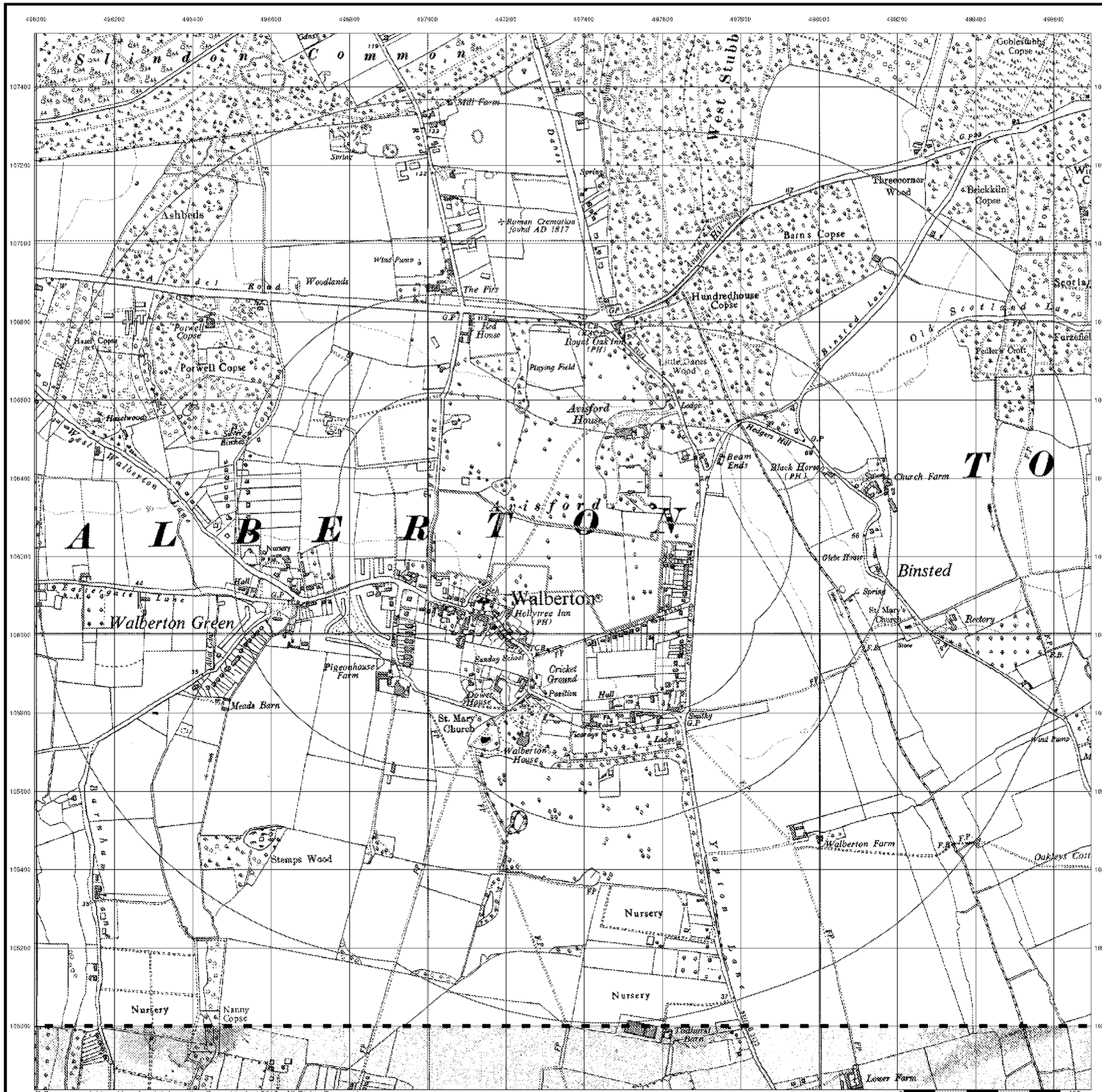
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Order Number: 143822756_1_1
Customer Ref: GE16861
National Grid Reference: 497330, 106210
Slice: A
Site Area (Ha): 11.27
Search Buffer (m): 1000

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

Tel: 0844 844 9952
Fax: 0844 844 9951
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Geo-Environmental

Ordnance Survey Plan

Published 1961 - 1962

Source map scale - 1:10,000

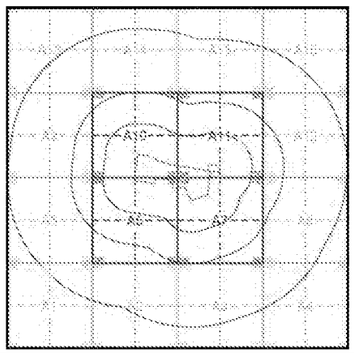
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some 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)

SU90NE
1961
1:10,560

SU90SE
1962
1:10,560

Historical Map - Slice A



N

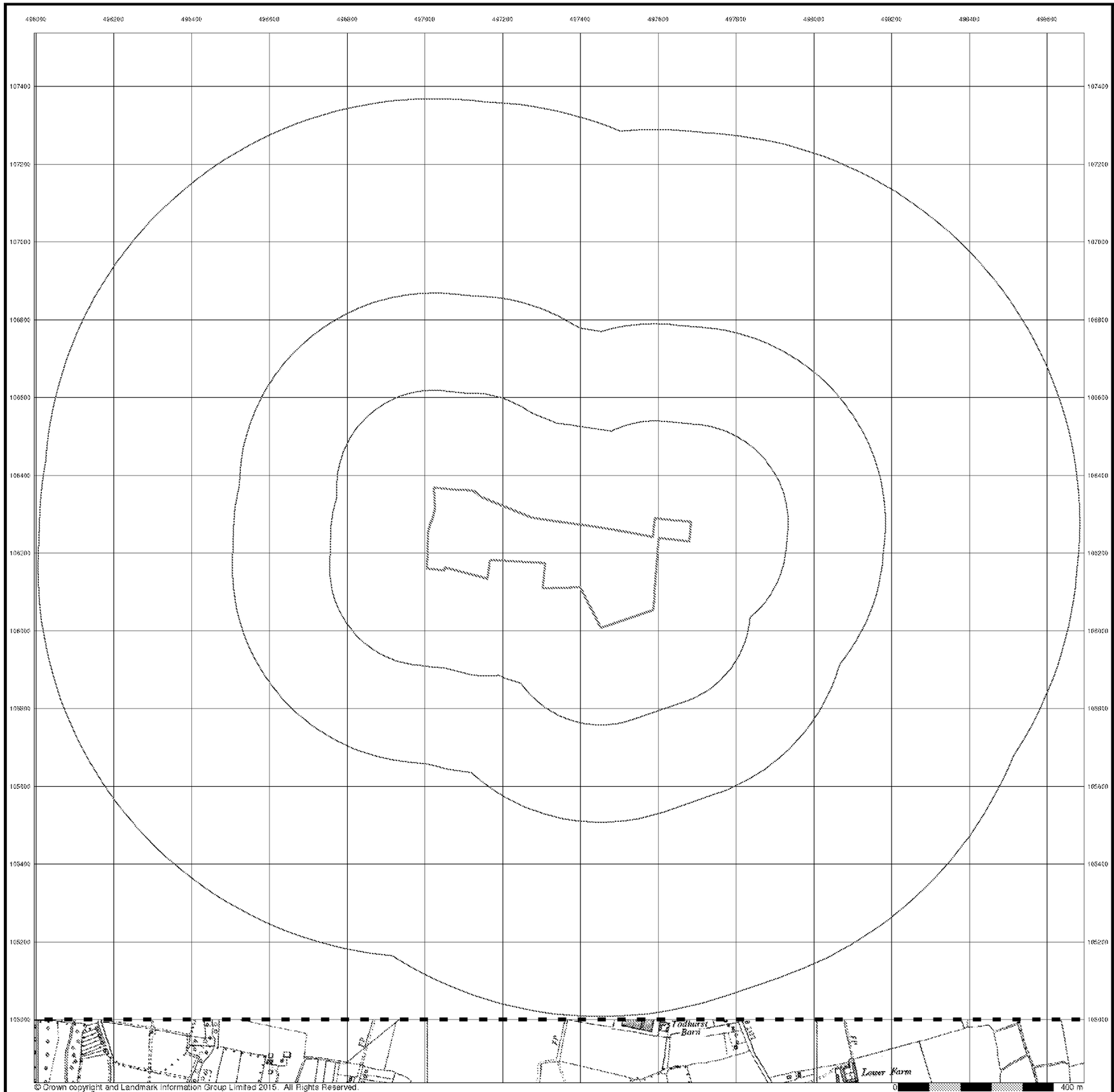
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

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Geo-Environmental

Ordnance Survey Plan

Published 1967

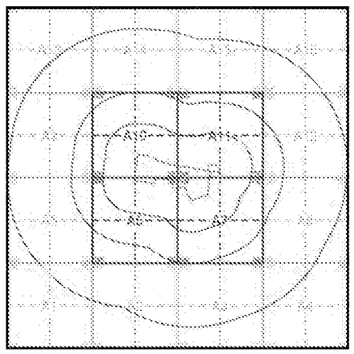
Source map scale - 1:10,000

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)

SU90SE
1967
1:10,560

Historical Map - Slice A



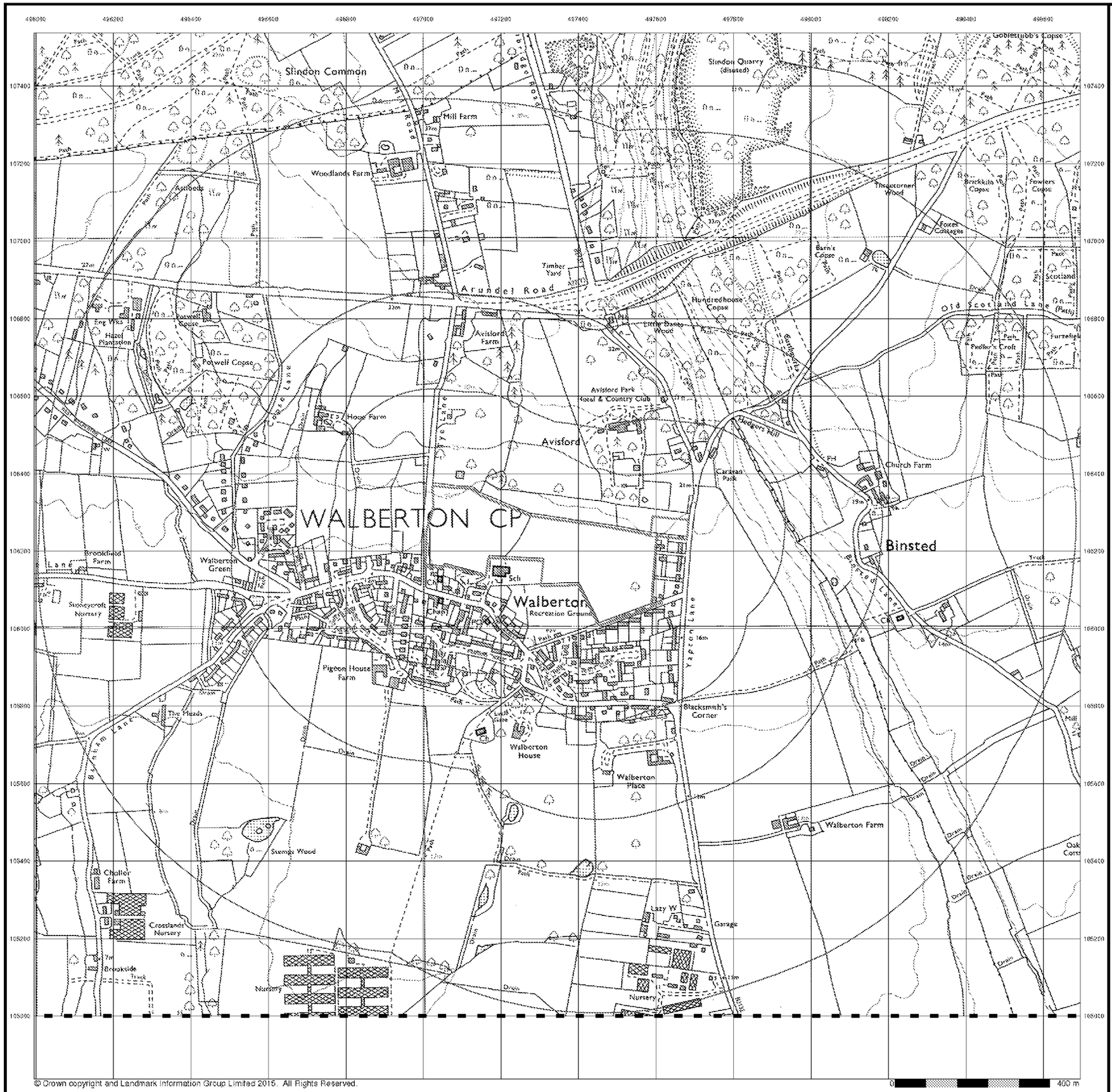
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

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Geo-Environmental

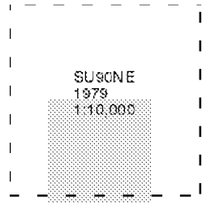
Ordnance Survey Plan

Published 1979

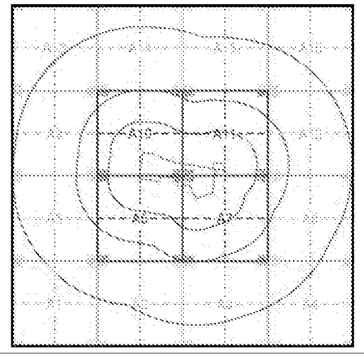
Source map scale - 1:10,000

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



N

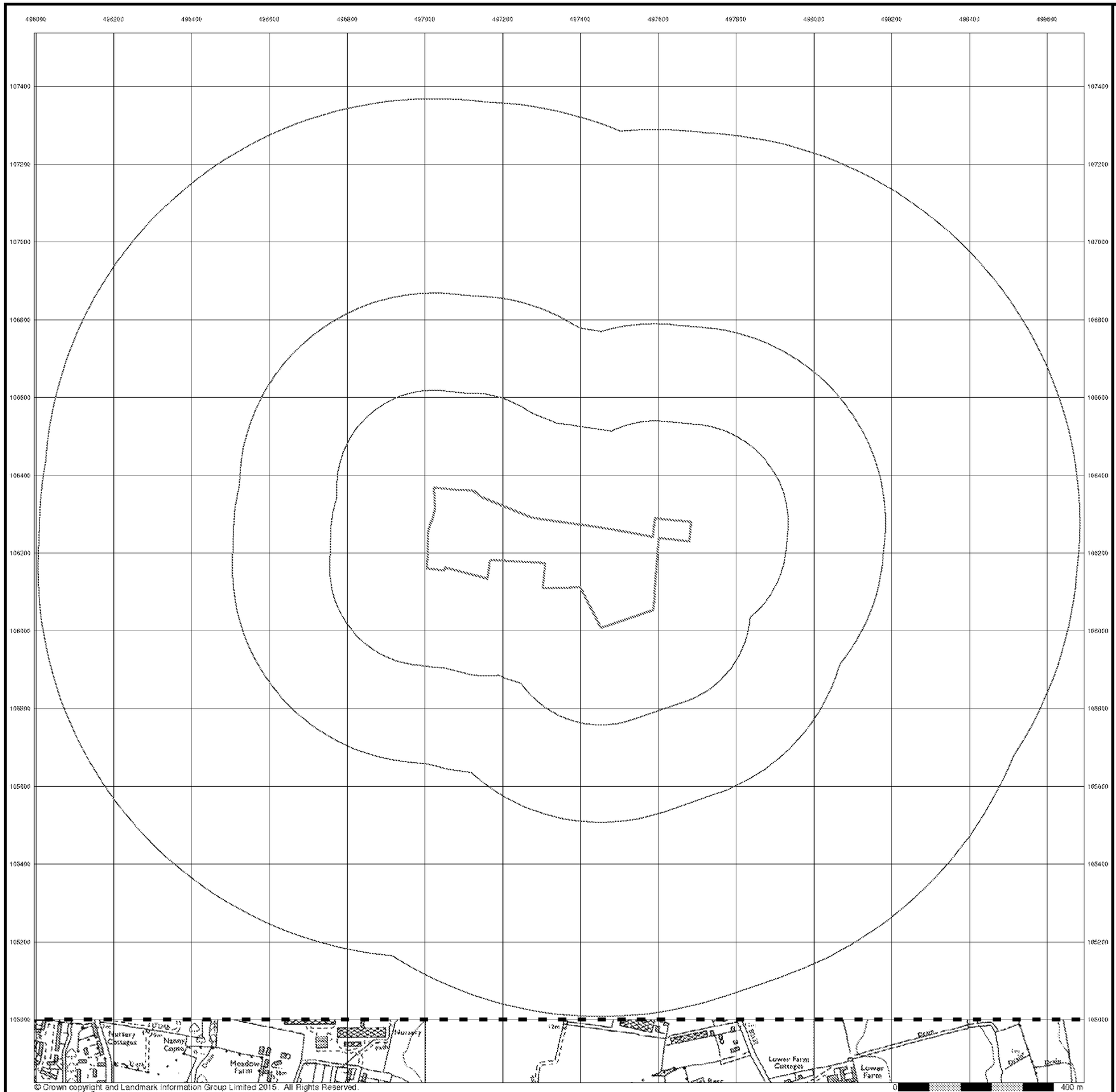
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

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Geo-Environmental

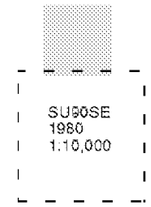
Ordnance Survey Plan

Published 1980

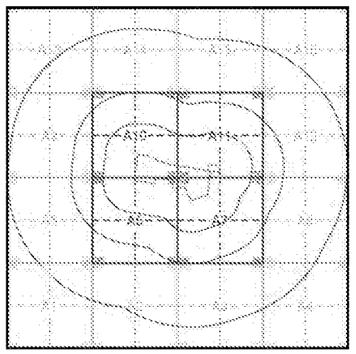
Source map scale - 1:10,000

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



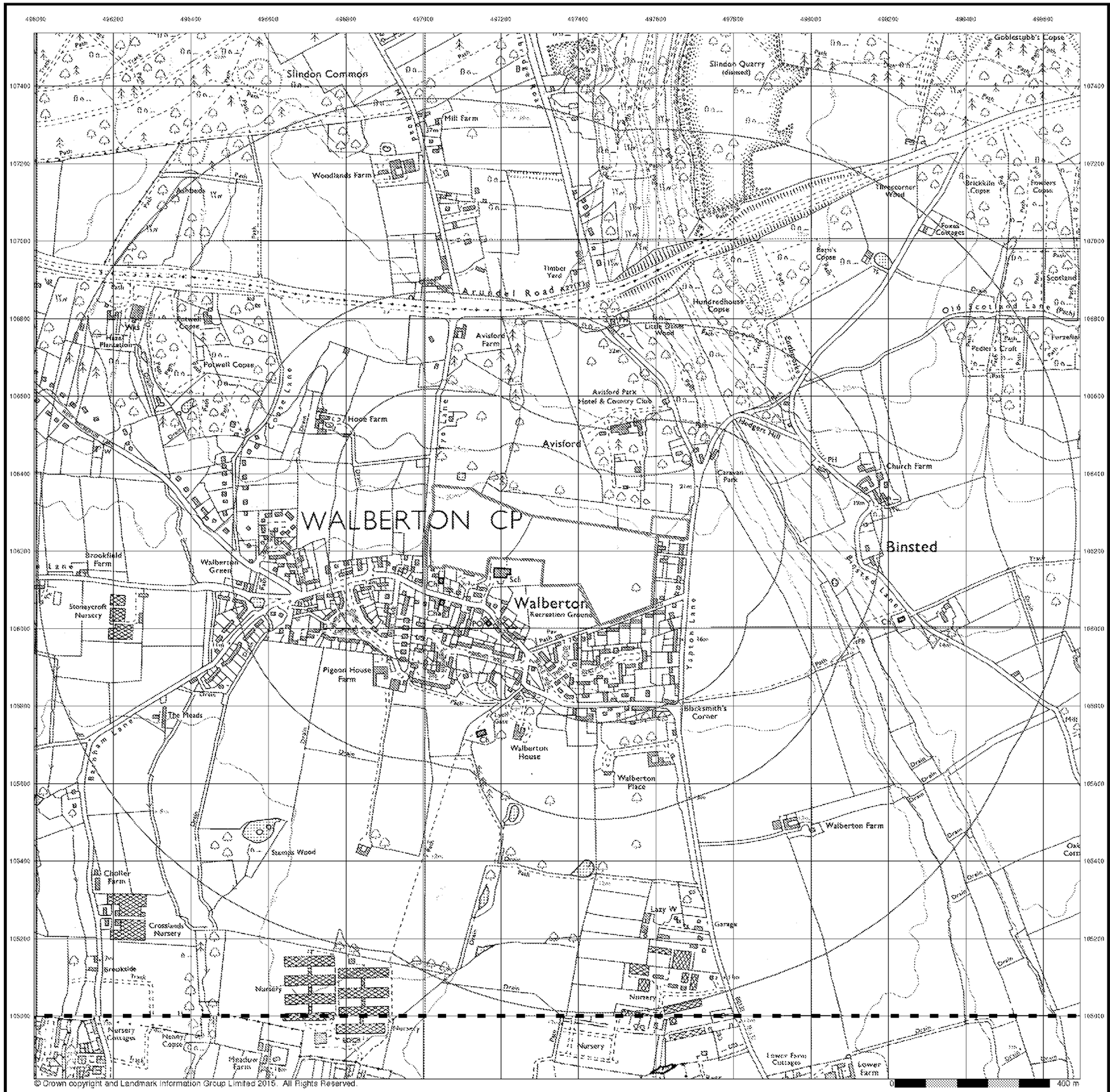
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

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Geo-Environmental

Ordnance Survey Plan

Published 1992

Source map scale - 1:10,000

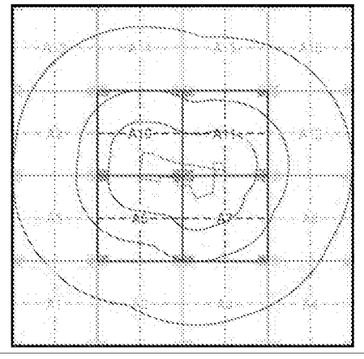
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some 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)

SU90NE
1992
1:10,000

SU90SE
1992
1:10,000

Historical Map - Slice A



N

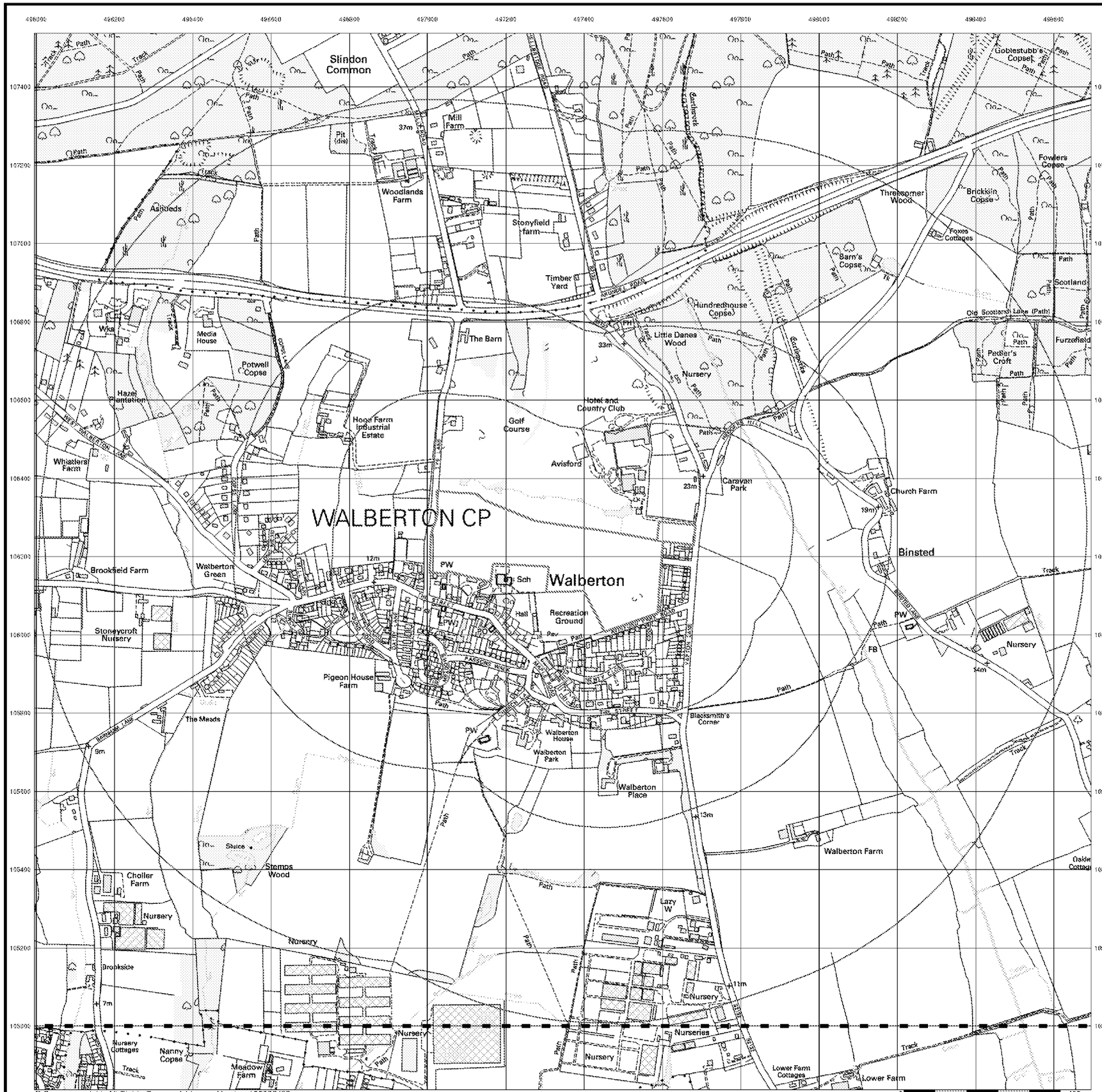
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

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Geo-Environmental

10k Raster Mapping

Published 2000

Source map scale - 1:10,000

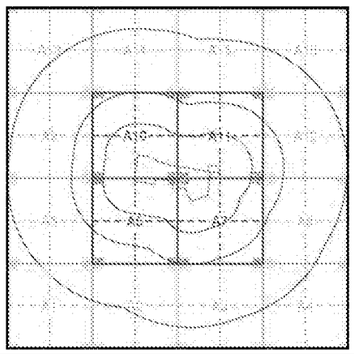
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks 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)

SU90NE
2000
1:10,000

SU90SE
2000
1:10,000

Historical Map - Slice A



N

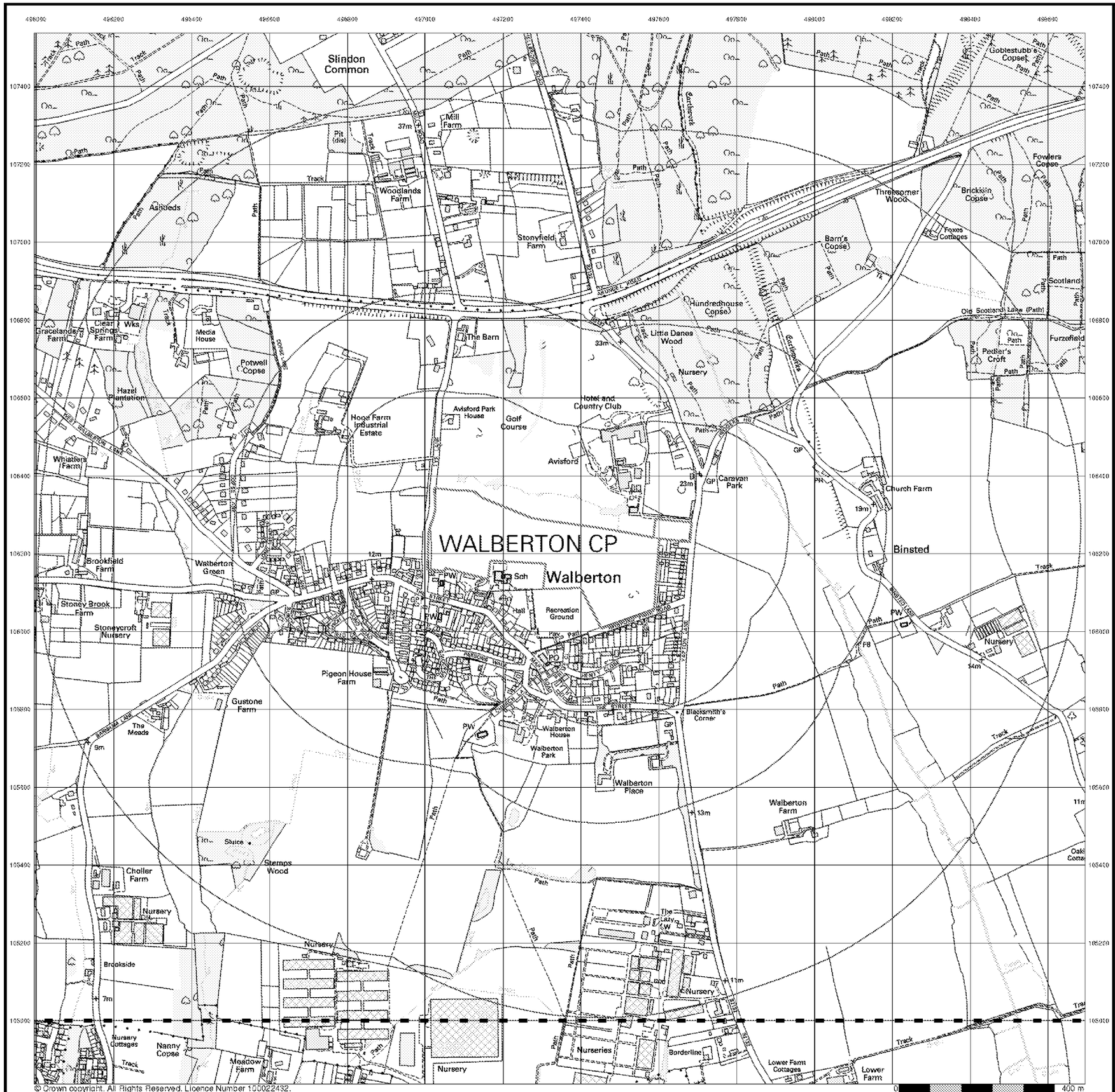
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

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Geo-Environmental

10k Raster Mapping

Published 2006

Source map scale - 1:10,000

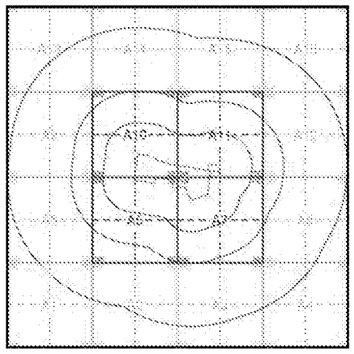
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks 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)

SU90NE 2006 1:10,000

SU90SE 2006 1:10,000

Historical Map - Slice A



N

Order Details

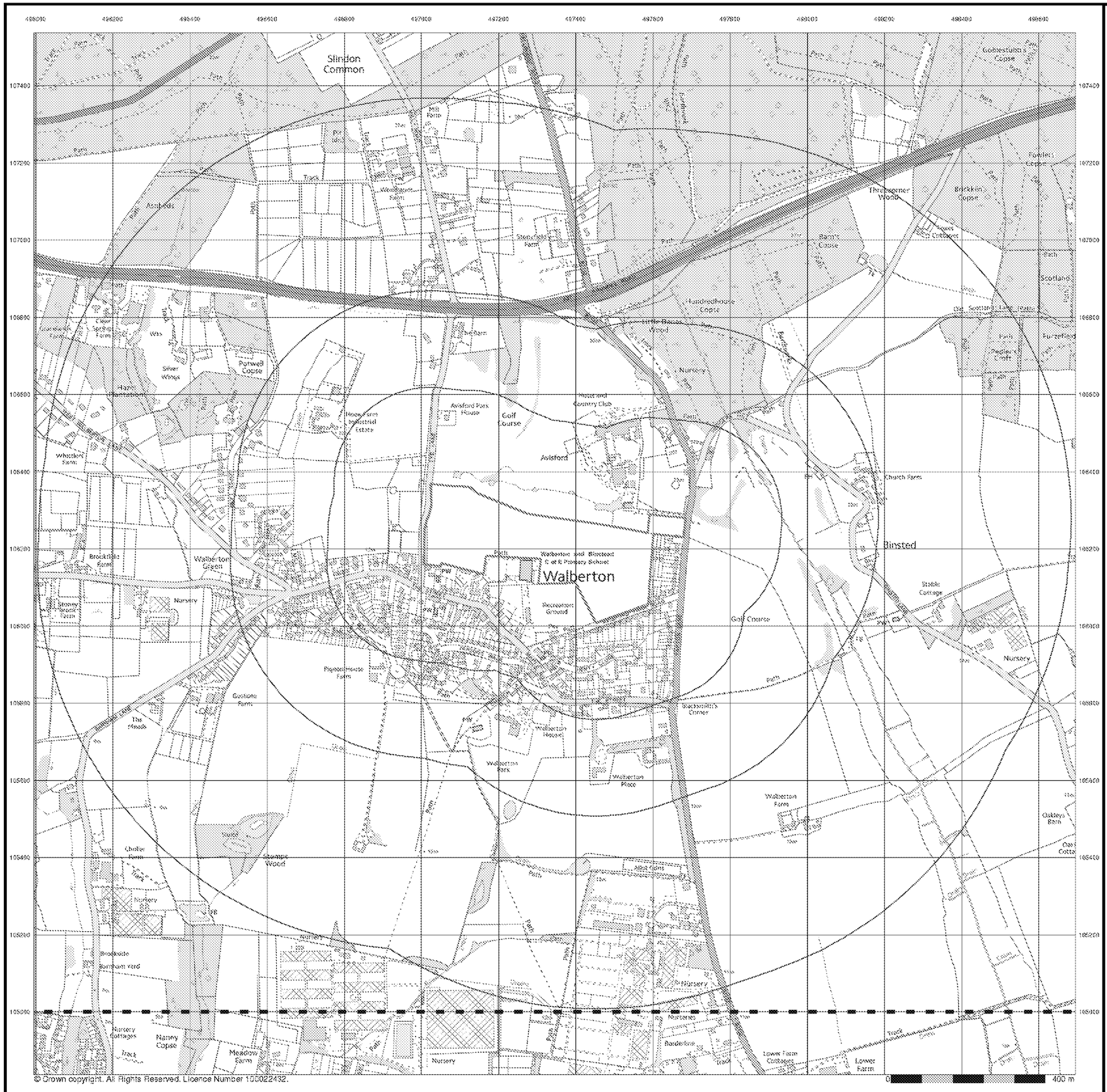
Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

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Geo-Environmental

VectorMap Local

Published 2017

Source map scale - 1:10,000

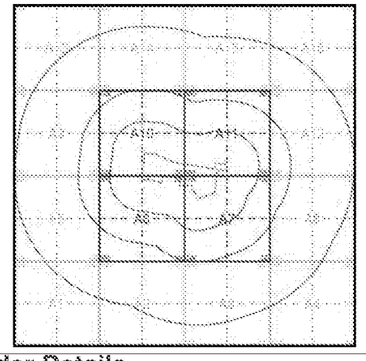
VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap 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)

SU90NE
2017
Variable

SU90SE
2017
Variable

Historical Map - Slice A



N

Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

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Geo-Environmental

General

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

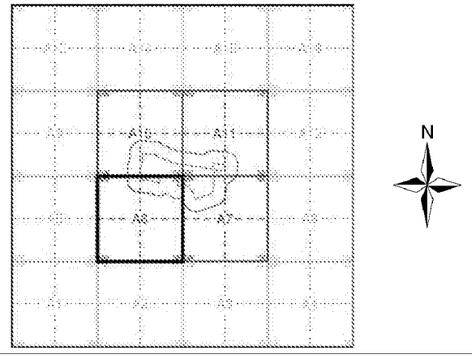
Geological

- 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 A6



Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Plot Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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Geo-Environmental

General

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

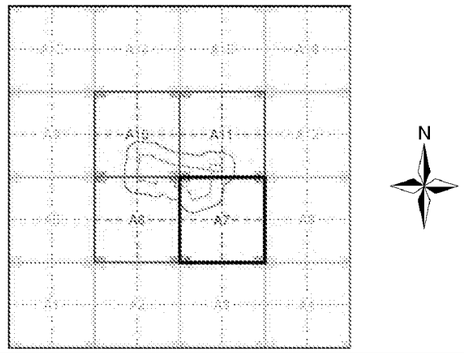
Geological

- 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 A7



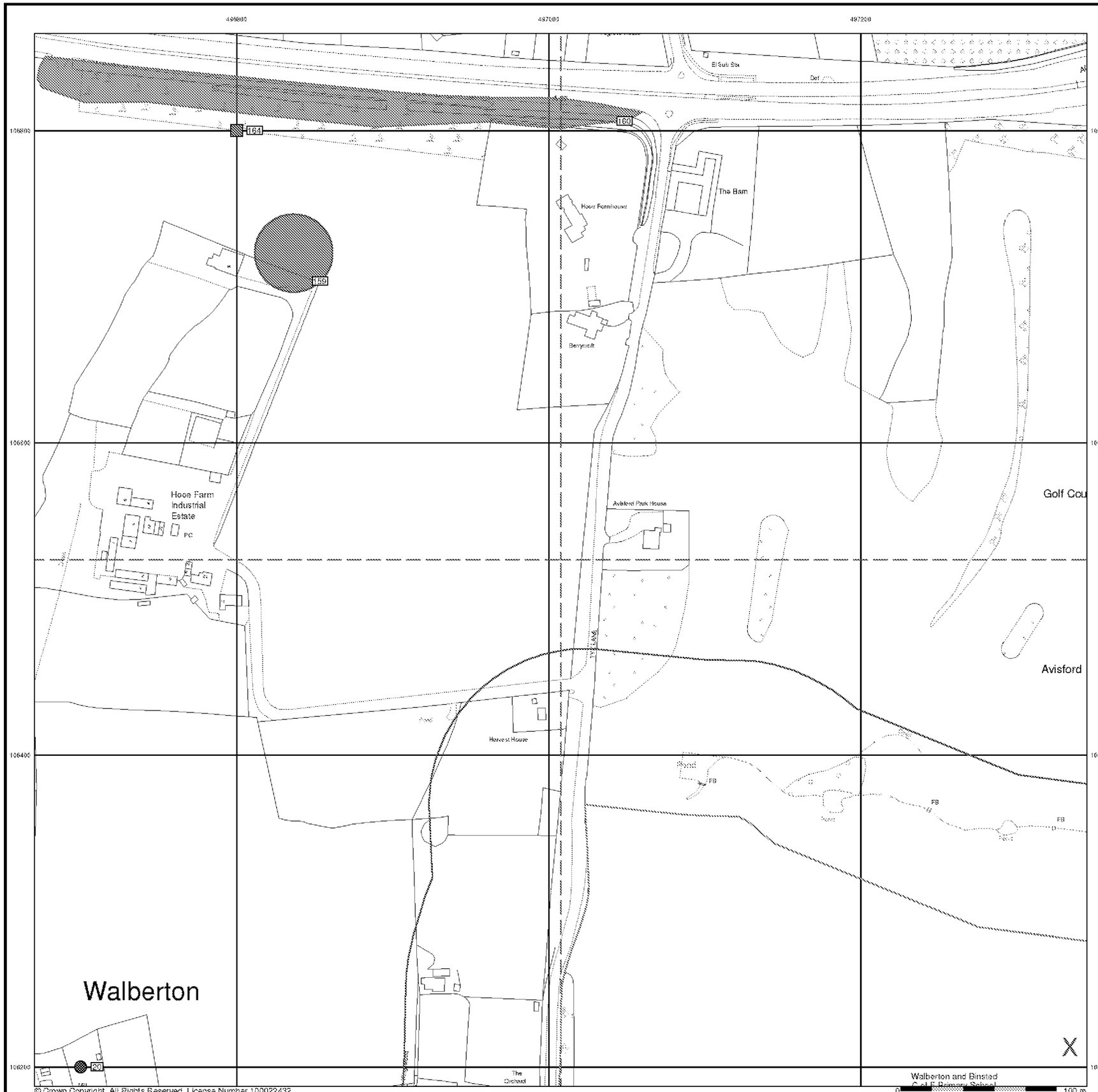
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Plot Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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Geo-Environmental

General

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

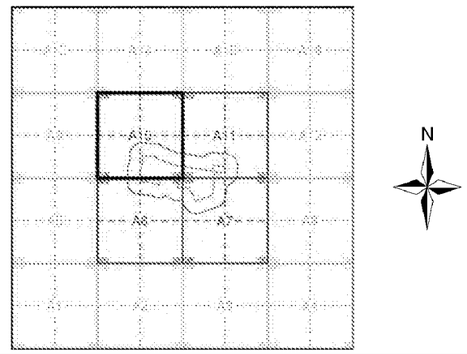
Geological

- 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 A10



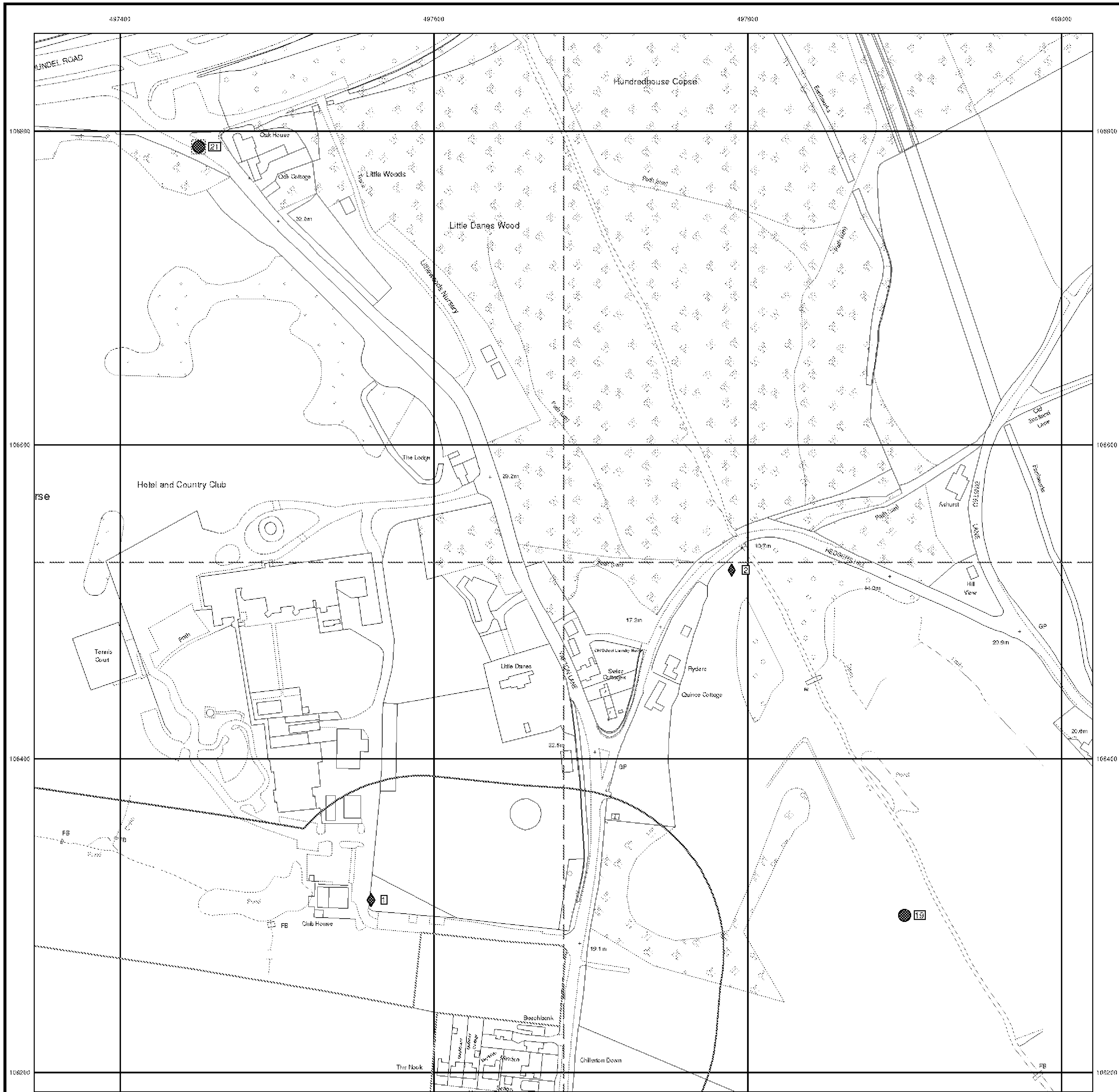
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Plot Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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ARUN DISTRICT COUNCIL WA/99/18 DOC

Geo-Environmental

General

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

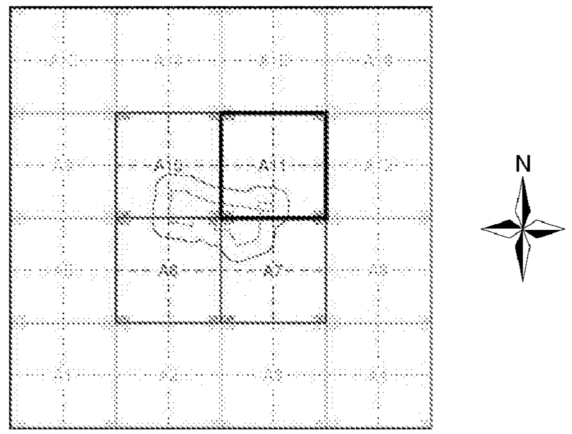
Geological

- 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 A11



Order Details

Order Number: 143822756_1_1
Customer Ref: GE16861
National Grid Reference: 497330, 106210
Slice: A
Site Area (Ha): 11.27
Plot Buffer (m): 100

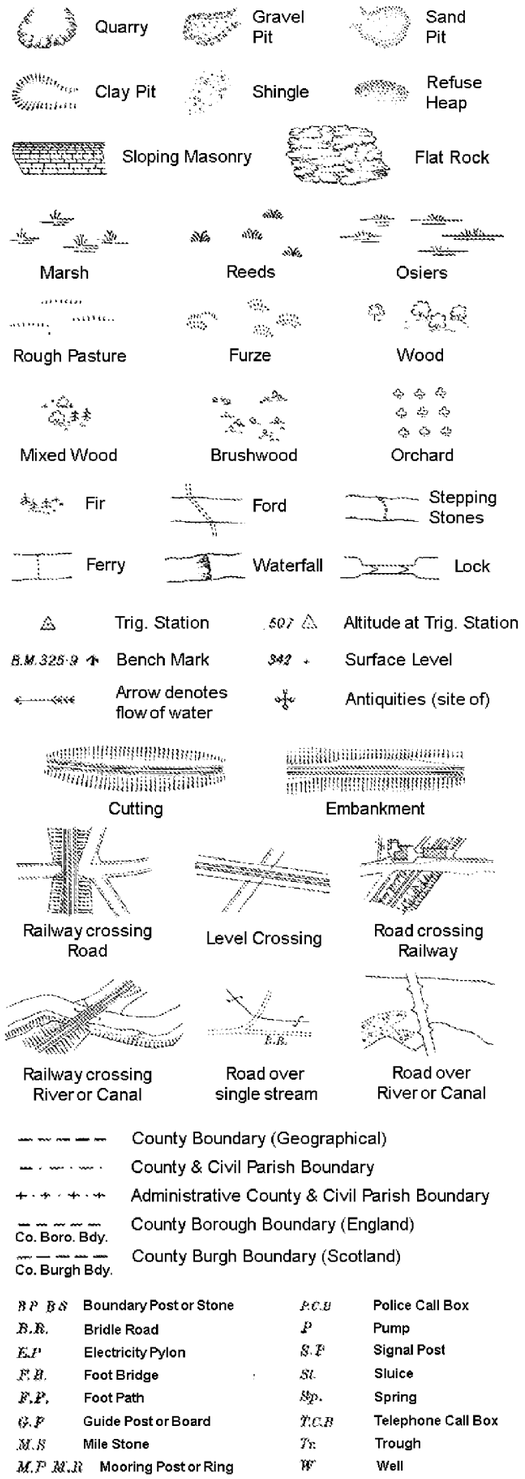
Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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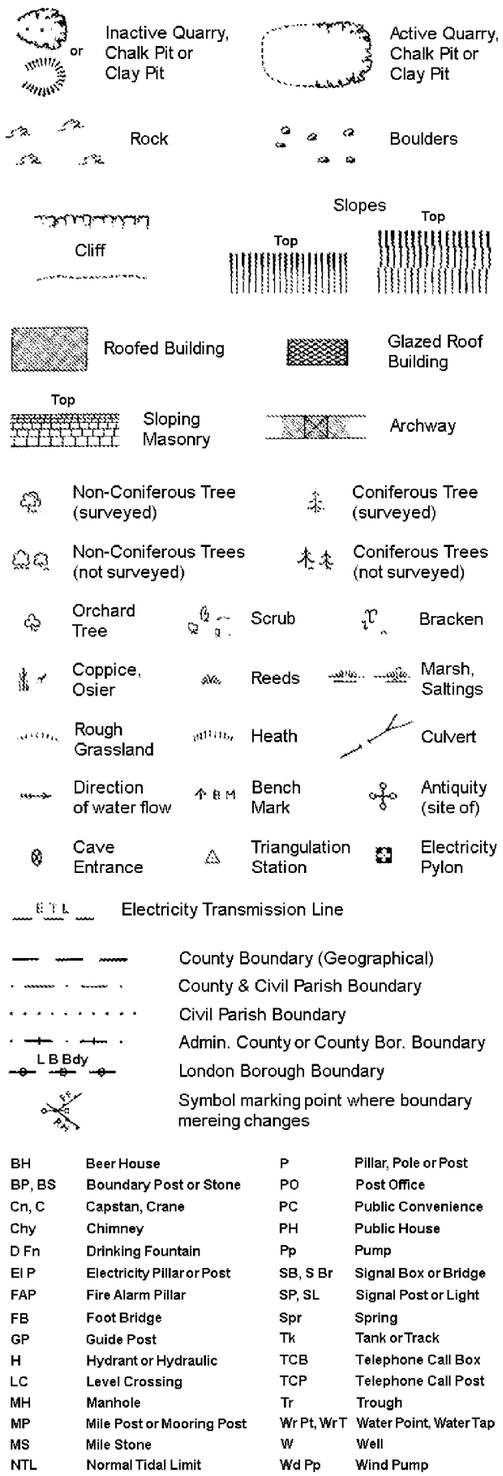
Historical Mapping Legends

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



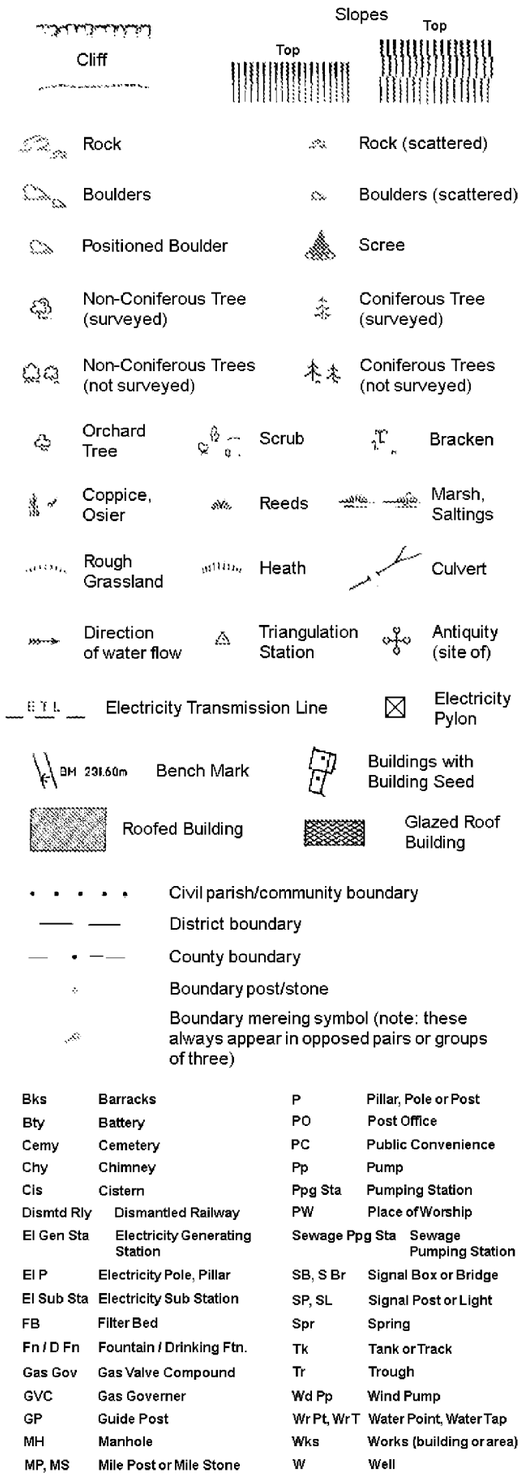
B.P. B.S.	Boundary Post or Stone	P.C.B.	Police Call Box
B.R.	Bridle Road	P.	Pump
E.P.	Electricity Pylon	S.P.	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P.	Guide Post or Board	T.C.B.	Telephone Call Box
M.S.	Mile Stone	Tr.	Trough
M.P. M.R.	Mooring Post or Ring	W.	Well

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



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



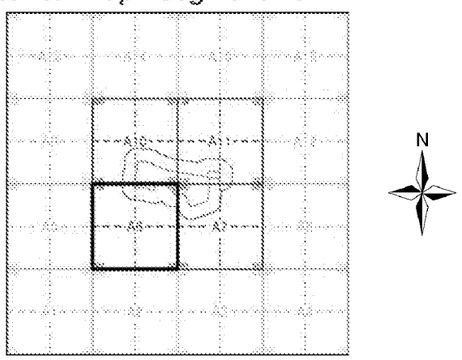
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

ARUN DISTRICT COUNCIL WA/99/18.DOC

Geo-Environmental
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Sussex	1:2,500	1875	2
Sussex	1:2,500	1897	3
Sussex	1:2,500	1912	4
Sussex	1:2,500	1938	5
Ordnance Survey Plan	1:2,500	1974	6
Additional SIMs	1:2,500	1977 - 1984	7
Additional SIMs	1:2,500	1989 - 1990	8
Additional SIMs	1:2,500	1992	9
Large-Scale National Grid Data	1:2,500	1994	10
Historical Aerial Photography	1:2,500	1999	11

Historical Map - Segment A6



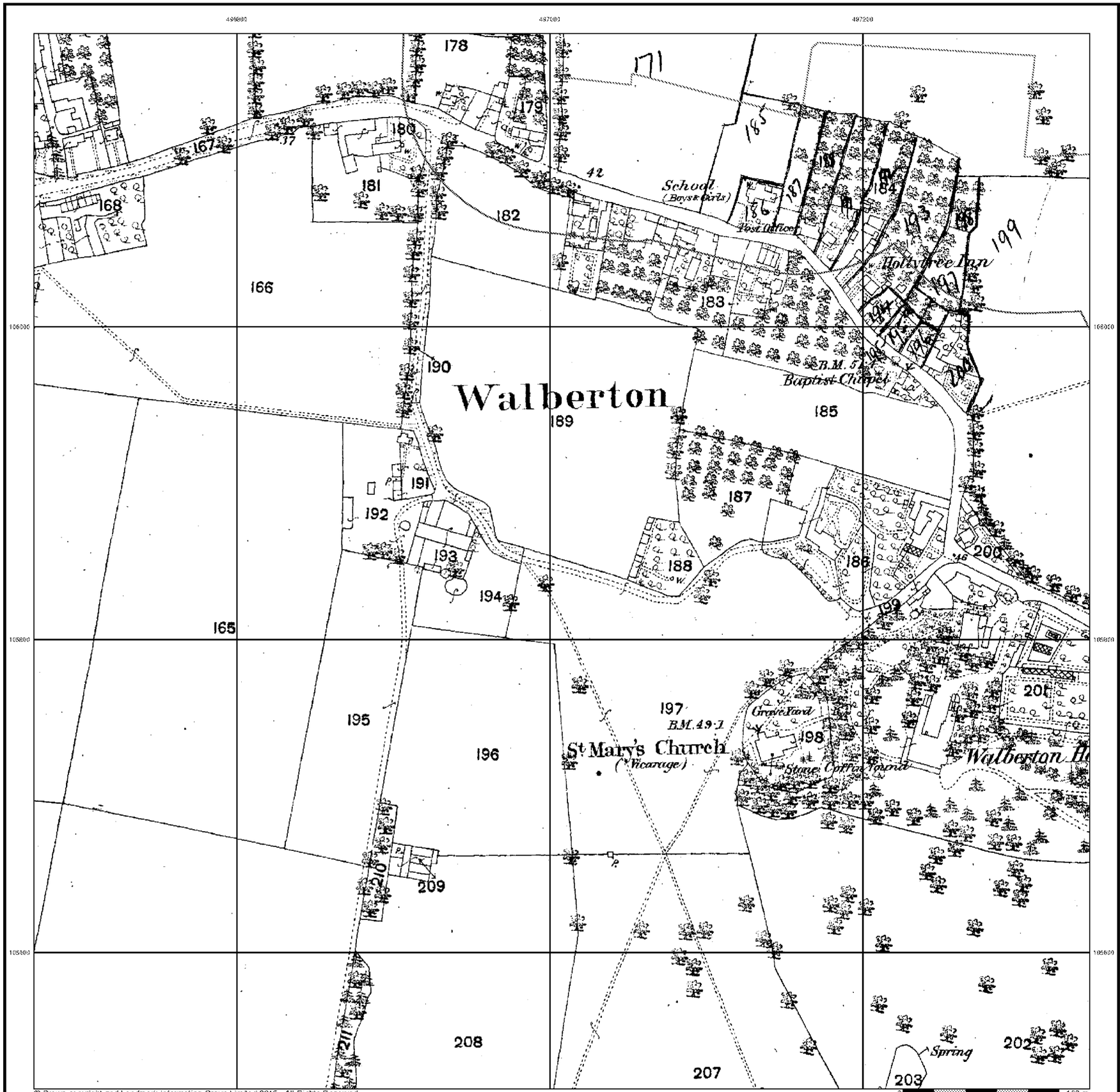
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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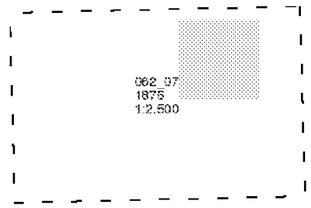
Geo-Environmental
Sussex

Published 1875

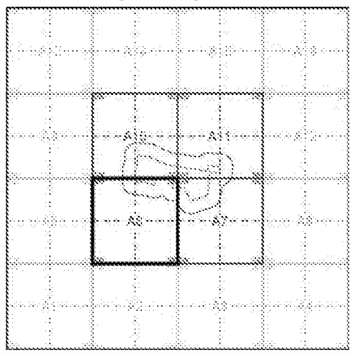
Source map scale - 1:2,500

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 A6



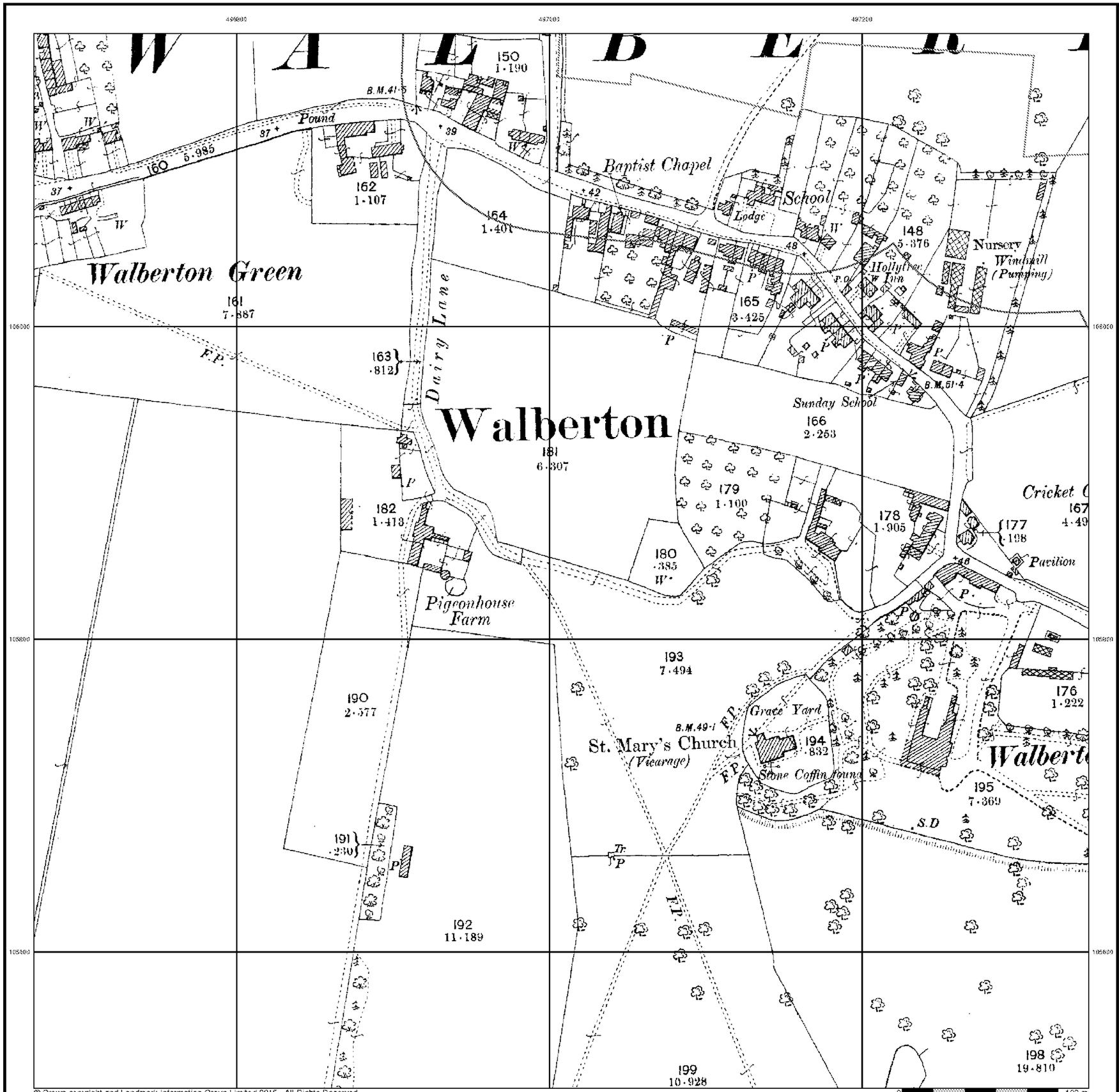
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
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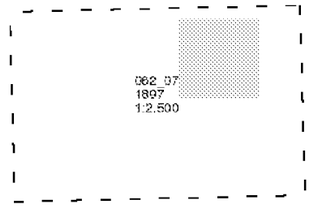
Geo-Environmental
Sussex

Published 1897

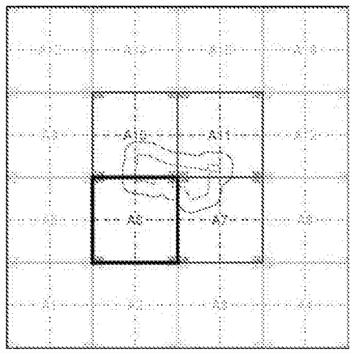
Source map scale - 1:2,500

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 A6



Order Details

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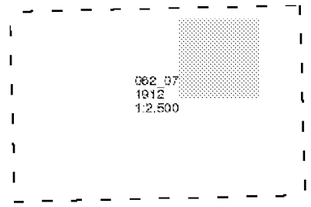
Geo-Environmental
Sussex

Published 1912

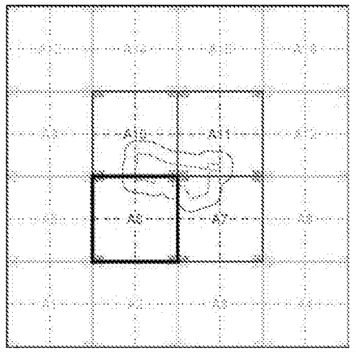
Source map scale - 1:2,500

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 A6



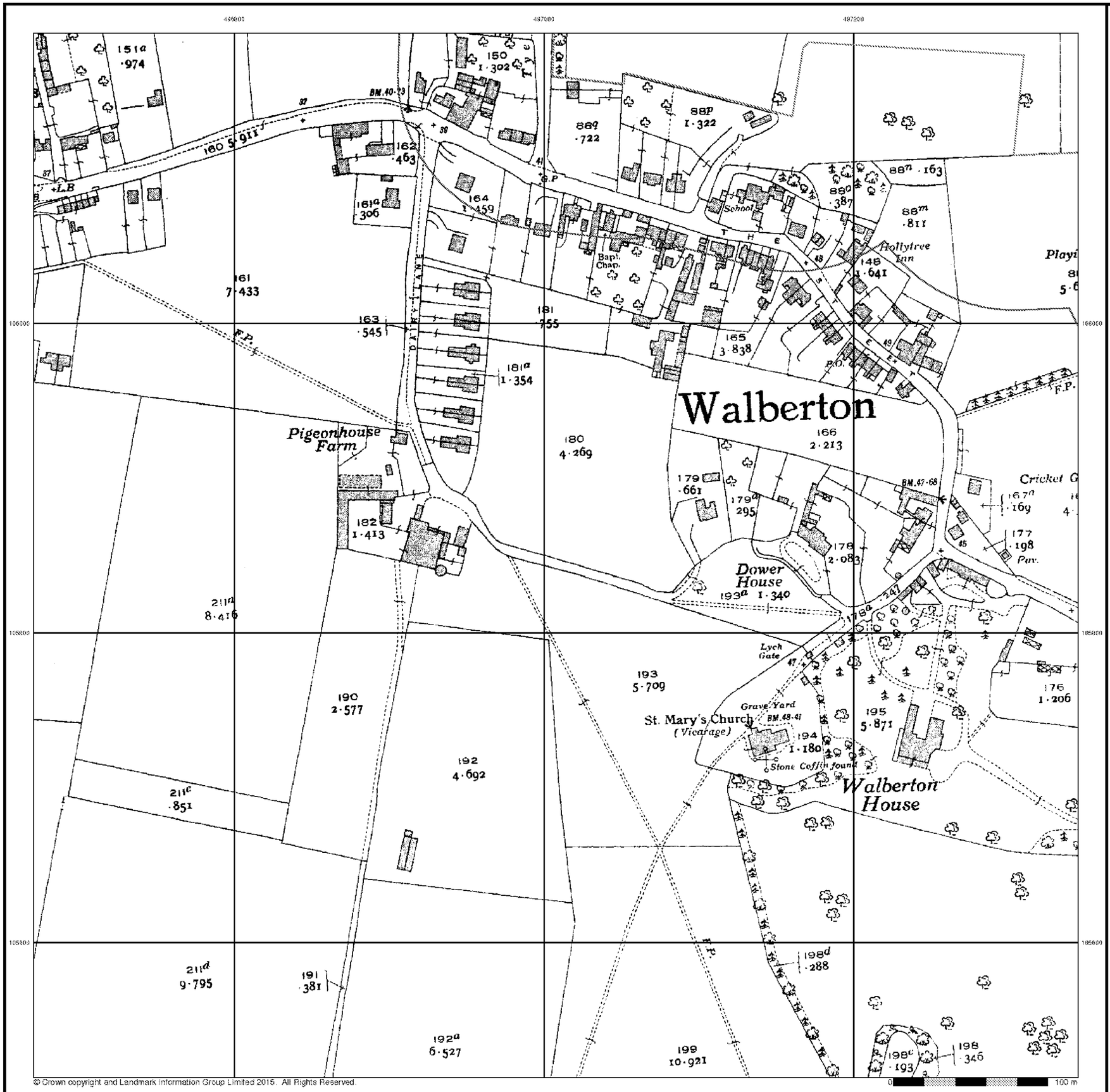
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
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Site Details

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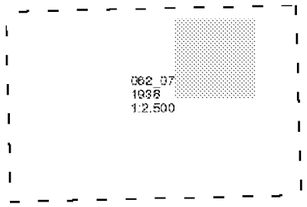
Geo-Environmental
Sussex

Published 1938

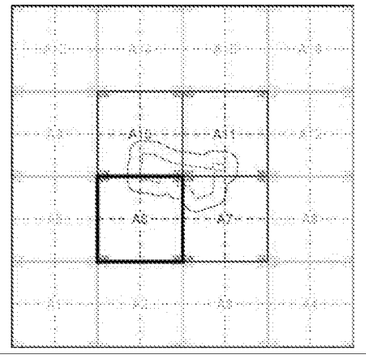
Source map scale - 1:2,500

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 A6



Order Details

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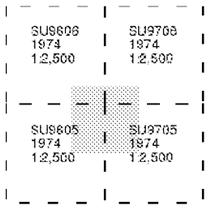
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0 100 m

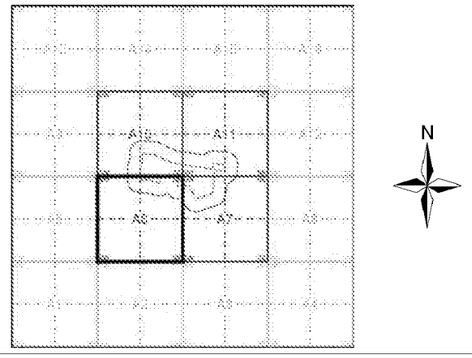
Geo-Environmental
Ordnance Survey Plan
Published 1974
Source map scale - 1:2,500

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 A6



Order Details

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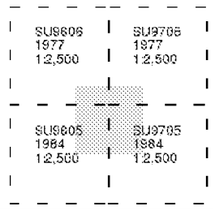


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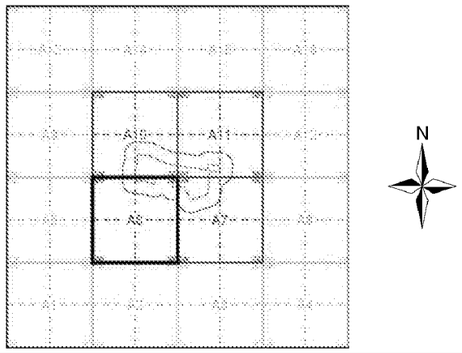
Geo-Environmental
Additional SIMs
Published 1977 - 1984
Source map scale - 1:2,500

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 A6



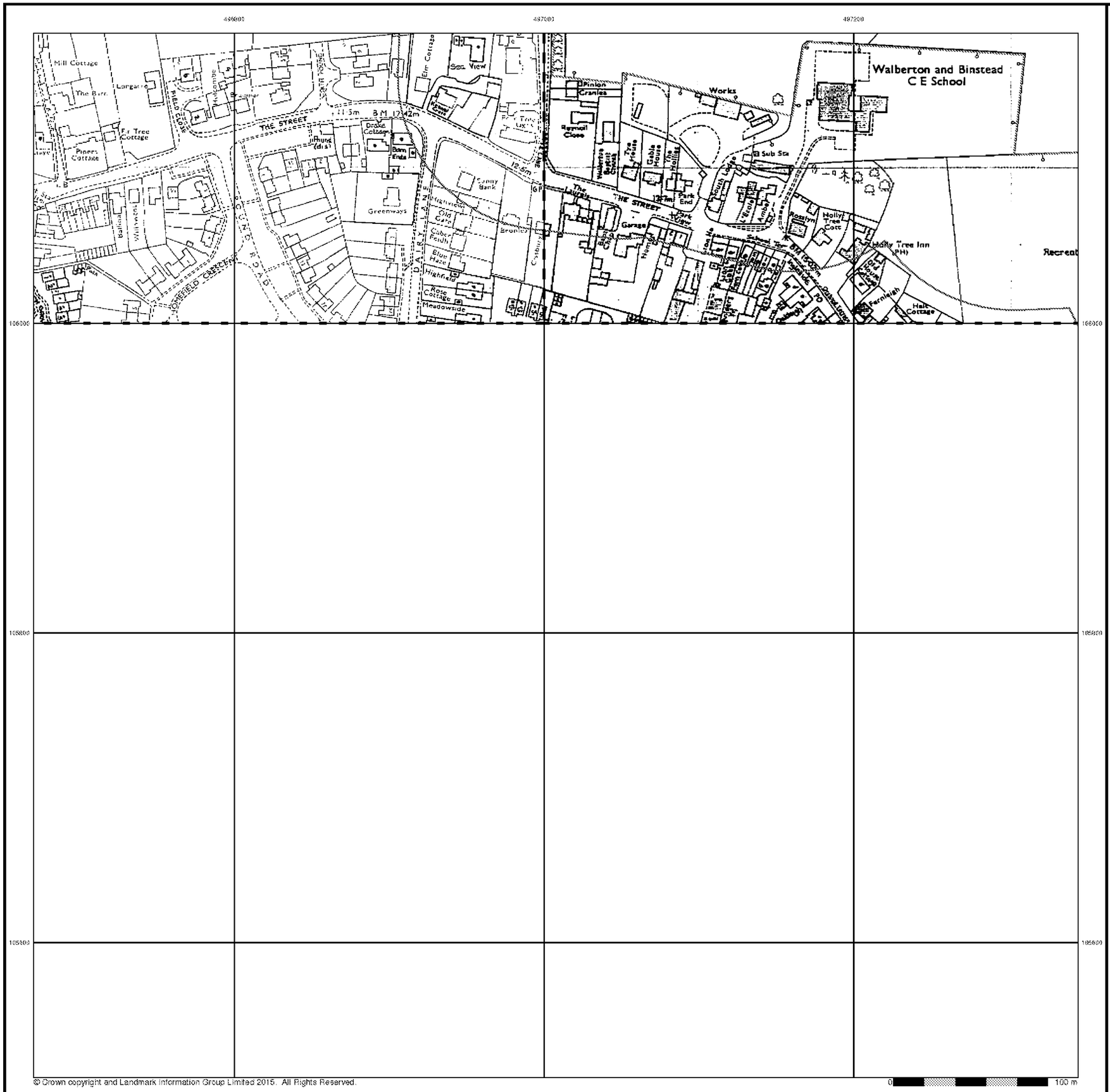
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

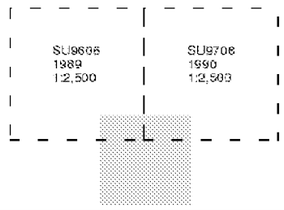
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Web: www.envirocheck.co.uk



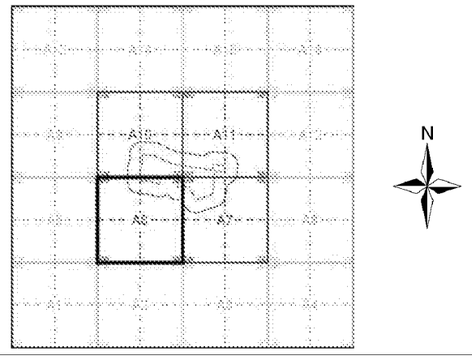
Geo-Environmental
Additional SIMs
Published 1989 - 1990
Source map scale - 1:2,500

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 A6



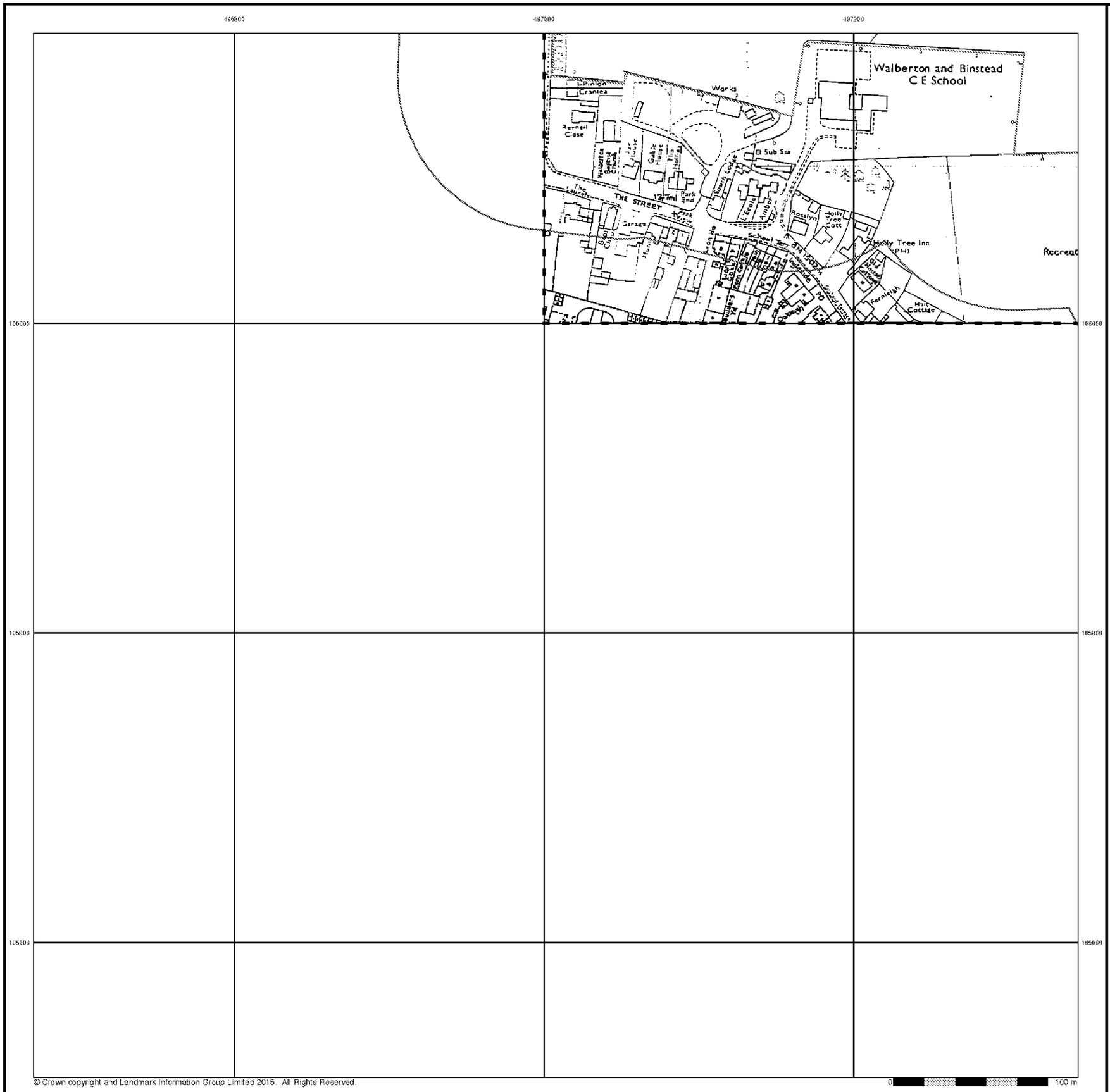
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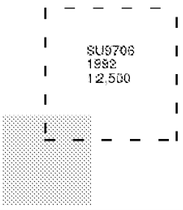


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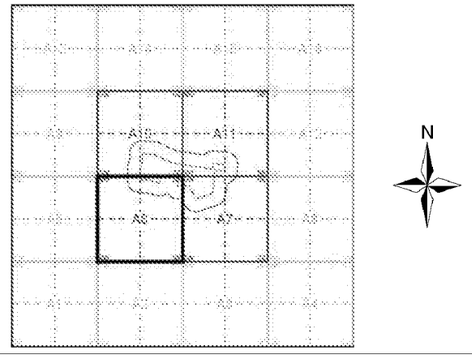
Geo-Environmental
Additional SIMs
Published 1992
Source map scale - 1:2,500

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 A6



Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
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Geo-Environmental

Large-Scale National Grid Data

Published 1994

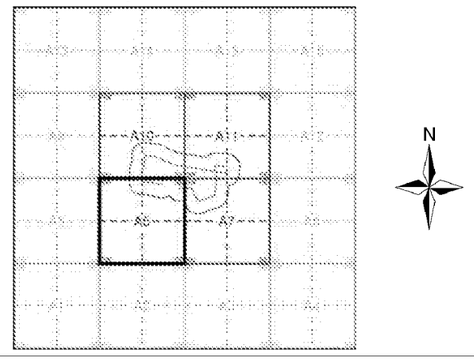
Source map scale - 1:2,500

'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)

SU9806 1994 1:2,500	SU9706 1994 1:2,500
SU9805 1994 1:2,500	SU9705 1994 1:2,500

Historical Map - Segment A6



Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

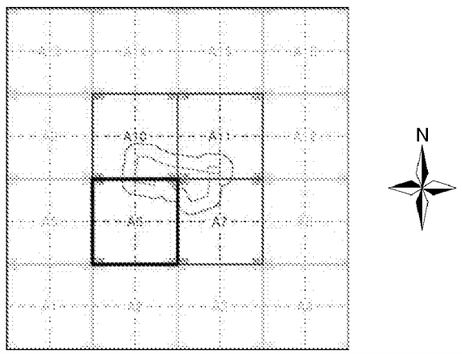
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Geo-Environmental
Historical Aerial Photography
Published 1999

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 A6



Order Details

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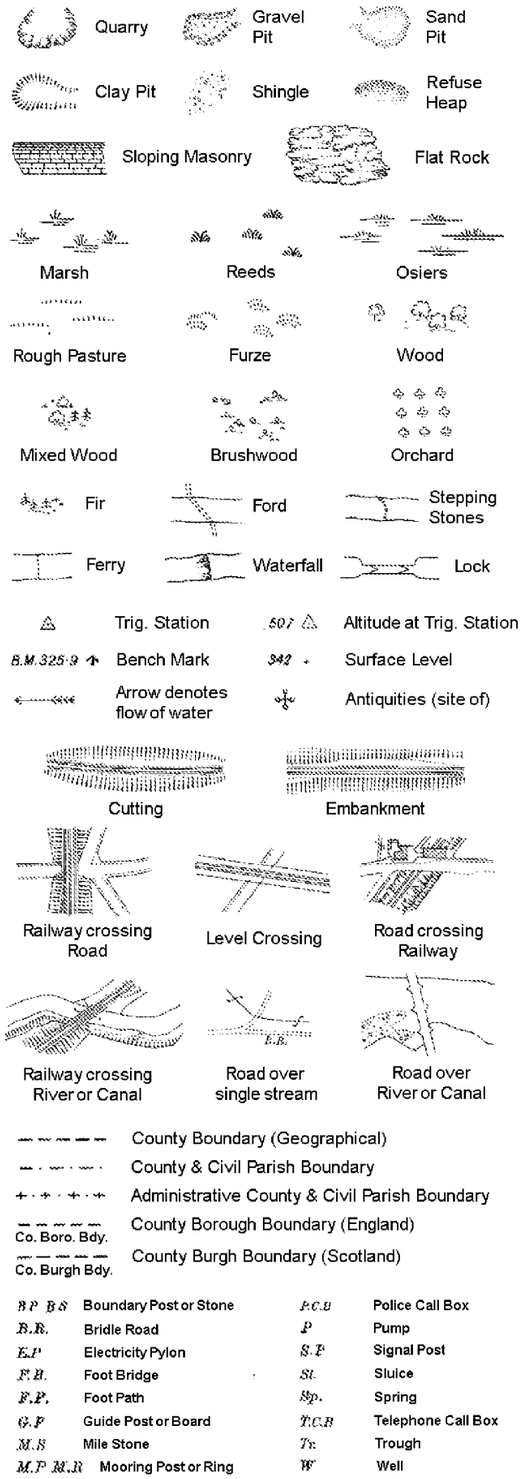
Site Details

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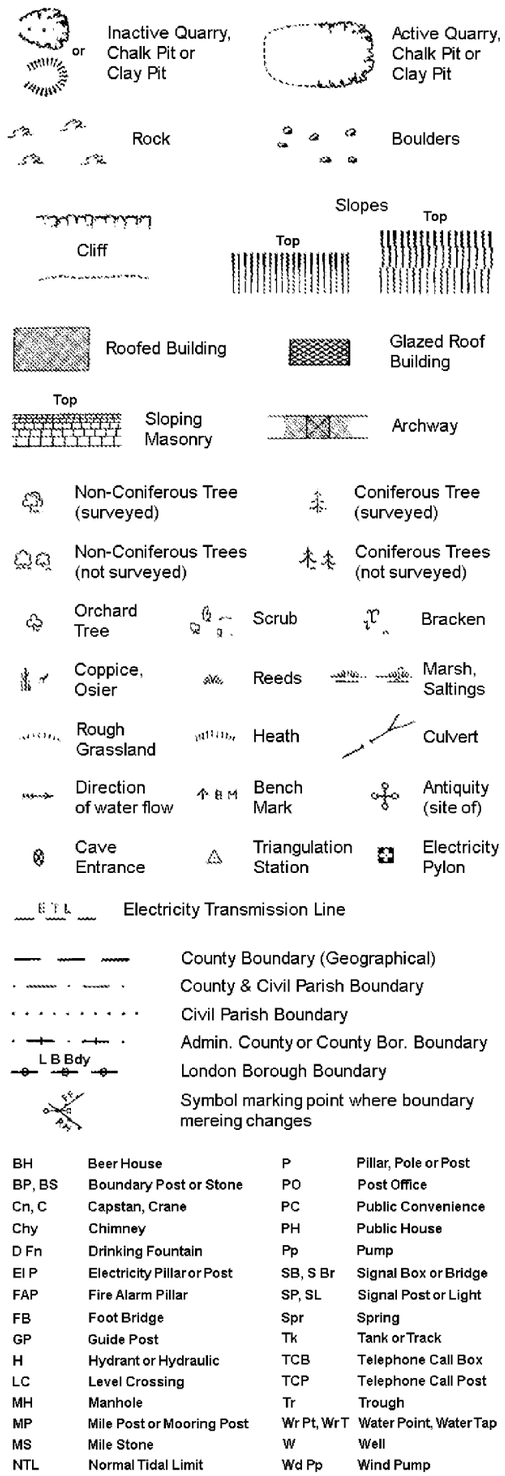
Historical Mapping Legends

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



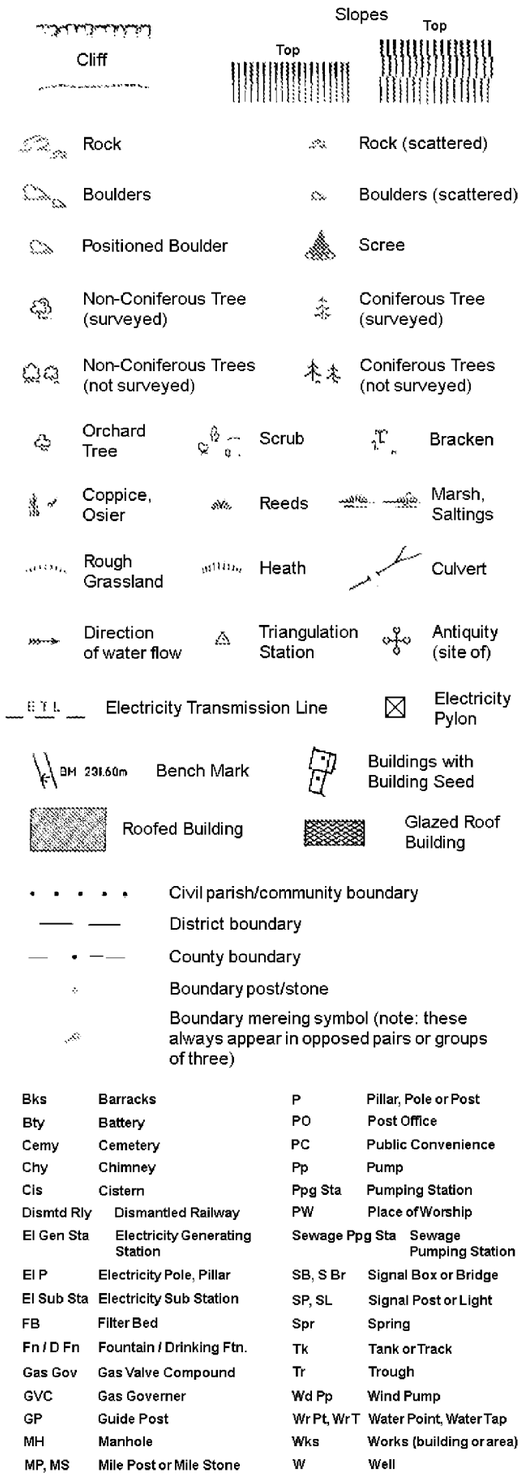
B.P. B.S.	Boundary Post or Stone	P.C.B.	Police Call Box
B.R.	Bridle Road	P.	Pump
E.P.	Electricity Pylon	S.P.	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P.	Guide Post or Board	T.C.B.	Telephone Call Box
M.S.	Mile Stone	Tr.	Trough
M.P. M.R.	Mooring Post or Ring	W.	Well

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



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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

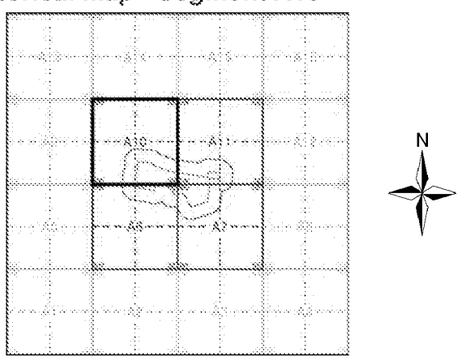


Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Geo-Environmental
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Sussex	1:2,500	1875 - 1876	2
Sussex	1:2,500	1897	3
Sussex	1:2,500	1912	4
Sussex	1:2,500	1938 - 1939	5
Ordnance Survey Plan	1:2,500	1974	6
Additional SIMs	1:2,500	1977	7
Additional SIMs	1:2,500	1989 - 1990	8
Additional SIMs	1:2,500	1992	9
Large-Scale National Grid Data	1:2,500	1994	10
Historical Aerial Photography	1:2,500	1999	11

Historical Map - Segment A10

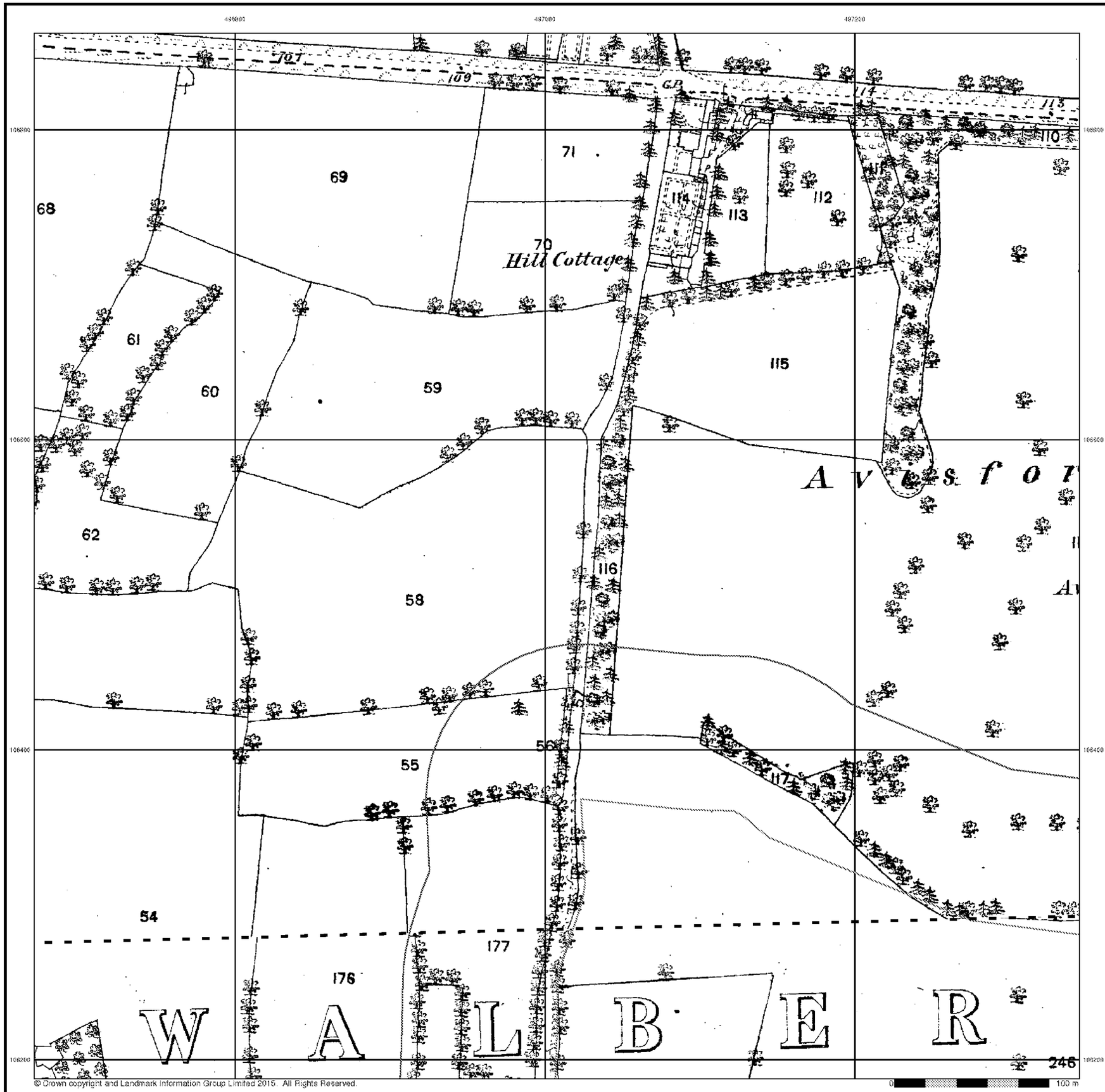


Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS



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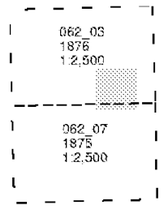
Geo-Environmental
Sussex

Published 1875 - 1876

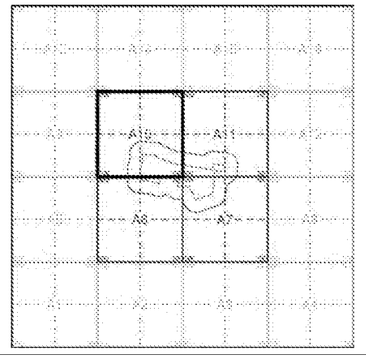
Source map scale - 1:2,500

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 A10



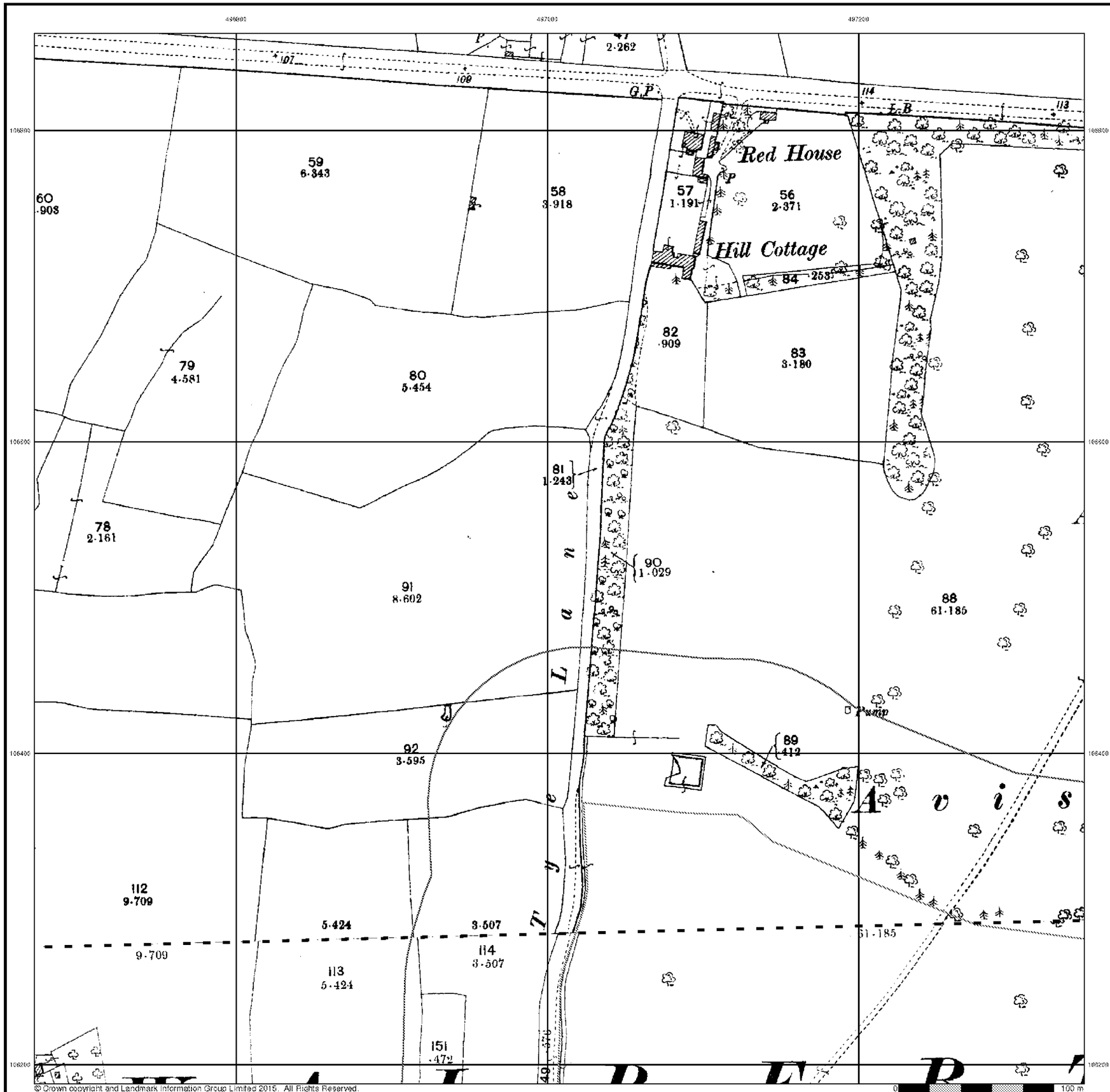
Order Details

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Slice:	A
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Search Buffer (m):	100

Site Details

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Geo-Environmental
Sussex

Published 1897

Source map scale - 1:2,500

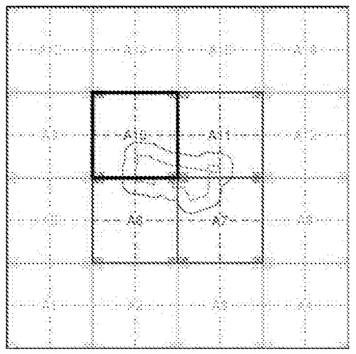
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)

062_03
1897
1:2,500

062_07
1897
1:2,500

Historical Map - Segment A10



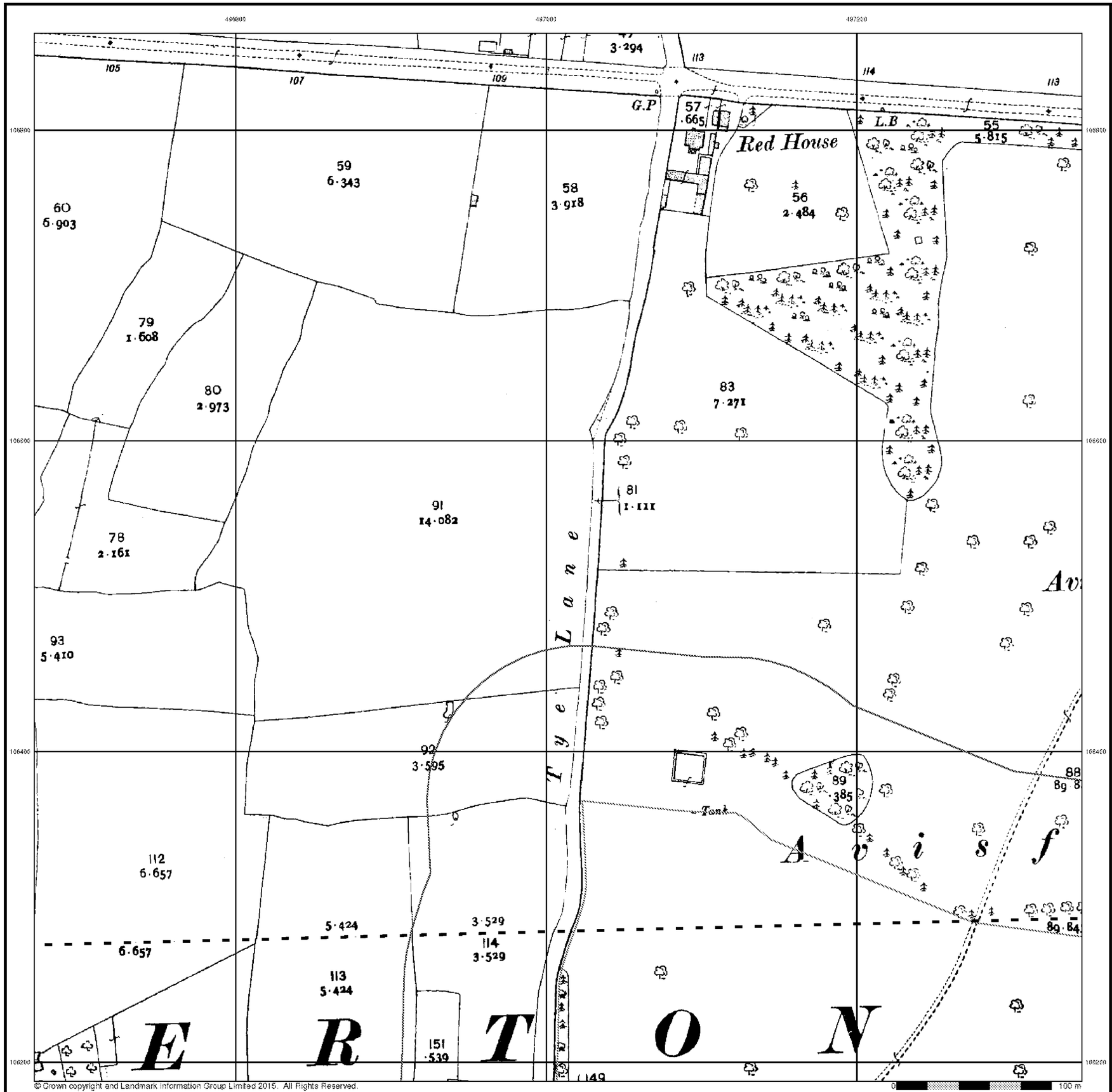
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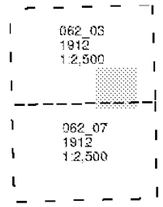
Geo-Environmental
Sussex

Published 1912

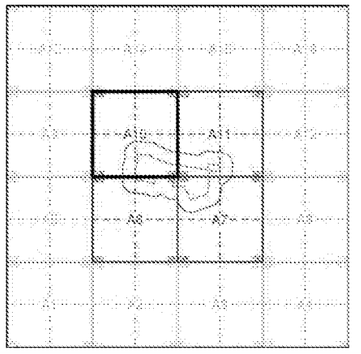
Source map scale - 1:2,500

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 A10



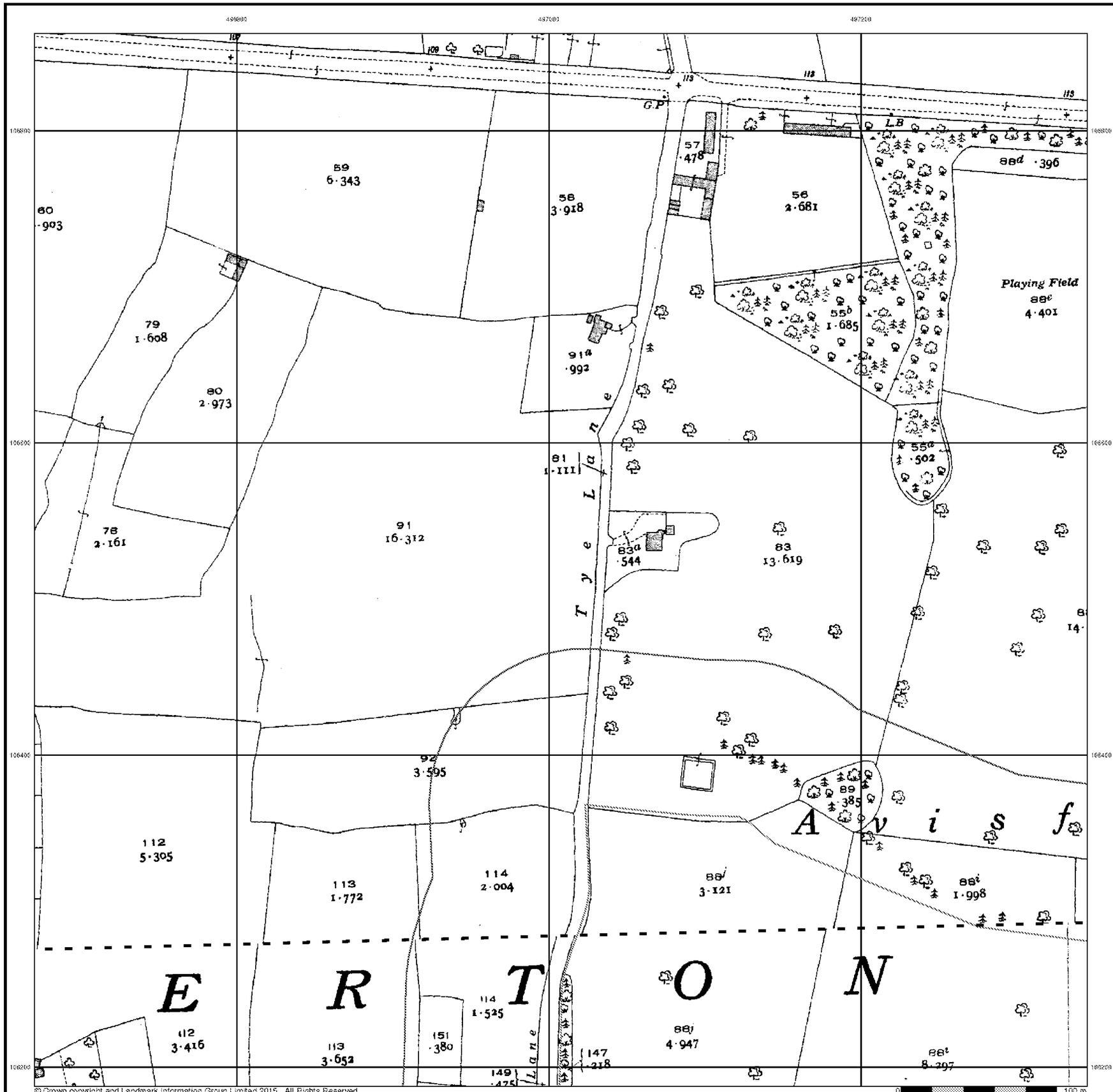
Order Details

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Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

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Geo-Environmental

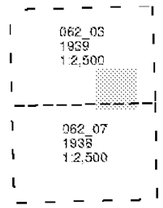
Sussex

Published 1938 - 1939

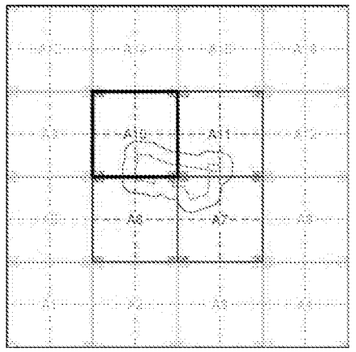
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

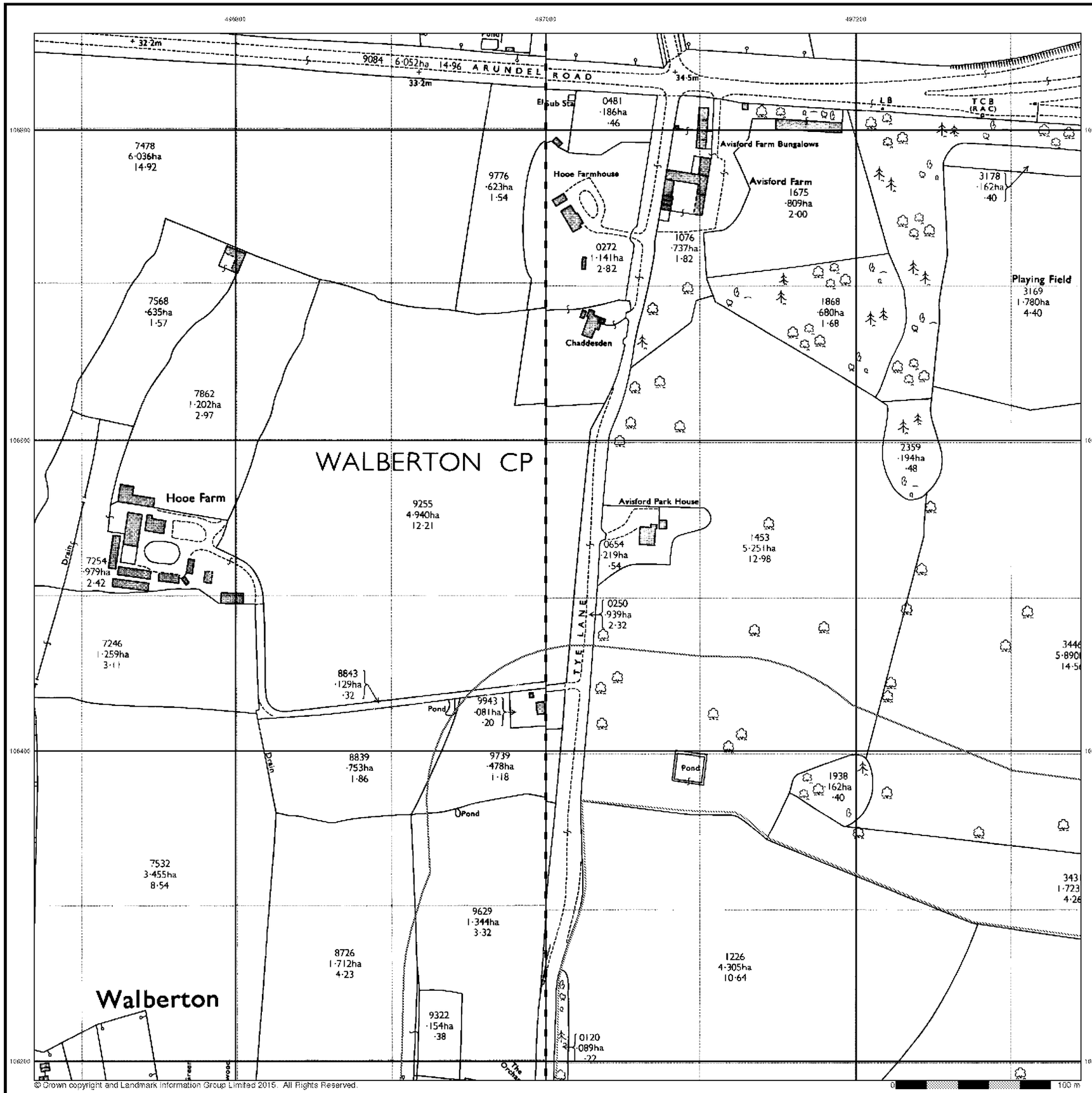
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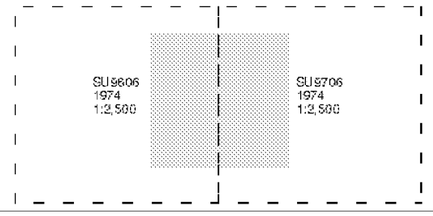


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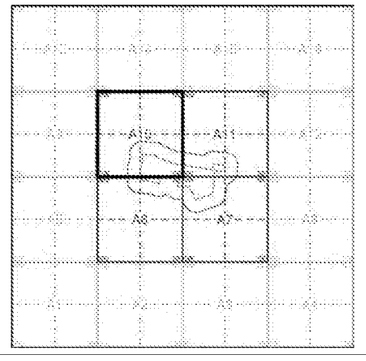
Geo-Environmental
Ordnance Survey Plan
Published 1974
Source map scale - 1:2,500

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 A10



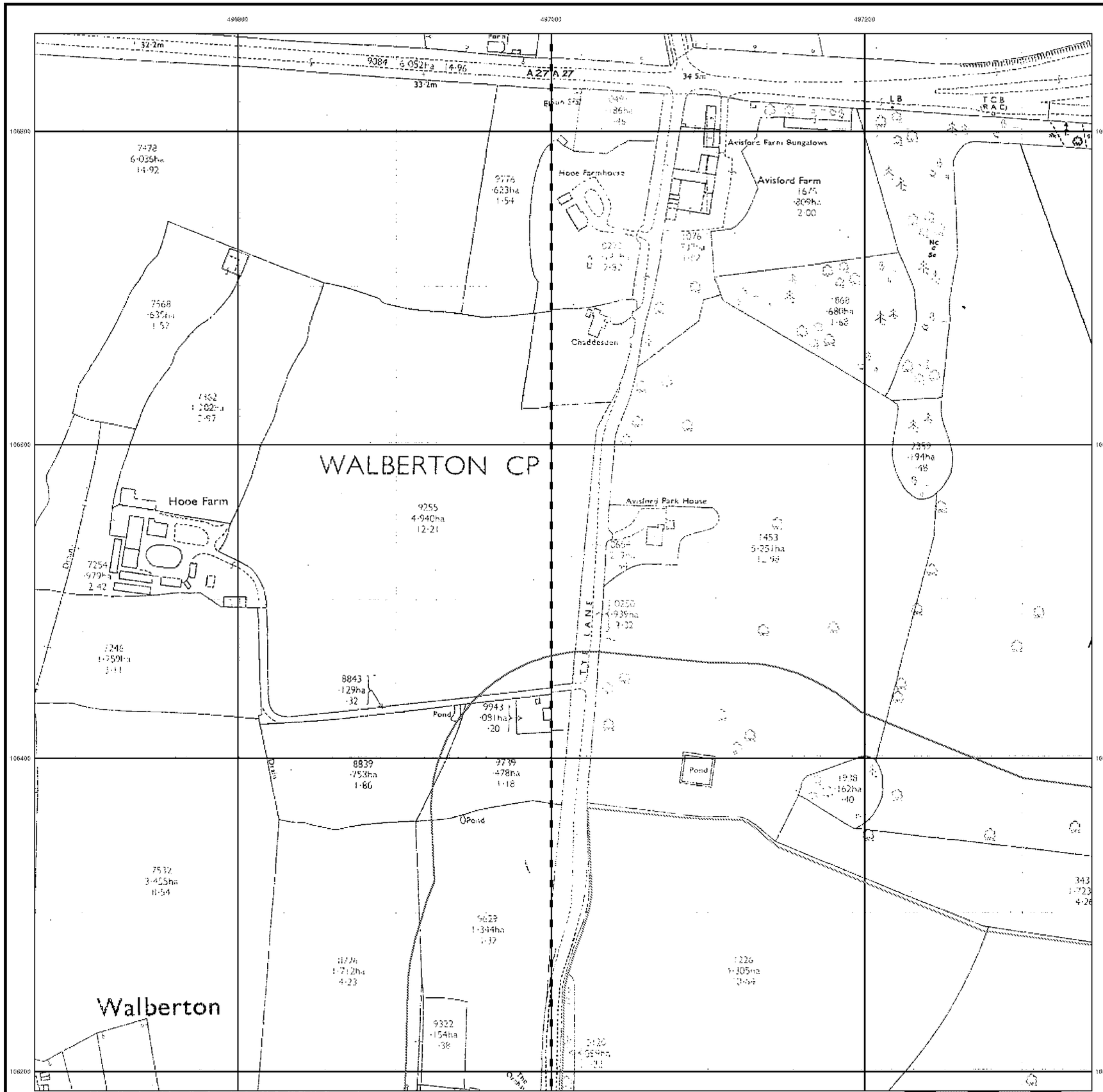
Order Details

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Site Details

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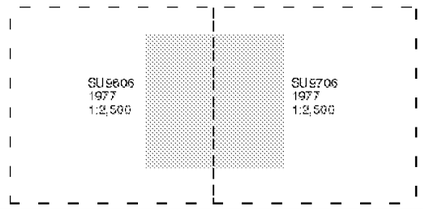
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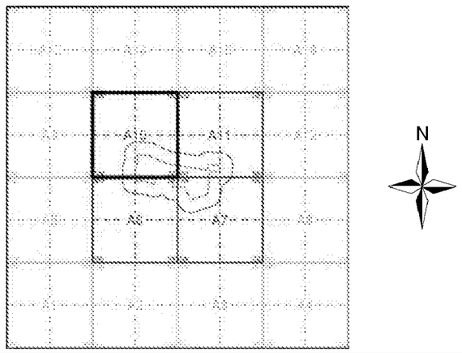
Geo-Environmental
Additional SIMs
Published 1977
Source map scale - 1:2,500

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 A10



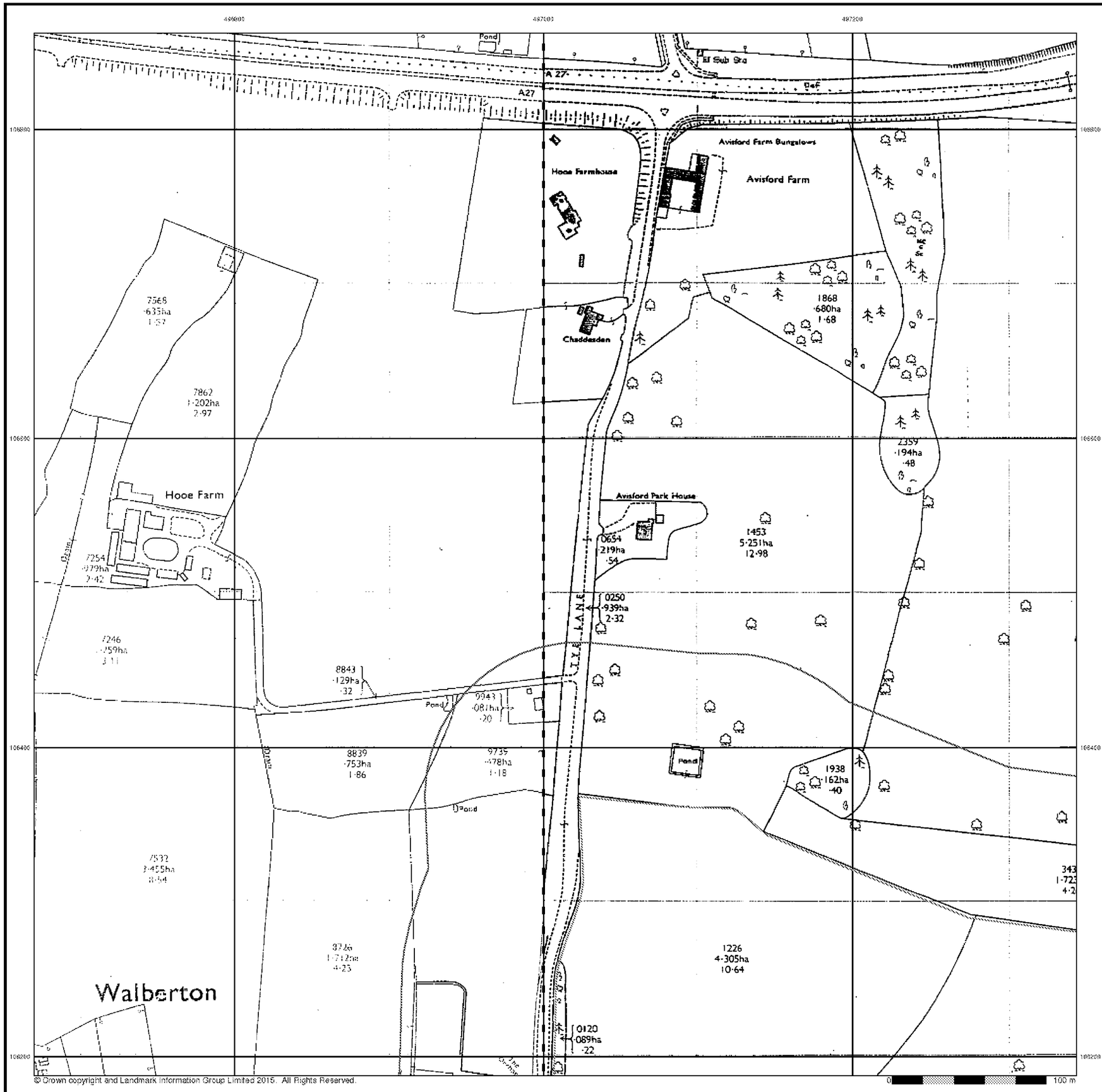
Order Details

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National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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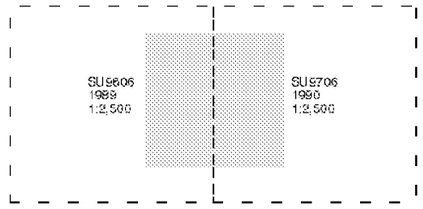


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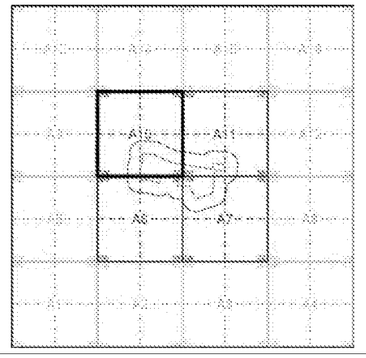
Geo-Environmental
Additional SIMs
Published 1989 - 1990
Source map scale - 1:2,500

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 A10



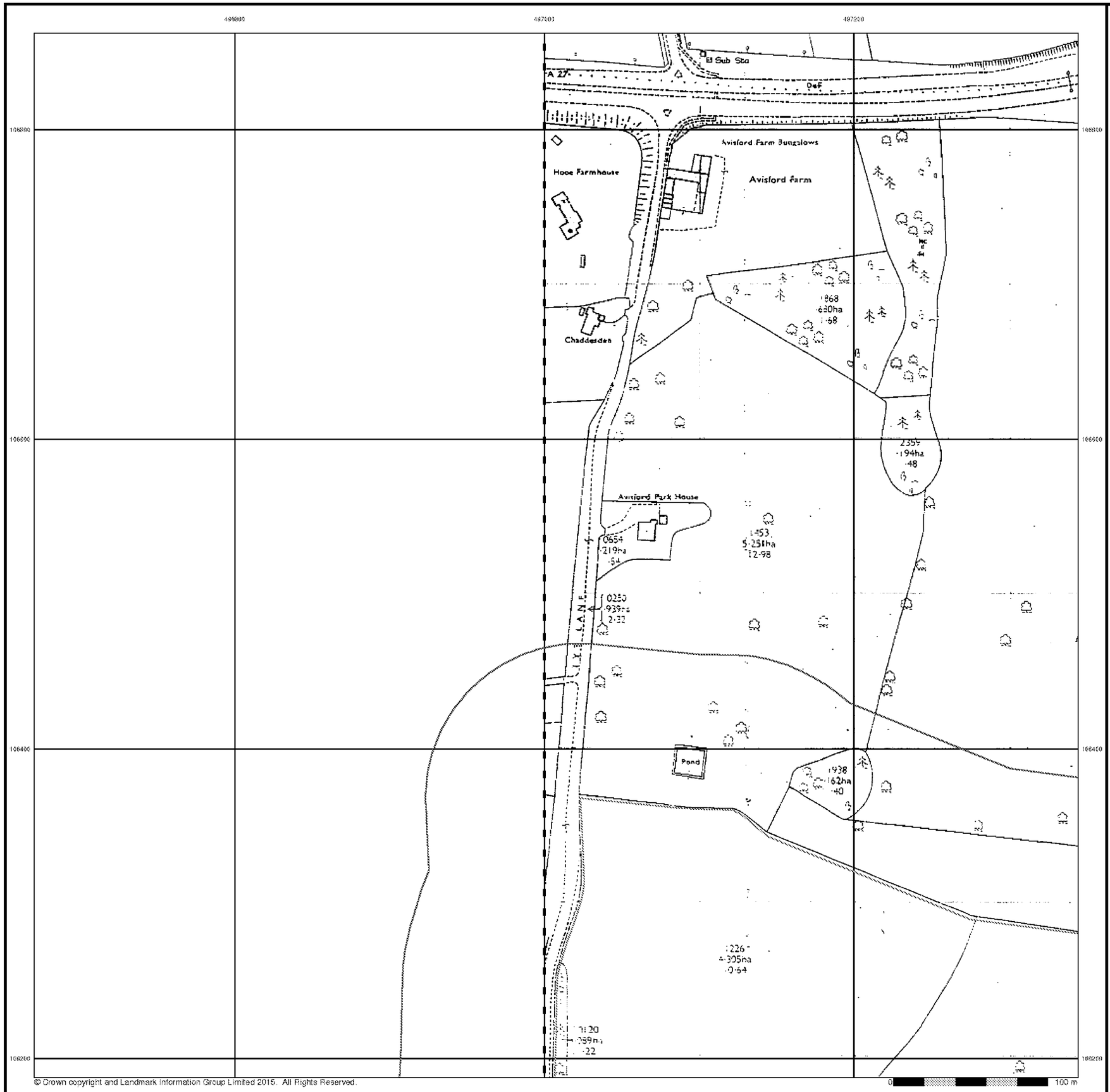
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
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Slice:	A
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Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

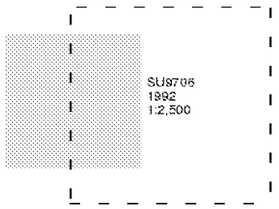
Landmark INFORMATION GROUP
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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



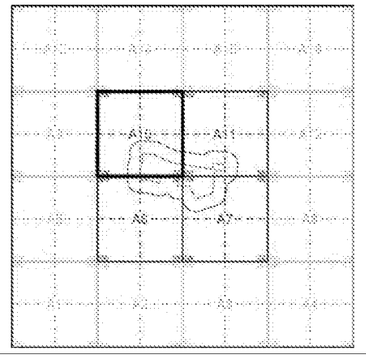
Geo-Environmental
Additional SIMs
Published 1992
Source map scale - 1:2,500

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 A10



Order Details

Order Number:	143822756_1_1
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Slice:	A
Site Area (Ha):	11.27
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Geo-Environmental

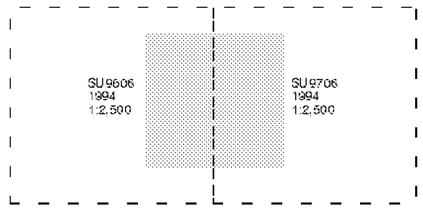
Large-Scale National Grid Data

Published 1994

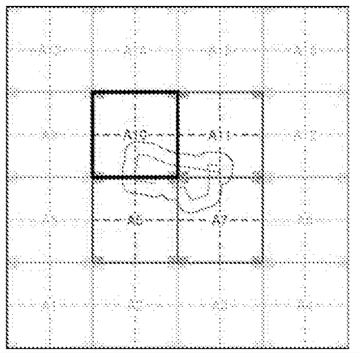
Source map scale - 1:2,500

'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)



Historical Map - Segment A10



N

Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
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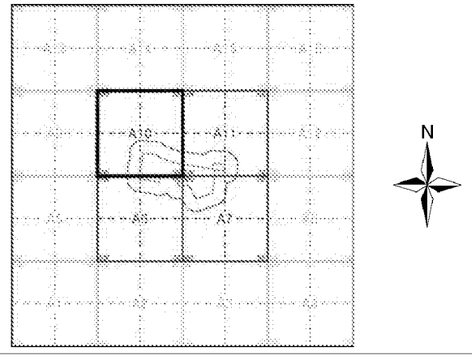


Geo-Environmental
Historical Aerial Photography

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 A10



Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

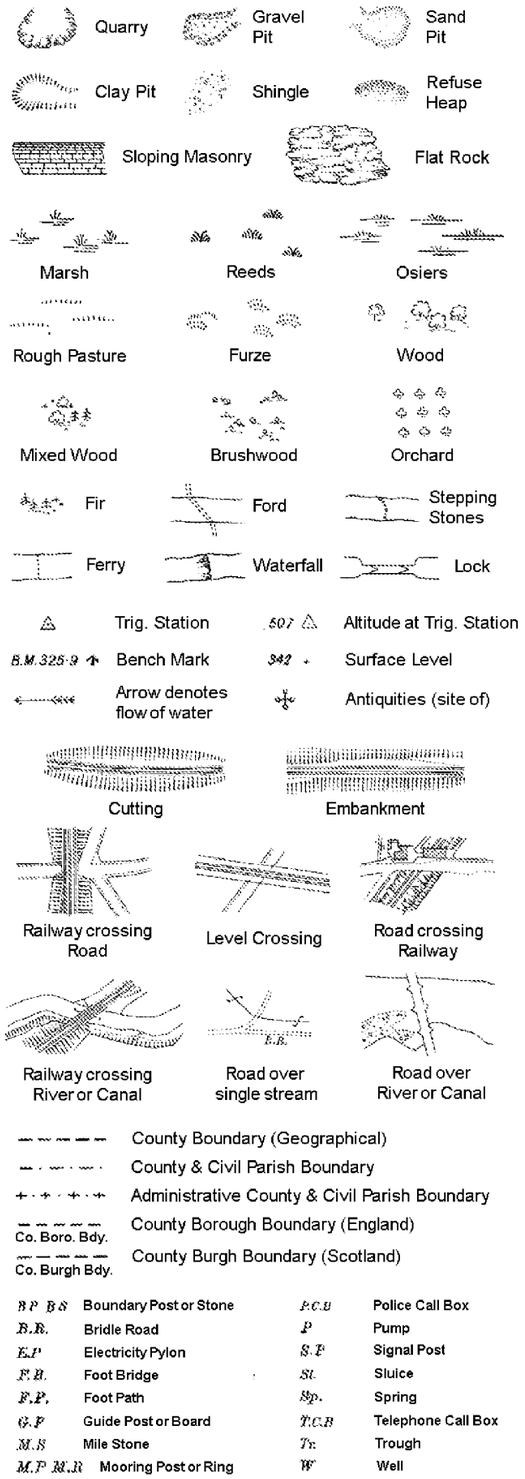
Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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

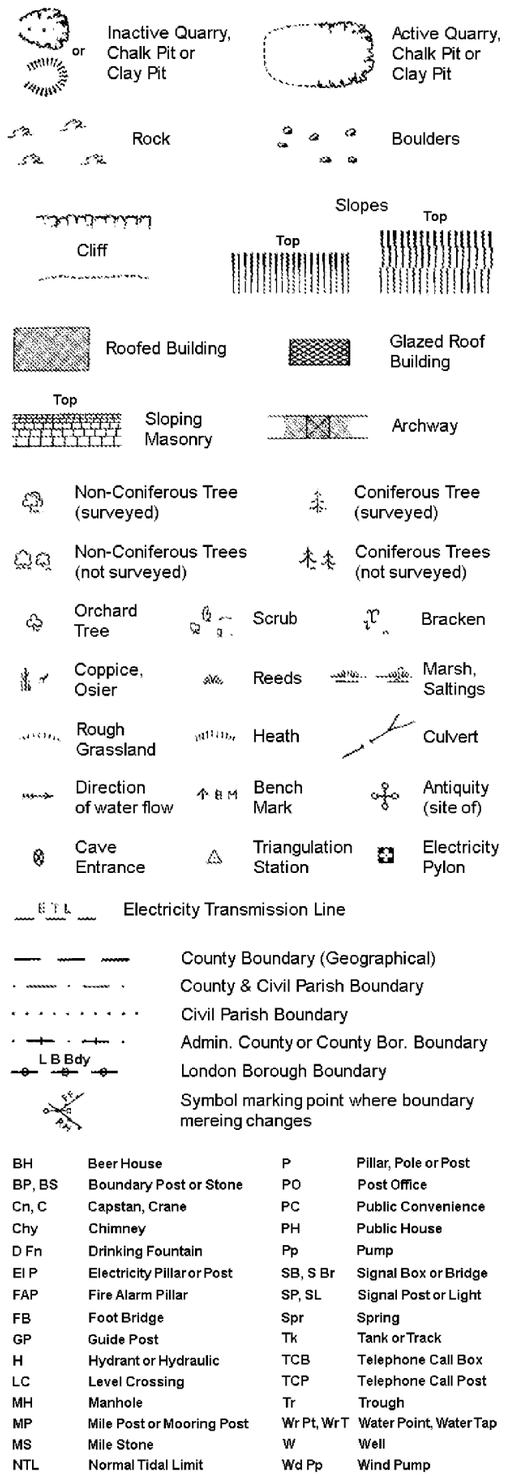
Historical Mapping Legends

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



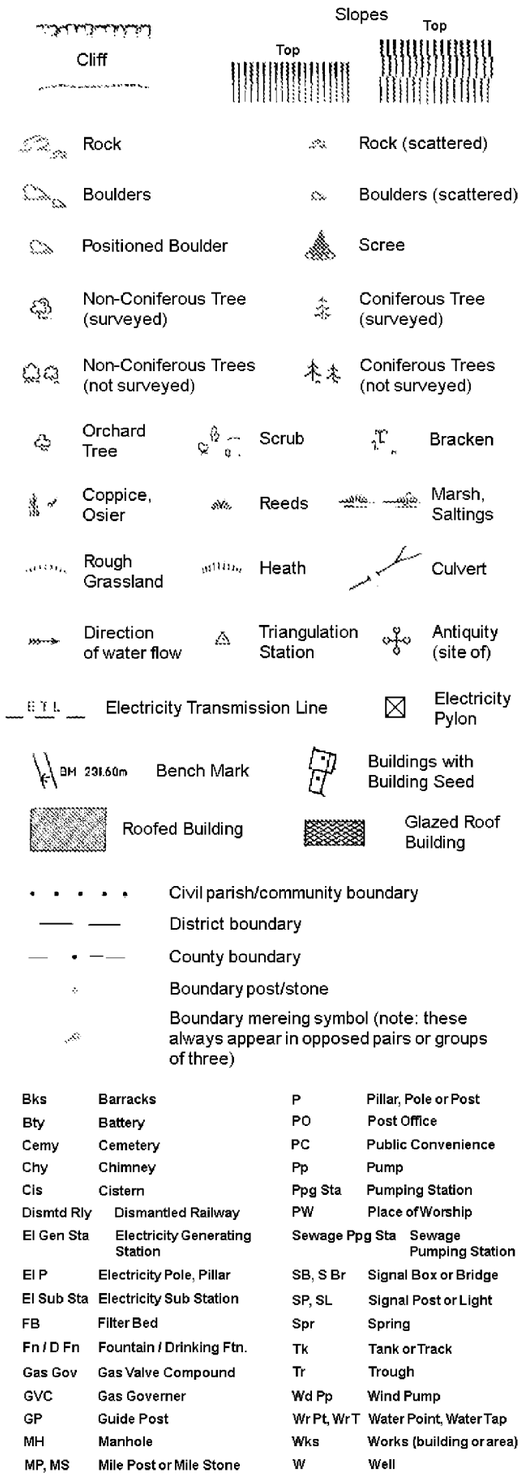
B.P. B.S.	Boundary Post or Stone	P.C.B.	Police Call Box
B.R.	Bridle Road	P.	Pump
E.P.	Electricity Pylon	S.P.	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P.	Guide Post or Board	T.C.B.	Telephone Call Box
M.S.	Mile Stone	Tr.	Trough
M.P. M.R.	Mooring Post or Ring	W.	Well

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



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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

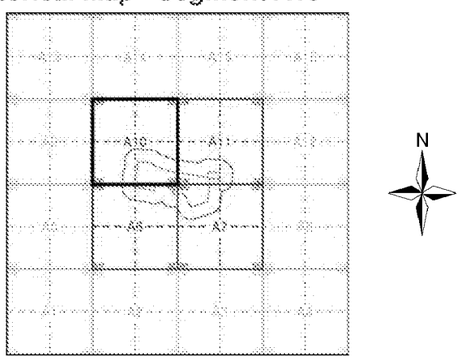


Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Geo-Environmental
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Sussex	1:2,500	1875 - 1876	2
Sussex	1:2,500	1897	3
Sussex	1:2,500	1912	4
Sussex	1:2,500	1938 - 1939	5
Ordnance Survey Plan	1:2,500	1974	6
Additional SIMs	1:2,500	1977	7
Additional SIMs	1:2,500	1989 - 1990	8
Additional SIMs	1:2,500	1992	9
Large-Scale National Grid Data	1:2,500	1994	10
Historical Aerial Photography	1:2,500	1999	11

Historical Map - Segment A10

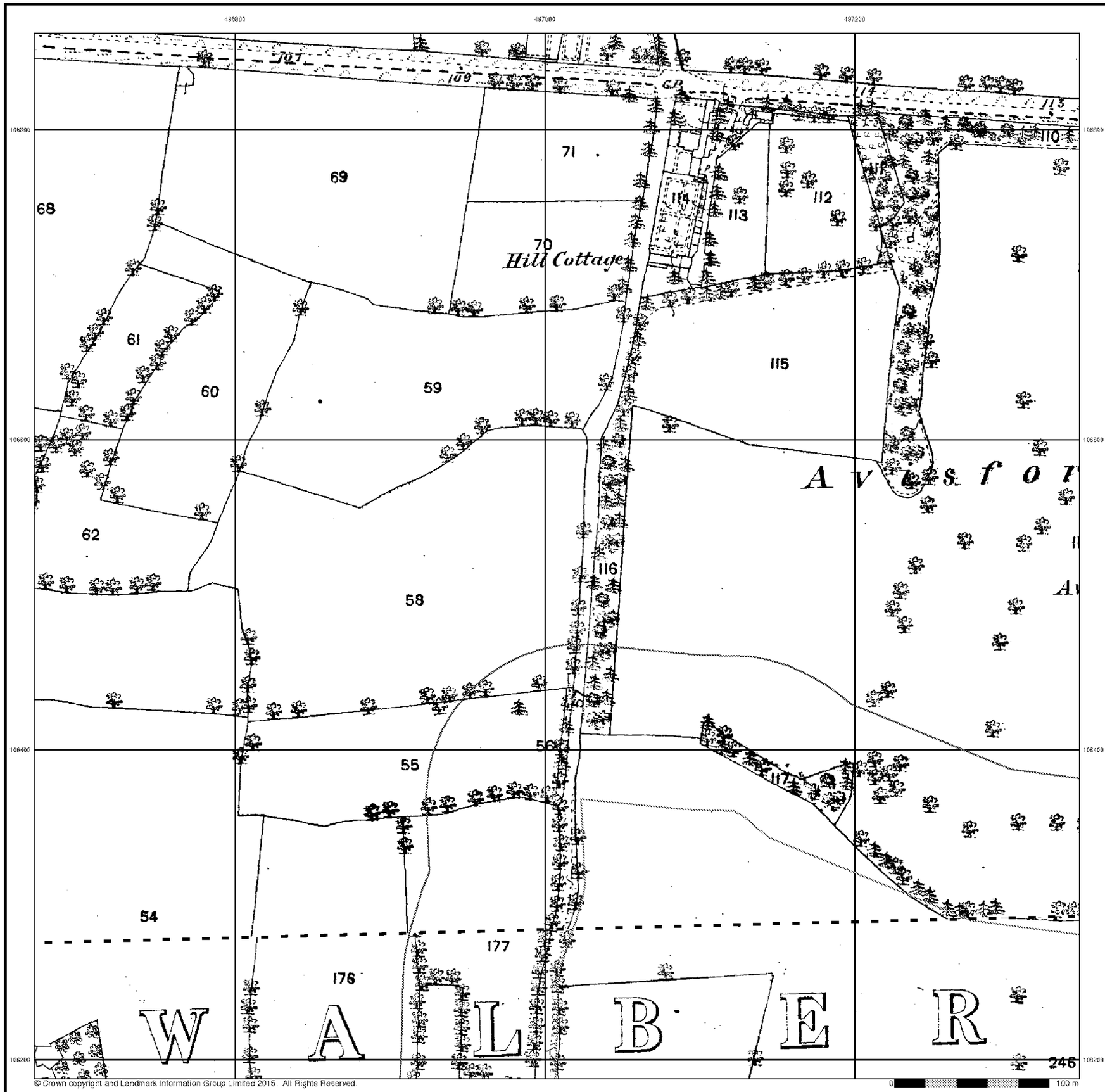


Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS



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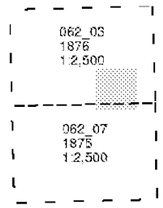
Geo-Environmental
Sussex

Published 1875 - 1876

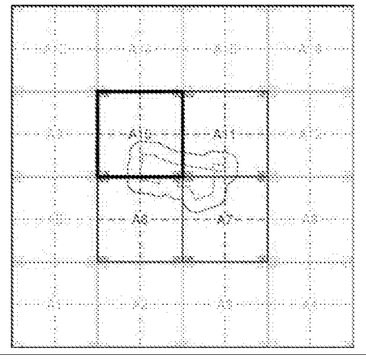
Source map scale - 1:2,500

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 A10



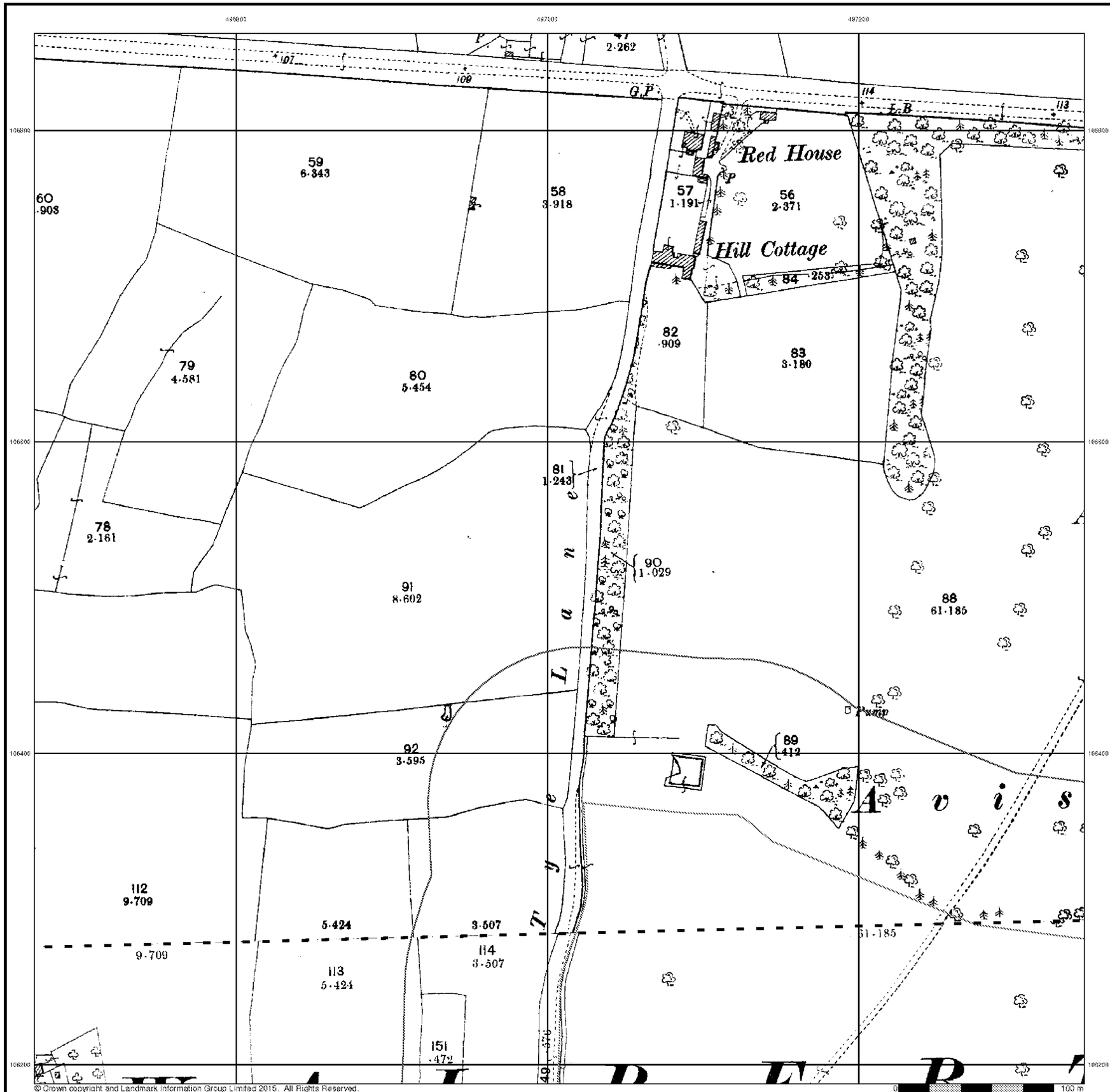
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Geo-Environmental
Sussex

Published 1897

Source map scale - 1:2,500

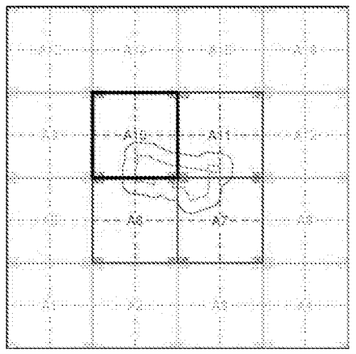
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)

062_03
1897
1:2,500

062_07
1897
1:2,500

Historical Map - Segment A10



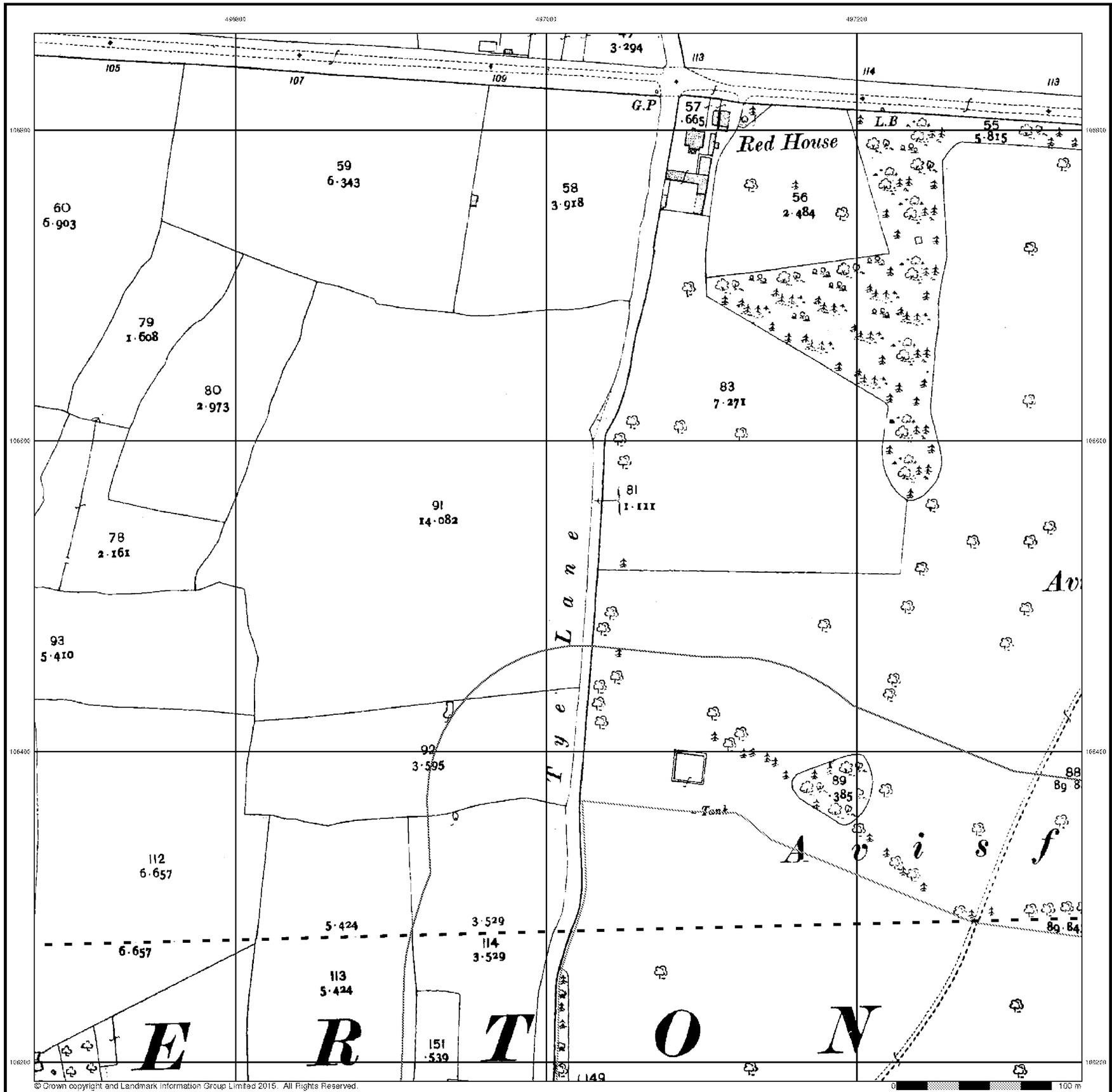
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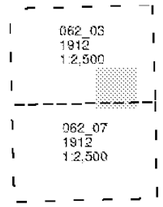
Geo-Environmental
Sussex

Published 1912

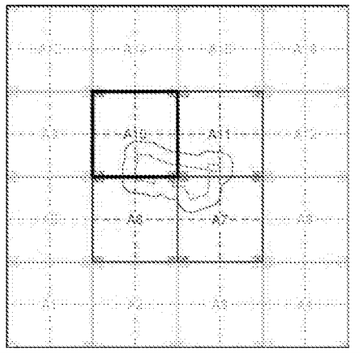
Source map scale - 1:2,500

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 A10



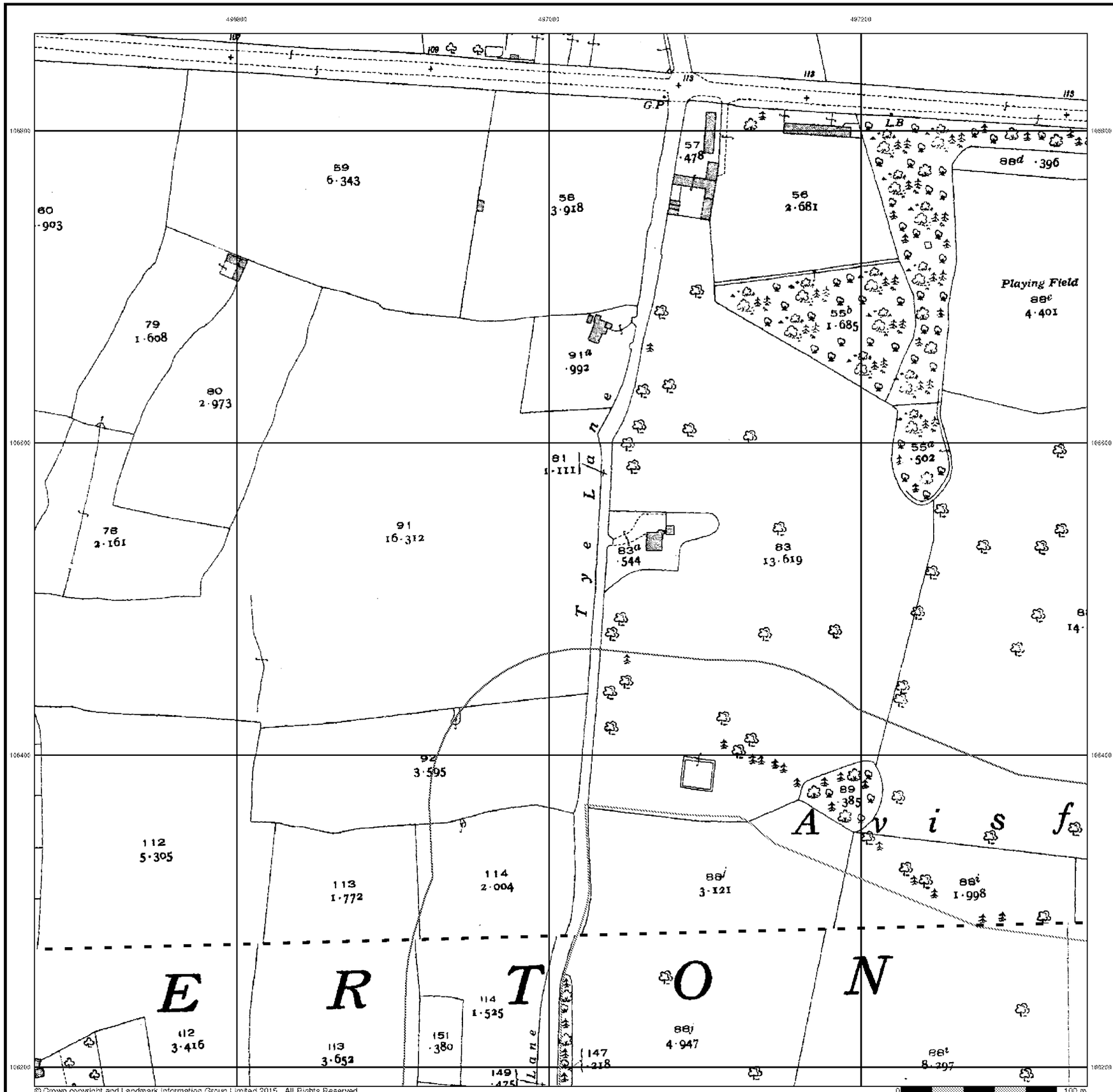
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Geo-Environmental

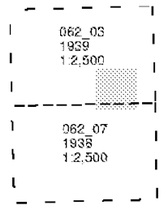
Sussex

Published 1938 - 1939

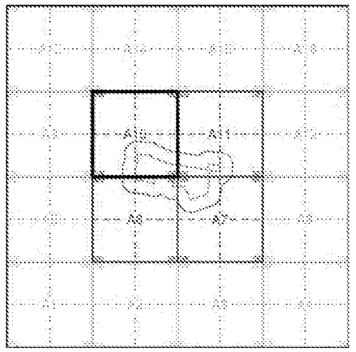
Source map scale - 1:2,500

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 A10



Order Details

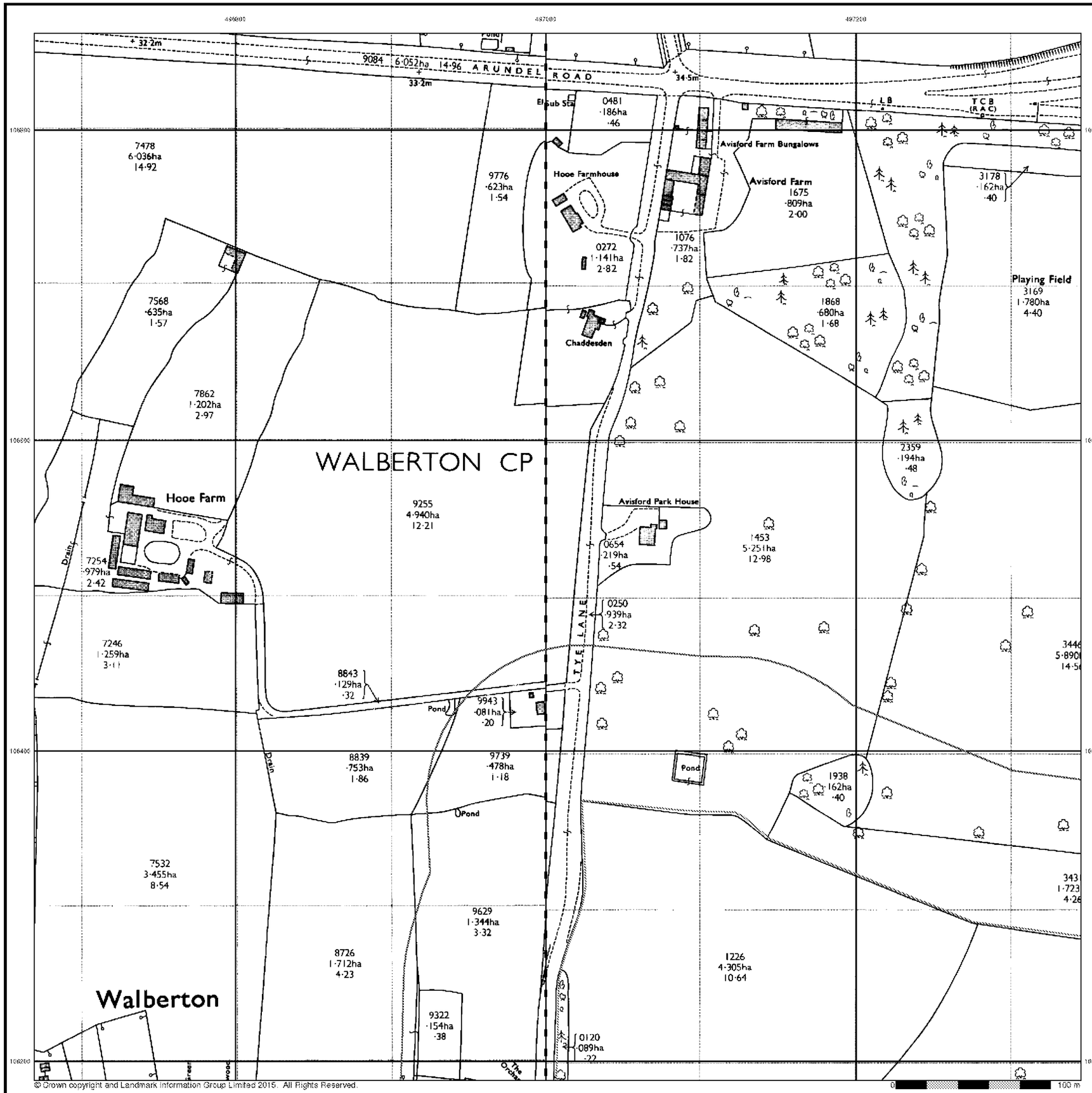
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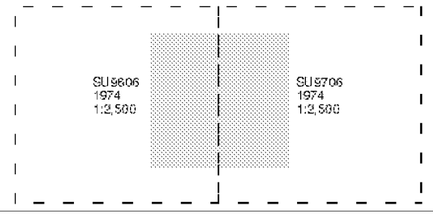


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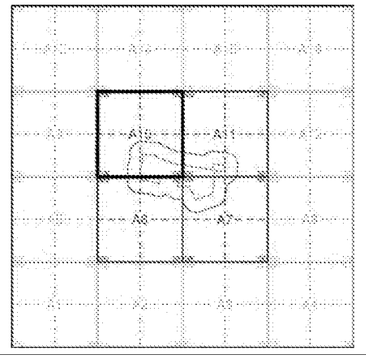
Geo-Environmental
Ordnance Survey Plan
Published 1974
Source map scale - 1:2,500

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 A10



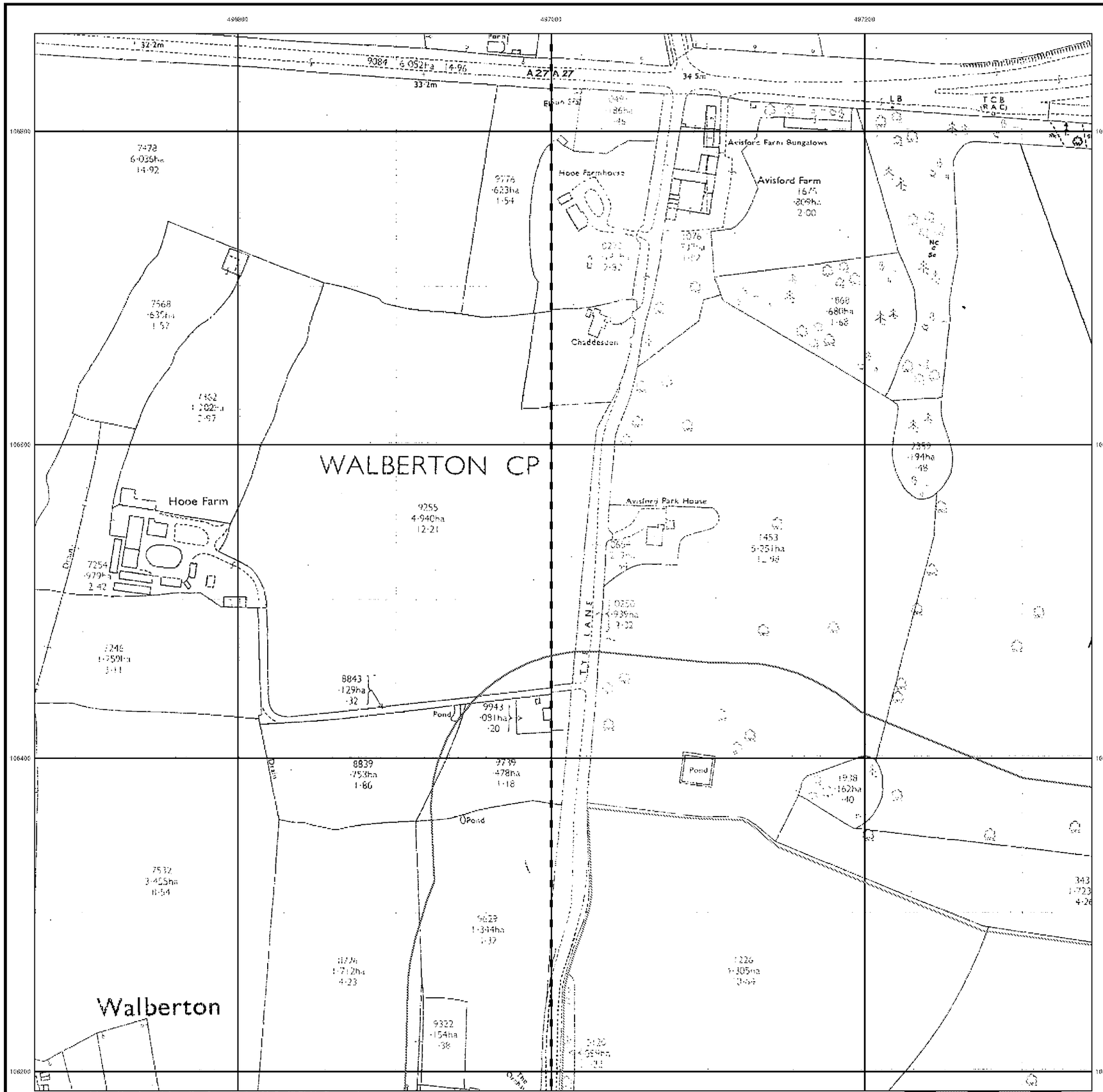
Order Details

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Site Details

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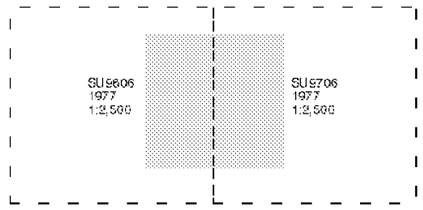
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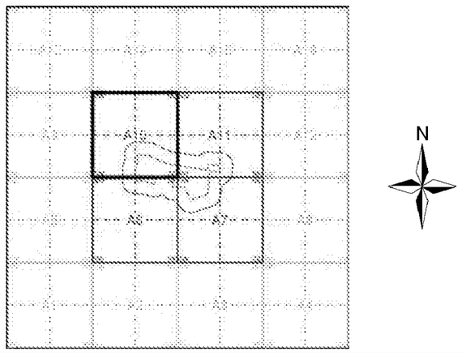
Geo-Environmental
Additional SIMs
Published 1977
Source map scale - 1:2,500

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 A10



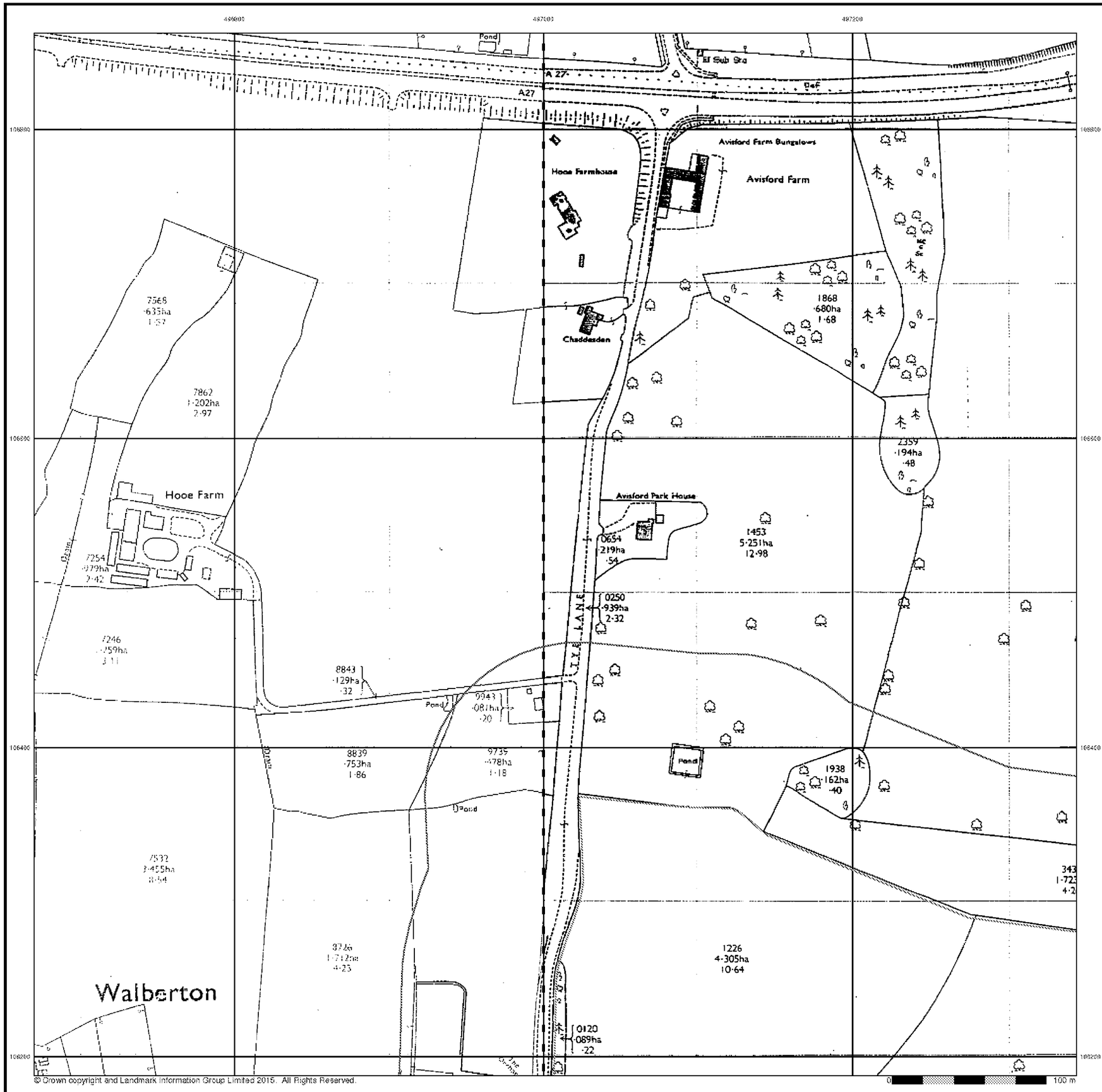
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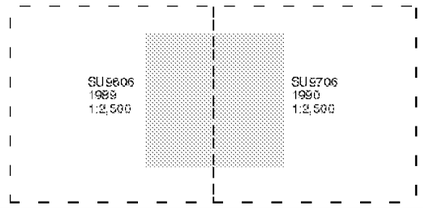


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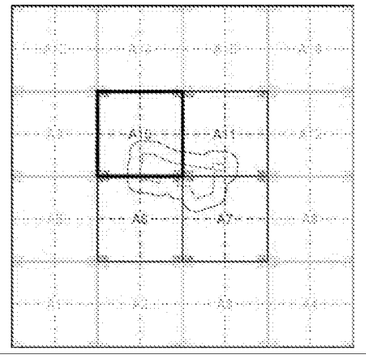
Geo-Environmental
Additional SIMs
Published 1989 - 1990
Source map scale - 1:2,500

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 A10



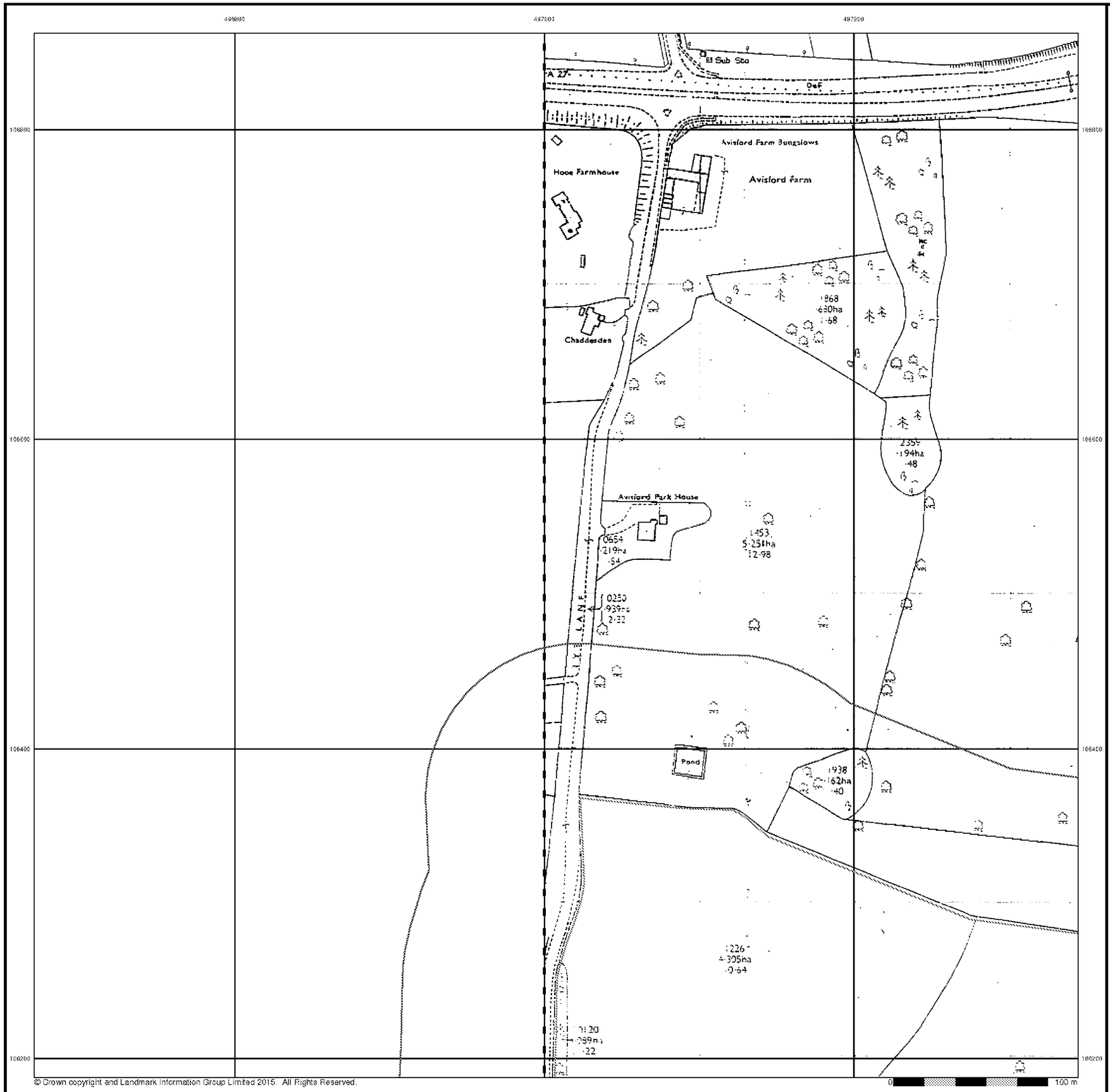
Order Details

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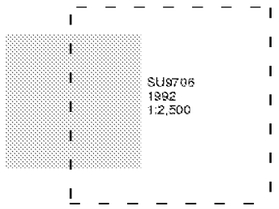
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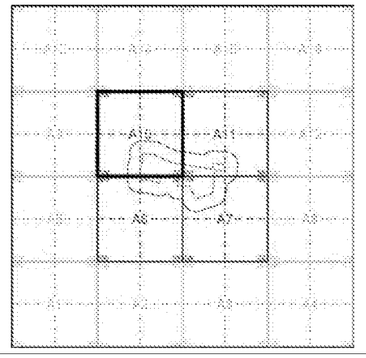
Geo-Environmental
Additional SIMs
Published 1992
Source map scale - 1:2,500

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Map Name(s) and Date(s)



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Geo-Environmental

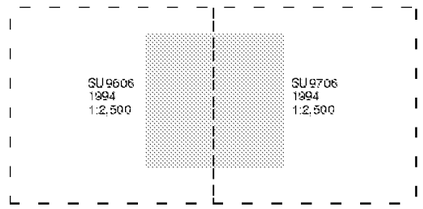
Large-Scale National Grid Data

Published 1994

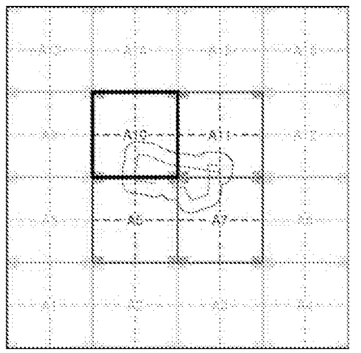
Source map scale - 1:2,500

'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)



Historical Map - Segment A10



N

Order Details

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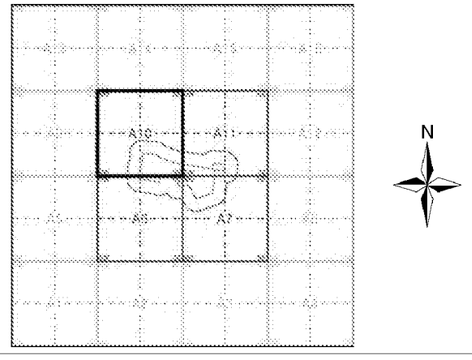


Geo-Environmental
Historical Aerial Photography

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 A10



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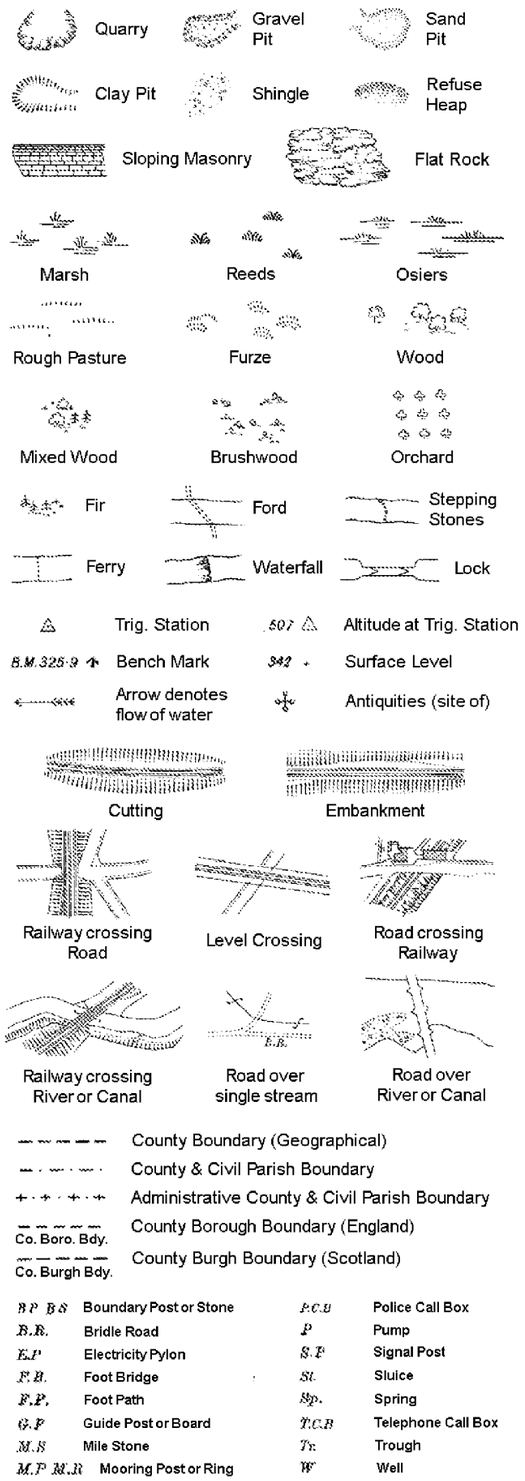
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Historical Mapping Legends

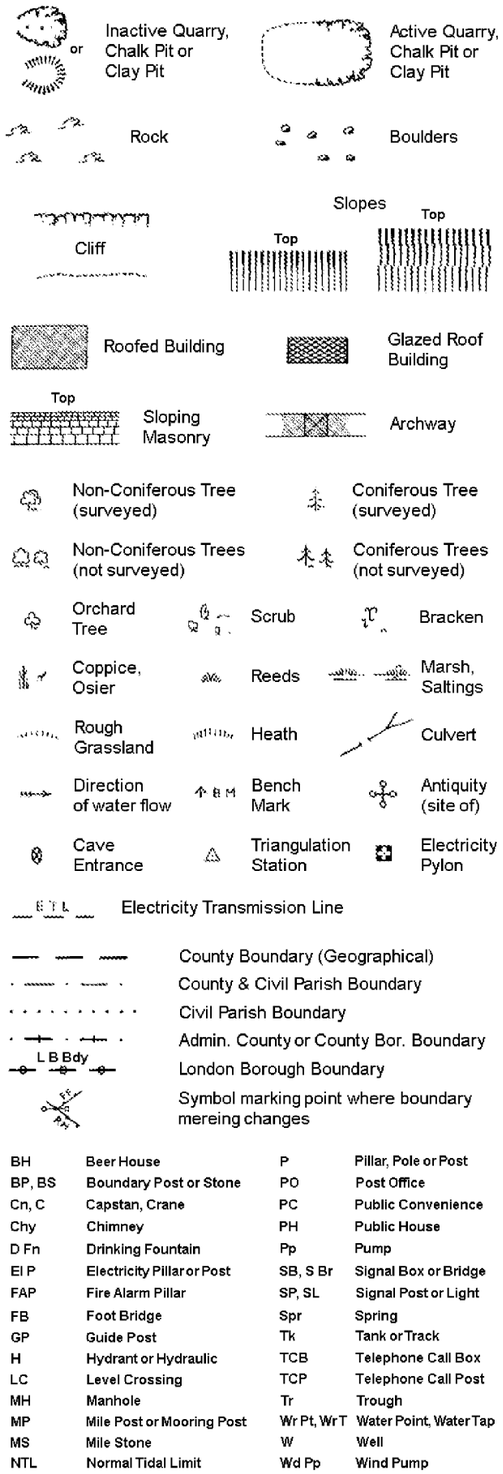
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B.P. B.S.	Boundary Post or Stone	P.C.B.	Police Call Box
B.R.	Bridle Road	P.	Pump
E.P.	Electricity Pylon	S.P.	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P.	Guide Post or Board	T.C.B.	Telephone Call Box
M.S.	Mile Stone	Tr.	Trough
M.P.M.R.	Mooring Post or Ring	W.	Well

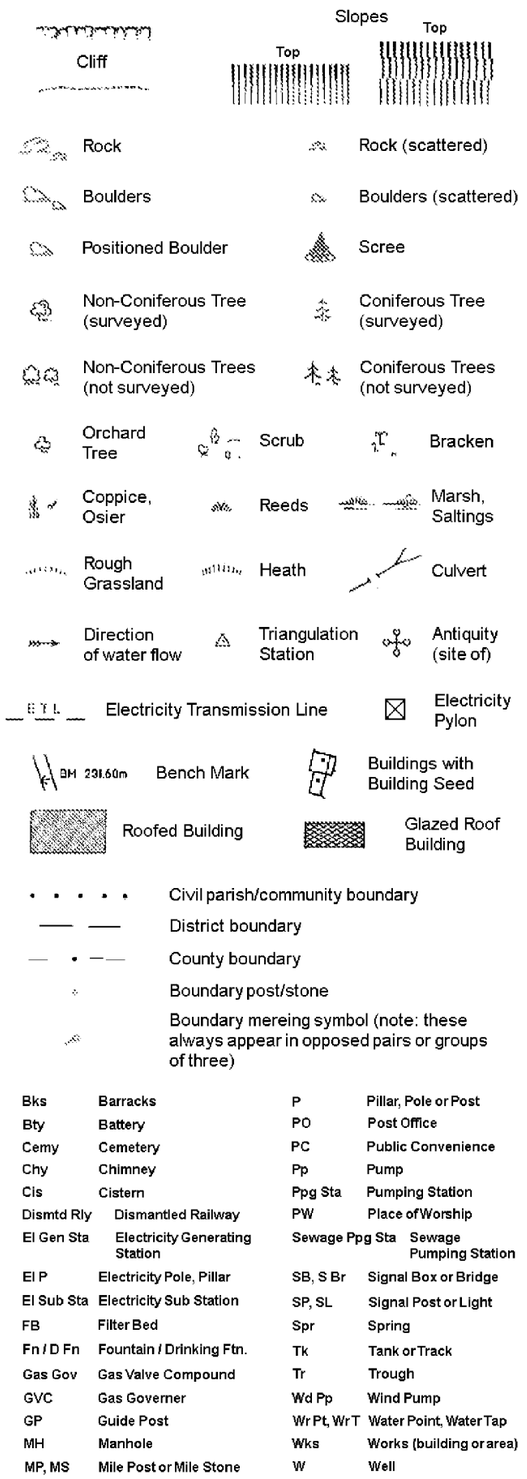
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

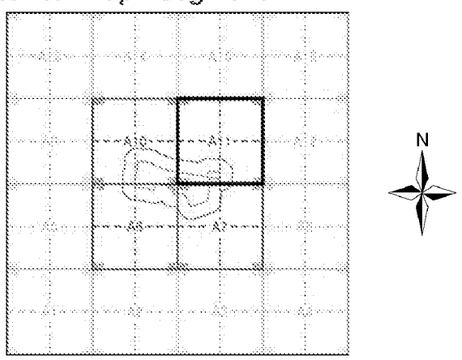
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

ARUN DISTRICT COUNCIL WA/99/18.DOC

Geo-Environmental
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Sussex	1:2,500	1875 - 1876	2
Sussex	1:2,500	1897	3
Sussex	1:2,500	1912	4
Sussex	1:2,500	1938 - 1939	5
Ordnance Survey Plan	1:2,500	1974	6
Additional SIMs	1:2,500	1977	7
Additional SIMs	1:2,500	1990	8
Additional SIMs	1:2,500	1992	9
Large-Scale National Grid Data	1:2,500	1994	10
Historical Aerial Photography	1:2,500	1999	11

Historical Map - Segment A11



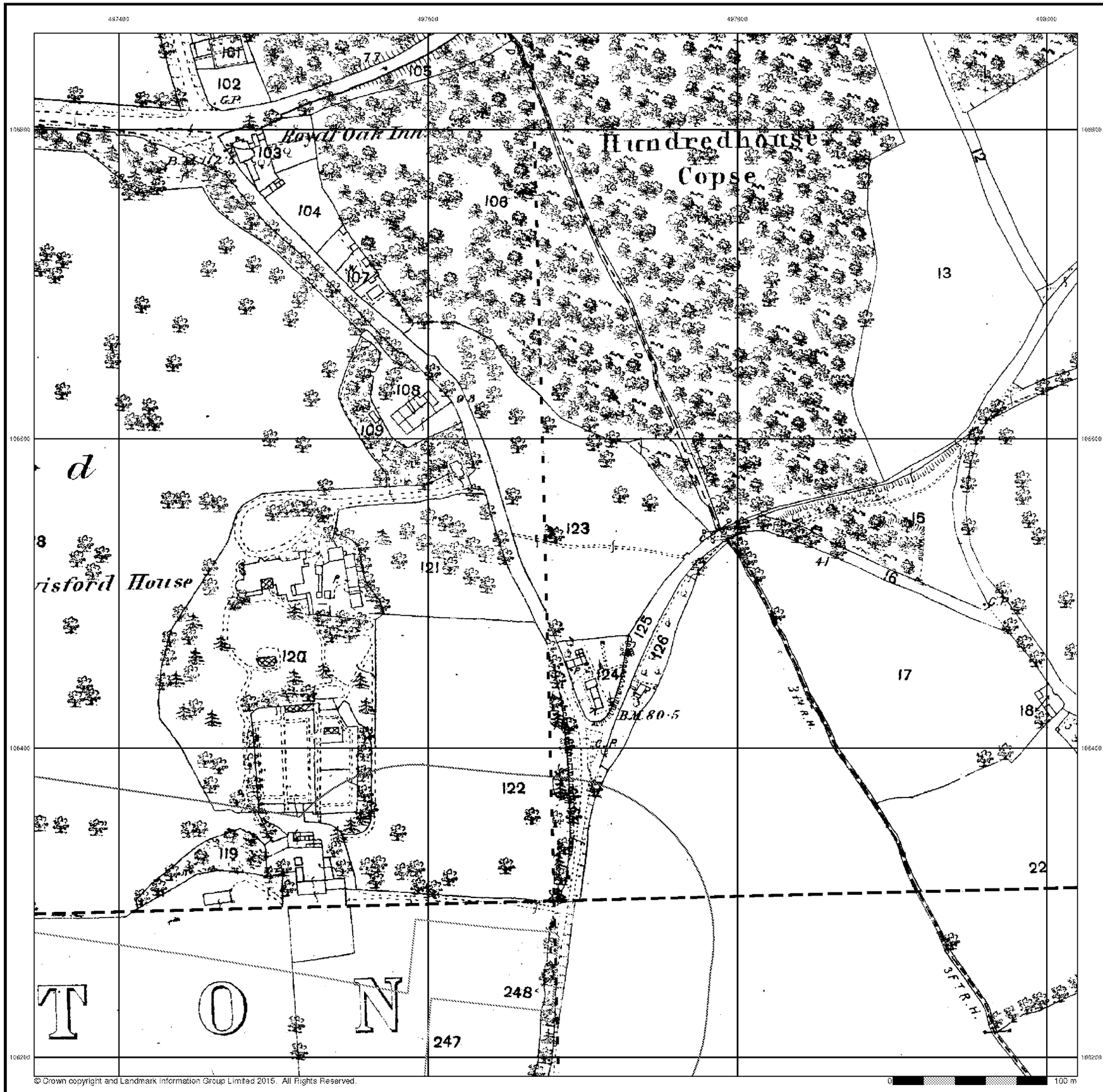
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Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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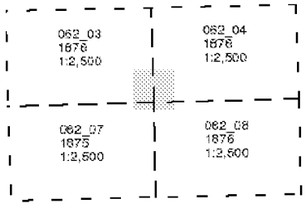
Geo-Environmental
Sussex

Published 1875 - 1876

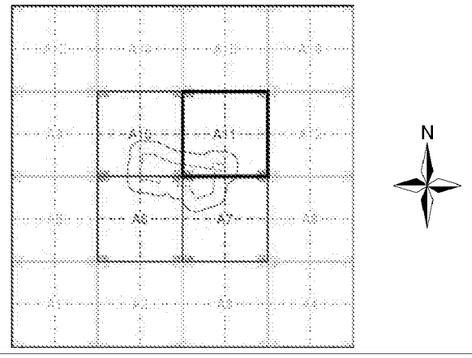
Source map scale - 1:2,500

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 A11



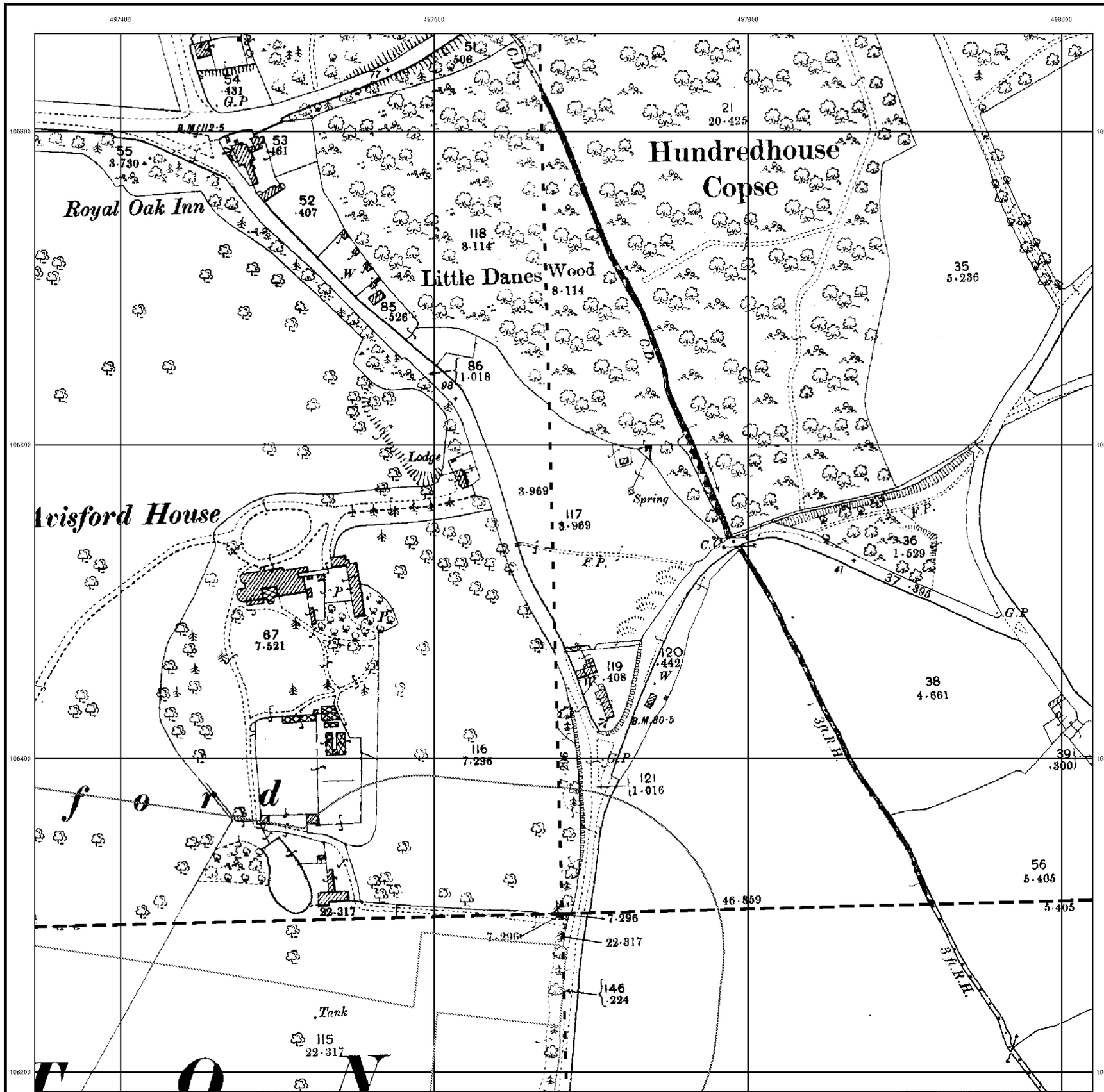
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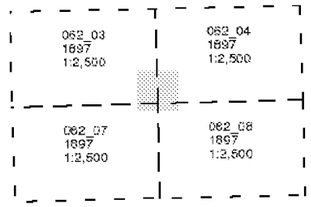
Geo-Environmental
Sussex

Published 1897

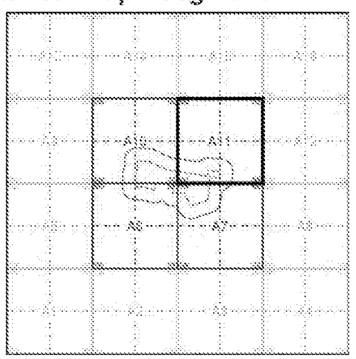
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



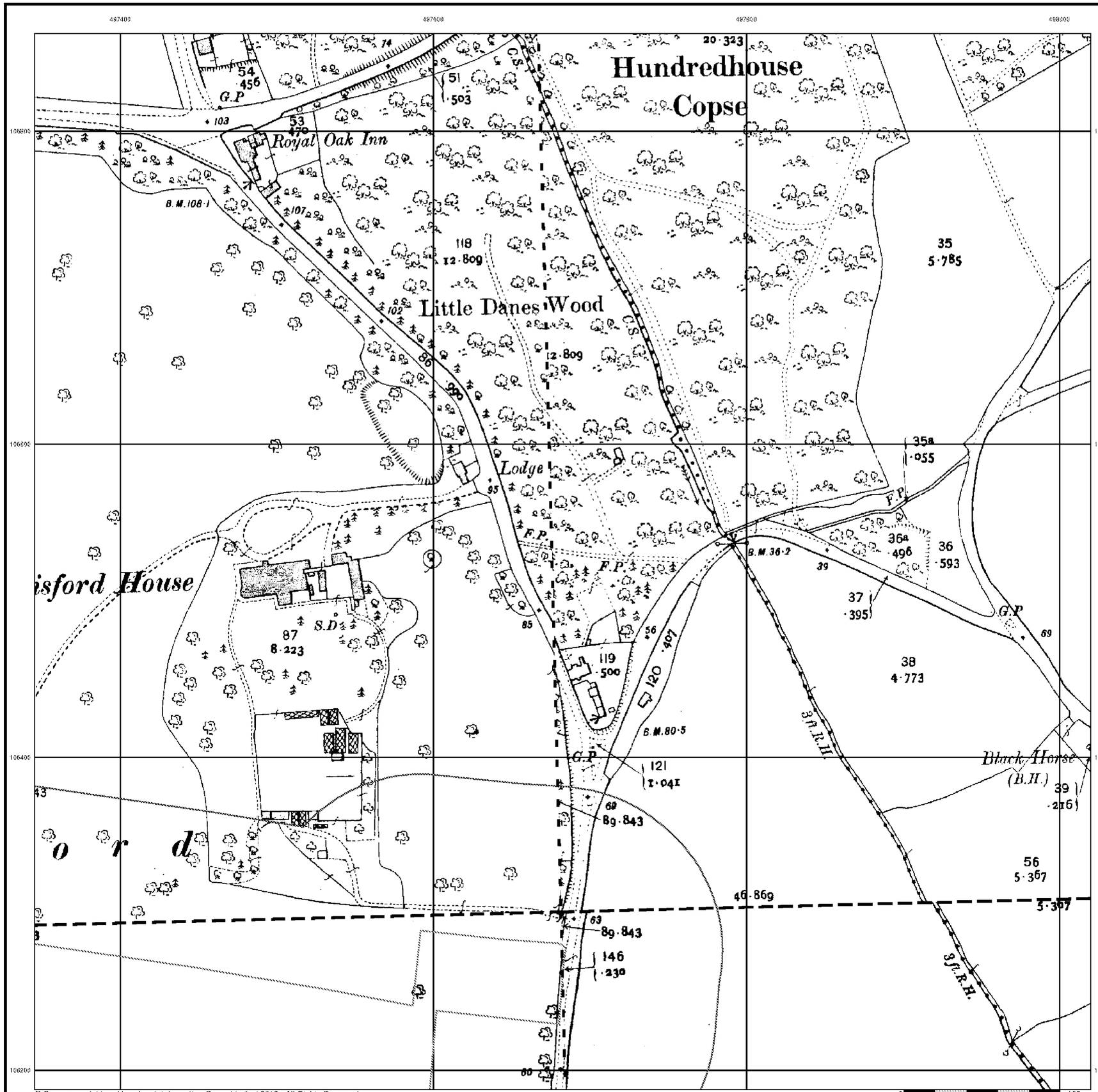
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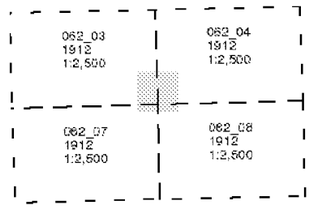
Geo-Environmental
Sussex

Published 1912

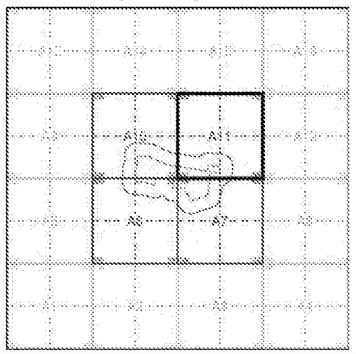
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



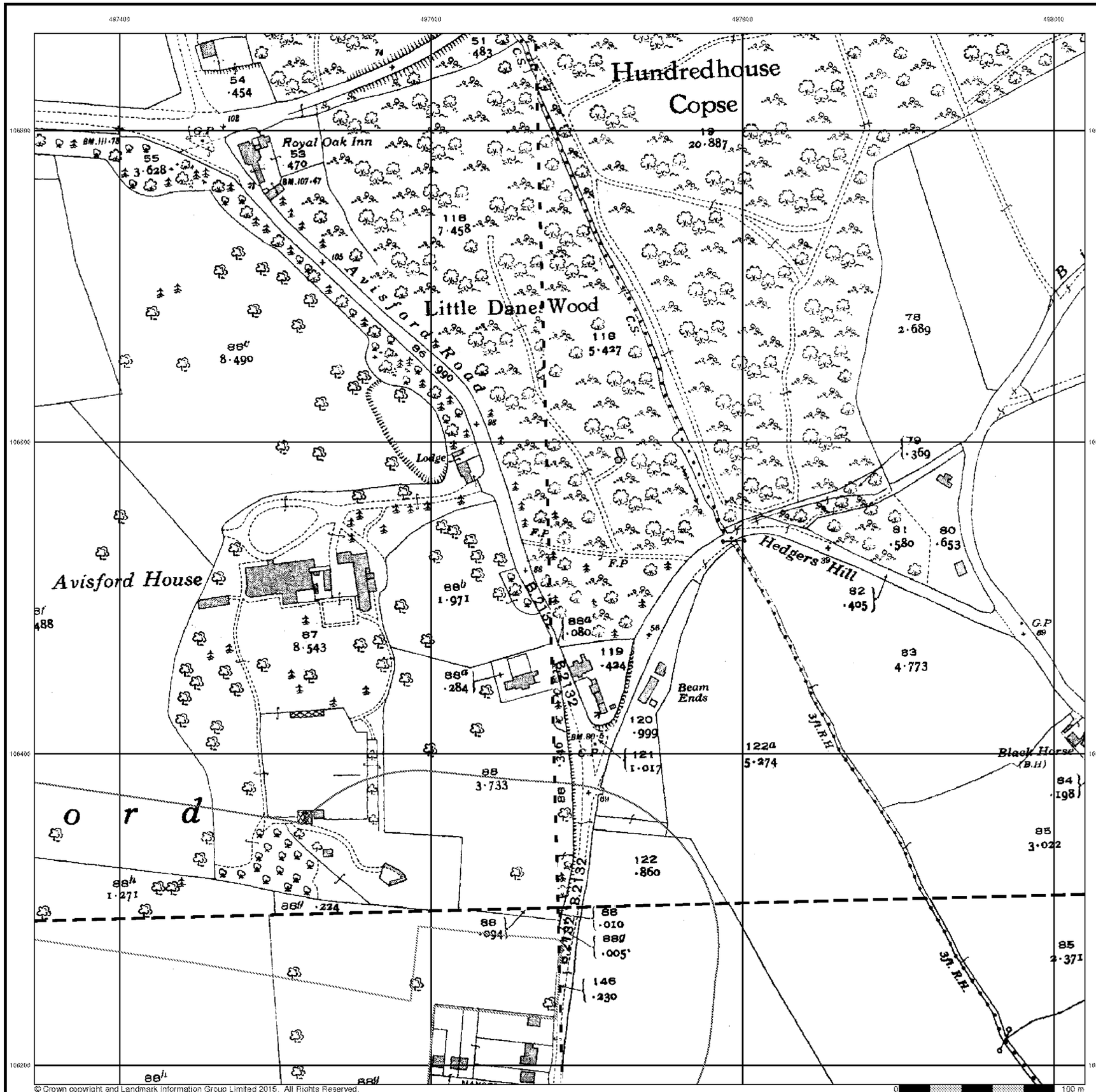
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0 100 m

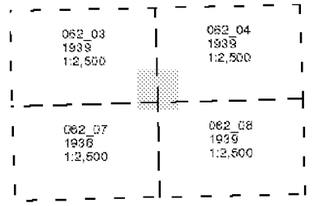
Geo-Environmental
Sussex

Published 1938 - 1939

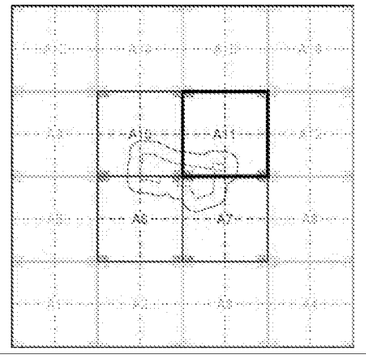
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



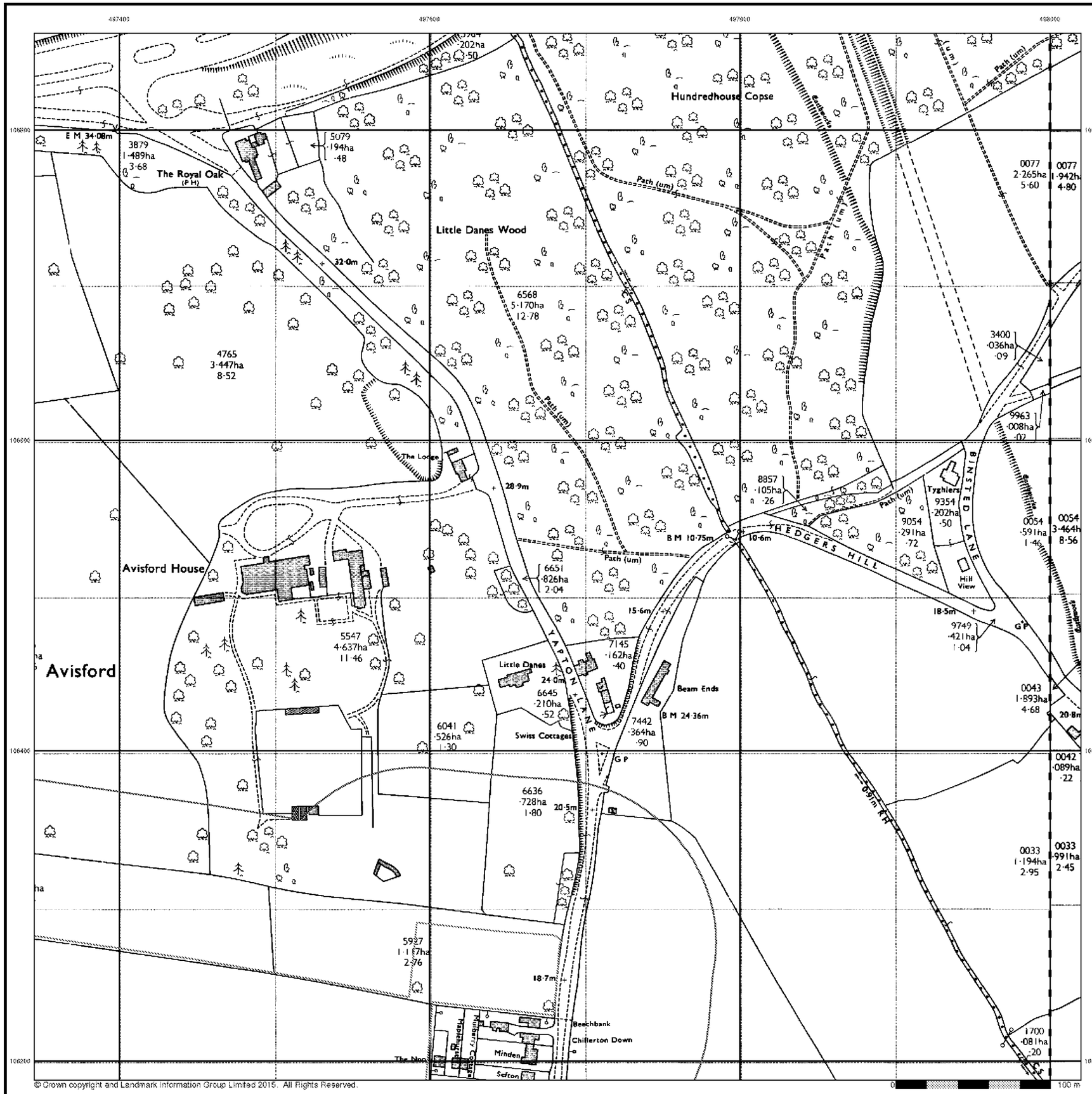
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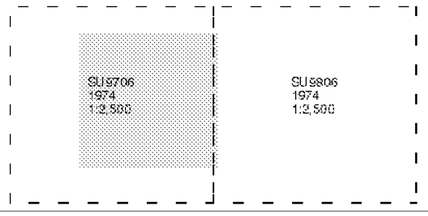
Ordnance Survey Plan

Published 1974

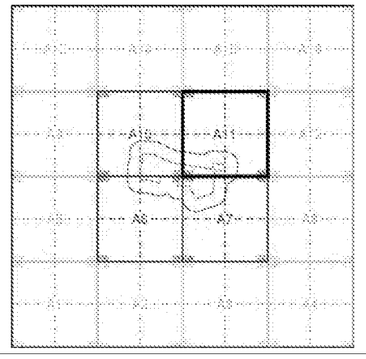
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

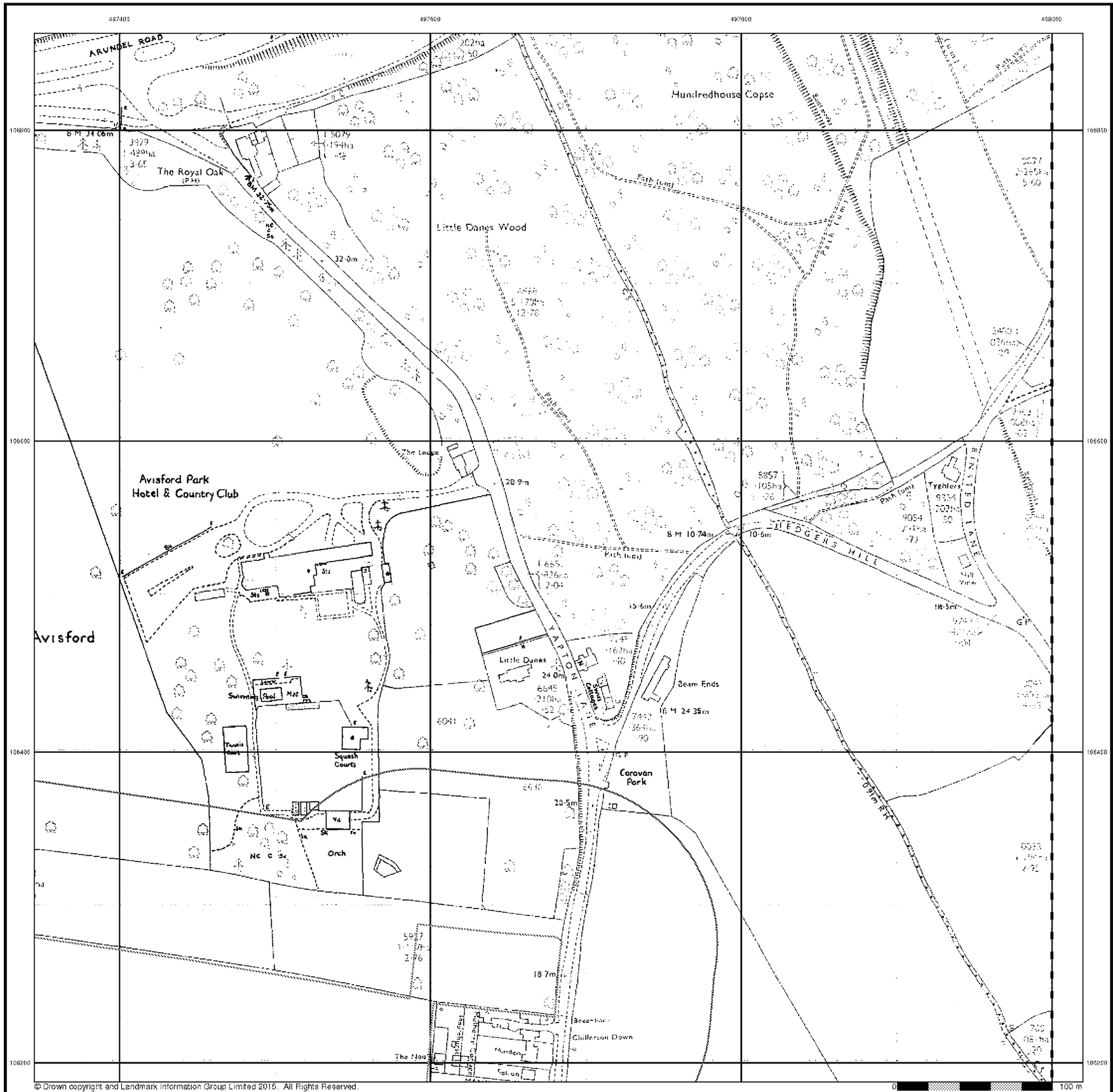
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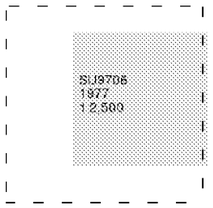


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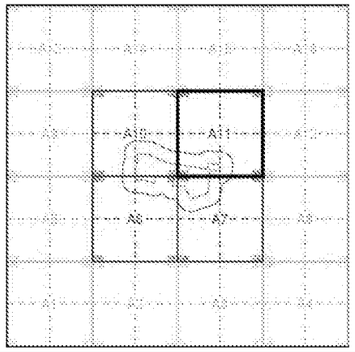
Geo-Environmental
Additional SIMs
Published 1977
Source map scale - 1:2,500

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 A11



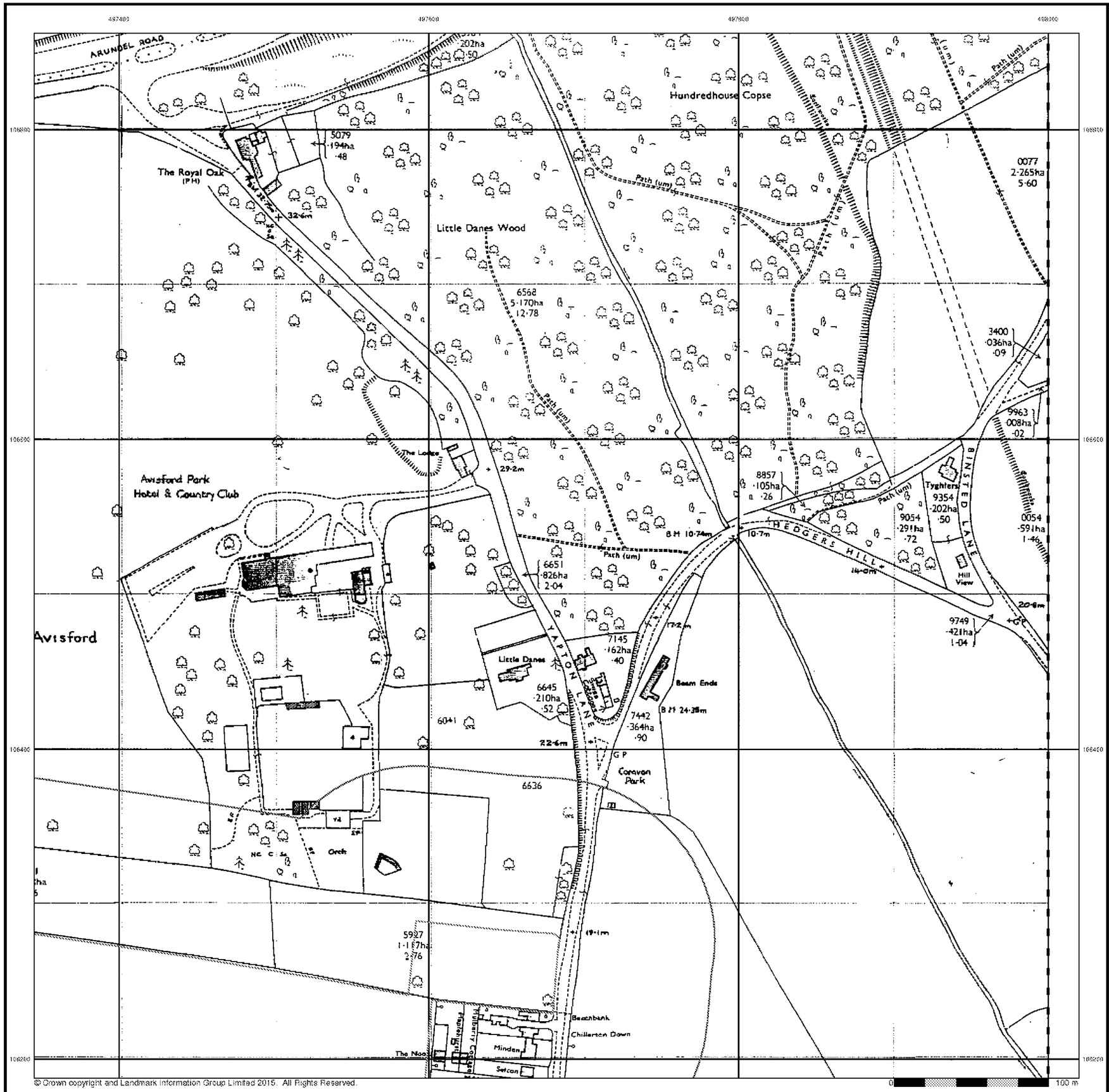
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Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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Geo-Environmental

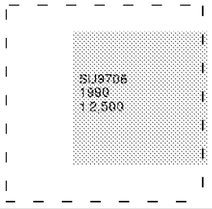
Additional SIMs

Published 1990

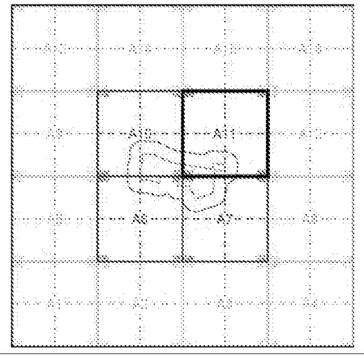
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



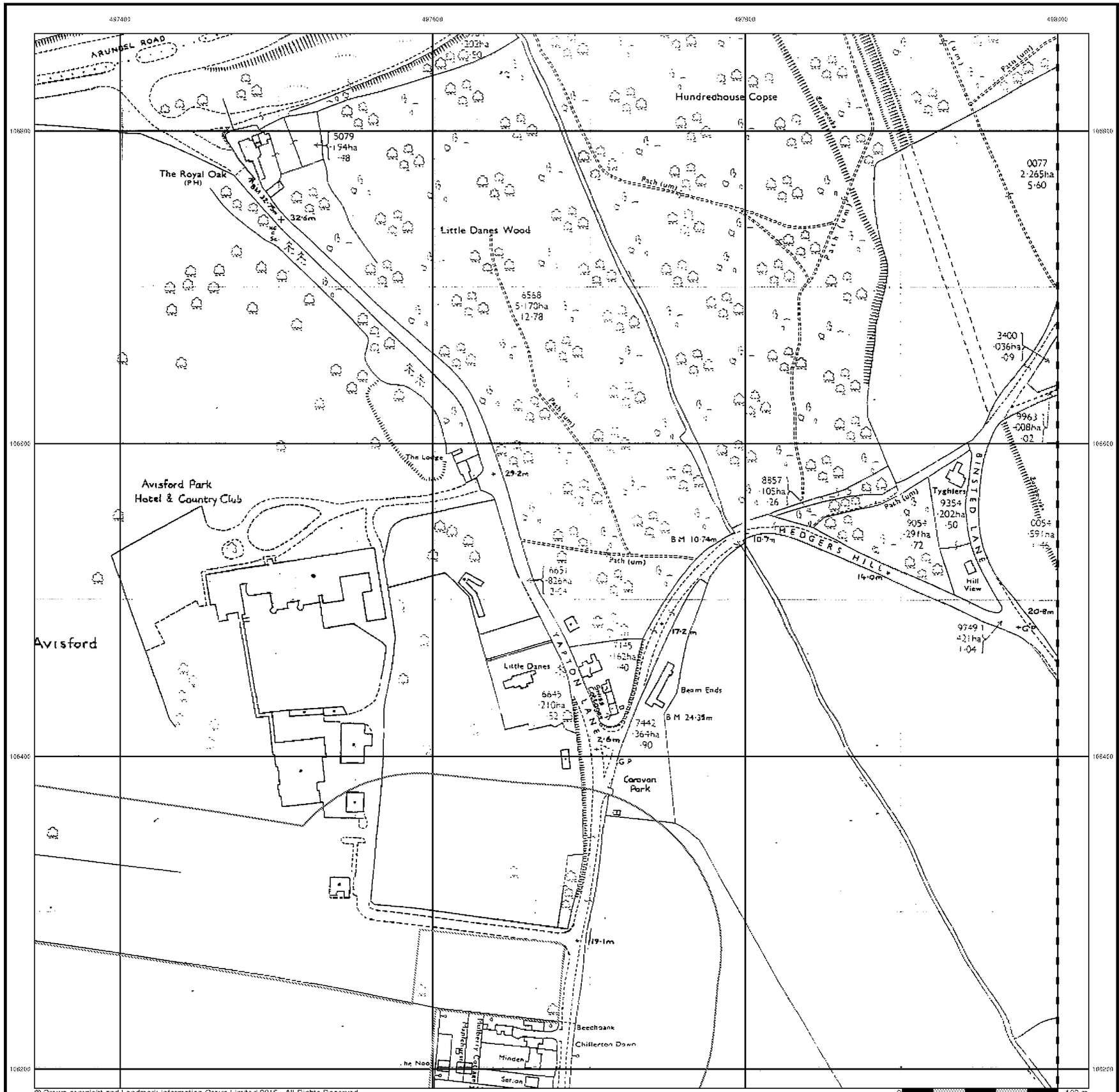
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Slice:	A
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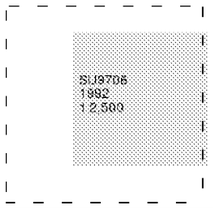


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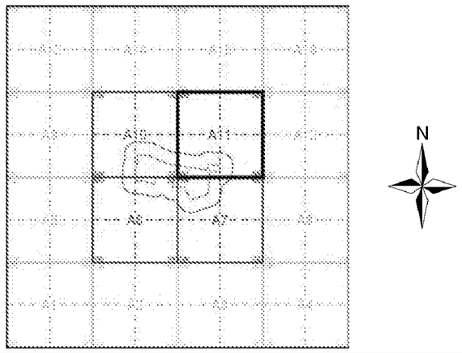
Geo-Environmental
Additional SIMs
Published 1992
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



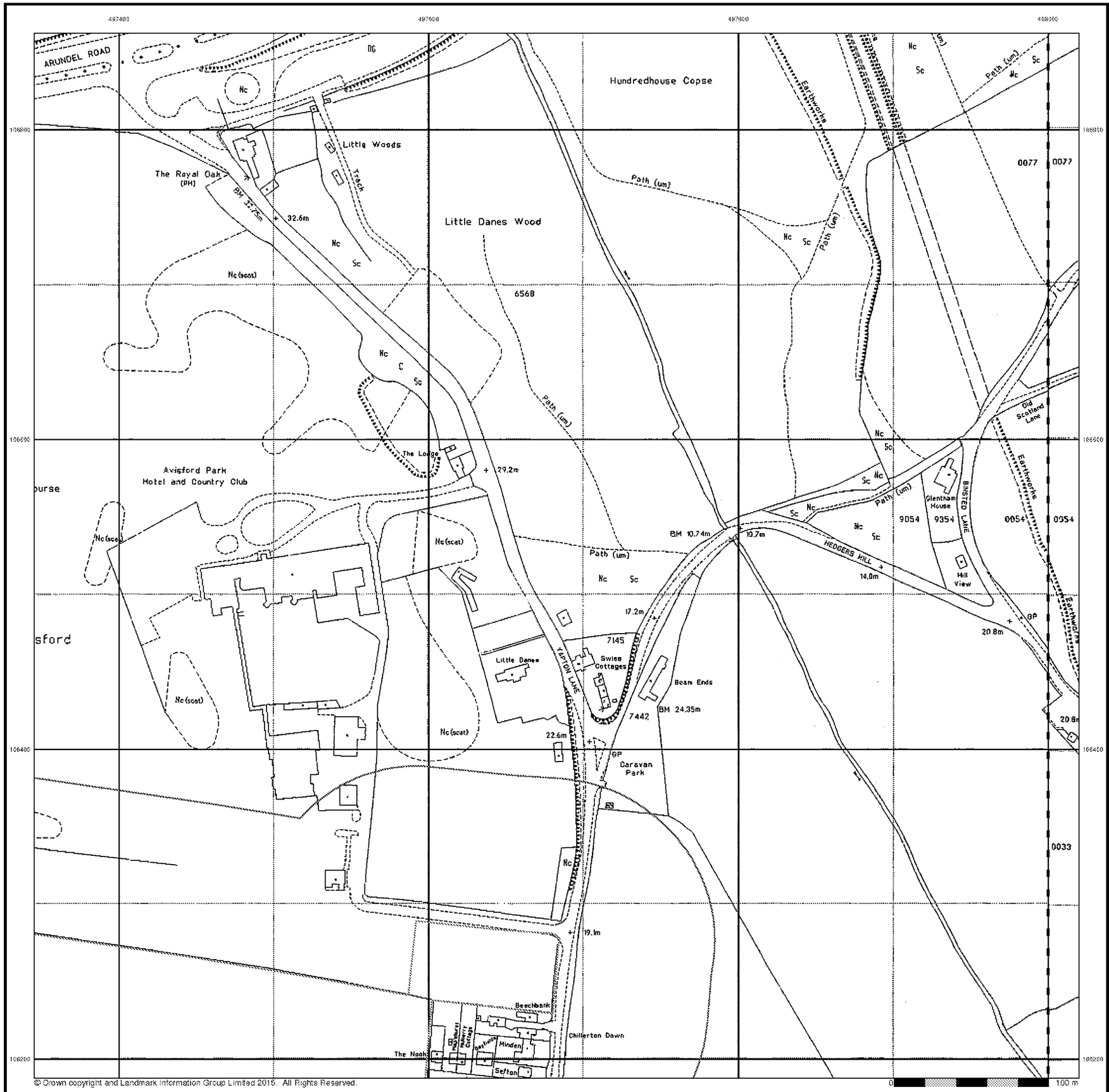
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Geo-Environmental

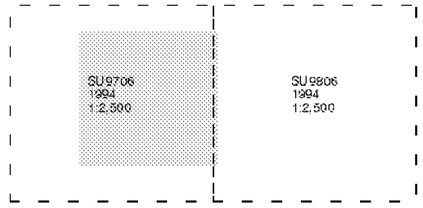
Large-Scale National Grid Data

Published 1994

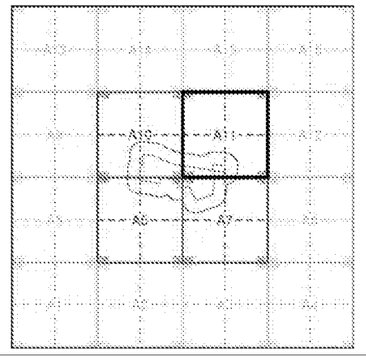
Source map scale - 1:2,500

'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)



Historical Map - Segment A11



Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
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Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

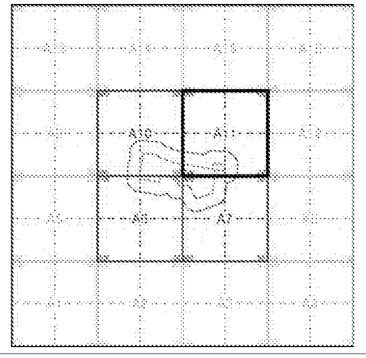
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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Geo-Environmental
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 A11



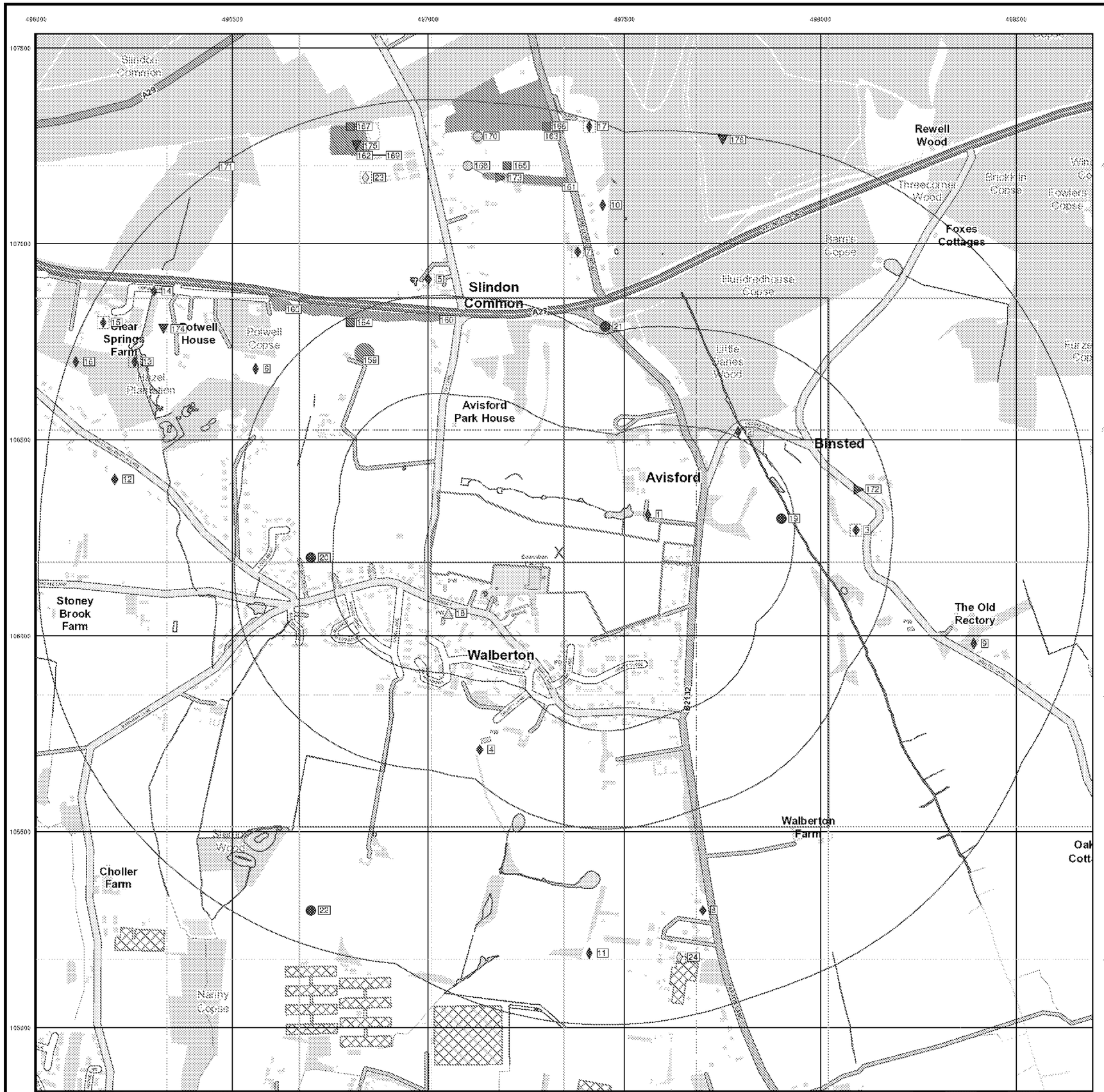
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	100

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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



Geo-Environmental

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

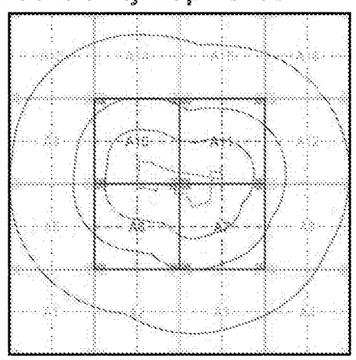
Agency and Hydrological
- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention 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

Geological
- 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 - Slice A



Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details
Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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



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Geo-Environmental
Industrial Land Use Map

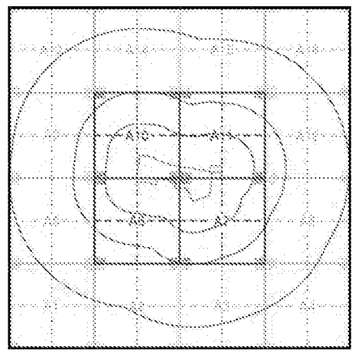
General

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



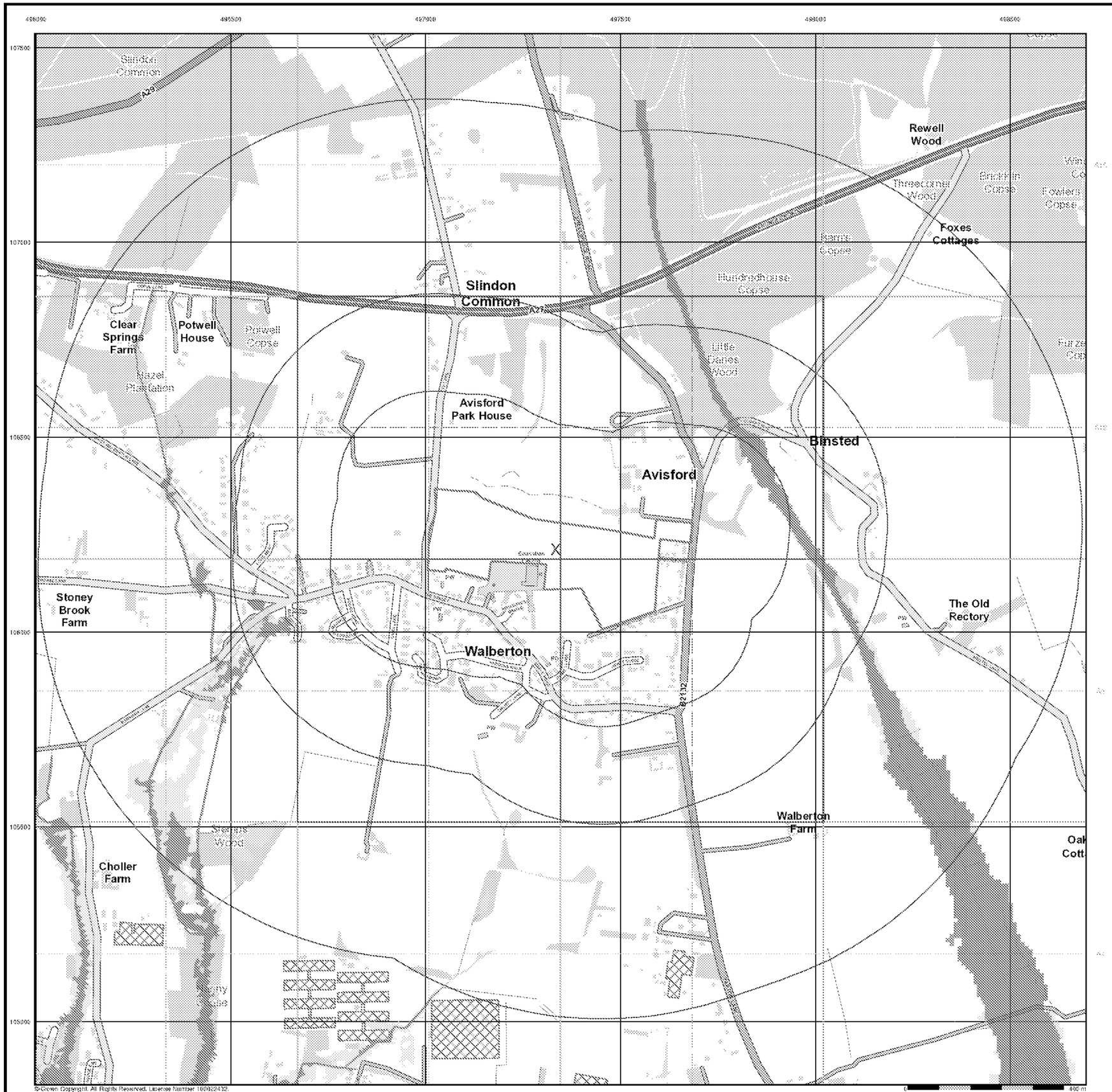
Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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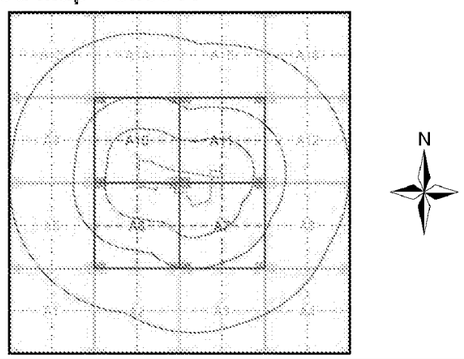
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Geo-Environmental

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

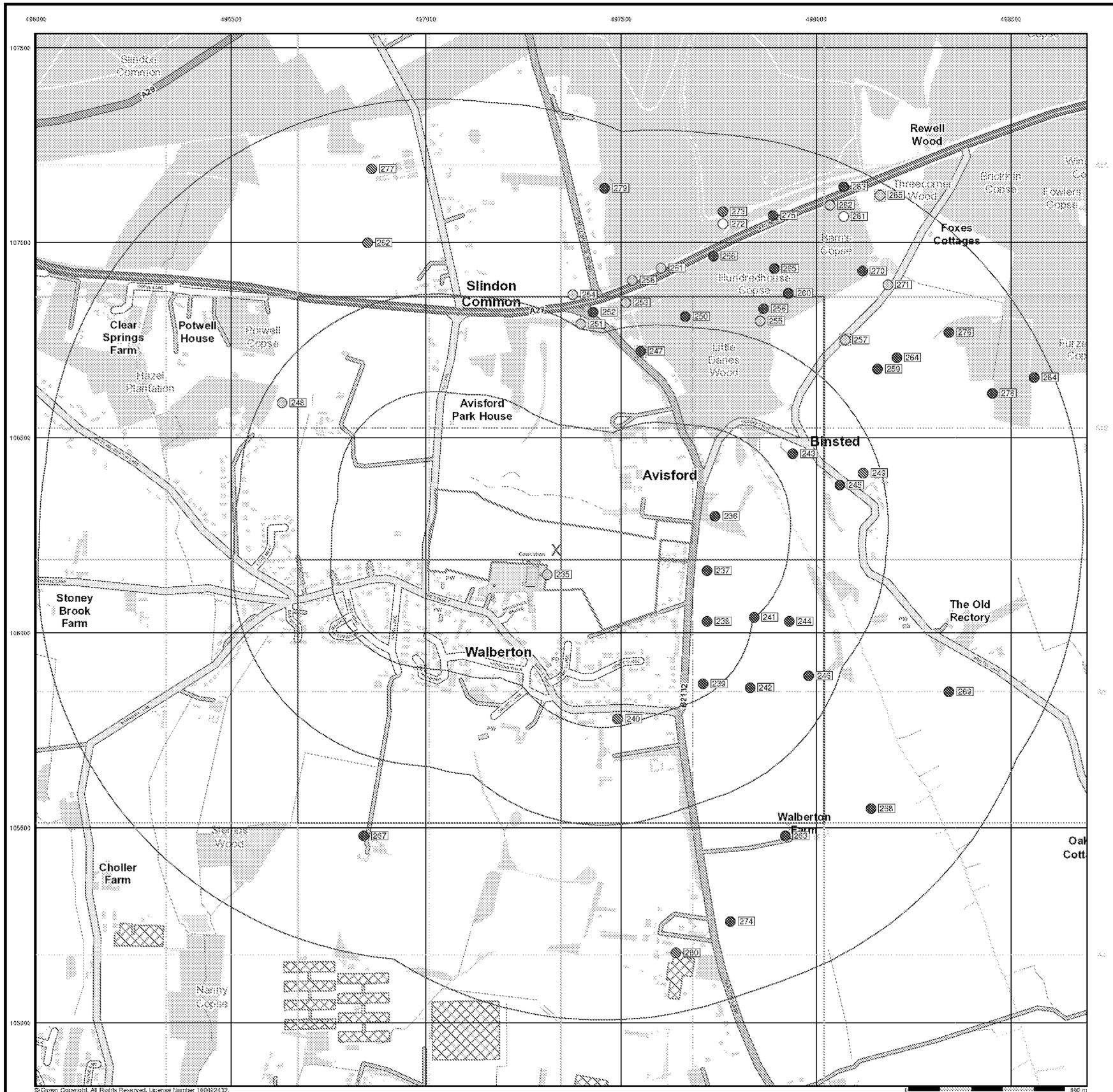


Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details
Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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



Geo-Environmental

General

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

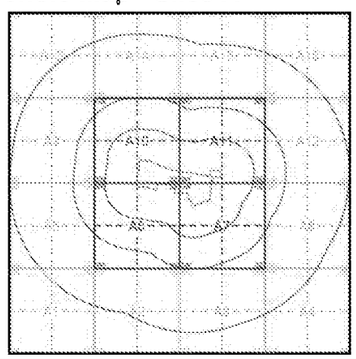
Agency and Hydrological (Boreholes)

- 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:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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Geo-Environmental

General

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

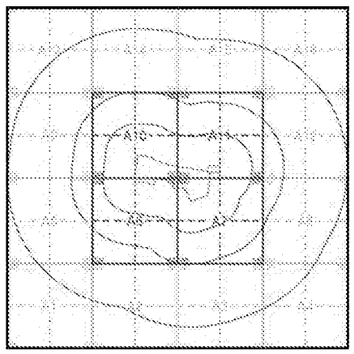
OS Water Network Data

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

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

OS Water Network Map - Slice A



N

Order Details

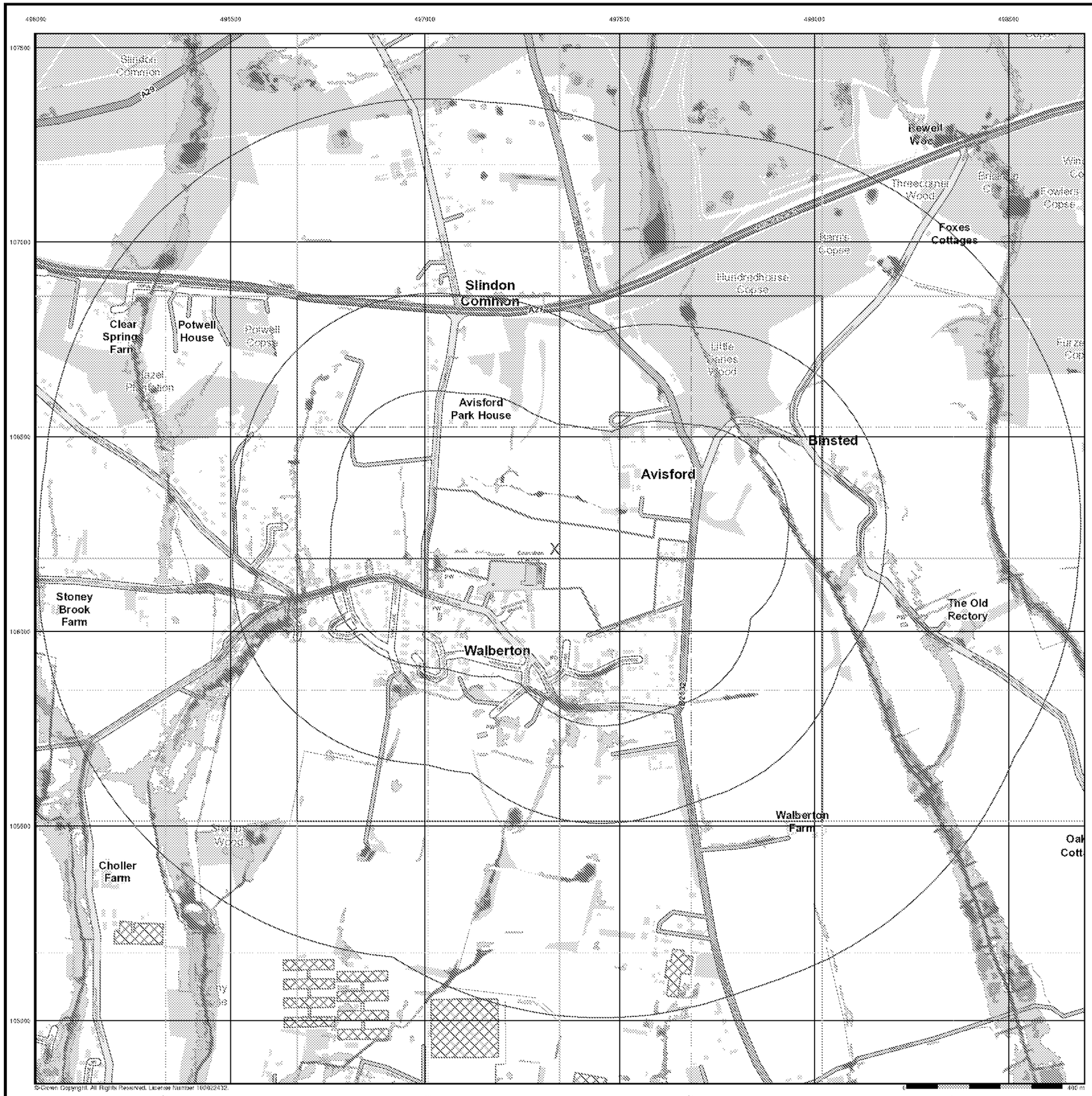
Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

Landmark INFORMATION GROUP

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



Geo-Environmental

General

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

Risk of Flooding from Surface Water

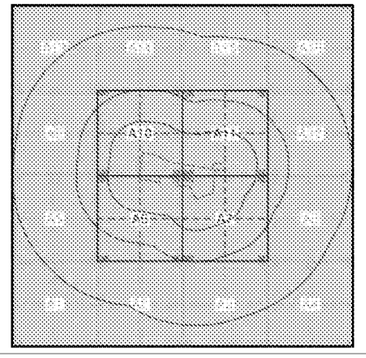
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

Order Number:	143822756_1_1
Customer Ref:	GE16861
National Grid Reference:	497330, 106210
Slice:	A
Site Area (Ha):	11.27
Search Buffer (m):	1000

Site Details

Wessex House, Tye Lane, Walberton, ARUNDEL, BN18 0PS

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

Wates
DEVELOPMENTS

WINTER GROUNDWATER MONITORING

LAND EAST OF IVY LANE, WALBERTON

JUNE 2017



ARUN DISTRICT COUNCIL WA/061/2020

Geo-Environmental

GROUNDWATER MONITORING REPORT

for the site known as,

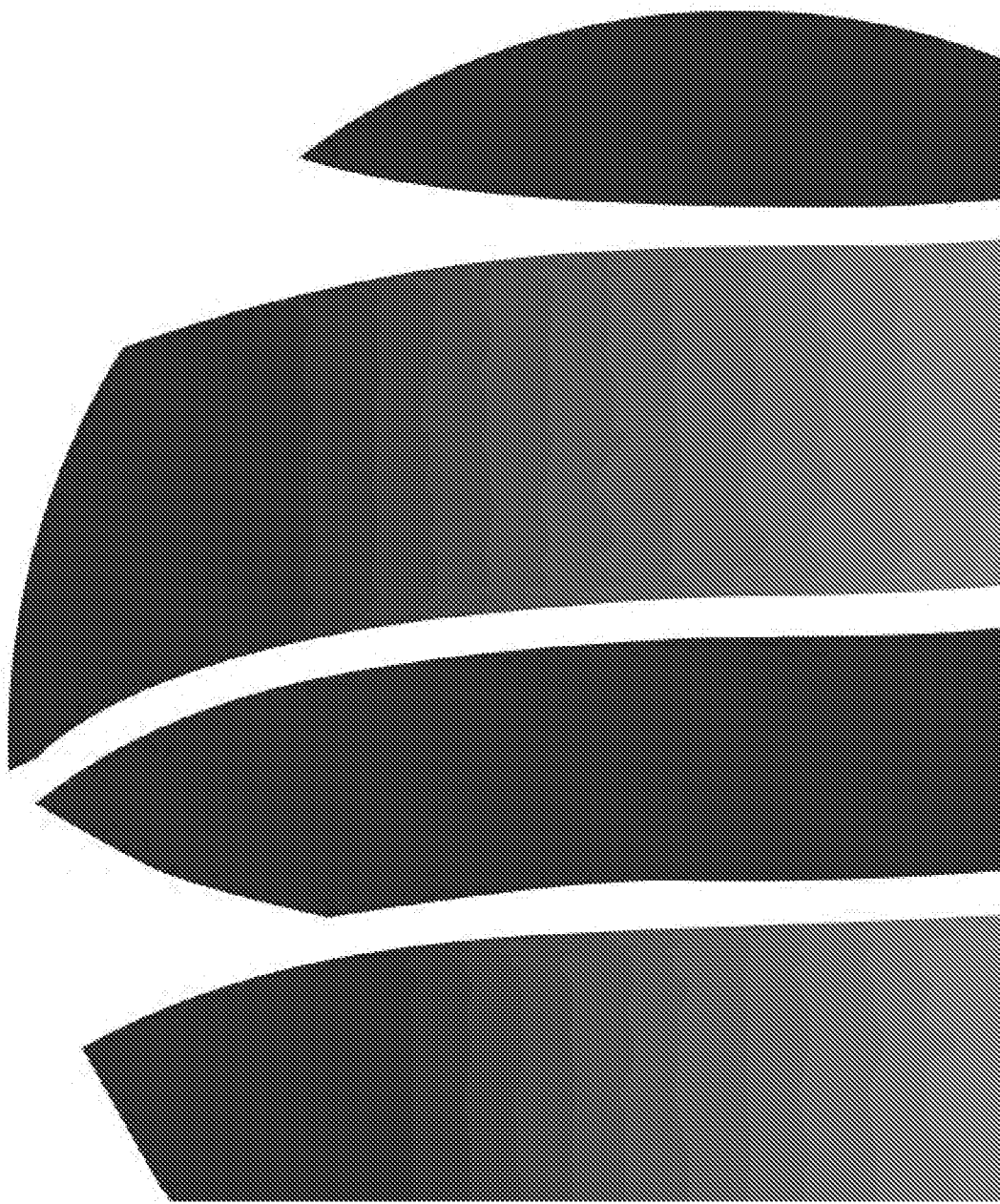
LAND EAST OF TYE LANE,

WALBERTON,

WEST SUSSEX

on behalf of

WATES DEVELOPMENTS LIMITED



ARUN DISTRICT COUNCIL WA/99/18/DOC

Report:	GROUND APPRAISAL REPORT
Site:	LAND EAST OF TYE LANE, WALBERTON, WEST SUSSEX
Client:	WATES DEVELOPMENTS LIMITED
Date:	15/06/2017
Reference:	GE16054-GWMR-JUNE17
Version:	2.0
Prepared by:	[redacted] CESAR AZEVEDO BEng Hons), FGS CONSULTING ENGINEER
Reviewed by:	[redacted] KATIE BRAYNE CSci, BSc (Hons), MSc, FGS, MiEnvSc SENIOR CONSULTING ENGINEER

[redacted]

ARUN DISTRICT COUNCIL WA/99/18/DOC

CONTENTS

1.0 Introduction
2.0 Site Description
3.0 Ground Conditions
4.0 Encountered Groundwater and Groundwater Monitoring Results

FIGURES

FIGURE 1 Exploratory Hole Location Plan

APPENDICES

APPENDIX A Exploratory Hole Logs

1.0 Introduction

Geo-Environmental was instructed by Wates Developments Limited to undertake an intrusive investigation at the site off Tye Lane, Walberton, BN18 0AN.

Eight monitoring wells were installed within window sampling boreholes to depths of 3.0mbgl to allow for groundwater monitoring. The purpose of this was in response to local concerns of ground conditions on the site and ultimately to inform the drainage strategy to be designed by the client's engineers.

2.0 Site Description

The intrusive site investigation was undertaken an area of open farmland situated east of Tye Lane, Walberton, Arundel, BN18 0AN. At the time of the site walkover, the site was generally flat and roughly rectangular in plan area, and comprised rough pasture and was vacant of any buildings.

The site was bound by mature and semi-mature trees with Tye Lane to the west. Avisford Park Golf Club was located immediately adjacent to the northern boundary, with the surrounding land comprising a residential properties with amenities to the south and east. Access to the site was via Yapton Lane to the east.

3.0 Ground Conditions

The ground conditions encountered during the investigation were broadly consistent with the anticipated published sequence of strata. In summary, ground conditions typically comprised a mantle of Topsoil locally overlying the River Terrace Deposits with the London Clay at depth.

Topsoil was encountered in all investigation positions to depths of 0.15m to 0.30mbgl and typically consisted of grass overlying dark brown slightly sandy clay with occasional rootlets and flint gravel.

Soils inferred to be the River Terrace Deposits were encountered in all locations from underlying the Topsoil to a depth of 3.0m bgl (maximum depth of the investigation). The deposits were of a mixed composition comprising silty CLAY and gravelly silty CLAY.

It was anticipated that the London Clay Formation (Clay, Silt and Sand) would underlie the River Terrace Deposits, however, this formation was not proved during the investigation. A summary of the encountered ground conditions is presented in Table 1.

On completion of the window sampling borehole, groundwater monitoring standpipes were installed within all borehole locations to facilitate return monitoring on seven occasions between 30th January 2017 and 11th April 2017, during what would be considered the wetter months in the year.

Depth (m bgl)	Description	Stratum	Position
0.0 – 0.15 - 0.30	Grass overlying dark brown slightly sandy clay with occasional rootlets.	Topsoil	All Positions
0.15-0.30 – 3.0	Brown silty CLAY with rare fine to coarse angular flint gravel, overlying orangish brown gravelly silty CLAY with rare black specks.	River Terrace Deposits	

Table 1: Summary of encountered ground conditions.

ARUN DISTRICT COUNCIL WA/99/18/DOC

The approximate positions of the window sampler boreholes are presented in Figure 1. For more detailed descriptions of the ground conditions at specific locations, reference should be made to the borehole logs attached in Appendix A.

4.0 Encountered Groundwater and Groundwater Monitoring Results

The majority of boreholes were dry on completion with the exception of WS5 and WS8 which recorded levels between 0.95mbgl and 1.06mbgl. Based on the underlying ground conditions set out above, this is not considered to be groundwater, but is most likely an accumulation of water sitting on top of the London Clay Formation within the more granular soils of the River Terrace Deposits.

Monitoring of the standpipes within the boreholes identified that groundwater was still present within WS5 and WS8 at relatively shallow depths of around 0.61m and 2.26m bgl., whilst no groundwater was encountered in any of the other exploratory holes. As previously discussed, this is believed to be an accumulation of water sitting on top of the London Clay Formation within the more granular soils of the River Terrace Deposits.

It should be noted that changes in groundwater levels do occur for a number of reasons including seasonal effects and variations in drainage. Such fluctuations may only be recorded by the measurement of the groundwater level within a standpipe or piezometer installed within appropriate response zones. However, the testing was undertaken during winter months and therefore represent a worst case scenario.

The depths of groundwater recorded during the intrusive investigation and over the monitoring period are presented in Table 2.

Groundwater Depths (mbgl)							
	Fieldwork	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Visit 7
Location	30/01/17	09/02/17	14/02/17	28/02/17	14/03/17	28/03/17	11/04/17
WS1	Dry	Dry	Dry	Dry	Dry	Dry	Dry
WS2	Dry	Dry	Dry	Dry	Dry	Dry	Dry
WS3	Dry	Dry	Dry	Dry	Dry	Dry	Dry
WS4	Dry	Dry	Dry	Dry	Dry	Dry	Dry
WS5	1.06	1.52	1.49	1.14	1.54	1.90	2.26
WS6	Dry	Dry	Dry	Dry	Dry	Dry	Dry
WS7	Dry	Dry	Dry	Dry	Dry	Dry	Dry
WS8	0.95	0.61	0.90	0.74	1.15	1.85	2.00

Table 2: Groundwater Depths

ARUN DISTRICT COUNCIL WA/99/18/DOC

FIGURES

Project Title:	**Land West of Yapton Road**	**Title :**	**Figure 1 - Site Location Plan**
Location :	**Walberton**	**Scale:**	**1:5000**
Project No. :	**GE16054**	**Engineer:**	**Cesar Azevedo**
Client :	**Wates Developments**		

Geo-Environmental

Legend Key

Locations By Type - WLS



APPENDIX A

Exploratory Hole Logs

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS1** Sheet 1 of 1

Project Name:	Land West of Yapton Road	Project No. GE16054	Co-ords: 497636E - 106265N	Hole Type WLS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments		Dates: 30/01/2017	Logged By CA

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.15			Grass over dark brown slightly sandy clay with occasional rootlets. TOPSOIL
								Firm dark orangish brown silty CLAY with rare fine to coarse angular flint gravel. RIVER TERRACE DEPOSITS
					1.10			Firm dark orangish brown gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					3.00			End of Borehole at 3.00m

1 2 3 4 5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Groundwater not encountered.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	Borehole Log	Borehole No. **WS2** Sheet 1 of 1
Project Name:	Land West of Yapton Road	Project No. GE16054	Co-ords: 497571E - 106216N	Hole Type WLS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments		Dates: 30/01/2017	Logged By CA

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20			Grass over dark brown slightly sandy clay with occasional rootlets. TOPSOIL
								Firm dark brown silty CLAY with rare fine to coarse angular flint gravel. RIVER TERRACE DEPOSITS
					0.90			Firm dark orangish brown gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					3.00			End of Borehole at 3.00m

1 2 3 4 5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Groundwater not encountered.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS3** Sheet 1 of 1
Project Name:	Land West of Yapton Road	Project No. GE16054	Co-ords: 497493E - 106072N	Hole Type WLS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments		Dates: 30/01/2017	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Grass over dark brown slightly sandy clay with occasional rootlets. TOPSOIL
					0.30			Firm dark brown silty CLAY with rare fine to coarse angular flint gravel. RIVER TERRACE DEPOSITS
					2.20			Firm dark orangish brown gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					3.00			End of Borehole at 3.00m

1 2 3 4 5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Groundwater not encountered.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	Borehole Log	Borehole No. **WS4** Sheet 1 of 1
Project Name:	Land West of Yapton Road	Project No. GE16054	Co-ords: 497351E - 106182N	Hole Type WLS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments		Dates: 30/01/2017	Logged By CA

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Grass over dark brown slightly sandy clay with occasional rootlets and flint gravel. TOPSOIL
					0.30			Firm dark brown silty CLAY with rare fine to coarse angular flint gravel. RIVER TERRACE DEPOSITS
					2.10			Firm dark orangish brown gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					3.00			End of Borehole at 3.00m

1
2
3
4
5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Groundwater not encountered.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS5** Sheet 1 of 1

Project Name:	Land West of Yapton Road	Project No. GE16054	Co-ords: 497268E - 106264N	Hole Type WLS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments		Dates: 30/01/2017	Logged By CA

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.25			Grass over dark brown slightly sandy clay with occasional rootlets and flint gravel. TOPSOIL
								Firm dark brown silty CLAY with rare fine to coarse angular flint gravel. RIVER TERRACE DEPOSITS
					0.80			Firm dark orangish brown gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
								Groundwater encountered at 1.06m likely to be perched water.
					2.60			Firm dark orangish brown very gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					3.00			End of Borehole at 3.00m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Groundwater encountered at 1.06m (probably perched water).

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS6** Sheet 1 of 1
Project Name:	Land West of Yapton Road	Project No. GE16054	Co-ords: 497187E - 106209N	Hole Type WLS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments		Dates: 30/01/2017	Logged By CA

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Grass over dark brown slightly sandy clay with occasional rootlets and flint gravel. TOPSOIL
					0.25			
								Firm dark brown silty CLAY with rare fine to coarse angular flint gravel. RIVER TERRACE DEPOSITS
					1.20			
								Firm dark orangish brown gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					2.30			
								Firm dark orangish brown very gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					3.00			End of Borehole at 3.00m

1 2 3 4 5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Groundwater not encountered.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS7** Sheet 1 of 1

Project Name:	Land West of Yapton Road	Project No. GE16054	Co-ords: 497082E - 106184N	Hole Type WLS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments		Dates: 30/01/2017	Logged By CA

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Grass over dark brown slightly sandy clay with occasional rootlets and flint gravel. TOPSOIL
					0.25			Firm dark brown silty CLAY with rare fine to coarse angular flint gravel. RIVER TERRACE DEPOSITS
					0.90			Firm dark orangish brown gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					1.50			Firm dark orangish brown very gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					3.00			End of Borehole at 3.00m

1 2 3 4 5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Groundwater not encountered.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS8** Sheet 1 of 1

Project Name:	Land West of Yapton Road	Project No. GE16054	Co-ords: 497104E - 106341N	Hole Type WLS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments		Dates: 30/01/2017	Logged By CA

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20			Grass over dark brown slightly sandy clay with occasional rootlets and flint gravel. TOPSOIL
								Firm dark brown orangish silty CLAY with rare fine to coarse angular flint gravel. RIVER TERRACE DEPOSITS
					0.90			Firm dark orangish brown gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					1.10			*Groundwater encountered at 0.95m likely to be perched water.*
								Firm dark orangish brown very gravelly silty CLAY with rare black specks. Gravel is fine to coarse angular flint. RIVER TERRACE DEPOSITS
					3.00			End of Borehole at 3.00m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Groundwater encountered at 0.95m (probably perched water).

AGS

APPENDIX B

Engineering Logs

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Trial Pit Log**	TrialPit No TP1 Sheet 1 of 1
Project Name: Tye Lane		Project No. GE16861	Co-ords: 497037.00 - 106355.00 Level:	Date 02/11/2017
Location: Walberton			Dimensions (m):	Scale 1:25
Client: Wates Developments Ltd			Depth 3.20	Logged KO'D

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES		0.20			Dark brown clayey sand with rootlets (TOPSOIL) TOPSOIL
	0.50	D					Medium strength dark brown sandy CLAY RIVER TERRACE DEPOSITS
	1.00	D		0.90			Sub-angular flint GRAVEL with cobbles in an orange brown clayey sandy matrix. RIVER TERRACE DEPOSITS
	1.70	D		1.70			Medium strength orange brown very sandy CLAY with grey-brown sandy lenses. RIVER TERRACE DEPOSITS
	3.00	D		2.30			High strength dark orangey brown and grey slightly sandy CLAY with orange-brown sandy lenses. RIVER TERRACE DEPOSITS
				3.20			End of Pit at 3.20m

1 2 3 4 5

Water Strikes	
Depth Strike	Rose to (mbgl)

Remarks Trial pit did not drain

Stability

AGS

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BN6 9GL
Geo-Environmental www.gesl.net

Trial Pit Log

TrialPit No
TP2
Sheet 1 of 1

Project Name: Tye Lane	Project No. GE16861	Co-ords: 497123.00 - 106160.00 Level:	Date 01/11/2017
Location: Walberton		Dimensions (m): Depth 3.30	Scale 1:25
Client: Wates Developments Ltd			Logged GE

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES					Dark grey brown silty clayey sand with rootlets (TOPSOIL) TOPSOIL
				0.25			Medium strength, becoming high strength orange brown silty sandy CLAY RIVER TERRACE DEPOSITS
	1.00	D					
	1.00	PP	PP=1.5kg/cm2				
	2.00	PP	PP=2kg/cm2				
				2.20			Well-graded rounded to sub-angular flint GRAVEL in a matrix of orange-brown silty sandy CLAY. Becomes less clayey and very sandy from 2.8m. RIVER TERRACE DEPOSITS
	2.30	D					
				3.30			End of Pit at 3.30m

1
2
3
4
5

Water Strikes	
Depth Strike	Rose to (mbgl)

Remarks Pit dry and stable

Stability

AGS

Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL
Geo-Environmental www.gesl.net

Trial Pit Log

TrialPit No: TP4
Sheet 1 of 1

Project Name: Tye Lane	Project No. GE16861	Co-ords: 497315.00 - 106138.00 Level:	Date 01/11/2017
Location: Walberton		Dimensions (m): Depth 3.00	Scale 1:25
Client: Wates Developments Ltd			Logged

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES		0.17			Dark grey brown silty clayey sand with rootlets (TOPSOIL) TOPSOIL
	0.50	D					Medium strength, becoming high strength orange brown silty sandy CLAY RIVER TERRACE DEPOSITS
	1.00	PP	PP=1.5kg/cm2	1.30			Well-graded rounded to sub-angular flint GRAVEL in a matrix of orange-brown silty sandy CLAY RIVER TERRACE DEPOSITS
	1.80	D		2.70			Light grey, off white chalky sandy well-graded rounded to sub-angular flint GRAVEL RIVER TERRACE DEPOSITS
				3.00			End of Pit at 3.00m

1
2
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4
5

Water Strikes
Depth Strike | Rose to (mbgl)

Remarks: Pit dry and stable

Stability

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Trial Pit Log**	TrialPit No TP5 Sheet 1 of 1
Project Name: Tye Lane		Project No. GE16861	Co-ords: 497574.00 - 106063.00 Level:	Date 01/11/2017
Location: Walberton			Dimensions (m): Depth 2.90	Scale 1:25
Client: Wates Developments Ltd				Logged

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES		0.15			Dark grey brown silty clayey sand with rootlets (TOPSOIL) TOPSOIL
	1.00 1.00	D PP	PP=1.5kg/cm2	1.10			Medium strength, becoming high strength orange brown silty sandy CLAY RIVER TERRACE DEPOSITS
				2.30			Well-graded rounded to sub-angular flint GRAVEL in a matrix of orange brown silty sandy CLAY RIVER TERRACE DEPOSITS
	2.50	D		2.90			Light grey, off white chalky sandy well-graded rounded to sub-angular flint GRAVEL. RIVER TERRACE DEPOSITS
							End of Pit at 2.90m

1
2
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4
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Water Strikes	
Depth Strike	Rose to (mbgl)

Remarks Pit dry and stable

Stability

AGS

Geo-Environmental
Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL
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Trial Pit Log

TrialPit No: TP6
Sheet 1 of 1

Project Name: Tye Lane	Project No. GE16861	Co-ords: 497594.00 - 106225.00 Level:	Date 01/11/2017
Location: Walberton		Dimensions (m): Depth 3.00	Scale 1:25
Client: Wates Developments Ltd			Logged

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES					Dark grey brown silty clayey sand with rootlets (TOPSOIL) TOPSOIL
				0.30			High strength orange brown silty sandy CLAY RIVER TERRACE DEPOSITS
	0.50	D					
	1.00	D					
	1.00	PP	PP=2kg/cm2				
	1.50	PP	PP=2kg/cm2				
				1.90			High strength orange brown silty sandy CLAY with abundant well-graded rounded to sub angular flint gravel RIVER TERRACE DEPOSITS
	2.00	D					
	2.00	PP	PP=2.2kg/cm2				
				2.20			Light grey, off-white chalky sandy well-graded rounded to sub-anguar flint GRAVEL RIVER TERRACE DEPOSITS
				3.00			End of Pit at 3.00m

1
2
3
4
5

Water Strikes
Depth Strike | Rose to (mbgl)

Remarks: Pit dry and stable

Stability

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS1** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497068E - 106278N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 01/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.25			Dark brown silty clay with abundant rootlets, frequent gravel and rare brick fragments. Gravel is sub-rounded to angular fine to coarse flints. Brick fragments are fine to medium gravel. TOPSOIL
		0.50	D					High strength dark brown slightly silty CLAY with frequent gravel and occasional rootlets. Gravel is fine to medium angular to sub-rounded flints with rare chert gravel. RIVER TERRACE DEPOSITS
		0.50	PP	1.8kg/cm2				
		0.70	ES					*...5cm band of flint gravel*
		1.00	D					
		1.00	PP	4.2kg/cm2				*...rootlets no longer present*
		1.50	D					
		1.50	PP	2.8kg/cm2				
		1.70	D		1.70			High strength orange brown and grey mottled slightly sandy very gravelly CLAY. Gravel is fine to coarse angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		2.20	D					
		2.70	D					
		2.90	D		2.80			High strength brown orange fissured CLAY with frequent gravel and occasional dark brown specks. Gravel is fine to coarse angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		3.00	PP	0.8kg/cm2				
		3.40	D					
		3.50	PP	1.2kg/cm2				
		4.00	D		4.00			End of Borehole at 4.00m
		4.00	PP	1.5kg/cm2				

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		Remarks
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS2** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497167E - 106320N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 01/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20 0.25	ES PP	2.0kg/cm2	0.20			Turf over dark brown silty CLAY with abundant rootlets and frequent gravel. Gravel is sub-rounded to angular fine to coarse flints. TOPSOIL
		0.50	D		0.50			Dark brown silty CLAY with abundant gravel. Gravel is sub-rounded to angular fine to coarse flints. RIVER TERRACE DEPOSITS
		0.70	ES					Medium strength dark brown slightly cobbly very clayey GRAVEL with occasional rootlets. Cobbles and gravel are fine to coarse sub-rounded to very angular flints. RIVER TERRACE DEPOSITS
		1.00	D					1
								...colour change to orange brown
		1.50	D					
		2.00	D					2
		2.60	D		2.60			Medium to high strength dark brown very gravelly CLAY with frequent cobbles. Cobbles and gravel are fine to coarse sub-rounded to very angular flints. RIVER TERRACE DEPOSITS
		3.00	D					3
		3.50	D					
		4.00	D		4.00			End of Borehole at 4.00m 4
								5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		**Remarks**
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	Standpipe instal.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS3** Sheet 1 of 1
Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497153E - 106252N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 01/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.15	ES		0.15			Dark brown silty CLAY with abundant rootlets and organic material and frequent gravel. Gravel is fine to medium sub-angular to sub-rounded flints. TOPSOIL Medium strength dark brown slightly silty CLAY with frequent gravel and occasional rootlets. Gravel is fine to medium angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		0.50	D					
		0.50	PP	2.6kg/cm2				
		0.70	ES					
								...becomes gravelly to 1.2m bgl
		1.00	D					
		1.00	PP	0.8kg/cm2				
		1.20	D		1.20			Medium to high strength orange brown and grey mottled slightly sandy slightly gravely CLAY with rare rootlets. Gravel is fine to coarse angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		1.50	D					
		1.50	PP	3.8kg/cm2				
		2.00	D		2.00			Medium to high strength orange brown and grey mottled slightly sandy very gravelly CLAY. Gravel is fine to coarse angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		2.00	PP	2.9kg/cm2				
		2.50	D					
		2.50	PP	2.8kg/cm2				
		2.80	D		2.70			pale yellowish brown clayey SAND & GRAVEL. Gravel is fine to coarse angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		3.30	D		3.10			Medium strength brown orange fissured CLAY with frequent gravel and occasional dark brown specks. Gravel is fine to coarse angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		3.50	PP	1.2kg/cm2				
		3.80	D					
		3.90	PP	1.1kg/cm2				
								...becomes gravelly
					4.00			End of Borehole at 4.00m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		Remarks
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS4** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497249E - 106243N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 01/11/2017	Logged By KO'D

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES					Grass over dark brown silty CLAY with occasional gravel. TOPSOIL
					0.30			
		0.50	D					Medium strength dark brown slightly silty slightly gravelly CLAY with dark grey flecking. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		0.50	PP	1.4kg/cm2				
		0.70	ES					
		1.00	D					
		1.00	PP	0.8kg/cm2				
					1.20			
		1.50	D					Medium strength dark brown slightly silty gravelly CLAY with dark grey flecking. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		1.50	PP	0.3kg/cm2				
					1.90			
		2.00	D					High strength orange brown slightly silty gravelly CLAY with dark grey flecking and occasional cobbles. Gravel and cobbles are sub-angular flint. RIVER TERRACE DEPOSITS
		2.00	PP	1.9kg/cm2				
					2.20			
		2.50	D					High strength orange brown slightly sandy very gravely CLAY with occasional cobbles. Gravels and cobbles are sub angular flint. RIVER TERRACE DEPOSITS
		2.50	PP	2.0kg/cm2				
								...clay is slightly wet to 3.1mbgl
		3.00	D					
					3.10			Dark brown clayey slightly sandy GRAVEL with cobbles. Gravel and cobbles are sub-angular flint. RIVER TERRACE DEPOSITS
		3.50	D		3.50			Pale brown slightly clayey sandy GRAVEL. Gravel is sub angular flint. RIVER TERRACE DEPOSITS
		4.00	D		4.00			End of Borehole at 4.00m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		Remarks
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS5** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497266E - 106196N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 01/11/2017	Logged By KO'D

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES					Grass over dark brown sandy slightly gravelly CLAY with abundant rootlets and organic material. Gravel is sub-angular flint. TOPSOIL
		0.50 0.50	D PP	0.6kg/cm2	0.50			Medium strength orange brown gravelly CLAY with rootlets and occasional cobbles. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		0.70	ES		0.80			Medium to high strength orange brown gravelly CLAY with grey-black flecking, rootlets, organic traces and occasional cobbles. Gravel and cobbles are sub-angular flint. RIVER TERRACE DEPOSITS
		1.00	D					
		1.50 1.50	D PP	4.5kg/cm2	1.30			High strength orange brown gravelly CLAY with dark grey-black flecking, frequent cobbles and rootlets. RIVER TERRACE DEPOSITS *...becomes very gravelly and clay is slightly wet to 2.3mbgl*
		2.00	D					
		2.50	D		2.30			High strength orange brown sandy very gravelly CLAY with dark grey-black flecking. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
					2.60			Dark brown-orange clayey sandy GRAVEL. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		3.00	D		2.80			White-pale brown sandy slightly cobbley GRAVEL with structureless chalk. Gravel and cobbles are sub-angular flint. RIVER TERRACE DEPOSITS
					3.20			End of Borehole at 3.20m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Standpipe instal. Refusal at 3.2m due to density.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS6** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497423E - 106257N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 01/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES					Dark brown silty CLAY with abundant rootlets and organic material and frequent gravel. Gravel is fine to medium sub-angular to sub-rounded flints. TOPSOIL
		0.25	PP	1.2kg/cm2	0.30			Medium to high strength dark brown slightly silty CLAY with occasional gravel and rootlets. Gravel is fine to medium sub-angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		0.50	D					
		0.50	PP	4.1kg/cm2				
		0.70	ES					
								...colour change to dark orange brown
		1.00	D					*...rootlets no longer present*
		1.00	PP	4.8kg/cm2				
		1.50	D					
		1.50	PP	4.2kg/cm2				
		2.00	D					
		2.00	PP	3.8kg/cm2				
		2.30	D		2.25			Medium to high strength brown silty CLAY with occasional gravel and rootlets. Gravel is fine to medium sub-angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		2.90	D		2.90			Medium strength light brown very gravelly CLAY. Gravel is fine to coarse sub-rounded to sub-angular chalk with occasional flint gravel. RIVER TERRACE DEPOSITS
		3.30	D		3.20			Medium to high strength brown silty CLAY with occasional gravel and rootlets. Gravel is fine to medium sub-angular to sub-rounded flints and chalk. RIVER TERRACE DEPOSITS
		3.80	D					
					4.00			End of Borehole at 4.00m

1 2 3 4 5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Standpipe instal.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS7** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497400E - 106195N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 01/11/2017	Logged By KO'D

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES					Grass over silty CLAY with rootlets and organic materials. TOPSOIL
					0.40			
		0.50	D					Medium strength orange brown slightly silty CLAY with dark grey-black flecks. Occasional rootlets. RIVER TERRACE DEPOSITS
		0.50	PP	0.8kg/cm2				
		0.70	ES					
		1.00	D					
		1.00	PP	0.8kg/cm2				
					1.40			
		1.50	D					High strength orange brown slightly silty gravelly CLAY with dark grey-black flecks frequent cobbles and occasional rootlets. Gravel and cobbles are sub-angular flint. RIVER TERRACE DEPOSITS
		1.50	PP	1.8kg/cm2				
		2.00	D		2.00			
		2.00	PP	2.2kg/cm2				Medium to high strength orange brown slightly silty gravelly CLAY with dark grey-black flecks and occasional cobbles. Gravel and cobbles are sub-angular flint. RIVER TERRACE DEPOSITS
		2.50	D					
		2.50	PP	1.6kg/cm2				*...becomes very gravelly to 2.8mbgl*
					2.80			
					2.90			Dark orangey brown clayey slightly silty GRAVEL. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		3.00	D					White-pale brown clayey sandy GRAVEL with structureless chalk. Gravel is sub angular flint. Cohesive gravel. RIVER TERRACE DEPOSITS
		3.00	PP	1.6kg/cm2				
		3.50	D		3.50			White-pale brown clayey very sandy GRAVEL with chalk fragments and frequent cobbles. Gravel and cobbles are sub-angular flint. RIVER TERRACE DEPOSITS
		4.00	D		4.00			End of Borehole at 4.00m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		Remarks
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	Borehole Log	Borehole No. **WS8** Sheet 1 of 1
Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497418E - 106137N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 02/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.30			Crop over dark brown silty CLAY with abundant rootlets and organic material and frequent gravel. Gravel is fine to medium sub-angular to sub-rounded flints. TOPSOIL
		0.50	D					Medium strength orange brown slightly silty CLAY with occasional rootlets, roots (3mm diameter) and gravel. Gravel is fine to medium very angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		0.70	ES					
		1.00	D					
		1.00	PP	3.8kg/cm2				
								...roots no longer present. Becomes slightly gravelly to 1.8m bgl.
		1.50	D					
		1.50	PP	5.0kg/cm2				
		2.00	D					
		2.00	PP	5.0kg/cm2				
		2.25	PP	4.4kg/cm2	2.30			Medium to high strength orange brown slightly silty gravelly CLAY with frequent coarse sand. Gravel is fine to medium very angular to sub-rounded flints and occasional chalk. RIVER TERRACE DEPOSITS
		2.50	D					
		2.75	PP	3.4kg/cm2				
		3.00	D					
		3.50	D		3.50			Off-white cream sandy gravelly CLAY. Some of the clay is pale brown silica clay, which's proportion decreases with depth. Gravel is chalk with frequent flint. Chalk is fine to medium sub-angular to sub-rounded, very weak low denisty. Flint is fine to coarse very angular to sub-rounded. RIVER TERRACE DEPOSITS
		3.50	PP	4.1kg/cm2				
		4.00	D		4.00			End of Borehole at 4.00m
		4.00	PP	2.5kg/cm2				

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Standpipe instal.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS9** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497523E - 106242N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 01/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.25	PP	3.2kg/cm2				Light brown silty CLAY with abundant rootlets and organic material and frequent gravel. Gravel is fine to medium sub-angular to sub-rounded flints. TOPSOIL
		0.30	ES		0.30			
		0.50	D					Medium to high strength brown silty CLAY with occasional gravel, rootlets and rare cobbles. Cobbles and gravel are fine to medium sub-angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		0.50	PP	0.8kg/cm2				
		0.75	PP	1.2kg/cm2				
		0.80	ES					
		1.00	D					
		1.00	PP	3.4kg/cm2				
								…becomes orange brown and fissured with frequent gravel.
		1.50	D					
		1.50	PP	1.2kg/cm2				*…becomes slightly gravelly, fine to coarse flints to 1.6m bgl.*
		2.00	D					
		2.30	PP	2.3kg/cm2				
					2.40			
		2.50	D					Medium to high strength dark brown very gravelly CLAY with frequent cobbles. Cobbles and gravel are fine to coarse sub-rounded to very angular flints. RIVER TERRACE DEPOSITS
		3.00	D					
		3.50	D					
					4.00			End of Borehole at 4.00m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)	
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to

Remarks

Standpipe instal. Poor recovery for last metre.

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS10** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497515E - 106180N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 02/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES					Dark brown silty CLAY with abundant rootlets and organic material and frequent gravel. Gravel is fine to medium sub-angular to sub-rounded flints and chalk. TOPSOIL
		0.25	PP	1.9kg/cm2	0.25			Medium to high strength orange brown silty sandy CLAY with frequent gravel occasional rootlets and black specks. Gravel is fine to medium very angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		0.50	D					
		0.50	PP	1.2kg/cm2				
		0.70	ES					*...colour change to dark orange brown*
		1.00	D					
		1.00	PP	1.9kg/cm2				
		1.50	D					
		1.50	PP	1.8kg/cm2				
					1.70			High strength orange brown slightly silty slightly gravelly CLAY with occasional rootlets. Gravel is fine to coarse very angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		2.00	D					
		2.00	PP	1.1kg/cm2	2.10			Medium strength to high strength orange brown slightly silty CLAY with frequent gravel. Gravel is fine to medium very angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		2.50	D					
		2.50	PP	2.3kg/cm2				
					2.90			Off-white cream sandy gravelly CLAY. Some of the clay is pale brown silica clay, which's proportion decreases with depth. Gravel is chalk with frequent flint. Chalk is fine to medium sub-angular to sub-rounded, very weak low denisty. Flint is fine to coarse very angular to sub-rounded. RIVER TERRACE DEPOSITS
		3.00	D					
		3.00	PP	0.6kg/cm2				
		3.50	D					
		3.50	PP	2.6kg/cm2				
		4.00	D		4.00			End of Borehole at 4.00m

1 2 3 4 5

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		Remarks
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	Borehole Log	Borehole No. **WS11** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497582E - 106160N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 02/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES					Turf over dark brown silty CLAY with abundant rootlets and organic material and frequent gravel. Gravel is fine to medium sub-angular to sub-rounded flints. TOPSOIL
		0.25	PP	0.8kg/cm2	0.30			
		0.50	D					Medium to high strength orange brown slightly silty CLAY with frequent gravel and occasional roots (2mm diameter). Gravel is fine to coarse very angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		0.50	PP	1.2kg/cm2				
		0.70	ES					
		1.00	D					
		1.00	PP	2.6kg/cm2				
		1.50	D					
		1.50	PP	3.6kg/cm2				
		1.60	D		1.60			Orange brown slightly silty very gravelly CLAY with occasional roots (2mm diameter). Gravel is fine to coarse very angular to sub-rounded flints. RIVER TERRACE DEPOSITS *...roots no longer present*
		2.00	D					
		2.50	D					
		2.60	D		2.60			Off-white cream sandy gravelly CLAY. Some of the clay is pale brown silica clay, which's proportion decreases with depth. Gravel is chalk with frequent flint. Chalk is fine to medium sub-angular to sub-rounded, very weak low denisty. Flint is fine to coarse very angular to sub-rounded. RIVER TERRACE DEPOSITS *...becomes predomiantly white chalk clay*
		3.00	D					
		3.50	D					
		3.50	PP	2.0kg/cm2				
		4.00	D		4.00			End of Borehole at 4.00m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		**Remarks**
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	Standpipe instal.

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS12** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497495E - 106104N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 02/11/2017	Logged By KO'D

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.20			Grass over dark brown, sandy CLAY with rootlets and organics, occasional cobbles and rare brick fragments. Cobbles are flint. TOPSOIL
		0.50	D					Medium strength dark brown slightly sandy CLAY with dark grey-black flecking and rare gravel. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		0.50	PP	0.8kg/cm2				
		0.70	ES		0.70			Medium strength dark brown slightly sandy very gravelly CLAY with grey-black flecking and slightly sandy orange clay lenses. RIVER TERRACE DEPOSITS
		1.00	D					
		1.00	PP	1.1kg/cm2				
					1.20			Orange brown slightly sandy GRAVEL. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		1.50	D					
					1.80			Orange brown slightly sandy gravelly CLAY with black flecking. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		2.00	D					
		2.00	PP	1.0kg/cm2	2.10			Orange brown clayey sandy GRAVEL. Gravel is sub-angular flint. RIVER TERRACE DEPOSITS
		2.50	D					
		2.50	PP	2.6kg/cm2				
					2.80			Orange brown clayey sandy GRAVEL with cobbles and black-grey flecking. Gravel and cobbles are angular to sub-angular flint. RIVER TERRACE DEPOSITS
		3.00	D					
					3.30			Off-white cream sandy gravelly CLAY. Some of the clay is pale brown silica clay, which's proportion decreases with depth. Gravel is chalk with frequent flint. Chalk is fine to medium sub-angular to sub-rounded, very weak low denisty. Flint is fine to coarse very angular to sub-rounded. RIVER TERRACE DEPOSITS
		3.50	D					
								...flint cobbles and gravel become rare to end of borehole
		4.00	D		4.00			End of Borehole at 4.00m

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		Remarks
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	

AGS

Geo-Environmental	Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net	**Borehole Log**	Borehole No. **WS13** Sheet 1 of 1

Project Name:	Tye Lane	Project No. GE16861	Co-ords: 497305E - 106278N	Hole Type WS
Location:	Walberton		Level:	Scale 1:25
Client:	Wates Developments Ltd		Dates: 02/11/2017	Logged By WH

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10	PP	1.7kg/cm2				Turf over dark brown silty CLAY with abundant rootlets and organic material and frequent gravel. Gravel is fine to medium sub-angular to sub-rounded flints. TOPSOIL
		0.20	ES		0.30			
		0.50	D					Medium to high strength orange brown slightly silty CLAY with frequent gravel and occasional rootlets and roots (1mm diameter). Gravel is fine to medium very angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		0.50	PP	2.5kg/cm2				
		0.70	ES					
		1.00	D					
		1.00	PP	4.4kg/cm2	1.10			
		1.50	D					Medium to high strength orange brown slightly silty gravelly CLAY with occasional rootlets. Gravel is fine to medium very angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		1.50	PP	1.6kg/cm2				*...rootlets no longer present*
								...becomes very gravelly
		2.00	D					
		2.50	D					
		3.00	D		2.90			Orange brown slightly silty slightly gravelly CLAY. Gravel is fine to medium very angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		3.00	PP	1.5kg/cm2				
		3.50	D		3.40			Medium strength orange brown CLAY with occasional gravel and dark brown specks. Gravel is fine to coarse angular to sub-rounded flints. RIVER TERRACE DEPOSITS
		3.50	PP	0.6kg/cm2				
		4.00	D		4.00			End of Borehole at 4.00m
		4.00	PP	0.2kg/cm2				

Casing		Water Strikes (mbgl)		Chiselling (mbgl)		Remarks
Diameter	Depth (m)	Depth Strike	Rose to	Depth from	Depth to	

APPENDIX C

Groundwater and Ground Gas Monitoring

Project: Tye Lane, Walburton
Ref: GE16861
Client:

Geo-Environmental

Location	Date	Time (sec)	CH_4 (%)	CO_2 (%)	O_2 (%)	Flow (l/hr)	VOC (ppm)	Pressure (mb)	GWL (m bgl)	GSV/Qhgs		Characteristic Situation BS8485 & C665		CS1 Limiting Value Check			NHBC			
										CH_4	CO_2	CH_4	CO_2	Flow	CH_4	CO_2	CH_4		CO_2	
																	GSV	Conc.	GSV	Conc.
WS2	07/12/17	10	0.0	0.2	20.5	0.0	0.0	1010	2.44	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS2	07/12/17	20	0.0	0.2	20.5	0.0	0.00	1010	2.44	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS2	07/12/17	30	0.0	0.2	20.5	0.0	0.00	1010	2.44	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS2	07/12/17	60	0.0	0.1	20.5	0.0	0.00	1010	2.44	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS2	07/12/17	120	0.0	0.1	20.6	0.0	0.00	1010	2.44	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	07/12/17	10	0.0	2.5	20.8	0.0	0.0	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	07/12/17	20	0.0	3.1	19.2	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	07/12/17	30	0.0	3.1	19.0	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	07/12/17	60	0.0	3.1	18.8	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	07/12/17	120	0.0	3.1	18.8	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS6	07/12/17	10	0.0	0.2	20.5	0.0	0.0	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS6	07/12/17	20	0.0	0.3	20.5	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS6	07/12/17	30	0.0	0.2	20.5	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS6	07/12/17	60	0.0	0.1	20.5	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS6	07/12/17	120	0.0	0.2	20.5	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS8	07/12/17	10	0.0	2.3	20.4	0.0	0.0	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS8	07/12/17	20	0.0	3.8	19.0	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS8	07/12/17	30	0.0	3.9	18.3	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS8	07/12/17	60	0.0	4.0	18.0	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS8	07/12/17	120	0.0	4.1	17.9	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS9	07/12/17	10	0.0	0.5	20.7	0.0	0.0	1010	3.37	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS9	07/12/17	20	0.0	0.5	20.4	0.0	0.00	1010	3.37	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS9	07/12/17	30	0.0	0.5	20.4	0.0	0.00	1010	3.37	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS9	07/12/17	60	0.0	0.3	20.4	0.0	0.00	1010	3.37	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS9	07/12/17	120	0.0	0.3	20.5	0.0	0.00	1010	3.37	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS11	07/12/17	10	0.0	0.1	20.6	0.0	0.0	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS11	07/12/17	20	0.0	0.1	20.6	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS11	07/12/17	30	0.0	0.1	20.6	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS11	07/12/17	60	0.0	0.1	20.6	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS11	07/12/17	120	0.0	0.1	20.6	0.0	0.00	1010	DRY	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN

APPENDIX D

Geochemical Laboratory Test Results

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
[redacted]

UKAS TESTING
2683

THE ENVIRONMENTAL LABORATORY

Analytical Report Number:	17-14803
Issue:	1
Date of Issue:	10/11/2017
Contact:	Glyn Evans
Customer Details:	GESL Unit 7 Danworth Farm Hurstpierpoint West SussexBN6 9GL
Quotation No:	Q14-00021
Order No:	PO2567
Customer Reference:	GE16861
Date Received:	06/11/2017
Date Approved:	10/11/2017
Details:	Tye Lane, Walberton
Approved by:	[redacted]

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

ARUN DISTRICT COUNCIL WA/99/18/DOC

ELAB

Sample Summary

Report No.: 17-14803

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
117392	TP1 0.10	01/11/2017	07/11/2017	Silty loam	
117393	TP2 0.10	01/11/2017	07/11/2017	Silty loam	c
117394	TP4 0.10	01/11/2017	07/11/2017	Silty loam	
117395	TP5 0.10	01/11/2017	07/11/2017	Silty loam	
117396	TP6 0.10	01/11/2017	07/11/2017	Silty loam	
117397	WS1 0.20	01/11/2017	07/11/2017	Silty loam	
117398	WS1 0.70	01/11/2017	07/11/2017	Silty loam	
117399	WS2 0.20	01/11/2017	07/11/2017	Silty loam	
117400	WS3 0.15	01/11/2017	07/11/2017	Silty loam	
117401	WS4 0.10	01/11/2017	07/11/2017	Silty loam	
117402	WS5 0.10	01/11/2017	07/11/2017	Silty loam	
117403	WS6 0.20	01/11/2017	07/11/2017	Silty loam	
117404	WS6 0.70	01/11/2017	07/11/2017	Silty loam	
117405	WS7 0.10	01/11/2017	07/11/2017	Silty loam	
117406	WS8 0.20	02/11/2017	07/11/2017	Silty loam	
117407	WS9 0.30	01/11/2017	07/11/2017	Silty loam	
117408	WS10 0.20	02/11/2017	07/11/2017	Silty loam	
117409	WS11 0.20	01/11/2017	07/11/2017	Silty loam	
117410	WS12 0.20	01/11/2017	07/11/2017	Silty loam	
117411	WS13 0.20	01/11/2017	07/11/2017	Silty loam	
117412	WS2 0.70	01/11/2017	07/11/2017		
117413	WS3 0.70	01/11/2017	07/11/2017		
117414	WS4 0.70	01/11/2017	07/11/2017		
117415	WS5 0.70	01/11/2017	07/11/2017		
117416	WS7 0.70	01/11/2017	07/11/2017		
117417	WS8 0.70	02/11/2017	07/11/2017		
117418	WS9 0.80	01/11/2017	07/11/2017		
117419	WS10 0.70	02/11/2017	07/11/2017		
117420	WS11 0.70	02/11/2017	07/11/2017		
117421	WS12 0.70	02/11/2017	07/11/2017		
117422	WS13 0.70	02/11/2017	07/11/2017		

ELAB

UKAS TESTING 2683

MCERTS

Results Summary

Report No.: 17-14803

ELAB Reference				117392	117393	117394	117395	117396	117397
Customer Reference									
Sample ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				TP1	TP2	TP4	TP5	TP6	WS1
Sample Depth (m)				0.10	0.10	0.10	0.10	0.10	0.20
Sampling Date				01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017
Determinand	**Codes**	**Units**	**LOD**						
Metals									
Arsenic	M	mg/kg	1	7.2	15.7	7.8	8.2	8.4	5.8
Barium	U	mg/kg	10	57.6	55.0	59.6	61.6	61.9	47.5
Beryllium	U	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium	M	mg/kg	0.5	0.6	0.6	0.9	< 0.5	0.5	< 0.5
Chromium	M	mg/kg	5	22.0	20.7	22.9	22.6	24.1	17.7
Copper	M	mg/kg	5	13.5	16.2	17.6	19.5	16.3	13.1
Lead	M	mg/kg	5	32.0	31.4	39.8	41.1	26.9	20.9
Mercury	M	mg/kg	0.5	1.0	1.5	1.2	1.2	1.4	1.7
Nickel	M	mg/kg	5	13.8	13.1	13.6	14.0	14.8	10.7
Selenium	M	mg/kg	1	1.1	1.4	1.4	1.5	1.4	1.2
Vanadium	M	mg/kg	5	26.8	27.5	31.4	30.3	32.3	22.6
Zinc	M	mg/kg	5	54.1	60.3	62.4	59.8	58.9	47.0
Anions									
Water Soluble Chloride	M	mg/kg	40	< 40	44	47	47	48	44
Water Soluble Sulphate	M	g/l	0.02	0.06	0.04	0.04	0.03	0.03	0.03
Inorganics									
Elemental Sulphur	N	mg/kg	20	< 20	< 20	< 20	< 20	< 20	< 20
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Total Sulphide	N	mg/kg	2	< 2	< 2	< 2	< 2	< 2	< 2
Total Cyanide	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03	0.05	0.04	0.06	0.06	0.04
Water Soluble Boron	N	mg/kg	0.5	< 0.5	0.6	1.1	1.0	0.9	0.7
Miscellaneous									
pH	M	pH units	0.1	8.0	7.8	7.6	6.5	6.8	7.2
Total Organic Carbon	N	%	0.01	0.36	1.2	0.95	2.0	0.66	0.73
Phenols									
Total Phenols	N	mg/kg	6	< 6	c < 6	< 6	< 6	< 6	< 6
Polyaromatic hydrocarbons									
Naphthalene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	c 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	c 0.2	0.1	0.2	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1	c 0.2	< 0.1	0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	c 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo (b) fluoranthene	M	mg/kg	0.1	0.1	c 0.2	0.2	0.2	0.1	0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	c 0.2	0.1	0.2	< 0.1	0.1
Benzo (a) pyrene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.1	c < 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	0.5	c 1.4	0.6	0.8	< 0.4	0.5

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Results Summary

Report No.: 17-14803

ELAB Reference				117392	117393	117394	117395	117396	117397
Customer Reference									
Sample ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				TP1	TP2	TP4	TP5	TP6	WS1
Sample Depth (m)				0.10	0.10	0.10	0.10	0.10	0.20
Sampling Date				01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017
Determinand	**Codes**	**Units**	**LOD**						
BTEX									
Benzene	M	ug/kg	10	< 10.0	c < 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	c < 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	c < 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	c < 10.0	< 10.0	< 10.0	< 10.0	< 10.0
TPH CWG									
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	c < 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	c < 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	c < 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	c < 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	c < 1.0	< 1.0	< 1.0	< 1.0	< 1.0
OrganoChlorine Pesticides									
alpha-HCH	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
beta_HCH	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
gamma-HCH	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
delta-HCH	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Heptachlor	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Aldrin	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Heptachlor expoxide	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
trans-Chlordane	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
alpha cis-Chlordane	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
p,p-DDE	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Dieldrin	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Endrin	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
p,p-DDD	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Endosulfan II	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Endrin aldehyde	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
p,p-DDT	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Endosulphan sulphate	M	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Methoxychlor	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t
Endrin ketone	N	ug/kg	10	< 10	n/t	< 10	n/t	< 10	n/t

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Results Summary

Report No.: 17-14803

				ELAB Reference	117398	117399	117400	117401	117402	117403	117404	117405
				Customer Reference								
				Sample ID								
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Location	WS1	WS2	WS3	WS4	WS5	WS6	WS6	WS7
				Sample Depth (m)	0.70	0.20	0.15	0.10	0.10	0.20	0.70	0.10
				Sampling Date	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017
Determinand	**Codes**	**Units**	**LOD**									
Metals												
Arsenic	M	mg/kg	1		5.9	4.9	5.4	7.0	8.2	8.6	10.6	7.1
Barium	U	mg/kg	10		47.4	45.3	45.7	54.4	61.9	59.6	67.1	51.7
Beryllium	U	mg/kg	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium	M	mg/kg	0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5		18.3	14.3	14.7	20.0	22.8	23.6	28.1	20.3
Copper	M	mg/kg	5		10.0	11.0	12.4	13.7	16.1	20.9	15.7	12.8
Lead	M	mg/kg	5		9.3	16.9	20.0	24.4	35.5	27.3	13.2	24.0
Mercury	M	mg/kg	0.5		1.5	1.0	1.4	1.5	1.4	1.8	1.5	1.5
Nickel	M	mg/kg	5		13.4	9.1	9.1	11.3	13.6	14.5	19.0	11.7
Selenium	M	mg/kg	1		< 1.0	< 1.0	1.2	1.1	1.5	1.3	1.1	1.1
Vanadium	M	mg/kg	5		23.5	18.2	19.9	27.9	32.8	31.7	37.9	28.5
Zinc	M	mg/kg	5		42.6	41.9	50.4	153	64.2	57.8	52.6	48.8
Anions												
Water Soluble Chloride	M	mg/kg	40		< 40	< 40	< 40	< 40	58	< 40	48	< 40
Water Soluble Sulphate	M	g/l	0.02		0.03	0.02	0.03	0.03	0.02	0.02	0.03	0.02
Inorganics												
Elemental Sulphur	N	mg/kg	20		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Hexavalent Chromium	N	mg/kg	0.8		< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Total Sulphide	N	mg/kg	2		< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Total Cyanide	M	mg/kg	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Acid Soluble Sulphate (SO4)	U	%	0.02		0.03	0.03	0.05	0.04	0.04	0.04	0.03	0.04
Water Soluble Boron	N	mg/kg	0.5		< 0.5	0.5	0.9	0.7	1.0	0.8	0.5	0.9
Miscellaneous												
pH	M	pH units	0.1		7.4	6.8	6.9	7.0	6.1	7.1	7.8	6.8
Total Organic Carbon	N	%	0.01		0.20	0.42	0.95	0.69	1.4	0.88	0.23	0.98
Phenols												
Total Phenols	N	mg/kg	6		< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Polyaromatic hydrocarbons												
Naphthalene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	0.3	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Anthracene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1		< 0.1	< 0.1	0.1	< 0.1	0.4	< 0.1	< 0.1	0.5
Pyrene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.4
Benzo(a)anthracene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3
Chrysene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3
Benzo (b) fluoranthene	M	mg/kg	0.1		< 0.1	0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.3
Benzo(k)fluoranthene	M	mg/kg	0.1		< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Benzo (a) pyrene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.7	0.1	0.2
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1		< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.1
Total PAH(16)	M	mg/kg	0.4		< 0.4	< 0.4	0.6	0.4	1.8	0.8	< 0.4	2.7

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The Environmental Laboratory Ltd. Reg. No. 3882193

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Results Summary

Report No.: 17-14803

			ELAB Reference	117398	117399	117400	117401	117402	117403	117404	117405
			Customer Reference								
			Sample ID								
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sample Location	WS1	WS2	WS3	WS4	WS5	WS6	WS6	WS7
			Sample Depth (m)	0.70	0.20	0.15	0.10	0.10	0.20	0.70	0.10
			Sampling Date	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017	01/11/2017
Determinand	**Codes**	**Units**	**LOD**								
BTEX											
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
TPH CWG											
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
OrganoChlorine Pesticides											
alpha-HCH	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
beta_HCH	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
gamma-HCH	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
delta-HCH	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Heptachlor	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Aldrin	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Heptachlor expoxide	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
trans-Chlordane	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
alpha cis-Chlordane	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
p,p-DDE	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Dieldrin	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Endrin	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
p,p-DDD	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Endosulfan II	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Endrin aldehyde	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
p,p-DDT	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Endosulphan sulphate	M	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Methoxychlor	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10
Endrin ketone	N	ug/kg	10	n/t	n/t	< 10	n/t	n/t	n/t	n/t	< 10

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Results Summary

Report No.: 17-14803

ELAB Reference				117406	117407	117408	117409	117410	117411
Customer Reference									
Sample ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				WS8	WS9	WS10	WS11	WS12	WS13
Sample Depth (m)				0.20	0.30	0.20	0.20	0.20	0.20
Sampling Date				02/11/2017	01/11/2017	02/11/2017	01/11/2017	01/11/2017	01/11/2017
Determinand	**Codes**	**Units**	**LOD**						
Metals									
Arsenic	M	mg/kg	1	6.5	5.2	6.9	7.3	7.7	8.0
Barium	U	mg/kg	10	49.6	38.7	48.8	65.3	52.7	58.2
Beryllium	U	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8
Chromium	M	mg/kg	5	17.6	13.8	16.8	18.1	20.9	22.1
Copper	M	mg/kg	5	13.8	10.0	14.1	22.1	14.7	15.6
Lead	M	mg/kg	5	24.9	14.8	25.7	33.3	24.7	26.7
Mercury	M	mg/kg	0.5	1.3	1.3	1.5	1.9	1.6	1.8
Nickel	M	mg/kg	5	10.8	9.4	11.1	12.1	12.6	13.7
Selenium	M	mg/kg	1	1.1	< 1.0	1.4	1.5	1.3	1.8
Vanadium	M	mg/kg	5	23.8	17.8	23.0	24.7	29.4	31.5
Zinc	M	mg/kg	5	53.2	35.3	51.5	70.2	51.2	58.8
Anions									
Water Soluble Chloride	M	mg/kg	40	43	< 40	44	68	55	72
Water Soluble Sulphate	M	g/l	0.02	0.03	0.02	0.03	0.04	0.03	0.03
Inorganics									
Elemental Sulphur	N	mg/kg	20	< 20	< 20	< 20	< 20	< 20	< 20
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Total Sulphide	N	mg/kg	2	< 2	< 2	< 2	< 2	< 2	< 2
Total Cyanide	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Acid Soluble Sulphate (SO4)	U	%	0.02	0.04	0.04	0.05	0.06	0.05	0.04
Water Soluble Boron	N	mg/kg	0.5	1.0	0.6	0.9	1.3	0.6	0.7
Miscellaneous									
pH	M	pH units	0.1	6.5	6.7	6.6	6.3	6.4	7.0
Total Organic Carbon	N	%	0.01	0.95	0.34	0.75	1.7	0.92	1.0
Phenols									
Total Phenols	N	mg/kg	6	< 6	< 6	< 6	< 6	< 6	< 6
Polyaromatic hydrocarbons									
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	0.2	0.1	0.2
Pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	0.1
Benzo (b) fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Benzo (a) pyrene	M	mg/kg	0.1	< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1
Indeno (1,2,3-cd) pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	0.2	0.2	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	0.1	0.2	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4	< 0.4	0.9	0.6	0.8

Tests marked N are not UKAS accredited.
The Environmental Laboratory Ltd. Reg. No. 3882193

ELAB

UKAS TESTING 2683

MCERTS

Results Summary

Report No.: 17-14803

ELAB Reference			117406	117407	117408	117409	117410	117411
Customer Reference								
Sample ID								
Sample Type			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location			WS8	WS9	WS10	WS11	WS12	WS13
Sample Depth (m)			0.20	0.30	0.20	0.20	0.20	0.20
Sampling Date			02/11/2017	01/11/2017	02/11/2017	01/11/2017	01/11/2017	01/11/2017
Determinand	**Codes**	**Units**	**LOD**					
BTEX								
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
TPH CWG								
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
OrganoChlorine Pesticides								
alpha-HCH	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
beta_HCH	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
gamma-HCH	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
delta-HCH	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Heptachlor	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Aldrin	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Heptachlor expoxide	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
trans-Chlordane	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
alpha cis-Chlordane	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
p,p-DDE	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Dieldrin	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endrin	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
p,p-DDD	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endosulfan II	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endrin aldehyde	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
p,p-DDT	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endosulphan sulphate	M	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Methoxychlor	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t
Endrin ketone	N	ug/kg	10	n/t	n/t	n/t	n/t	n/t	n/t

ELAB
UKAS TESTING
2683

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Results Summary

Report No.: 17-14803

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
117392	0.10	TP1	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117393	0.10	TP2	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117394	0.10	TP4	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117395	0.10	TP5	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t
117396	0.10	TP6	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117397	0.20	WS1	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117398	0.70	WS1	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117399	0.20	WS2	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117400	0.15	WS3	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117401	0.10	WS4	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t
117402	0.10	WS5	Brown soil,root	No asbestos detected	n/t	n/t	n/t	n/t
117403	0.20	WS6	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t
117404	0.70	WS6	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t
117405	0.10	WS7	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117406	0.20	WS8	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t
117407	0.30	WS9	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117408	0.20	WS10	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t
117409	0.20	WS11	Brown soil,stones,metal	No asbestos detected	n/t	n/t	n/t	n/t
117410	0.20	WS12	Brown soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
117411	0.20	WS13	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 17-14803

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	09/11/2017	109	Colorimetry
Hexavalent chromium	N	As submitted sample	09/11/2017	110	Colorimetry
pH	M	Air dried sample	10/11/2017	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	10/11/2017	115	Ion Chromatography
Aqua regia extractable metals	M	Air dried sample	09/11/2017	118	ICPMS
Phenols in solids	N	As submitted sample	09/11/2017	121	HPLC
Elemental Sulphur	N	Air dried sample	09/11/2017	122	HPLC
PAH (GC-FID)	M	As submitted sample	08/11/2017	133	GC-FID
Water soluble anions	M	Air dried sample	09/11/2017	172	Ion Chromatography
Organochlorine Pesticides in solids	M	As submitted sample	08/11/2017	173	GC-MS
BTEX in solids	M	As submitted sample	09/11/2017	181A	GC-MS
Water soluble boron	N	Air dried sample	09/11/2017	202	Colorimetry
Total cyanide	M	As submitted sample	09/11/2017	204	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	10/11/2017	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	08/11/2017	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	09/11/2017	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	08/11/2017	214	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	09/11/2017	214	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	09/11/2017	214	GC-MS
Asbestos identification	U	As submitted sample	09/11/2017	PMAN	Microscopy

Tests marked N are not UKAS accredited

Report Information

Report No.: 17-14803

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

Soil sample results are expressed on an air dried basis (dried at < 30°C)
Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
PCB congener results may include any coeluting PCBs
Uncertainty of measurement for the determinands tested are available upon request

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
All water samples will be retained for 7 days following the date of the test report
Charges may apply to extended sample storage

APPENDIX E

Geotechnical Laboratory Testing and DCP results

Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results

Job No.	Project Name	Programme	
23621	Tye Lane, Walberton	Samples received	06/11/2017
		Schedule received	07/11/2017
Project No.	Client	Project started	08/11/2017
GE16861	GESL	Testing Started	17/11/2017

Hole No.	Sample				Soil Description	NMC	Passing 425µm	LL	PL	PI	Remarks
	Ref	Top	Base	Type		%	%	%	%	%	
TP2	-	1.00	-	D	Brown slightly gravelly fine sandy silty CLAY (gravel is fine and sub-angular)	23	97	42	20	22	
TP4	-	0.50	-	D	Brown slightly gravelly fine sandy silty CLAY (gravel is fine and sub-angular)	24	95	37	21	16	
TP5	-	1.00	-	D	Brown slightly gravelly fine sandy silty CLAY (gravel is fm and sub-angular)	22	95	42	20	22	
TP6	-	0.50	-	D	Brown slightly gravelly fine sandy silty CLAY (gravel is fm and sub-angular)	22	95	41	21	20	
TP6	-	1.00	-	D	Brown and orangish brown mottled slightly gravelly fine sandy silty CLAY with rare carbonaceous deposits (gravel is fm and sub-angular)	20	99	39	20	19	
WS1	-	1.00	-	D	Brown slightly fine sandy gravelly silty CLAY (gravel is fmc and angular to sub-angular)	20	49	44	18	26	
WS2	-	1.00	-	D	Brown sandy silty clayey GRAVEL (gravel is fmc and sub-angular to angular)	15	29	35	20	15	
WS2	-	2.00	-	D	Brown silty sandy clayey GRAVEL (gravel is fmc and sub-angular)	15	26	34	21	13	Sample washed to obtain test fraction
WS3	-	1.00	-	D	Brown gravelly fine sandy silty CLAY (gravel is fmc and angular to sub-angular)	21	48	35	20	15	
WS4	-	1.50	-	D	Brown slightly gravelly fine sandy silty CLAY (gravel is fmc and sub-angular)	24	68	41	20	21	
WS5	-	1.00	-	D	Orangish brown and brown mottled sandy slightly gravelly silty CLAY with occasional fine rootlets (gravel is fine and angular)	13	99	41	20	21	
WS5	-	2.00	-	D	Brown gravelly sandy silty CLAY with traces of rootlets (gravel is fmc and angular to sub-angular)	14	60	45	20	25	

Test Methods: BS1377: Part 2: 1990:
Natural Moisture Content : clause 3.2
Atterberg Limits: clause 4.3 and 5.0

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

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Checked and Approved
Initials J.P
Date: 22/11/2017

2519 Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) MSF-5-R1(b)

Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results

Job No.	Project Name	Programme	
23621	Tye Lane, Walberton	Samples received	06/11/2017
		Schedule received	07/11/2017
Project No.	Client	Project started	08/11/2017
GE16861	GESL	Testing Started	17/11/2017

Hole No.	Sample				Soil Description	NMC	Passing 425µm	LL	PL	PI	Remarks
	Ref	Top	Base	Type		%	%	%	%	%	
WS6	-	1.50	-	D	Brown and orangish brown fine sandy silty CLAY with rare fine gravel	18	99	39	20	19	
WS7	-	1.00	-	D	Brown slightly gravelly fine sandy silty CLAY with occasional black flecks (gravel is fine and angular)	22	99	40	20	20	
WS8	-	1.00	-	D	Brown slightly gravelly sandy silty CLAY with roots (gravel is fine and sub-angular)	15	98	42	22	20	
WS8	-	2.00	-	D	Brown slightly gravelly sandy silty CLAY with occasional roots and rootlets (gravel is fmc and sub-angular)	16	69	43	21	22	
WS9	-	1.50	-	D	Brown slightly fine sandy gravelly silty CLAY (gravel is fmc and angular to sub-angular)	20	64	43	18	25	
WS10	-	1.00	-	D	Brown slightly gravelly fine sandy silty CLAY (gravel is fine and sub-angular)	23	97	42	21	21	
WS10	-	2.00	-	D	Brown gravelly fine sandy silty CLAY (gravel is fmc and sub-angular)	23	60	47	21	26	
WS11	-	1.50	-	D	Brown slightly gravelly slightly fine sandy silty CLAY with roots and rootlets (gravel is fm and sub-angular)	19	93	45	21	24	
WS11	-	2.00	-	D	Brown slightly sandy clayey GRAVEL (gravel is fmc and angular)	21	15	49	24	25	Sample washed to obtain test fraction
WS12	-	1.00	-	D	Brown sandy gravelly silty CLAY (gravel is fmc and angular)	21	35	39	21	18	Sample washed to obtain test fraction
WS13	-	1.00	-	D	Orangish brown mottled brown slightly gravelly fine sandy silty CLAY (gravel is fm and sub-angular to angular)	18	95	41	20	21	
WS13	-	1.50	-	D	Brown and orangish brown mottled fine sandy gravelly silty CLAY (gravel is fmc and sub-angular to angular)	19	40	35	19	16	

Test Methods: BS1377: Part 2: 1990:
Natural Moisture Content : clause 3.2
Atterberg Limits: clause 4.3 and 5.0

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

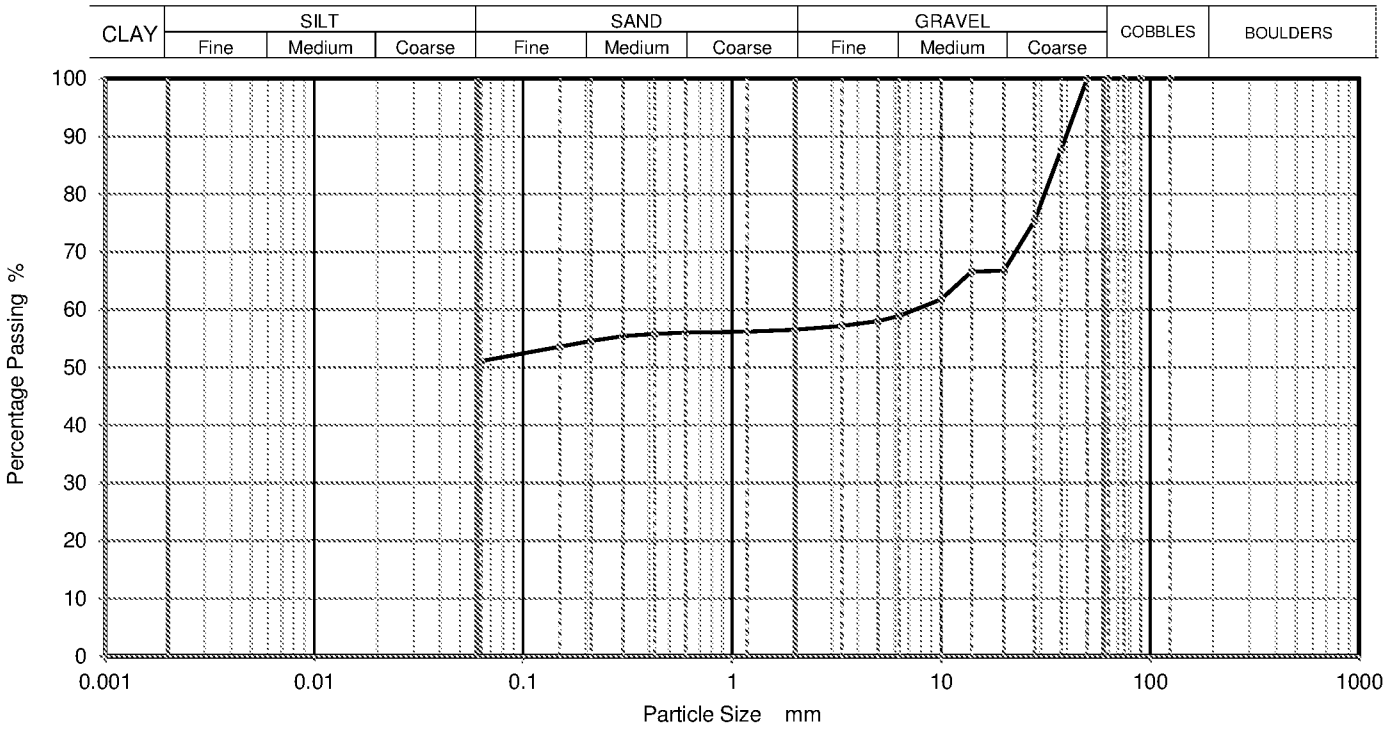
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Checked and Approved
Initials J.P
Date: 22/11/2017

2519 Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) MSF-5-R1(b)

PARTICLE SIZE DISTRIBUTION

Job Ref	23621				
Borehole/Pit No.	TP2				
Site Name	Tye Lane, Walberton			Sample No.	-
Project No.	GE16861	Client	GESL	Depth Top	2.30 m
Soil Description	Brown slightly sandy gravelly silty CLAY (gravel is fmc and angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	88		
28	75		
20	67		
14	67		
10	62		
6.3	59		
5	58		
3.35	57		
2	57		
1.18	56		
0.6	56		
0.425	56		
0.3	55		
0.212	55		
0.15	54		
0.063	51		

Dry Mass of sample, g	388

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	43.5
Sand	5.4
Fines <0.063mm	51.2

Grading Analysis		
D100	mm	
D60	mm	7.52
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

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Checked and Approved

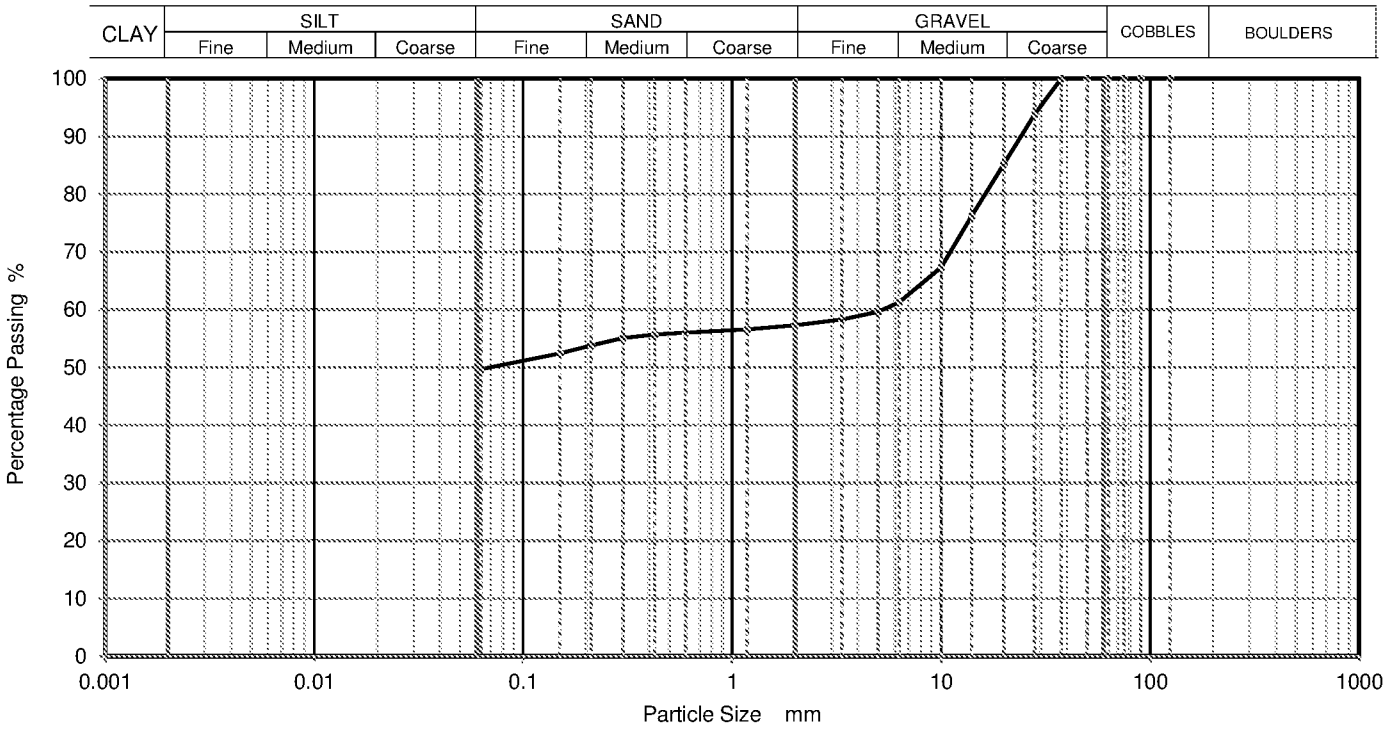
Initials: J.P

Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Site Name	Tye Lane, Walberton			Job Ref	23621
				Borehole/Pit No.	TP4
Project No.	GE16861	Client	GESL	Sample No.	-
				Depth Top	1.80 m
Soil Description	Brown slightly sandy gravelly silty CLAY (gravel is fmc and angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	94		
20	85		
14	76		
10	67		
6.3	61		
5	60		
3.35	58		
2	57		
1.18	57		
0.6	56		
0.425	56		
0.3	55		
0.212	54		
0.15	52		
0.063	50		

Dry Mass of sample, g	260

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	42.7
Sand	7.6
Fines <0.063mm	49.7

Grading Analysis		
D100	mm	
D60	mm	5.26
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

K4 Soils Laboratory

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Tel: 01923 711288

Checked and Approved

Initials: **J.P**

Date: 22/11/2017

UKAS TESTING 7519

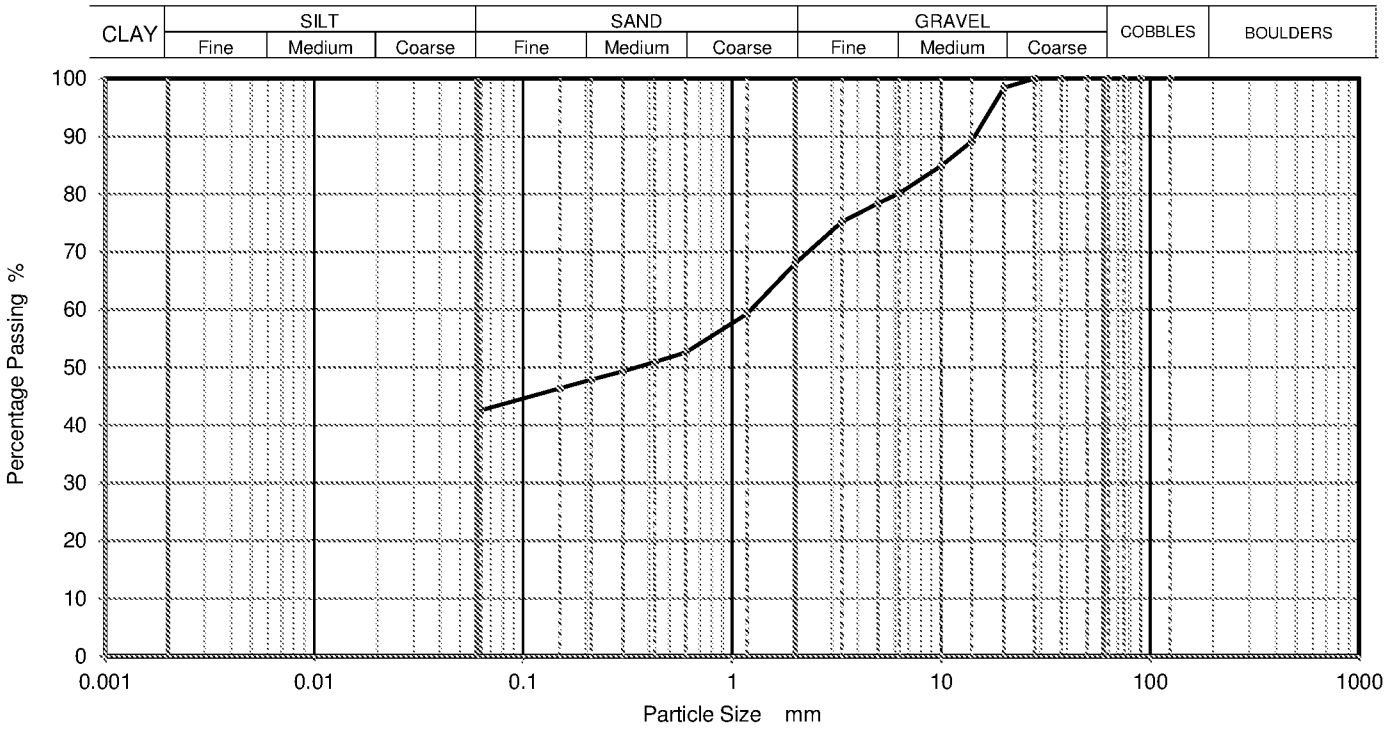
Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

MSF-5-R3

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Job Ref	23621				
Borehole/Pit No.	TP5				
Site Name	Tye Lane, Walberton			Sample No.	-
Project No.	GE16861	Client	GESL	Depth Top	2.50 m
Soil Description	Brown slightly sandy slightly gravelly silty CLAY with occasional fm chalk fragments (gravel is fmc and angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	98		
14	89		
10	85		
6.3	80		
5	78		
3.35	75		
2	68		
1.18	59		
0.6	53		
0.425	51		
0.3	49		
0.212	48		
0.15	46		
0.063	43		

Dry Mass of sample, g: 364

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	32.0
Sand	25.4
Fines <0.063mm	42.6

Grading Analysis		
D100	mm	
D60	mm	1.23
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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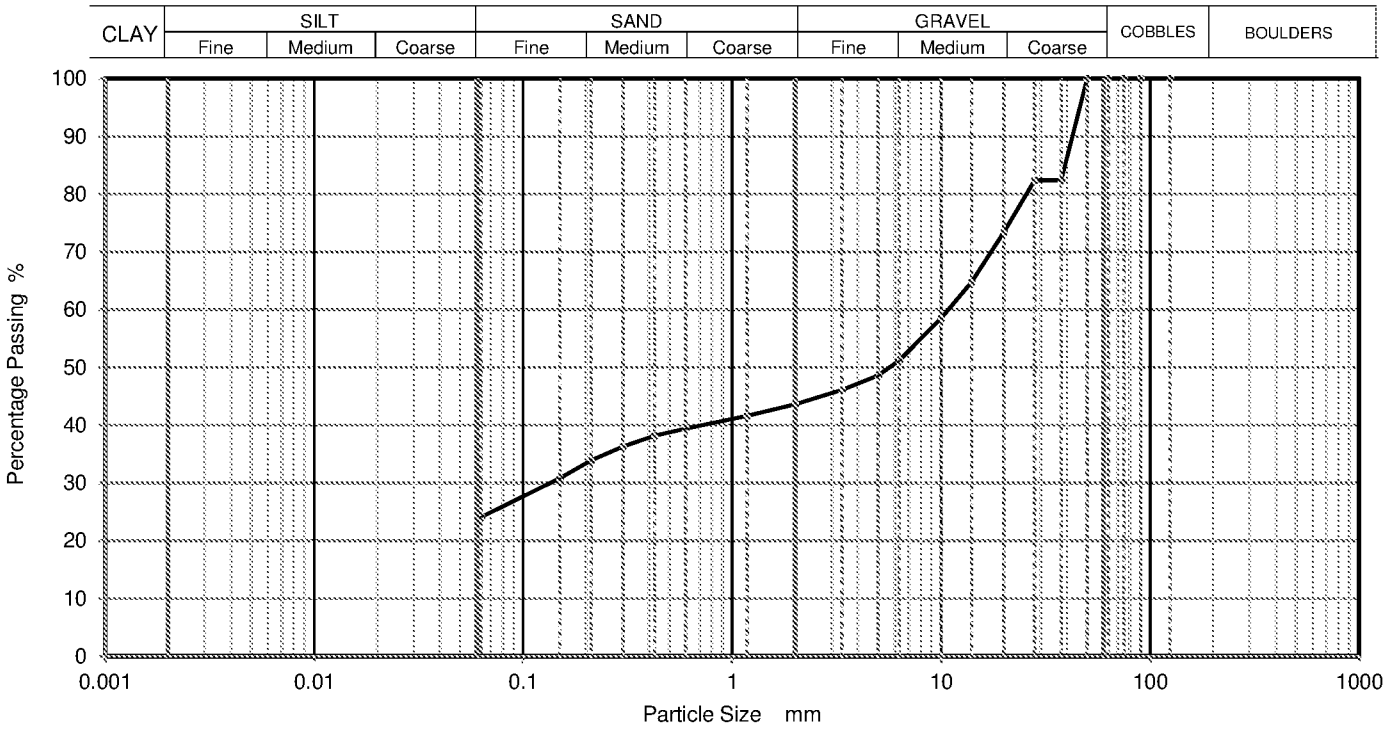
Initials: J.P

Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Job Ref	23621				
Borehole/Pit No.	WS3				
Site Name	Tye Lane, Walberton			Sample No.	-
Project No.	GE16861	Client	GESL	Depth Top	2.80 m
Soil Description	Light greyish brown sandy very clayey GRAVEL (gravel is fmc and angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	82		
28	82		
20	73		
14	65		
10	59		
6.3	51		
5	49		
3.35	46		
2	44		
1.18	42		
0.6	39		
0.425	38		
0.3	36		
0.212	34		
0.15	31		
0.063	24		

Dry Mass of sample, g: 639

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	56.4
Sand	19.5
Fines <0.063mm	24.1

Grading Analysis		
D100	mm	
D60	mm	10.8
D30	mm	0.136
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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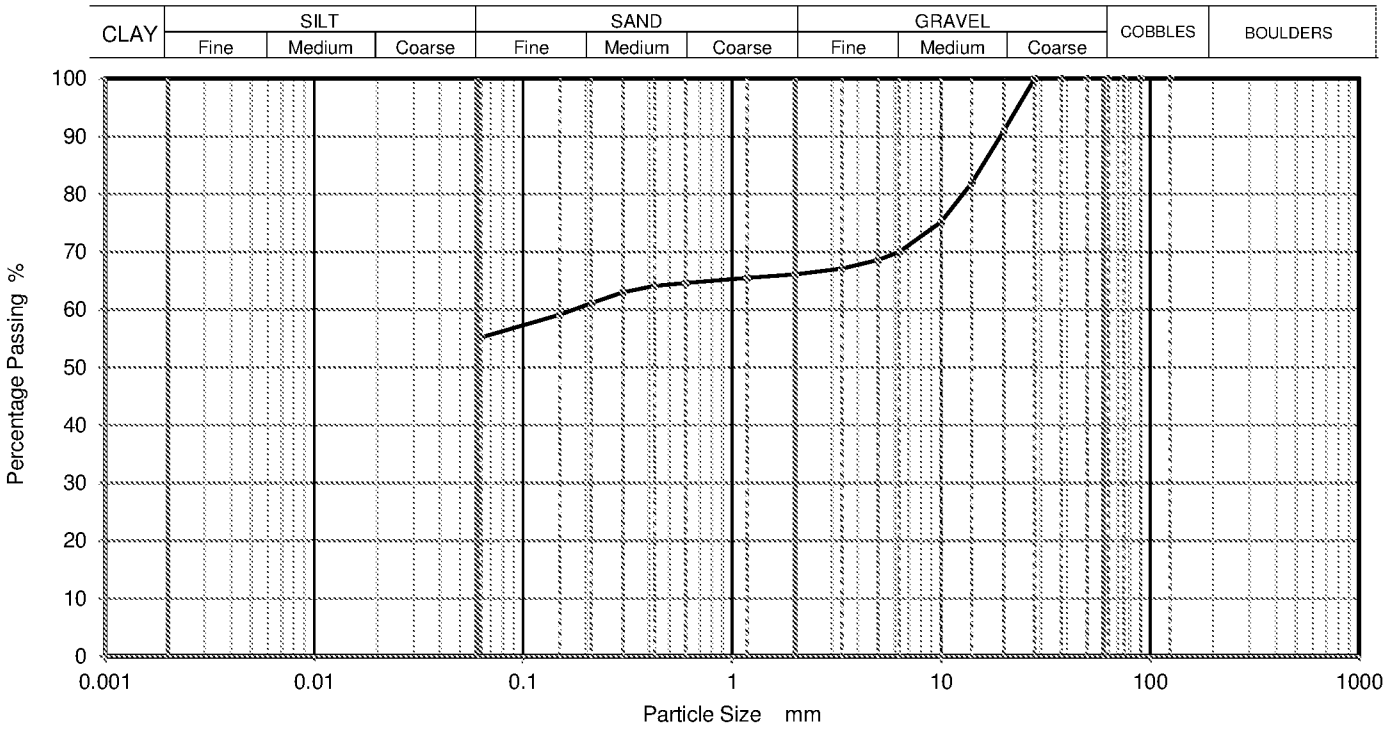
Initials: J.P

Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Job Ref	23621				
Borehole/Pit No.	WS7				
Site Name	Tye Lane, Walberton			Sample No.	-
Project No.	GE16861	Client	GESL	Depth Top	2.50 m
Soil Description	Brown slightly sandy slightly gravelly silty CLAY (gravel is fmc and angular to sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	91		
14	82		
10	75		
6.3	70		
5	69		
3.35	67		
2	66		
1.18	66		
0.6	65		
0.425	64		
0.3	63		
0.212	61		
0.15	59		
0.063	55		

Dry Mass of sample, g	200

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	33.9
Sand	10.8
Fines <0.063mm	55.2

Grading Analysis		
D100	mm	
D60	mm	0.175
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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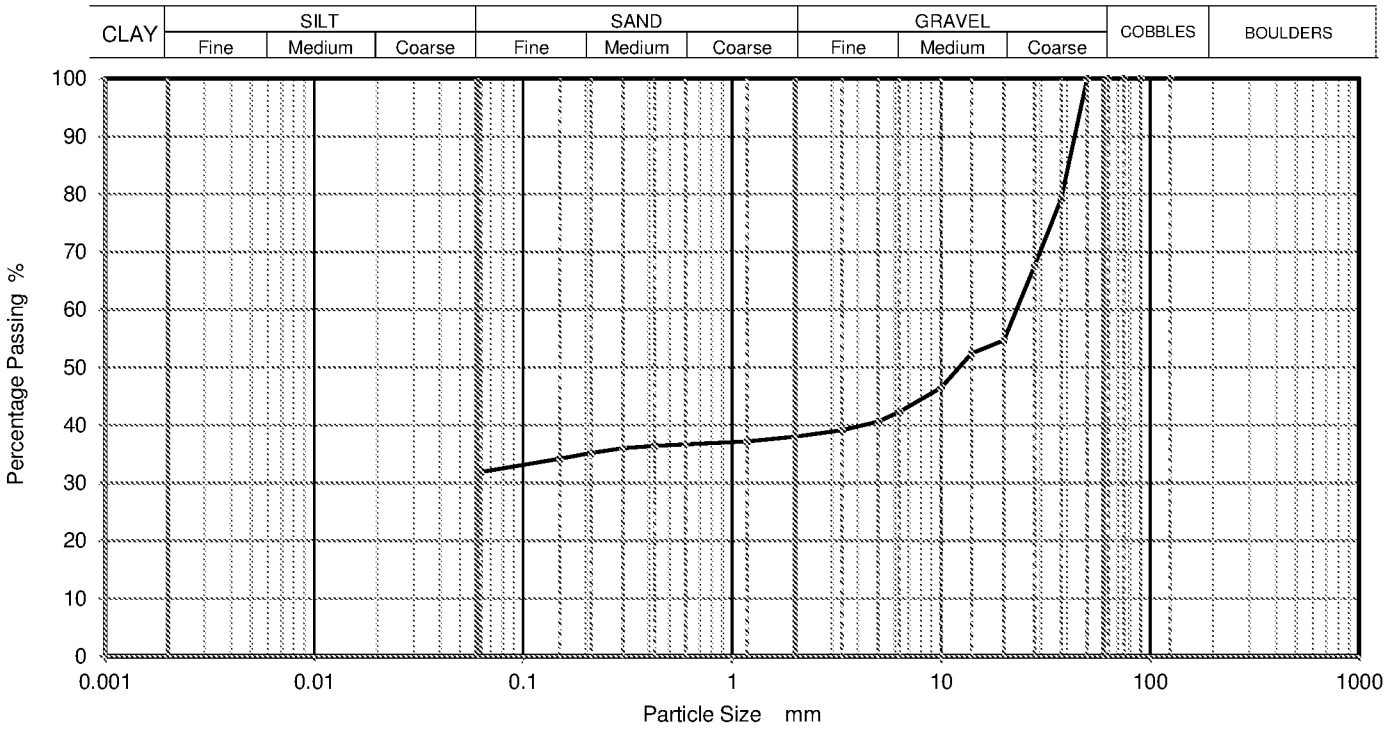
Initials: J.P

Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Site Name	Tye Lane, Walberton			Job Ref	23621
				Borehole/Pit No.	WS9
Project No.	GE16861	Client	GESL	Sample No.	-
				Depth Top	2.50 m
Soil Description	Brown slightly sandy very clayey GRAVEL (gravel is fmc and sub-angular to angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	79		
28	68		
20	55		
14	52		
10	47		
6.3	42		
5	41		
3.35	39		
2	38		
1.18	37		
0.6	37		
0.425	36		
0.3	36		
0.212	35		
0.15	34		
0.063	32		

Dry Mass of sample, g	437

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	62.0
Sand	6.1
Fines <0.063mm	31.9

Grading Analysis		
D100	mm	
D60	mm	23
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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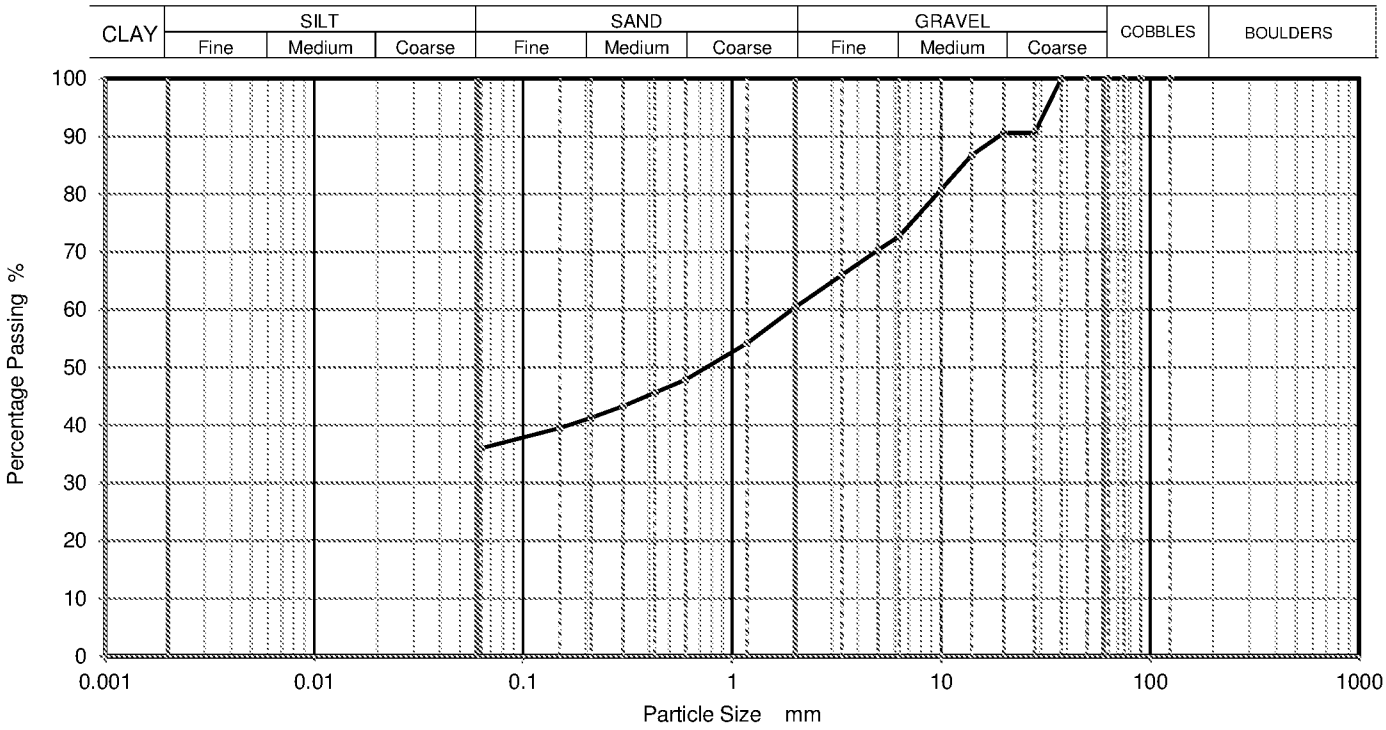
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Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Job Ref	23621				
Borehole/Pit No.	WS10				
Site Name	Tye Lane, Walberton			Sample No.	-
Project No.	GE16861	Client	GESL	Depth Top	3.50 m
Soil Description	Brown slightly sandy gravelly silty CLAY with occasional fm chalk fragments (gravel is fmc and angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	91		
20	91		
14	87		
10	81		
6.3	73		
5	70		
3.35	66		
2	60		
1.18	54		
0.6	48		
0.425	46		
0.3	43		
0.212	41		
0.15	40		
0.063	36		

Dry Mass of sample, g: 291

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	39.6
Sand	24.5
Fines <0.063mm	36.0

Grading Analysis		
D100	mm	
D60	mm	1.93
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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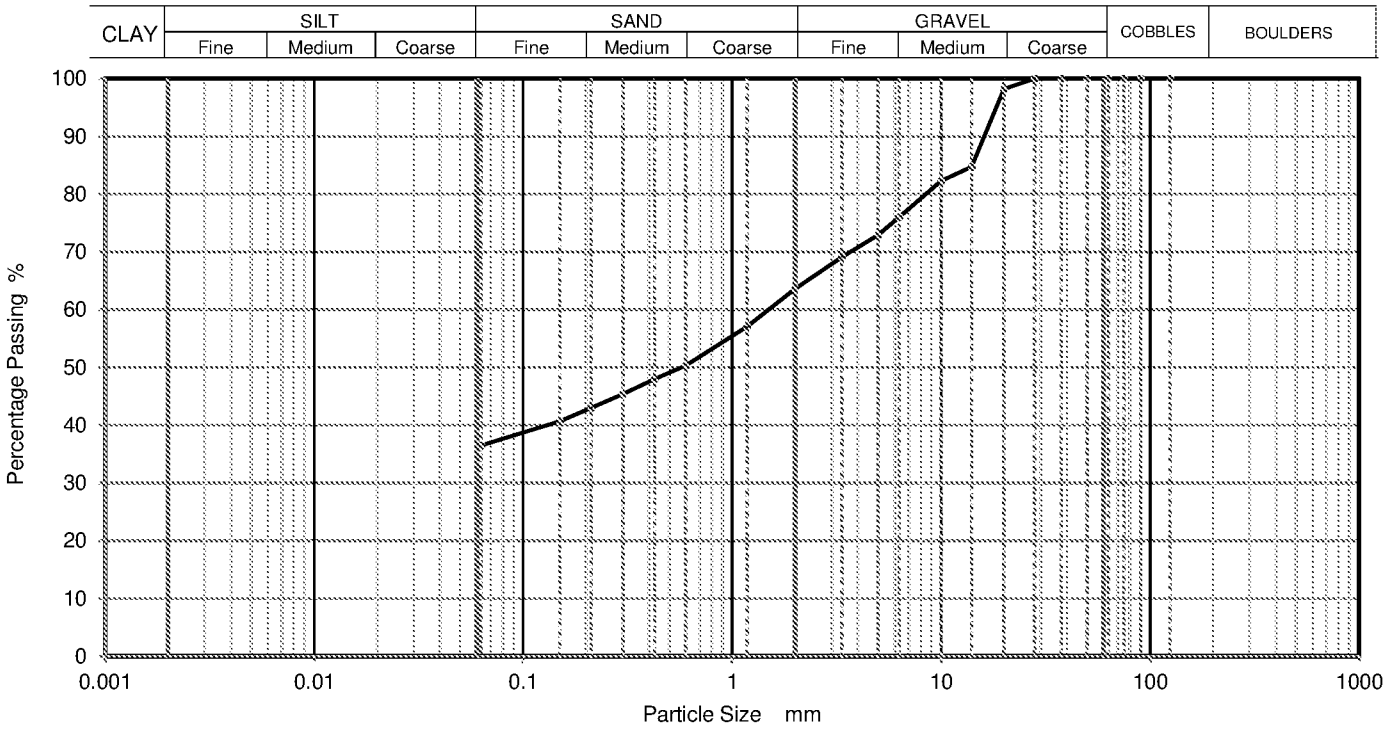
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Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Job Ref	23621				
Borehole/Pit No.	WS11				
Site Name	Tye Lane, Walberton			Sample No.	-
Project No.	GE16861	Client	GESL	Depth Top	3.00 m
Soil Description	Brown slightly sandy gravelly silty CLAY with occasional fm chalk fragments (gravel is fmc and angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	98		
14	85		
10	82		
6.3	76		
5	73		
3.35	69		
2	64		
1.18	57		
0.6	50		
0.425	48		
0.3	45		
0.212	43		
0.15	41		
0.063	37		

Dry Mass of sample, g: 291

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	36.4
Sand	27.1
Fines <0.063mm	36.5

Grading Analysis		
D100	mm	
D60	mm	1.5
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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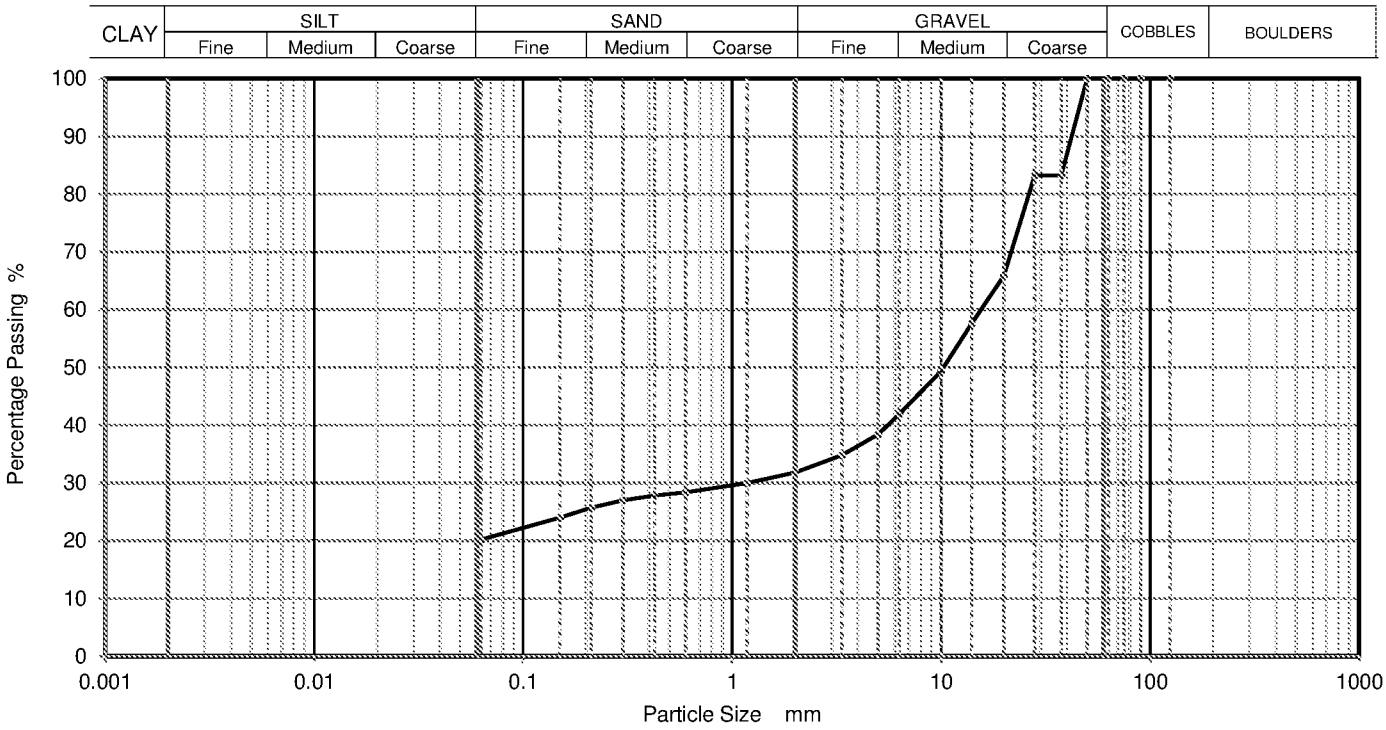
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Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Site Name	Tye Lane, Walberton			Job Ref	23621
				Borehole/Pit No.	WS12
Project No.	GE16861	Client	GESL	Sample No.	-
				Depth Top	2.50 m
Soil Description	Brown sandy very clayey GRAVEL (gravel is fmc and angular to sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	83		
28	83		
20	66		
14	58		
10	49		
6.3	42		
5	38		
3.35	35		
2	32		
1.18	30		
0.6	28		
0.425	28		
0.3	27		
0.212	26		
0.15	24		
0.063	20		

Dry Mass of sample, g: 520

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	68.2
Sand	11.6
Fines <0.063mm	20.2

Grading Analysis		
D100	mm	
D60	mm	15.5
D30	mm	1.18
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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K4 Soils Laboratory

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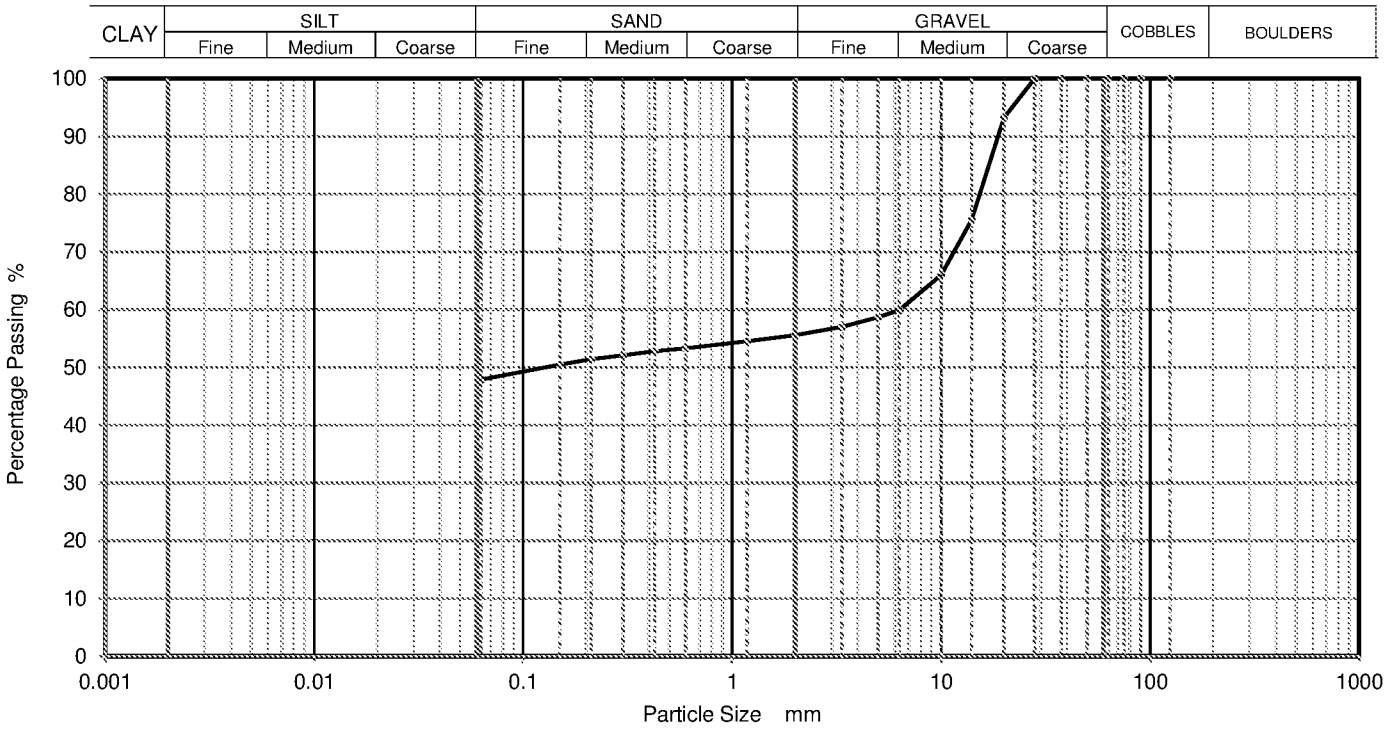
Initials: J.P

Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Job Ref	23621				
Borehole/Pit No.	WS13				
Site Name	Tye Lane, Walberton			Sample No.	-
Project No.	GE16861	Client	GESL	Depth Top	2.50 m
Soil Description	Brown slightly sandy gravelly silty CLAY (gravel is fmc and angular to sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	93		
14	76		
10	66		
6.3	60		
5	59		
3.35	57		
2	56		
1.18	55		
0.6	53		
0.425	53		
0.3	52		
0.212	51		
0.15	51		
0.063	48		

Dry Mass of sample, g	295

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	44.4
Sand	7.7
Fines <0.063mm	47.9

Grading Analysis		
D100	mm	
D60	mm	6.34
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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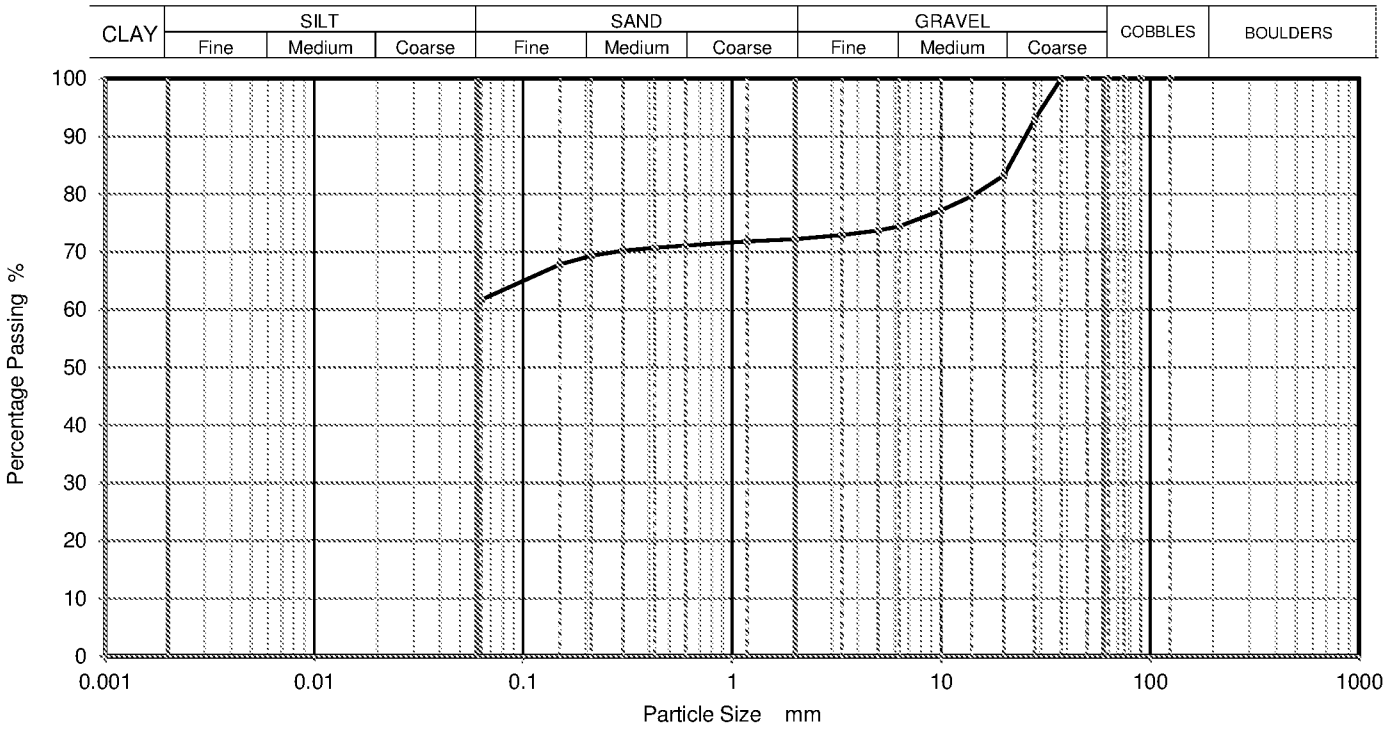
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Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

PARTICLE SIZE DISTRIBUTION

Job Ref	23621				
Borehole/Pit No.	WS13				
Site Name	Tye Lane, Walberton			Sample No.	-
Project No.	GE16861	Client	GESL	Depth Top	4.00 m
Soil Description	Brown slightly sandy slightly gravelly silty CLAY (gravel is fmc and sub-angular to angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/11/2017
				Schedules received	07/11/2017
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	08/11/2017
				Date tested	20/11/2017



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	93		
20	83		
14	80		
10	77		
6.3	74		
5	74		
3.35	73		
2	72		
1.18	72		
0.6	71		
0.425	71		
0.3	70		
0.212	69		
0.15	68		
0.063	62		

Dry Mass of sample, g: 232

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	27.8
Sand	10.5
Fines <0.063mm	61.7

Grading Analysis		
D100	mm	
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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Checked and Approved

Initials: J.P

Date: 22/11/2017

ARUN DISTRICT COUNCIL WA/918/OUT

Sulphate Content (Gravimetric Method) for 2:1 Soil: Water Extract and pH Value - Summary of Results

Tested in accordance with BS1377 : Part 3 : 1990, clause 5.3 and clause 9

Job No.	Project Name	Programme	
23621	Tye Lane, Walberton	Samples received	06/11/2017
		Schedule received	07/11/2017
Project No.	Client	Project started	08/11/2017
GE16861	GESL	Testing Started	21/11/2017

Hole No.	Sample				Soil description	Dry Mass passing 2mm	SO3 Content	SO4 Content	pH	Remarks
	Ref	Top	Base	Type		%	g/l	g/l		
TP6	-	1.00	-	D	Brown and orangish brown mottled slightly gravelly fine sandy silty CLAY with rare carbonaceous deposits (gravel is fm and sub-angular)	99	0.09	0.11	8.14	
WS5	-	2.00	-	D	Brown gravelly sandy silty CLAY with traces of rootlets (gravel is fmc and angular to sub-angular)	66	0.11	0.13	7.99	
WS9	-	2.50	-	D	Brown slightly sandy very clayey GRAVEL (gravel is fmc and sub-angular to angular)	38	0.14	0.17	7.94	
WS13	-	1.50	-	D	Brown and orangish brown mottled fine sandy gravelly silty CLAY (gravel is fmc and sub-angular to angular)	47	0.13	0.16	8.09	

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU
Tel: 01923 711 288
Email: James@k4soils.com

Checked and Approved

Initials **J.P**

Date: **22/11/2017**

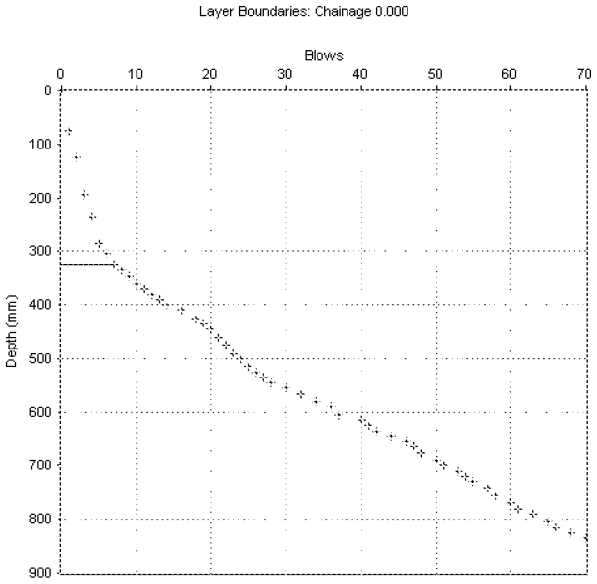
2519 | Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) | MSF-5-R29

UK DCP V3.1

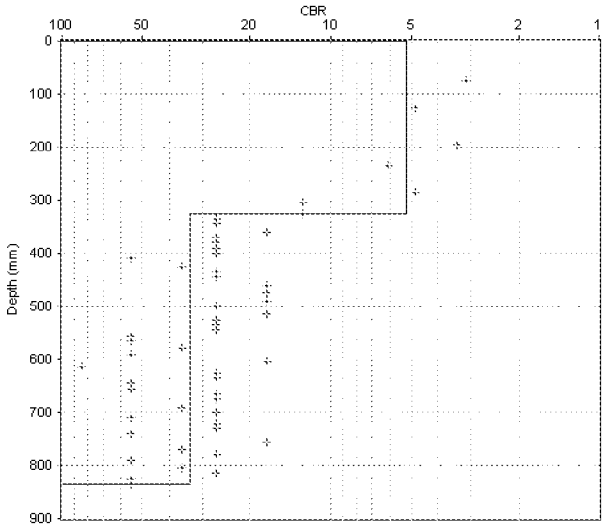
DCP Layer Strength Analysis Report

Project Name: DCP1

Chainage (km):	0.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	95	Surface Moisture:	Unknown
Test Date:	02/11/2017	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	46.43	5	325	325
2	8.10	33	510	835

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

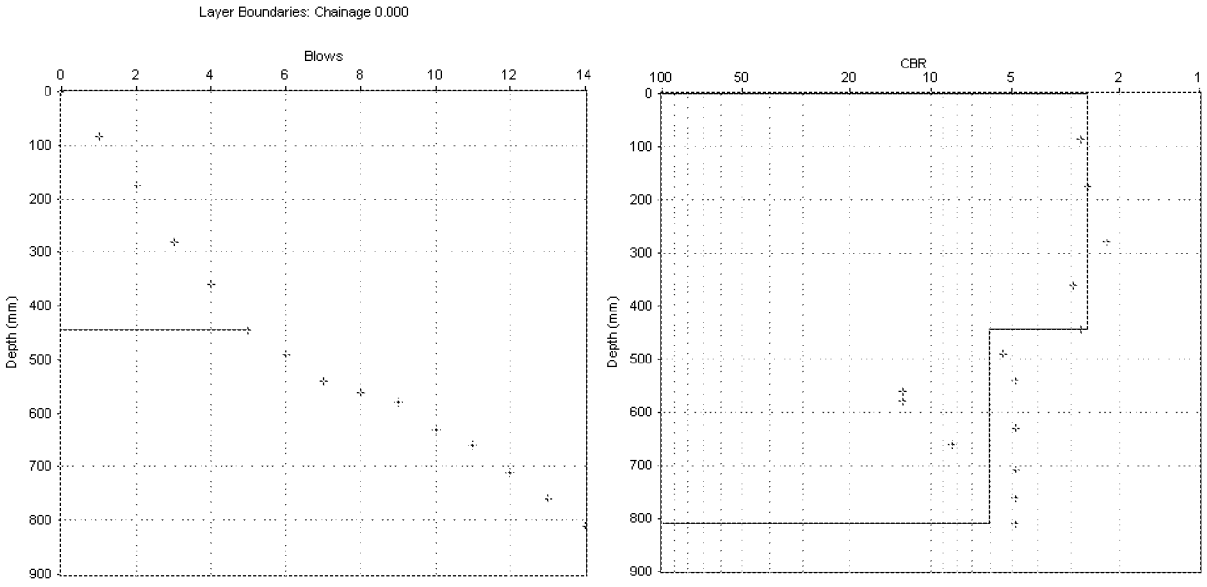
ARUN DISTRICT COUNCIL WA/99/18/DOC

UK DCP V3.1

DCP Layer Strength Analysis Report

Project Name: DCP2

Chainage (km):	0.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	120	Surface Moisture:	Unknown
Test Date:	22/11/2017	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart

CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	89.00	3	445	445
2	40.56	6	365	810

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

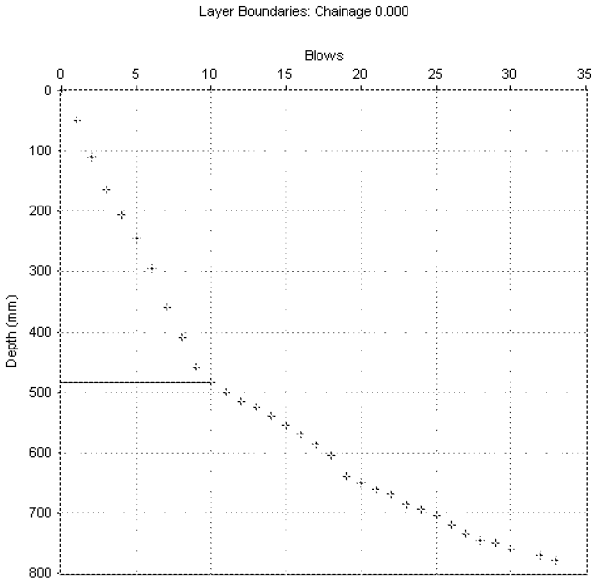
ARUN DISTRICT COUNCIL WA/99/18/DOC

UKDCP V3.1

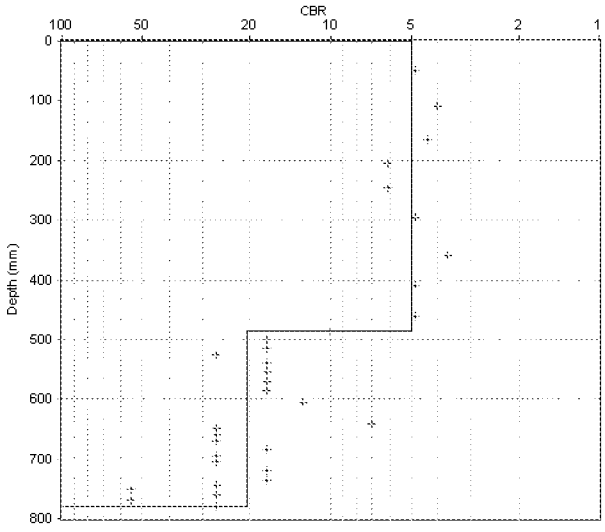
DCP Layer Strength Analysis Report

Project Name: DCP3

Chainage (km):	0.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	150	Surface Moisture:	Unknown
Test Date:	02/11/2017	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	48.50	5	485	485
2	12.83	20	295	780

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

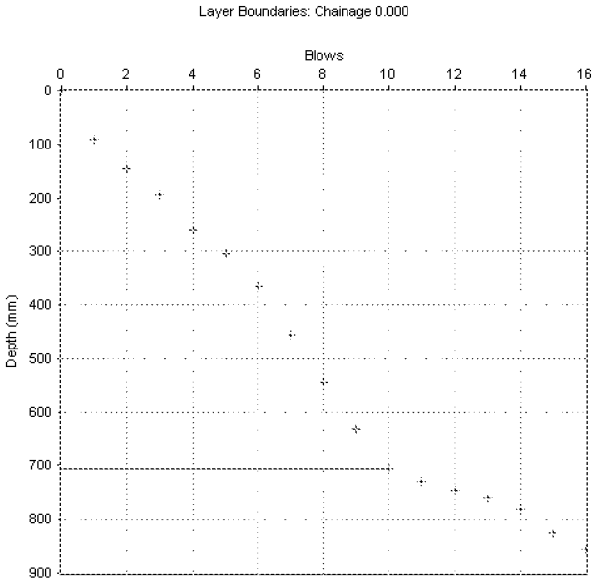
ARUN DISTRICT COUNCIL WA/99/18/DOC

UK DCP V3.1

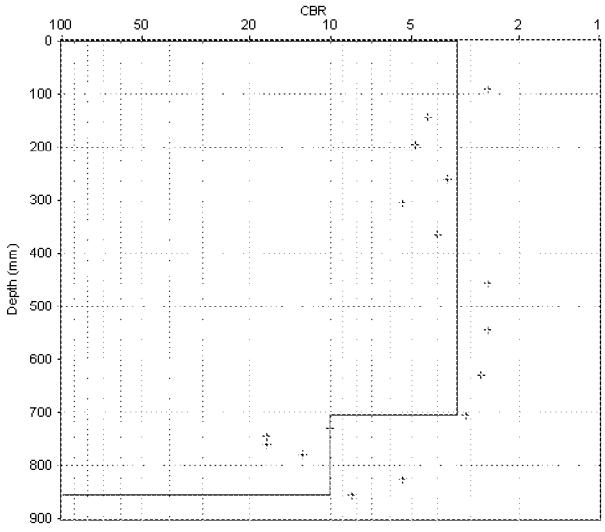
DCP Layer Strength Analysis Report

Project Name: DCP4

Chainage (km):	0.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	115	Surface Moisture:	Unknown
Test Date:	02/11/2017	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	70.50	3	705	705
2	25.00	10	150	855

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

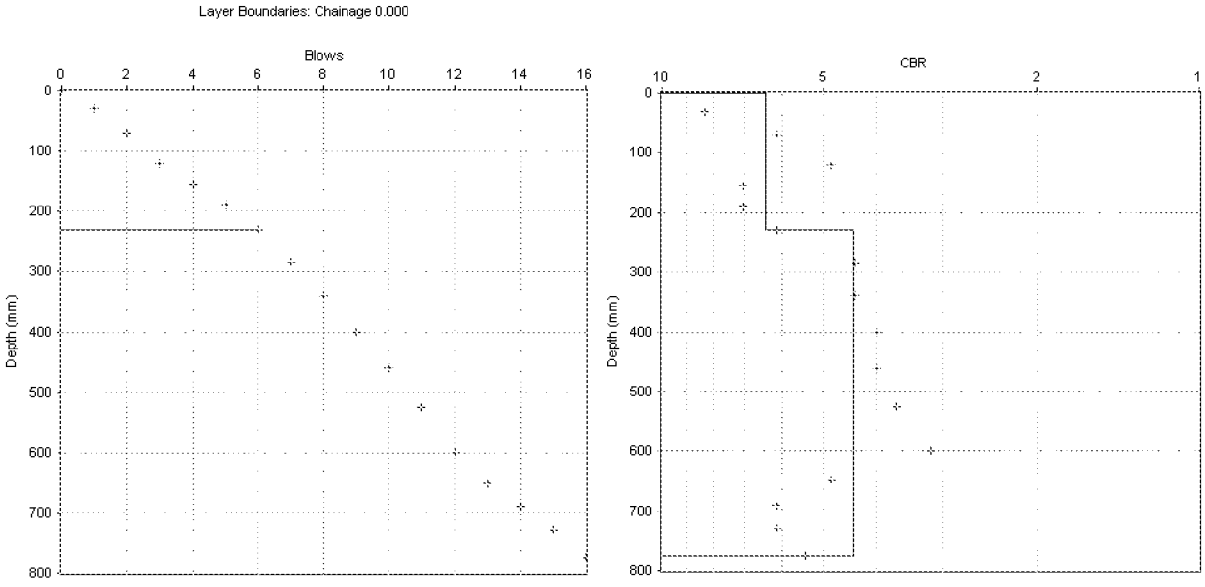
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UK DCP V3.1

DCP Layer Strength Analysis Report

Project Name: DCP5

Chainage (km):	0.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	160	Surface Moisture:	Unknown
Test Date:	02/11/2017	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart

CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	38.33	6	230	230
2	54.50	4	545	775

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

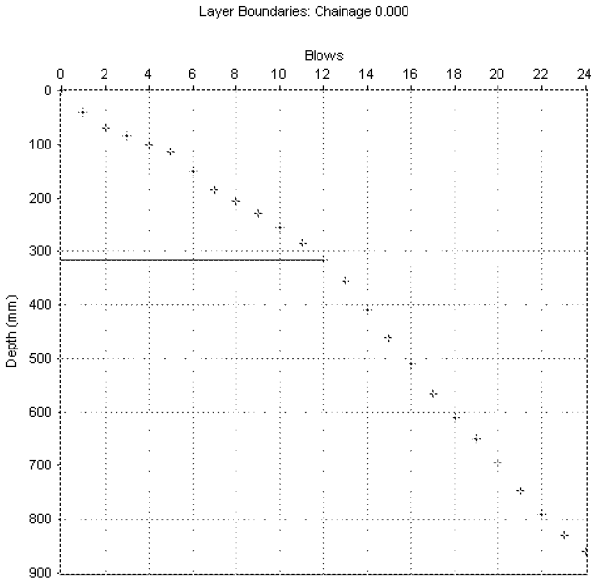
ARUN DISTRICT COUNCIL WA/99/18/DOC

UKDCP V3.1

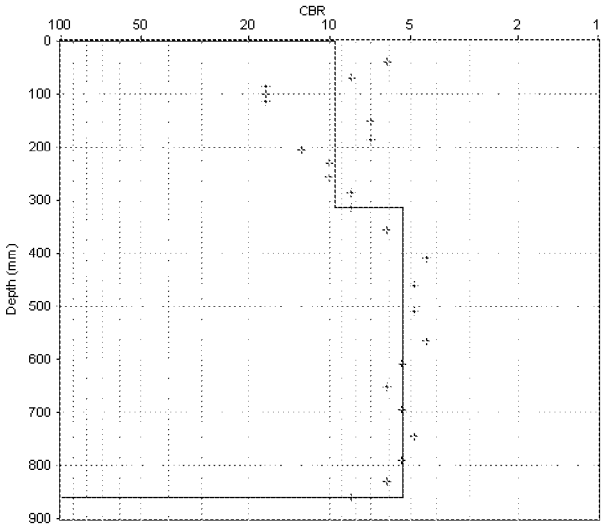
DCP Layer Strength Analysis Report

Project Name: DCP6

Chainage (km):	0.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	100	Surface Moisture:	Unknown
Test Date:	02/11/2017	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	26.25	10	315	315
2	45.42	5	545	860

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

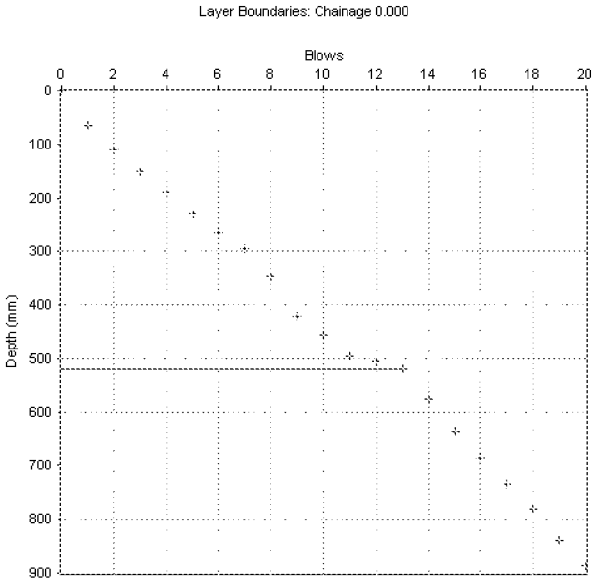
ARUN DISTRICT COUNCIL WA/99/18/DOC

UK DCP V3.1

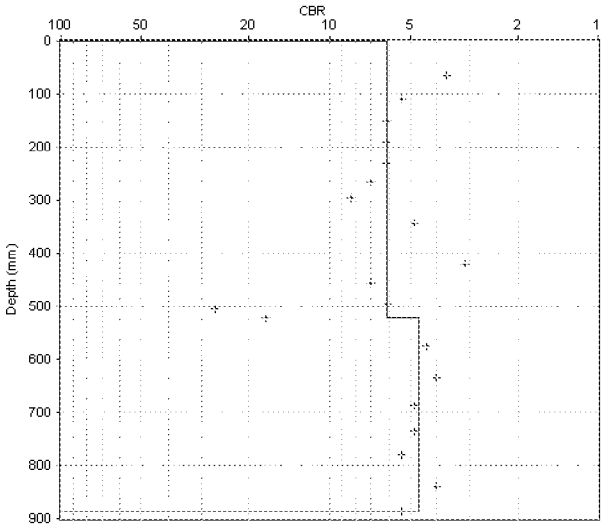
DCP Layer Strength Analysis Report

Project Name: DCP7

Chainage (km):	0.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	75	Surface Moisture:	Unknown
Test Date:	02/11/2017	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	40.00	6	520	520
2	52.14	5	365	885

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

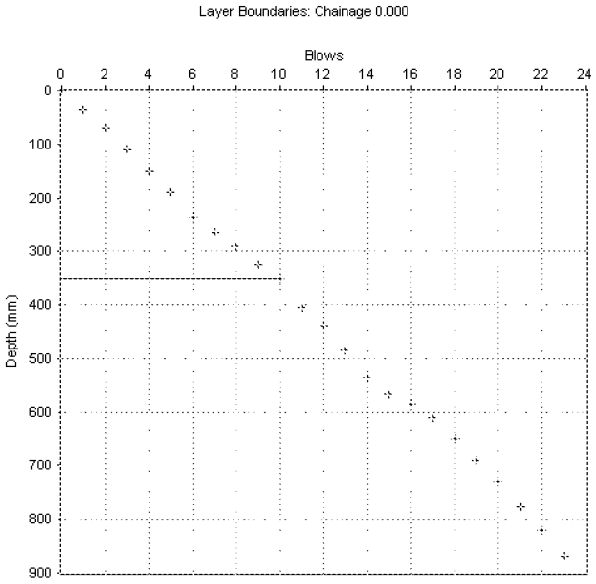
ARUN DISTRICT COUNCIL WA/99/18/DOC

UK DCP V3.1

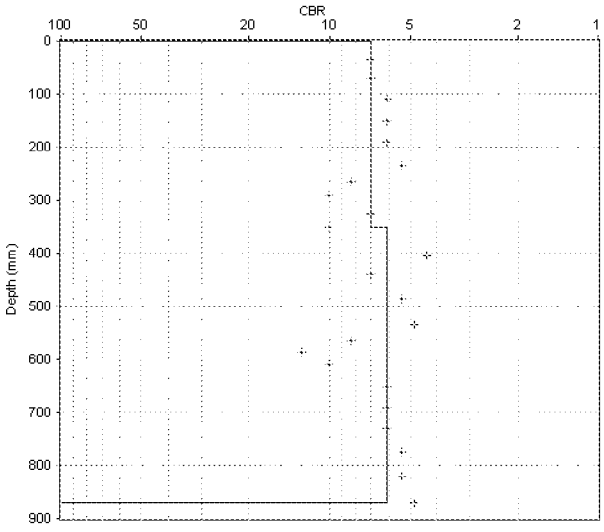
DCP Layer Strength Analysis Report

Project Name: DCP8

Chainage (km):	0.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	70	Surface Moisture:	Unknown
Test Date:	02/11/2017	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	35.00	7	350	350
2	40.00	6	520	870

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

ARUN DISTRICT COUNCIL WA/99/18/DOC

APPENDIX F

CLEA Model Output and ESI Stats

STEP 5: RESULTS

Find AC | Print Reports | Back to Guide

		Ratio of ADE to relevant Health Criteria Value			Soil Assessment Criteria			Soil Saturation Limit	Pathway Contributions (%)										
		oral HCV	inhal HCV	Combined	oral HCV	inhal HCV	Combined		direct soil ingestion	sum of consumption of homegrown produce and attached	dermal contact (indoor)	dermal contact (outdoor)	inhalation of dust (indoor)	inhalation of dust (outdoor)	inhalation of vapour (indoor)	inhalation of vapour (outdoor)	oral background	inhalation background	Total
Number	Chemical	(dimensionless)	(dimensionless)	(dimensionless)	mg kg^{-1}	mg kg^{-1}	mg kg^{-1}	mg kg^{-1}	%	%	%	%	%	%	%	%	%	%	%
1	Arsenic	1.00	0.38	NR			**NR**	NR	79.89	7.54	0.45	11.86	0.25	0.00	0.00	0.00	0.00	0.00	100.00
2	Cadmium	0.91	0.10	1.00				NR	11.21	38.70	0.00	0.06	0.04	0.00	0.00	0.00	49.96	0.04	100.00
3	Chromium III	0.15	0.85	1.00				NR	85.63	1.03	0.00	0.00	0.27	0.00	0.00	0.00	13.01	0.06	100.00
4	Mercury, inorganic	0.93	0.07	1.00				NR	66.71	30.08	0.00	0.00	0.21	0.00	0.00	0.00	3.00	0.00	100.00
5	Nickel	0.14	1.00	NR			**NR**	NR	32.77	16.18	0.03	0.81	0.10	0.00	0.00	0.00	49.90	0.10	99.90
6	Copper	0.50	0.50	1.00				NR	36.15	13.78	0.00	0.00	0.11	0.00	0.00	0.00	49.92	0.04	100.00
7	Zinc	1.00	0.00	1.00				NR	23.95	26.00	0.00	0.00	0.08	0.00	0.00	0.00	49.95	0.02	100.00
8	Selenium	1.00	NR	NR		**NR**	**NR**	NR	40.59	28.46	0.00	0.00	0.13	0.00	0.00	0.00	30.82	0.00	100.00
9	Chromium VI	1.00	NR	NR		**NR**	**NR**	NR	36.29	26.02	0.00	0.00	0.00	0.00	0.00	0.00	37.70	0.00	100.00
10	Barium	1.00	NR	NR		**NR**	**NR**	NR	49.28	0.57	0.00	0.00	0.16	0.00	0.00	0.00	50.00	0.00	100.00
11	Beryllium	0.19	0.81	1.00				NR	47.43	2.49	0.00	0.00	0.15	0.00	0.00	0.00	49.92	0.00	100.00
12	Vanadium	0.90	0.10	1.00				NR	27.91	26.36	0.00	0.00	0.09	0.00	0.00	0.00	45.56	0.09	100.00
13	Phenol	0.31	0.69	1.00				8.28E+04	0.92	87.49	0.05	1.37	0.00	0.00	0.80	0.00	8.34	1.03	100.00
14																			
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29																			
30																			

Client/client ref:
Project no: QE16861
Site ref:
Data description: Near Surface Soils
Contaminant(s): Metals, inorganics and BaP
Test scenario: Planning
Date: 7 December 2017
User details: JT

	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Total Cyanide (mg/kg)	Total Phenols (mg/kg)
Critical concentration, C$_c$	37	1330	41.2	26	3010	5200	200	169	127	350	107	19400	34	293
Notes														
Full dataset size	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Outliers present?	Yes	No	Yes	No	No	No	No	No	No	No	No	Yes	No	No
Number of outliers temporarily excluded	0													
Number removed by hand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sample size, n	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Sample mean, $\bar{x}$	7.55	54.1722222	0.52777778	0.36944444	19.7222222	15.1888889	27.2388889	1.44444444	12.1666667	1.23888889	26.6722222	59.9333333	0.5	3
Standard deviation, s	2.32410641	7.18870074	0.11785113	0.21360966	3.29983165	3.24289067	7.20425845	0.25718435	1.8553579	0.32564667	4.88018871	24.661258	0	0
Number of non-detects	0	0	17	13	0	0	0	0	0	2	0	0	18	18
Set non-detect value to	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit
Data type	Non-normal	Normal	Non-normal	Non-normal	Normal	Normal	Normal	Normal	Normal	Non-normal	Normal	Non-normal	Single value	Single value
Selection approach	Auto Chebyshev	Auto One-sample t	Auto Chebyshev	Auto Chebyshev	Auto One-sample t	Auto One-sample t	Auto One-sample t	Auto One-sample t	Auto One-sample t	Auto Chebyshev	Auto One-sample t	Auto Chebyshev	Auto Chebyshev	Auto Chebyshev
Test scenario	Planning (a true mean lower than critical concentration, $\mu < C_c$)				Evidence level required		95%	Use Nearest neighbour to test for outliers						
Evidence, μ vs C_c	53.76077786	752.9703958	-1464.2	509.0651803	3844.642857	6785.235343	101.7402865	2764.079588	262.588998	4543.783894	69.83375412	4327.200651	N/A	N/A
Upper confidence limit on the mean, μ	9.93779235	57.1197997	0.6488583	0.5889075	21.0752497	16.5185689	30.1928455	1.54989755	12.9274177	1.57345903	28.6732423	85.2703674	0.5	3
Evidence level	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Data decision	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level	evidence level
Result	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$	$\mu < C_c$
Exceed data set	Or	Or	Or	Or	Or	Or	Or	Or	Or	Or	Or	Or	Or	Or

Back to data | Go to outlier test | Go to normality test | Show individual summary

Client/client ref:
Project ref: GE16861
Site ref:
Data description: Near Surface Soils
Contaminant(s): Metals, inorganics and BaP
Test scenario: Planning
Date: 7 December 2017
User details: JT

	Benzo (a) pyrene (mg/kg)					
Original observations, n	5					
Notes						
Full dataset size	18	0	0	0	0	0
Outliers present?	Yes					
Number of outliers temporarily excluded						
Number removed by user	0	0	0	0	0	0
Sample size, n	18	0	0	0	0	0
Sample mean, $\bar{x}$	0.10833333	No Data	No Data	No Data	No Data	No Data
Standard deviation, s	0.16201652					
Number of non-detects	15	0	0	0	0	0
Set non-detect value to	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit
Distribution	Non-normal					
Selection approach	Auto Chebyshev	Auto	Auto	Auto	Auto	Auto
Test statistic						
t statistic, $t_{1-\alpha,df}$	128.0939016					
Upper confidence limit on the mean, μ_{UCL}	0.27479154					
Evidence level	100%					
Base decision on	evidence level					
Result	$\mu < Cc$					
Export data as	Or	Or	Or	Or	Or	Or

Back to data