URS

Project Number 49319164

Phase 1 Investigation Report

Shell Fontwell, West Sussex

NP 10018981



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Shell UK Oil Products Limited

Prepared by:

URS Corporation Ltd.

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EXECUTIVE SUMMARY

URS Corporation Ltd (URS) was commissioned by Shell Oil Products UK Ltd (Shell), to conduct a Phase 1 investigation of Shell Fontwell Service Station (hereafter referred to as "the site") which is located within Fontwell, approximately 10km east of Chichester (Arundel Road, Fontwell, Arundel, BN18 0SB). The site is located in an area of mixed land use, including low density residential properties to the east and south of the site boundaries and commercial properties adjacent to the western and northern site boundaries. There is a pond (potential surface water receptor) reported to be situated approximately 210m west of the site, although this was not confirmed during the URS site walkover in January 2011. Groundwater receptors include the underlying superficial deposits (undifferentiated head deposit, Secondary Aquifer), bedrock geology (Lambeth Group, Secondary Aquifer) and nearby Tarrant Chalk Member (Principal Aquifer).

Prior to construction of a filling station in approximately 1990, the site was undeveloped. Since 1990, the site has operated as a petrol filling station. Information obtained from the local petroleum officer (PO) reported a minor release on the unleaded inlet suction line for pump 7 in May 1992. No further evidence of fuel infrastructure failures was reported.

The existing site occupies an area of approximately 0.34ha. Facilities on the site include six pump islands located predominantly in the centre of the forecourt under the canopy and a shop. There are seven underground storage tanks (USTs), located in the western section of the site. Three of these tanks contain diesel and the remaining four contain petrol. There are three one tonne LPG tanks located in the north eastern section of the site.

The surface cover in the fuel island area of the main forecourt area is covered in herringbone brickwork in good condition. Surface cover surrounding the HGV fuel dispenser is concrete hardstanding that appears to be in good repair. Access routes constructed of tarmac are generally in good condition. A small area of tarmac east of pump 7 has been resurfaced and was cracked.

The site is underlain by a Secondary Aquifer (Lambeth group and potentially also drift deposits overlying this). The bedrock which underlies the Lambeth group is Upper Chalk; a Principal Aquifer. The underlying Chalk has not been encountered in a previous site investigation by RSK, however, based on a BGS log (from a borehole approximately 100m to the south east of the site) chalk is present at approximately 10m bgl. Furthermore the Lambeth group/Chalk boundary tends west to east along the north and north western boundary of the site. The site is not located within a groundwater Source Protection Zone for the protection of drinking water supply. The overall site sensitivity is classified as Moderate.

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1. INTRODUCTION

1.1. Site Summary

URS Corporation Ltd. (URS) has undertaken a Phase 1 Investigation of Shell Fontwell site at the request of Shell UK Oil Products Limited (Shell) in accordance with Work Request Number 453925555 dated 25th October 2010.

Table A: Summary of Key Site Information	
Site Name	Shell Fontwell
Site Operation	Operational Petrol Filling Station (Shell trading since 1990)
Network Planning System ID	NP 10018981
Site Address	Arundel Road, Fontwell, Arundel, West Sussex, BN18 0SB Refer to Figure 1 for the site location.
Grid Co-ordinates	495190, 107080
Reported Site Area	Approximately 0.34ha
Freehold/Leasehold	URS understands the site is leased to Shell - 30 yrs from 1st September 1990 as shown on Figure 2.
Previous, present, and proposed zoning and land use of the property	URS understands that the future use of the site is Continued Petroleum Use (CPU).
Sources of Information	Appendix A provides a list of references.

1.2. Objectives

The objective of the Phase 1 Investigation detailed herein was to develop a preliminary Conceptual Site Model (CSM) for the site to enable the identification of data gaps, and to prioritise any subsequent work towards gathering information to test and refine the CSM assumptions. This is done by:

- Evaluation of the likelihood of occurrence, nature and potential magnitude of Chemicals of Potential Concern (COPC) at a site;
- Evaluation of potential transport mechanisms and migration pathways by which COPC could migrate off-site;
- Estimation of the potential effects of COPC on the subject property and surrounding areas; and
- Review of relevant information in preparation for field work at the site.

This report has been collated to support Shell with its environmental asset management activities and possible future site redevelopment.

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1.3. Scope of Work

The Scope of Work for this Phase 1 Assessment includes:

- Completion of a desktop investigation of relevant data sources.
- A site inspection/walkover.
- Provision of Envirocheck data search, including BGS logs and geology.
- Relevant site information from the petroleum officer.
- Completion of a site photographic log.

1.4. Historic Reports

A summary of relevant previous historic reports is presented in the following table:

Table B: Previous Site Investigations and Remedial Works	
Previous site investigations	RSK (February 2008) *Comprehensive Environmental Site Assessment Report* (ref. 310493 – R1 (02)). (Reference 1) Seven boreholes were drilled by RSK during a Phase II investigation in August 2007 to a maximum depth of 12 metres. Monitoring wells were installed in five of the boreholes and the remaining two were backfilled. The report concluded that no unacceptable risks were identified and that the site may continue to operate without any remediation work.
Historical Site Boreholes	As described above, seven boreholes were drilled by RSK in August and of these, five were converted to monitoring wells. MW1 was reported dry in 2007, and was found to be filled-in during a site walkover by URS in January 2011. Four monitoring wells are currently present on the site, to a maximum depth of 6.8m below ground level (bgl). The monitoring wells were in good condition with the exceptions of MW7 and MW2, which both had depressed head works.
Historical Remedial Activities	URS understands that no significant remedial works have been undertaken at the site to date.

1.5. Phase 1 Site Visit

URS undertook a walkover survey of the subject property on 11th January 2011. As part of the site inspection a series of photographs were obtained and are presented in Appendix B.

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2. SITE SETTING

2.1. Desk Study

Information sources reviewed in producing the following tables are listed within Appendix A. The Envirocheck Report (Reference 2) is presented in Appendix C. Information received from the Petroleum Officer (Reference 3) is presented in Appendix D and BGS logs (Reference 4) in Appendix E.

Table C: History of On-Site Activities

Map Date	On-site Feature
1876 - 1979	Site occupied by wood or orchard and is bounded by roads to the south and east.
1989	Site cleared of orchard and undeveloped.
1994 - 2010	Petrol forecourt canopy and shop

Table D: Summary of Historical Off-site Activities

Map Date	Off-site Feature	Approximate Distance (m)	Direction
1880 - present	Mixed woodland (Slindon Wood)	250m	north
1880 - 2000	Public house: Balls Hut Inn	30m	south
1914 - 1961	Reservoir: Bognor Water Works Co.	50m	south
1914 - 1961	Farm: The Hermitage	100m	west
1947 - 2010	Residential Properties	30m	east
1992 - present	Motel and other commercial properties	10m	northeast and north
1947 - present	Fontwell Park Racecourse and residential housing	150m	west and southwest

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Table E: On-site Regulatory Information	
Discharge Consents	None reported by Envirocheck, however the site has a soakaway in the southwest corner that is fed by water from the interceptor.
Pollution Incidents	None reported by Envirocheck
Integrated Pollution Controls	None reported by Envirocheck
Integrated Pollution Prevention Controls	None reported by Envirocheck
Local Authority Pollution Prevention Control	On-site entry for petrol filling station
Substantiated Pollution Incident Register	None reported by Envirocheck
Prosecutions relating to Authorised Processes	None reported by Envirocheck
Registered Radioactive Substances	None reported by Envirocheck
BGS Recorded Landfill Sites	None reported by Envirocheck
Historic Landfill Sites	None reported by Envirocheck
Local Authority Recorded Landfill Sites	None reported by Envirocheck
Registered Landfill Sites	None reported by Envirocheck
Registered Waste Transfer Sites	None reported by Envirocheck
Licensed Waste Management Facilities	None reported by Envirocheck
Registered Waste Treatment or Disposal Sites	None reported by Envirocheck
Control of Major Hazard Sites	None reported by Envirocheck
Notification of Installations Handling Hazardous Substances	None reported by Envirocheck
Contemporary Trade Directory Entries	Site entry listed
Fuel Station Entries	Site entry listed

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Table F: Off-site Regulatory Information within 1km of the site	
Discharge Consents	▪ 650m northwest of site – single domestic property with sewage discharge of final treated effluent to groundwater via soakaway. Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) ▪ 750m west of site - single domestic property with sewage discharge of final treated effluent to groundwater via soakaway. Status: Pre National Rivers Authority Legislation ▪ 750m west of site – undefined property type with sewage discharge of final treated effluent to groundwater via soakaway. Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act) ▪ 900m south of site – mixed farming property with trade discharge of process water to land. Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) ▪ 950m southeast of site - single domestic property with sewage discharge of final treated effluent to groundwater via soakaway. Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) ▪ 950m southeast of site - single domestic property with sewage discharge of final treated effluent to groundwater via soakaway. Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) ▪ 1000m east of site - single domestic property with sewage discharge of final treated effluent to land. Status: Pre National Rivers Authority Legislation ▪ 1000m east of site - single domestic property with sewage discharge of final treated effluent to ditch leading to Barnham Rife. Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) ▪ 1000m east of site – undefined property type with sewage discharge of final treated effluent to freshwater stream / river. Status: lapsed (under Environment Act 1995, Schedule 23)
Pollution Incidents	▪ Minor pollution incident in October 1995 161m to the southwest of the site: A small quantity of diesel entered drains when a lorry overturned on the A27 adjacent to the Fontwell Racecourse. ▪ Minor pollution incident in October 1998 730m east of the site: Crude sewage overflowing from mains sewer on arable land 'The Pines'.

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Table F: Off-site Regulatory Information within 1km of the site	
Integrated Pollution Controls	None reported by Envirocheck
Integrated Pollution Prevention Controls	None reported by Envirocheck
Local Authority Pollution Prevention Control	Quarry process controls at Slindon Bottom Pit located over 850m north, revoked in 1994
Substantiated Pollution Incident Register	None reported by Envirocheck
Prosecutions relating to Authorised Processes	None reported by Envirocheck
Registered Radioactive Substances	None reported by Envirocheck
BGS Recorded Landfill Sites	Slindon Tip (Slindon Bottom) lies 730m to the north of the site.
Historic Landfill Sites	▪ Slindon Bottom South lies 700m to the north of site. The landfill was operational from 1954 to 1975 and accepted inert, industrial, commercial and household waste. This is likely to form part of Slindon Tip. ▪ Wandleys Lane lies 840m to the southwest of the site. The landfill was operational between 1979 and 1981 and accepted inert waste.
Local Authority Recorded Landfill Sites	▪ Land adjoining 'Days Fontwell' is recorded as a landfill. It lies 190m to the north of site. The status of the landfill is unknown and the type of waste is not specified. ▪ Everyman's Pit lies 700m north of the site located on Slindon Bottom Road. The status of the landfill is unknown and the type of waste is not specified however it is likely to be a part of the Slindon Tip.
Registered Landfill Sites	Wyatt of Snetterton hold a lapsed/cancelled/defunct licence for a landfill 200m north of the site. Inert waste was authorised.
Registered Waste Transfer Sites	None reported by Envirocheck
Licensed Waste Management Facilities	None reported by Envirocheck
Registered Waste Treatment or Disposal Sites	None reported by Envirocheck
Control of Major Hazard Sites	None reported by Envirocheck
Notification of Installations Handling Hazardous Substances	None reported by Envirocheck

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Table F: Off-site Regulatory Information within 1km of the site	
Contemporary Trade Directory Entries	▪ Car body repairs (inactive) 150m southeast of site ▪ Gunsmiths (inactive) 170m east of site ▪ Pest and vermin control (inactive) 170m east of site ▪ Industrial and commercial machinery (inactive) 570m southwest of site ▪ Garage services (inactive) 640m east of site. ▪ Car dealers (active) 700m east of site ▪ Breakdown and recovery (active) 740m east of site ▪ Manufacturers (active) 720m west of site ▪ Waste disposal services (inactive) 730m north of site ▪ Joinery manufacturers (inactive) 750m south of site ▪ Chemists' and pharmacists' suppliers and wholesalers (inactive) 790m southwest of site ▪ Temperature monitoring systems manufacturers (inactive) 792m southwest of site ▪ Precision engineers (inactive) 820m southwest of site ▪ Joinery manufacturers (inactive) 870m southwest of site ▪ Road haulage services (active) 990m south of site
Fuel Station Entries	Site entry listed

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2.2. Fuel Infrastructure

The following information is based on site observations and information provided by Shell.

Table G: General Information regarding Fuel Infrastructure	
Site Age	URS understands the site was opened in 1990, based on information provided by Shell and the petroleum officer.
Known Redevelopment on the site	Three 1 tonne LPG pumps were installed in 2004.
Stock reconciliation	Based on interviews conducted with site staff, stock reconciliation is carried out daily. No exceedance of limits have been reported.
History of Tank Overfills	Tanks have overfill protection. The current site manager is not aware of any overfill incidents in the past 8 years. .
Number of Fuel Islands and Dispensers (Cars and HGVs)	Cars: Four fuel islands (ten dispensers). HGVs: Two fuel islands (two dispensers).
Gauge system currently operating	Gilbarco Veeder Root, 350ECPU
LPG on the site	Three LPG tanks present in northeast corner of the site on a 3m high raised embankment.
Number of overground tanks, capacity and contents	None other than the LPG tanks described above.
Number of underground tanks/compartments	Seven single wall tanks in west of the site
Number of off-set fill points	Seven off-set fill points for the underground tanks located in the north of the site adjacent to HGV pump 10. One off-set fill point for the LPG tanks located to the west of the LPG tanks.
Evidence of abandoned underground tanks on-site	No evidence of abandoned underground tanks observed during site-walkover..
Underground Tanks Installation Strata	Based on data from BGS maps and boreholes logs, the strata is likely to be Head Deposits composed of orangey brown, silty sand and firm, reddish brown, sandy clay.

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Table G: General Information regarding Fuel Infrastructure	
Construction of the Tanks	Tanks are reported to be of single walled steel construction, and are fitted with high and low level alarms.
Tank Manholes	Seven tank manholes in good condition with black water at the base of the pit. Black residue is visible on the piping, indicating that the water level had risen to above the piping at some point. The tank manholes were labelled 1 – 7 and information corresponded with the tank information.
Site Interceptor	One three-stage interceptor is located west of the tank farm close to the western boundary of the site.
Interceptor Drainage	The interceptor drains to a soakaway in southwest corner of site.
Soakaway on the site	Soakaway is located in southwest corner of site
Known spillages on site	The petroleum officer (PO) indicated the following minor spillages are recorded for the site: May 1992 – During inspection of pump 7 a possible minor release was detected on the unleaded inlet suction line and was raised with the site for investigation. Feb 2006 – West Sussex County Council (WSCC) Fire and Rescue Service attended site to deal with a motor caravan fire on the forecourt. The PO did not attend but no spillage of fuel was reported. Feb 2007 – WSCC Fire and Rescue Service attended site to deal with a LPG release from a car. Again the PO did not attend. The incident was due to a faulty valve on the vehicle which had been disconnected from the delivery hose. Evidence of staining around the pumps during a preliminary site investigation by RSK in June 2007 and in site walkover in January 2011.

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Table H: Summary of On-site Fuel Infrastructure										
Tank number	**Tank 1**	**Tank 2**	**Tank 3**	**Tank 4**	**Tank 5**	**Tank 6**	**Tank 7**	**Tank 8**	**Tank 9**	**Tank 10**
Tank type	SW Steel	SW Steel	SW Steel	SW Steel	SW Steel	SW Steel	SW Steel	Steel	Steel	Steel
Tank size (litres)	24,700	24,700	24,700	12,350	12,171	24,700	24,700	1 tonne	1 tonne	1 tonne
Product stored	Unleaded	Diesel	Unleaded	V-Power	V-Power Diesel	Unleaded	Diesel	LPG	LPG	LPG
Status	Operational	Operational	Operational	Operational	Operational	Operational	Operational	Operational	Operational	Operational
Installation date	1990	1990	1990	1990	1990	1990	1990	2004	2004	2004
Removal or abandonment date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Legend:
SW – single walled

Note:
V-Power replaced Optimax in November 2006 (Reference 5)

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2.3. Environmental Setting

Table I: Site Surface	
Site Surface	Fuel island area of forecourt constructed of herringbone brick work in good condition. Concrete surface around HGV fuel islands in good condition. Access routes constructed of tarmac are generally in good condition. A small area of tarmac east of pump 7 has been resurfaced and is cracked.
Presence of Open Ground	Narrow strips of open ground are present around interceptor manholes. Grass, shrubs and trees on embankments surround the site on its southern, eastern and northern boundaries.
Evidence of superficial chemicals of potential concern (COPC)	There was no evidence of stressed vegetation at the site. Minor staining was evident in the vicinity of the pumps underneath the canopy. Strong hydrocarbon odours were noted when the manhole cover of tank 1 was lifted (unleaded). No evidence of product was visible in the inspection chambers or interceptor, or beneath surface or foul water manholes lifted during the URS site visit.
Location of fences and retaining walls (and sheet piling)	LPG tank area in the northeast of the site is raised (by 3m) behind a brick wall. A 2m high embankment behind the vent stacks and offset fill points to the north of the site is retained by a 2m high brick wall.

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Table J: Surrounding Land Use
North: The site is bounded to the north by a Travelodge Hotel and its car park.
South: The site is bounded to the south by a thin line of trees and shrubs on a 1.5m high embankment. Beyond the soft ground is Arundel Road, which contains low density housing.
East: London Road runs along the eastern boundary and is separated by a thin line of trees and shrubs. London Road has low density residential use.
West: Adjacent to the western site boundary is car park that serves a Little Chef and a Burger King. Beyond the car park is a small strip of soft ground and a dual carriage way (the A27).

Table K: Site Specific Information – topography, hydrology, hydrogeology and geology	
On-site The site is relatively flat and slopes naturally to the south. The north-eastern corner of the site has been built up and stands approximately 3m higher than the lowest point on site.	
North: The land slopes very gently upward. No surface water features are known within 1000m of the site.	
South: The land slopes very gently downward. No surface water features are known within 1000m of the site.	
East: No surface water features are known within 1000m of the site.	
West: Envirocheck reports that the nearest surface water feature is located 210m to the west of the site.	
Other Information **Environmentally sensitive areas (e.g. SSSI)**	Surface water and groundwater on site have been designated as Nitrate Vulnerable Zones by DEFRA. South Downs National Park lies 186m to the northeast of the site and is designated an Environmentally Sensitive Area by Natural England.
Surface Water Features and Abstractions	The Envirocheck report identified one surface water abstraction from a pond or lake at Eastergate Pumping Station. The abstraction is operated by Portsmouth Water Company for public water supply (22,000m^3/day) and is located 670m to the southwest of site at Eastergate.
Flood Vulnerability	The site is not identified to be in an area at risk of river or coastal flooding. The Envirocheck reports that land 100 m west of the site may be subject to 100 year floods.
Made Ground and Drift Geology	Made Ground has previously been observed underlying the site, ranging in thickness from 0.25m to 0.66m (RSK, 2008). Given that the site was previously undeveloped the thickness is expected to be limited,

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Table K: Site Specific Information – topography, hydrology, hydrogeology and geology	
	although this may vary across the site, especially where areas have been excavated to locate tanks and in the northeastern corner of the site where the land has been artificially raised. The drift geology is reported as undifferentiated head of gravel, sand, silt and clay.
Solid Geology	The bedrock beneath the site is indicated to comprise the Lambeth Group (Reference 1). This is classified as a Secondary A Aquifer by the Environment Agency. Approximately 100m to the north of the site and underlying Lambeth Group is the Tarrant Chalk Member, which is a Principal Aquifer. A Secondary A aquifer is defined as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers. BGS borehole logs located within 500m of the site (borehole numbers SU90NW620A and SU90NW144), were reported as being drilled to depths of between 11 and 60 m bgl. The Chalk encountered is described as Chalk and marl or Chalk and flints, or very fine grained limestone. (Reference 2). BGS logs are presented in Appendix E.
Other Information **Coal Mining; Radon; Ground Stability Hazards; Landslides.**	The site is not in an area likely to be affected by coal mining or radon. The potential landslide and ground stability hazards are reportedly very low.
Groundwater Abstractions	Three groundwater abstractions are listed at 660m to the southwest of the site. These are all owned by Portsmouth Water Ltd. The daily rate of abstraction is not listed. A further 14 abstractions are listed as being greater than 1000m away from site in various directions.
Groundwater Source Protection Zones	The site is not located within a source protection zone; however the site lies very near to the outer source protection zone. 20m to the north of site and 50m to the west of the site is the inner zone of a source protection zone.

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Table L: Receptors and Sensitivity	
Potential sensitive receptors	*Human Health* • On-site and off-site workers. • Residential areas located approximately 40m east and south. • Hotel and restaurant adjacent to the western and northern site boundary. *Controlled Waters* • Underlying Secondary Aquifers (Drift deposits and Lambeth Group) and nearby Principal Aquifer (Tarrant Chalk Member).
Overall Sensitivity	**Moderate.** The site is underlain by a Secondary Aquifer and within 100m of the Tarrant Chalk Member, which is a Principal Aquifer. The closest commercial properties are located immediately adjacent to the site (north and west) and the closest residential properties are located approximately 40 m to the south and east.

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3. PRELIMINARY CONCEPTUAL SITE MODEL

3.1. Preliminary Conceptual Site Model

3.1.1. Potential Chemicals of Concern

1. TPH – Petroleum hydrocarbons;
2. BTEX –- Benzene, toluene, ethylbenzene and xylenes;
3. Petroleum Additives – Methyl tertiary butyl ether (MTBE) and tertiary amyl methyl ether (TAME);
4. PAHs – Polycyclic aromatic hydrocarbons; and
5. Heavy metals.

3.1.2. Potential Sources

The following is a list of potential on-site sources for the site:

1. Operational underground Storage Tanks (URS understands there are no historic / decommissioned storage tanks on site);
2. Accidental releases to ground from off-set fill points, located in north of site adjacent to HGV fuel pump 10;
3. Accidental releases to ground to ground from dispenser pumps: 4 Fuel Islands under the canopy, and two Fuel Islands for HGVs at the northern end of the site;
4. Accidental releases to ground from fuel lines: fuel lines located underneath the canopy, and to the north and west of the canopy;
5. Drainage gullies running in a north-south orientation to the east and west of the canopy, and across the entrance and exit to the forecourt;
6. Site interceptor chamber and associated drains located near the western boundary of the site;

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7. The soakaway located near the south west boundary of the site and collects discharge from the site interceptor, surface water from the site and storm water;
8. Site Drainage; and
9. Made Ground of unknown origin used during site construction.

3.1.3. Potential Pathways

Human Health

1. Vapours – Potential migration of vapours through made ground to above ground buildings;
2. Particulate – Potential ingestion, inhalation, dermal contact, with soil particulates; and
3. Permeation – Potential migration of hydrocarbon substances through plastic potable water supply pipes.

Controlled Waters

1. Leaching – Potential migration of hydrocarbon substances from soils into shallow (and potentially deep) aquifers;
2. Potential migration of impacted perched water into shallow (and potentially deep) aquifers;
3. Potential leaching – Migration of hydrocarbon substances from soils into shallow groundwater, followed by migration to surface water; and
4. Direct entry of impacted surface water to shallow (and potentially deep) aquifers through excavations – i.e. through the soakaway or releases from fuel infrastructure sited on the underlying aquifer.

3.1.4. Potential Receptors

Human Health

1. Retail shop staff;
2. The general public and visiting staff (such as contractors, including those undertaking potential site excavation works);

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3. Residents in properties adjacent to the site (located approximately 40m east and south and potential more distant receptors further to the east); and

4. Workers in the hotel and restaurant adjacent to the western and northern site boundary.

Controlled Waters

1. Groundwater within the undifferentiated head deposits on site (Secondary aquifer);

2. Groundwater within the Lambeth Group (Secondary aquifer); and

3. Groundwater within the Tarrant Chalk Member (Principal Aquifer).

The Initial Conceptual Site Model is presented in Figure 4.

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4. PRELIMINARY RISK ASSESSMENT

4.1. Introduction

A Preliminary Risk Assessment has been completed for the site. The Preliminary Risk Assessment identified potential sources, pathways, and receptors for the site, in order to assess the potential risks posed by identified potential sources to human health and / or controlled waters receptors. When required, the viability of the source – pathway – receptor pollutant linkage must be evaluated further to assess whether a significant potential risk is likely to be present.

URS understands the end use for the site is: Continued Petroleum Use.

4.2. Review of Potential Source – Pathway – Receptor Linkages

Based on the available information, the following pollutant linkages have been evaluated.

Table L: Human Health

Source	Pathway	Receptor	Likelihood of Pollutant Linkage
Potentially impacted shallow soils / groundwater (hydrocarbons)	1. Vapours – Migration of vapours through made ground to above ground buildings	On-site shop staff	Potential Linkage
		Off-site residents 40m to the east and south of the site	Potential Linkage
		Off-site restaurant and hotel workers immediately to the west and north of the site	Potential Linkage
	2. Particulate – Ingestion, inhalation, dermal contact, with soil particulates.	On-site shop staff and visiting staff	Unlikely
		Visiting contractors excavating ground	Potential Linkage
	3. Permeation – Migration of hydrocarbon substances through plastic potable water supply pipes	On-site shop staff (ingestion of drinking water onsite)	Potential Linkage

ARUN DISTRICT COUNCIL WA/9211/

Table M: Controlled Waters			
Source	**Pathway**	**Receptor**	**Pollutant Linkage**
Potentially impacted shallow soils / groundwater (hydrocarbons)	4a. Leaching - Migration of hydrocarbon substances from soils into shallow (and potentially deep) groundwater	shallow and deep aquifers	Potential Linkage
	4b Migration of impacted perched water into shallow (and potentially deep) groundwater		Potential Linkage
	5a Leaching - Migration of hydrocarbon substances from soils into shallow groundwater, followed by migration to surface water	surface water (pond approximately 210m to the west of the site)	Potential Linkage
	5b Migration of impacted perched water into shallow groundwater, followed by migration to surface water		Potential Linkage

Figures

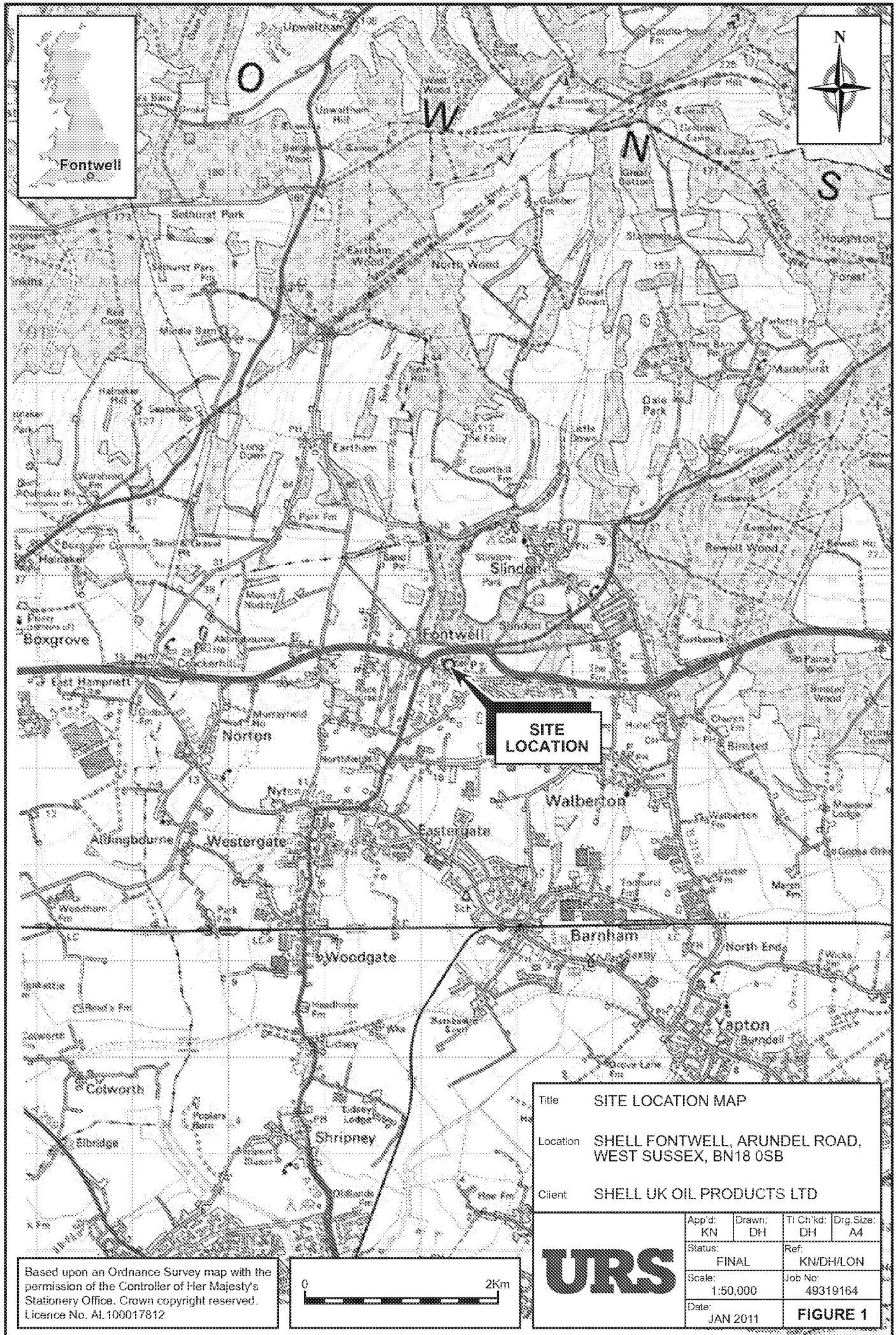
Figure 1 **Site Locality Map**

Figure 2 **Site Title Plan**

Figure 3 **Site Features Plan**

Figure 4 **Initial Conceptual Site Model**

ARUN DISTRICT COUNCIL WA/92/11/

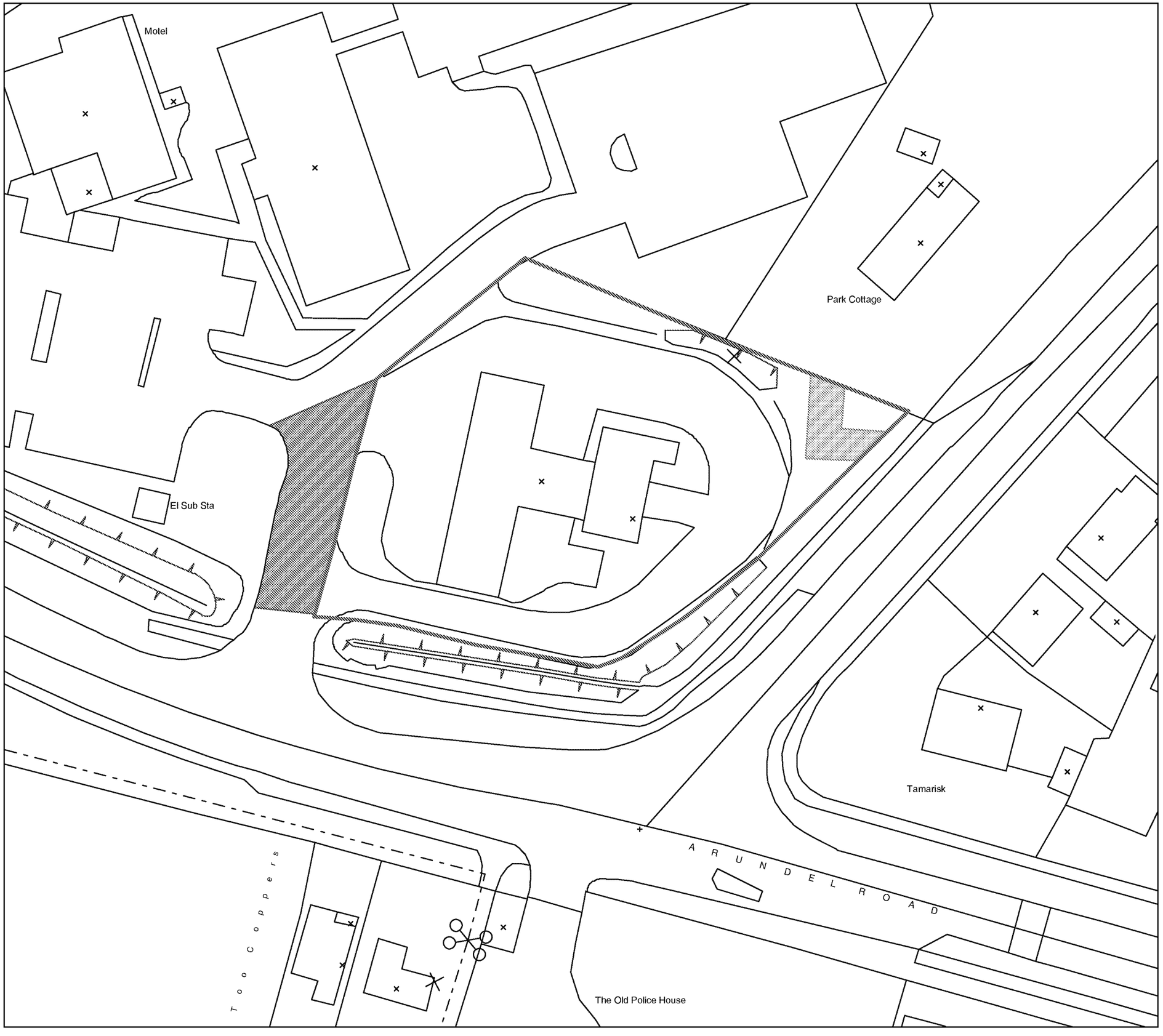


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Title	SITE LOCATION MAP
Location	SHELL FONTWELL, ARUNDEL ROAD, WEST SUSSEX, BN18 0SB
Client	SHELL UK OIL PRODUCTS LTD

URS

App'd:	Drawn:	Ti Ch'kd:	Drg.Size:
KN	DH	DH	A4
Status: FINAL		Ref: KN/DH/LON	
Scale: 1:50,000		Job No: 49319164	
Date: JAN 2011		FIGURE 1	



LEGEND

- SITE BOUNDARY
- RIGHT OF WAY FOR SHELL TO ACCESS THEIR DEMISED PREMISES
- RIGHT OF WAY RESERVED - SHELL HAVE RIGHT TO CONSTRUCT A ROADWAY

CONSULTING ENGINEERS

URS

ST. GEORGES HOUSE, 5 ST GEORGES ROAD,
WIMBLEDON, SW19 4DR
TEL - 020 8944 3300 FAX - 020 8944 3301

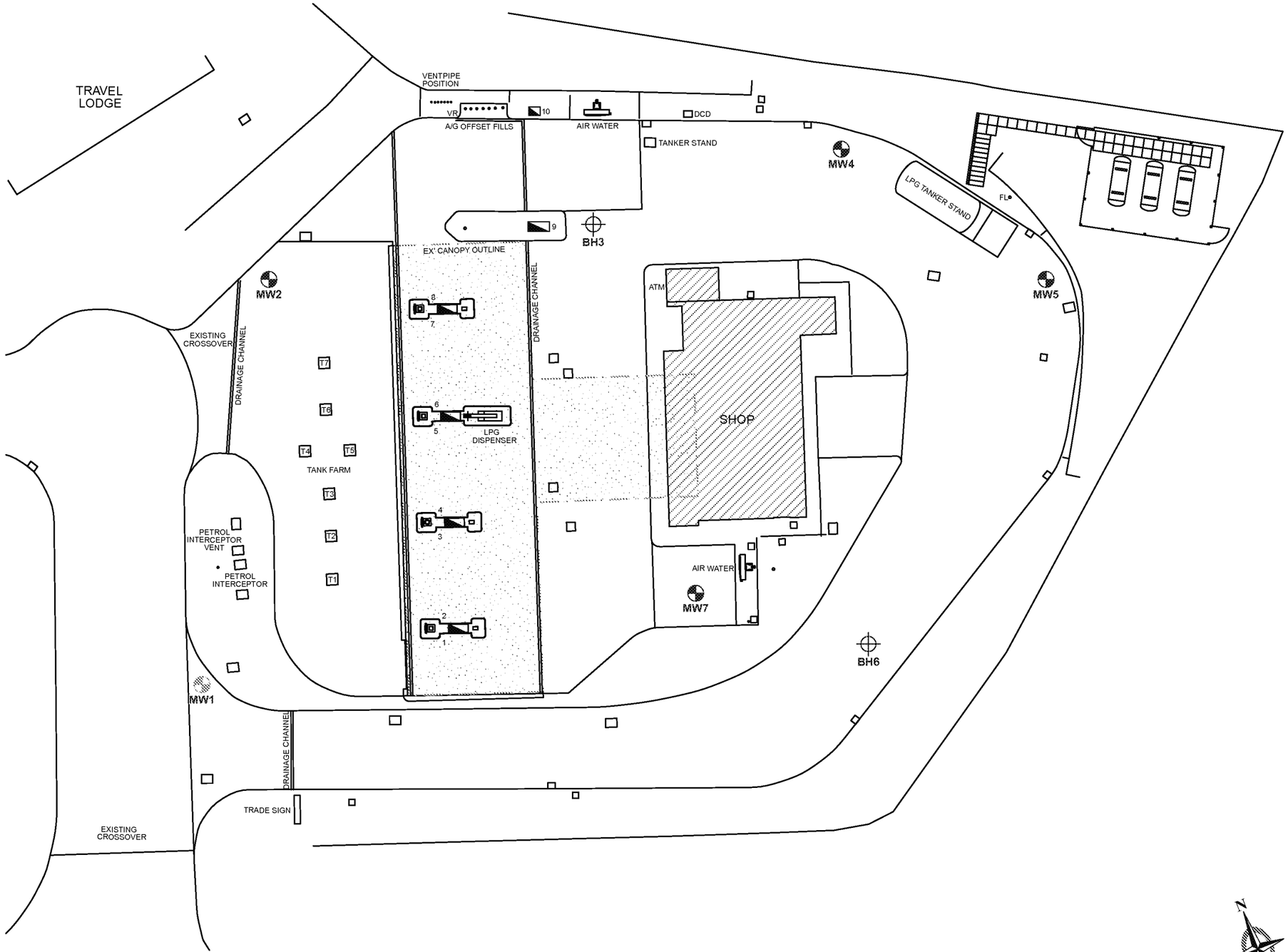
CLIENT
SHELL UK OIL PRODUCTS LTD
PO BOX 430
STAINES
TW18 3ZB

PROJECT
SHELL FONTWELL,
ARUNDEL ROAD,
WEST SUSSEX,
BN18 0SB

DRAWING TITLE
FIGURE 2 - SITE TITLE PLAN

DRAWN	TRACED	CHECKED	APPROVED	DATE
DH				JAN 2011

SCALE	DRG NO.	REV.
NTS	49319164 / FIGURE 2	



LEGEND

- PUMP ISLAND
- T — UNDERGROUND STORAGE TANK MANHOLE
- FORMER CANOPY EXTENT
- BUILDING
- MW2 — MONITORING WELL LOCATION WITH WELL ID
- MW1 — FORMER MONITORING WELL LOCATION WITH WELL ID
- BH6 — BOREHOLE LOCATION WITH BOREHOLE ID

1. WELL LOCATIONS ARE APPROXIMATE
2. MAP SOURCE: AECOM

0 5 10m

APPROXIMATE SCALE (METRES)

CONSULTING ENGINEERS

URS

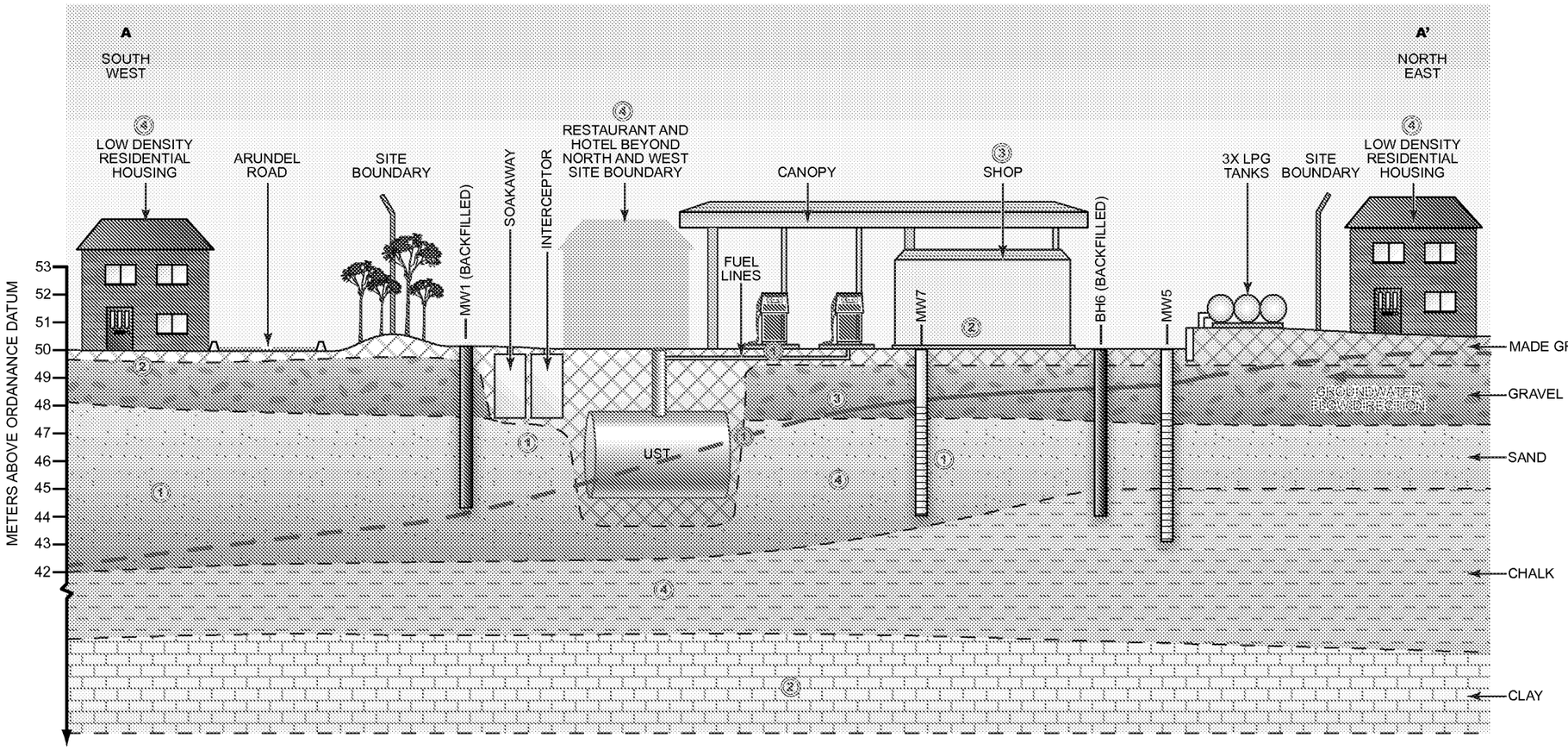
ST. GEORGES HOUSE, 5 ST GEORGES ROAD,
WIMBLEDON, SW19 4DR
TEL - 020 8944 3300 FAX - 020 8944 3301

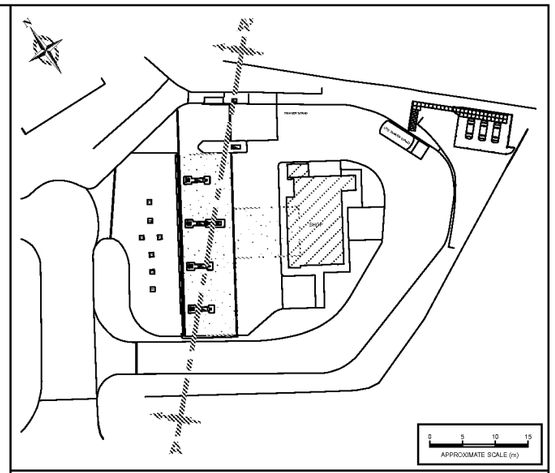
CLIENT
SHELL UK OIL PRODUCTS LTD
PO BOX 430
STAINES
TW18 3ZB

PROJECT
SHELL FONTWELL,
ARUNDEL ROAD,
WEST SUSSEX,
BN18 0SB

DRAWING TITLE
FIGURE 3 - SITE FEATURES PLAN

DRAWN	TRACED	CHECKED	APPROVED	DATE
DH				JAN 2011
SCALE	DRG NO.			REV.
AS SHOWN	49319164 / FIGURE 3			





SOURCES

1. POTENTIALLY IMPACTED SHALLOW SOILS AND GROUNDWATER

PATHWAYS

1. VAPOUR FROM GROUNDWATER
2. VAPOUR FROM SOILS
3. LEACHING FROM SOILS TO GROUNDWATER
4. GROUNDWATER MIGRATION

RECEPTORS

1. SECONDARY AQUIFER (UNDIFFERENIATED HEAD DEPOSIT AND LAMBETH GROUP
2. PRINCIPAL AQUIFER (TARRANT CHALK MEMBER)
3. ON-SITE WORKERS
4. OFF-SITE RESIDENTS AND HOTEL / RESTAURANT WORKERS

Potential Chemicals of Concern

- TPH – Petroleum hydrocarbons.
- BTEX –- Benzene, toluene, ethylbenzene and xylenes.
- Petroleum Additives – Methyl tertiary butyl ether (MTBE) and tertiary amyl methyl ether (TAME).
- PAHs – Polycyclic aromatic hydrocarbons.
- Heavy metals.

Potential Sources

- Operational underground Storage Tanks.
- Accidental releases to ground from off-set fill points.
- Accidental releases to ground from dispenser pumps.
- Accidental releases to ground from fuel lines.
- Drainage gullies running in a north-south orientation to the east and west of the canopy, and across the entrance and exit to the forecourt.
- Site interceptor and associated drains located near the western boundary of the site.
- The soakaway located near the south west boundary of the site that collects discharge from the site interceptor, surface water from the site and storm water.
- Site Drainage.
- Made Ground of unknown origin used during site construction.

Potential Pathways

Human Health

- Vapours – Potential migration of vapours through made ground to above ground buildings.
- Particulate – Potential ingestion, inhalation, dermal contact, with soil particulates. and
- Permeation – Potential migration of hydrocarbon substances through plastic potable water supply pipes.

Controlled Waters

- Leaching – Potential migration of hydrocarbon substances from soils into shallow (and potentially deep) aquifers.
- Potential migration of impacted perched water into shallow (and potentially deep) aquifers.
- Potential leaching – Migration of hydrocarbon substances from soils into shallow groundwater, followed by migration to surface water.
- Direct entry of impacted surface water to shallow (and potentially deep) aquifers through excavations – i.e. through the soakaway or releases from fuel infrastructure.

Potential Receptors

Human Health

- Retail shop staff.
- The general public and visiting staff (such as contractors, including those undertaking potential site excavation works).
- Residents in properties adjacent to the site (located approximately 40m east and south and potential more distant receptors further to the east).
- Workers in the hotel and restaurant adjacent to the western and northern site boundary.

Controlled Waters

- Groundwater within the undifferentiated head deposits on site (Secondary aquifer).
- Groundwater within the Lambeth Group (Secondary aquifer).
- Groundwater within the Tarrant Chalk Member (Principal Aquifer).

Potential Complete Pollutant Linkages

Human Health

- Particulate – Ingestion, inhalation, dermal contact, with soil particulates by visiting contractors when excavating ground.

Controlled Waters

- Leaching - Migration of COPC from soil into shallow (and potentially deep) groundwater.
- Leaching - Migration of COPC from soils or shallow groundwater followed by migration to surface water.

CONSULTING ENGINEERS

URS

ST. GEORGES HOUSE, 5 ST GEORGES ROAD,
WIMBLEDON, SW19 4DR
TEL - 020 8944 3300 FAX - 020 8944 3301

CLIENT
SHELL UK OIL PRODUCTS LTD
PO BOX 430
STAINES
TW18 3ZB

PROJECT
SHELL FONTWELL,
ARUNDEL ROAD,
WEST SUSSEX,
BN18 0SB

DRAWING TITLE
FIGURE 4 - INITIAL CONCEPTUAL SITE MODEL

DRAWN	TRACED	CHECKED	APPROVED	DATE
DH				MARCH 2011
SCALE	DRG NO.			REV.
NTS	49319164 / FIGURE 4			C

Appendix A - References

Reference 1 RSK Preliminary Investigation Report: BU 308301 – Shell Fontwell. (Draft Report No: 310435 – R1 (01), dated May 2007)

Reference 2 Landmark Envirocheck report 33445435_1_1 (16 November 2010)

Reference 3 Information supplied via email from Petroleum Officer David Brown, West Sussex County Council, dated 13 January 2011

Reference 4 British Geological Survey (BGS) Georecords Plus Data Pack BH_116487_1

Reference 5 Drawing Hazardous Areas Details (No. 10018981/HAZ/001/B, dated October 2009)

Reference 6 Drawing Stage 2 VR Alterations (No. 308301/VR2/001, dated January 2008)

Reference 7 Tank to Pump Schematic (No. 10018981/TPS/001/C, dated October 2009)

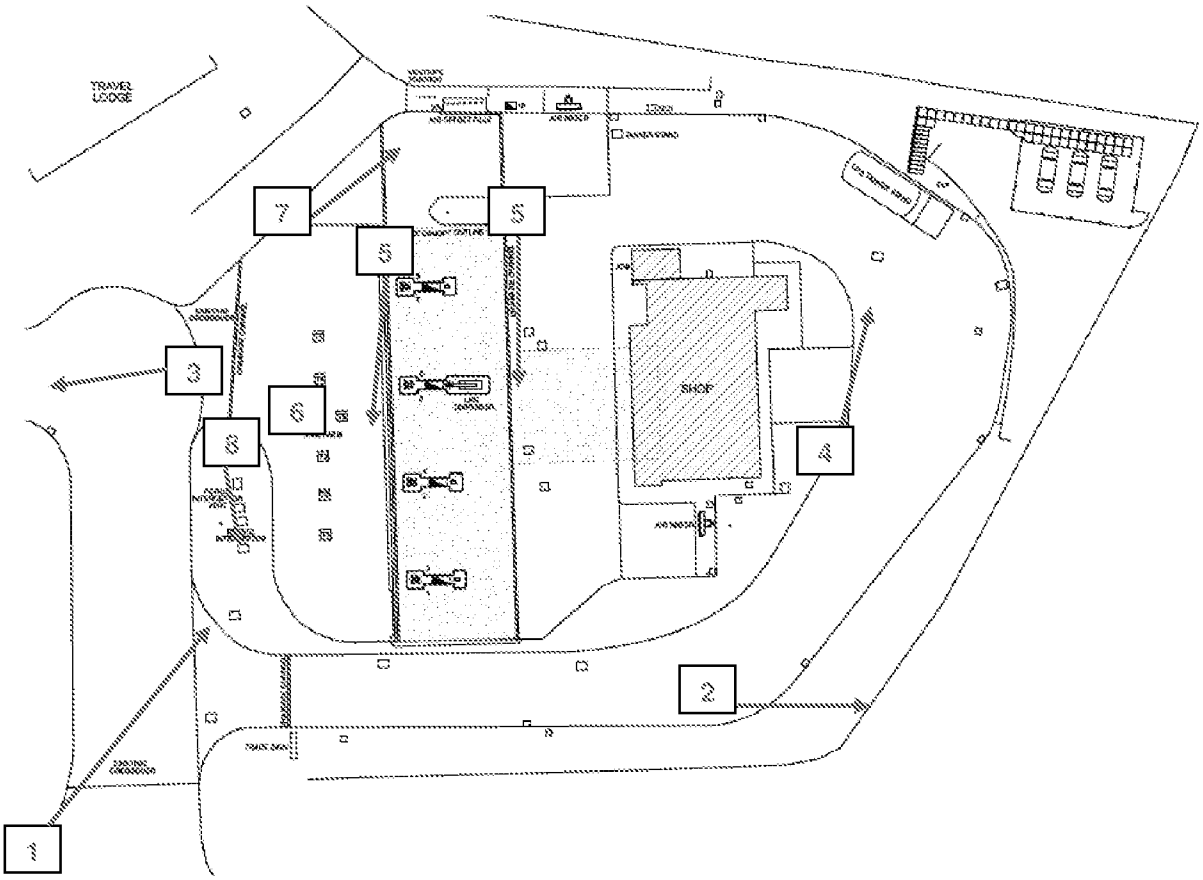
ARUN DISTRICT COUNCIL WA/92/11/

Appendix B - Photographs

ARUN DISTRICT COUNCIL WA/92/11/

Appendix A - Photographs

Site Orientation Photographs



ARUN DISTRICT COUNCIL WA/92/11/



Photograph No: 1 View to northeast of Shell Fontwell



Photograph No: 2 View to southeast on Arundel Road – low density housing.

ARUN DISTRICT COUNCIL WA/92/11/



Photograph No: 3	View to south from site entrance – car park for fast food restaurants (right of picture).

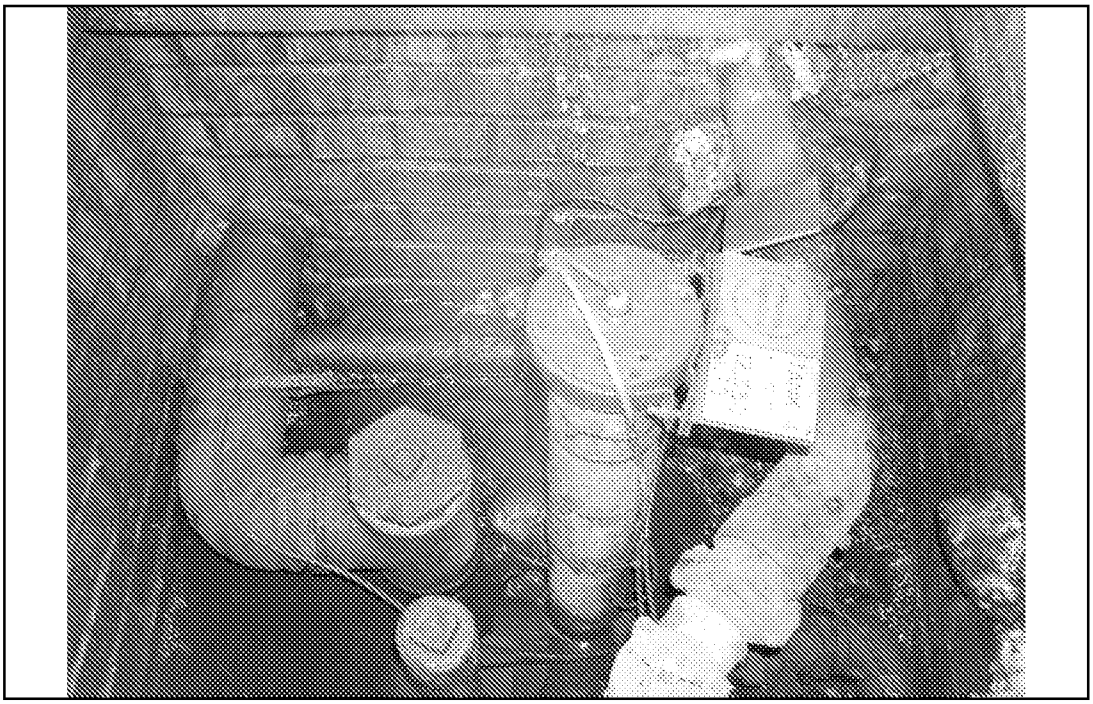


Photograph No: 4	View to northeast from behind the shop – 3 LPG tanks raised on a 3m high embankment and a residential property adjacent to the site.

ARUN DISTRICT COUNCIL WA/92/11/

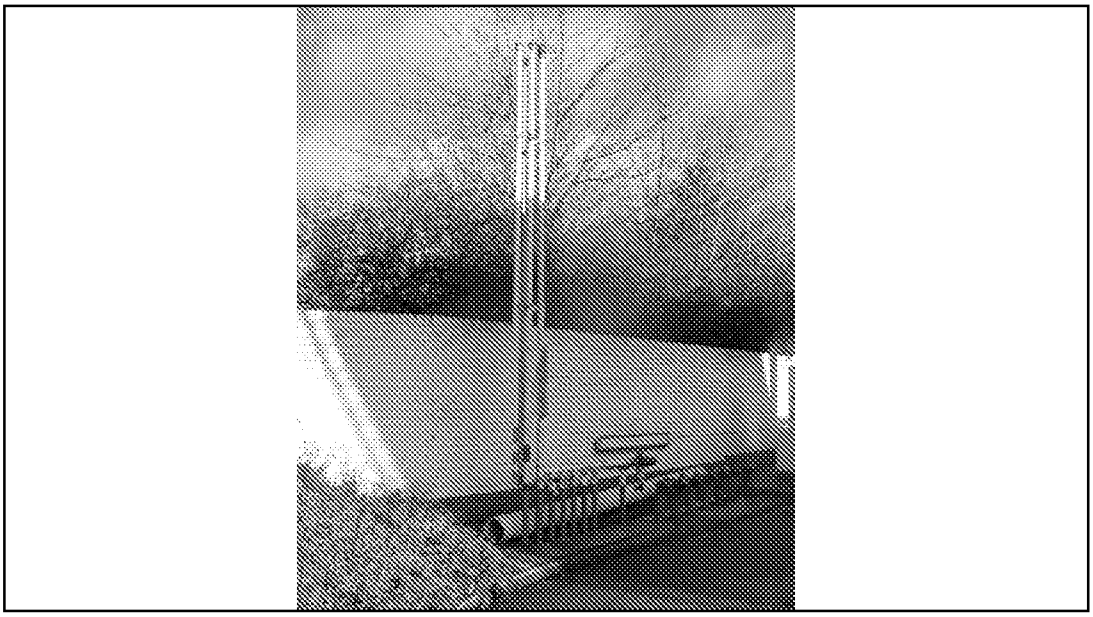


Photograph No: 5	Looking south from pump 8 – drainage gully along eastern (left photo) and western (right photo) edges of the fuel island area.



Photograph No: 6	Inside manhole for tank 4. This photo is representative of the condition of all seven tank manholes.

ARUN DISTRICT COUNCIL WA/92/11/



Photograph No: 7

Looking northeast at northern corner of the site – vent stack with low level manifold and off set filling points. .



Photograph No: 8

Four interceptor manholes (southern edge of site) – top right shows northern-most manhole with contaminated water in the base, bottom right picture shows black water with electrical equipment.

ARUN DISTRICT COUNCIL WA/92/11/

Appendix C - Petroleum Officer Records

ARUN DISTRICT COUNCIL WA/92/11/

[redacted]

west sussex county council

Mr T Eastgate
URS Europe Ltd
5 St Georges Road
London
SW19 4DR

13th January 2011

Dear Mr Eastgate,

LPTEBOARUN/ 1- R208016

Health and Safety at Work etc Act 1974
Petroleum (Regulation) Acts 1928 and 1936
Dangerous Substances and Explosive Atmospheres Regulations 2002
Environmental Survey – Shell Fontwell, Arundel Road, Fontwell, West Sussex BN18 0SB

Thank you for your enquiry regarding the history of the above site requesting a search of our records to specifically focus on any indications of leaks or spills which may have occurred.

Our records start with a note in January 1990 which is thought to relate to the initial development and construction of the site which was created when the route of the A27 was realigned and a roundabout created at the junction with the A29.

I can confirm that our records do not show any reported major incidents involving leaks or spills at this site during its history. The following three minor incidents are recorded:

- May 1992 – During inspection of pump 7 a possible minor leak was detected on the unleaded inlet suction line and was raised with the site for investigation.

- Feb 2006 – WSCC Fire and Rescue Service attended site to deal with a motor caravan fire on the forecourt. This service did not attend but no spillage of fuel was reported.

- Feb 2007 – WSCC Fire and Rescue Service attended site to deal with a LPG leak from a car. Again this service did not attend. The leak was due to a faulty valve on the vehicle which had been disconnected from the delivery hose.

Please note that although West Sussex County Council makes every effort to ensure that the information provided is accurate we cannot be held responsible for any error or omission in the data provided.

Please contact me if you have any further queries.

Yours sincerely,

David Brown
Trading Standards Officer

Appendix D - Envirocheck Data

ARUN DISTRICT COUNCIL WA/92/11/

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
33445435_1_1

Customer Reference:
Shell Fontwell

National Grid Reference:
495190, 107080

Slice:
A

Site Area (Ha):
0.34

Search Buffer (m):
1000

Site Details:

Shell Fontwell, Arundel Road
Fontwell
ARUNDEL
West Sussex
BN18 0SB

Client Details:

Ms E Corby
URS Corporation Ltd
2nd Floor, St Georges House
5 St Georges Road
London
SW19 4DR

Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	10
Hazardous Substances	-
Geological	12
Industrial Land Use	14
Sensitive Land Use	16
Data Currency	17
Data Suppliers	21
Useful Contacts	22

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 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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Information supplied from a joint dataset compiled by The British Geological Survey and the Health Protection Agency.

Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1				9
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 3	1			1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 3		Yes		
Pollution Incidents to Controlled Waters	pg 3		1		1
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 4				4 (*14)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 8	Yes	n/a	n/a	n/a
Source Protection Zones	pg 8	3			3
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Waste					
BGS Recorded Landfill Sites	pg 10				1
Historical Landfill Sites	pg 10				2
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 10				1
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites	pg 10		1		2
Registered Landfill Sites	pg 11		1		
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
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					
Geological					
BGS Recorded Mineral Sites					
BGS 1:625,000 Solid Geology	pg 12	Yes	n/a	n/a	n/a
Brine Compensation Area			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 12			1	
Non Coal Mining Areas of Great Britain	pg 12	Yes	Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 12	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 13	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 13	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 13	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 13	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 13	Yes	n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 14	1	3		12
Fuel Station Entries	pg 15	1			

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas	pg 16		1		
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks	pg 16		1		
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 16	1			1
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Miss Lesley Dobbie Property Type: Domestic Property (Single) Location: Little Glebe Little Heath Road, Fontwell, Arundel, West Sussex, Bn18 0sr Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: Npswqd004459 Permit Version: 1 Effective Date: 12th November 2008 Issued Date: 12th November 2008 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	A12NE (NW)	645	1	494578 107368
2	**Discharge Consents** Operator: J Phillips Property Type: Domestic Property (Single) Location: Langley, Denamans Lane, Fontwell, Nr Arundel, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P09338 Permit Version: 1 Effective Date: 11th July 2000 Issued Date: 11th July 2000 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 10m	A12NW (W)	733	1	494420 107120
3	**Discharge Consents** Operator: Mr P Perry Property Type: Undefined Or Other Location: Westergate House Stw, Denmans Lane, Fontwell, W.Sussex, Po20 Authority: Environment Agency, Southern Region Catchment Area: Old-unknown river Reference: P05400 Permit Version: 1 Effective Date: 23rd August 1994 Issued Date: 23rd August 1994 Revocation Date: 9th September 1996 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Not Supplied **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	754	1	494400 106990
4	**Discharge Consents** Operator: Dj & Hd Godsmark Property Type: Mixed Farming Location: Swallowfield, Eastergate Lane, Eastergate, West Sussex, Po20 3sj Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: App/So/75su 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	A8SW (S)	883	1	494980 106190

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: S E Healey Property Type: Domestic Property (Single) 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	A9NE (SE)	949	1	496100 106700
6	**Discharge Consents** Operator: Mrs Karen Plunkett Property Type: Domestic Property (Single) Location: Meadows (Formerly Firtree Cottage) Denmans Lane, Eastergate, West Sussex, West Sussex, Po20 3sd Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: P12287 Permit Version: 1 Effective Date: 10th February 2005 Issued Date: 10th February 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	A7NW (SW)	965	1	494380 106480
7	**Discharge Consents** Operator: P.C.Fisher Esq. Property Type: Domestic Property (Single) 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	A14SE (E)	979	1	496170 106800
7	**Discharge Consents** Operator: Fordingbridge Plc Property Type: Domestic Property (Single) 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	A14SE (E)	995	1	496170 106750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**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	A14SE (E)	995	1	496170 106750
8	**Local Authority Pollution Prevention and Controls** Name: Shell Fontwell Location: Arundel Road, Fontwell, Arundel, West Sussex, BN18 0SB Authority: Arun District Council, Environmental Health Department Permit Reference: PVR/7/06 Dated: 14th September 1998 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A13SE (E)	0	2	495201 107080
9	**Local Authority Pollution Prevention and Controls** Name: Mobile Equipment Location: Slindon Bottom Pit, Slindon, ARUNDEL, West Sussex, BN18 0 Authority: Worthing Borough Council, Environmental Health Department Permit Reference: Pp3/95 Dated: 7th February 1994 Process Type: Local Authority Air Pollution Control Description: PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	852	3	495090 107960
	Nearest Surface Water Feature	A13NW (W)	210	-	494942 107090
10	**Pollution Incidents to Controlled Waters** Property Type: Other Transport Location: Adjacent Racecourse Authority: Environment Agency, Southern Region Pollutant: Oils - Diesel (Including Agricultural) Note: Lorry Overturned A27 Fontwell Sml Qty Of Diesel Drain; Road (Road Traffic Accident) Incident Date: 3rd October 1995 Incident Reference: 1508 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Oils/Related Products Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	161	1	495001 107001
11	**Pollution Incidents to Controlled Waters** Property Type: Arable Location: The Pines, Walberton Lane Authority: Environment Agency, Southern Region Pollutant: Crude Sewage Note: Overflowing Main Sewer Incident Date: 5th October 1998 Incident Reference: 2760 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leaking Underground Pipe Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	726	1	495900 106800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Water Abstractions** Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 101 Location: Point A Eastergate Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	662	1	494800 106500
12	**Water Abstractions** Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 102 Location: Point A Eastergate Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	662	1	494800 106500
12	**Water Abstractions** Operator: Portsmouth Water Co Licence Number: 10/41/542108 Permit Version: 100 Location: Point A Eastergate Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: H5 Chalk Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th September 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	662	1	494800 106500
12	**Water Abstractions** Operator: Portsmouth Water Company Licence Number: 542108C Permit Version: Not Supplied Location: Eastergate Pumping Station, EASTERGATE Authority: Environment Agency, Southern Region Abstraction: Private Water Undertaking Abstraction Type: Not Supplied Source: Pond or Lake Daily Rate (m3): 22000 Yearly Rate (m3): 8052000 Details: Additional Purpose: Public Water Supply Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	667	1	494800 106495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	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: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4NW (S)	1197	1	495590 105920
	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	A4NW (S)	1197	1	495590 105920
	Water Abstractions Operator: Portsmouth Water Company Licence Number: 542108A Permit Version: Not Supplied Location: Westergate Pumping Station, EASTERGATE Authority: Environment Agency, Southern Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Pond or Lake Daily Rate (m3): 22000 Yearly Rate (m3): 8052000 Details: Additional Purpose: Public Water Supply Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A11SE (W)	1239	1	493930 106845
	Water Abstractions Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 101 Location: Point B Westergate Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A11SE (W)	1261	1	493900 106900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 102 Location: Point B Westergate Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A11SE (W)	1261	1	493900 106900
	Water Abstractions Operator: Portsmouth Water Co Licence Number: 10/41/542108 Permit Version: 100 Location: Point B Westergate Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: H5 Chalk Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th September 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11SE (W)	1261	1	493900 106900
	Water Abstractions Operator: Portsmouth Water Company Licence Number: 542108B Permit Version: Not Supplied Location: Slindon Pumping Station, EASTERGATE Authority: Environment Agency, Southern Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Pond or Lake Daily Rate (m3): 5500 Yearly Rate (m3): 2500000 Details: Additional Purpose: Public Water Supply Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A23NE (N)	1407	1	495450 108495
	Water Abstractions Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 101 Location: Point C At Slindon Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1412	1	495450 108500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 102 Location: Point C At Slindon Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1412	1	495450 108500
	Water Abstractions Operator: Portsmouth Water Co Licence Number: 10/41/542108 Permit Version: 100 Location: Point C At Slindon Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: H5 Chalk Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th September 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A23NE (N)	1412	1	495450 108500
	Water Abstractions Operator: J R Robinson Licence Number: 10/41/542105 Permit Version: 100 Location: Point A At Eastergate 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 Marked Pink On Said Map Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A2NW (SW)	1456	1	494260 105910
	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: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A20NW (NE)	1593	1	496510 108050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	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	A15NE (E)	1605	1	496840 107170
	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	A15NE (E)	1605	1	496840 107170
	Groundwater Vulnerability Geological Classification: Minor Aquifer (Variably permeable) - These can be fractured or potentially fractured rocks, which do not have a high primary permeability, or other formations of variable permeability including unconsolidated deposits. Although not producing large quantities of water for abstraction, they are important for local supplies and in supplying base flow to rivers 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	A13SW (N)	0	1	495192 107081
	Drift Deposits None				
13	**Source Protection Zones** Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	A13SW (SW)	0	1	495185 107072
14	**Source Protection Zones** Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	A13SW (N)	0	1	495192 107081
15	**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.	A13SW (N)	0	1	495192 107081
16	**Source Protection Zones** Name: Eastergate Source: Environment Agency, Head Office Reference: Su059 Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	A7NE (SW)	611	1	494828 106543
17	**Source Protection Zones** Name: Eastergate Source: Environment Agency, Head Office Reference: Su059 Type: Groundwater Source	A7NE (SW)	662	1	494800 106500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	**Source Protection Zones** Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	A12SW (W)	722	1	494428 107077
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**BGS Recorded Landfill Sites** Site Name: Slindon Tip Location: Slindon Bottom, Fortwell, ARUNDEL, West Sussex Authority: British Geological Survey, National Geoscience Information Service Ground Water: Information not available Surface Water: Information not available Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate	A18NW (N)	733	5	495022 107827
20	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Fontwell, Sussex Name: Slindon Bottom South Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20406 First Input Date: 31st December 1954 Last Input Date: 31st December 1975 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial and Household Waste EA Waste Ref: Not Supplied Regis Ref: Not Supplied WRC Ref: 3800/8138 BGS Ref: 2563 Other Ref: WD27/112	A18NW (N)	704	1	495120 107814
21	**Historical Landfill Sites** Licence Holder: Eastergate Parish Council Location: Eastergate, Sussex Name: Wandleys Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20078 First Input Date: 14th March 1979 Last Input Date: 13th March 1981 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: Not Supplied Regis Ref: Not Supplied WRC Ref: 3800/8126 BGS Ref: Not Supplied Other Ref: WD27/100, WD13/5/28	A7SE (SW)	840	1	494833 106283
22	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Slindon Bottom Gravel Pit Licence Number: 19759 Location: Slindon Bottom Gravel Pit, Slindon Bottom Road, Slindon, Fontwell, West Sussex, BN18 0SN Licence Holder: Taylor Plant & Haulage Ltd Authority: Environment Agency - Southern Region, Solent and South Downs Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) Max Input Rate: Not Supplied **Licence Status: Active** Issued 26th January 1994 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A18NW (N)	698	1	495117 107808
	Local Authority Landfill Coverage Name: Arun District Council - Has no landfill data to supply		0	9	495192 107081
	Local Authority Landfill Coverage Name: West Sussex County Council - Has supplied landfill data		0	4	495192 107081
23	**Local Authority Recorded Landfill Sites** Location: Land Adjoining Days Fontwell Reference: WA/21/88 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	A13NE (N)	188	4	495200 107300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**Local Authority Recorded Landfill Sites** Location: Everyman'S Pit, Slindon Bottom Road, Fontwell Reference: AL/12/01 Authority: West Sussex County Council, Environment & Development **Last Reported Status: Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A18NW (N)	701	4	495109 107810
25	**Local Authority Recorded Landfill Sites** Location: Wandleys Lane, Eastergate Reference: EG/57/78 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	A7SE (SW)	839	4	494800 106300
26	**Registered Landfill Sites** Licence Holder: Wyatt Of Snetterton Licence Reference: 5/BR/88 Site Location: Adj. Days, Fontwell, Arundel, West Sussex Licence Easting: 495010 Licence Northing: 107220 Operator Location: As Site Address 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: 1st June 1988 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 Inert Waste	A13NW (NW)	199	1	495010 107220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Chalk including Red Chalk	A13SW (N)	0	5	495192 107081
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Natural Cavities Easting: 495600 Northing: 106900 Distance: 412 Quadrant Reference: A14 Quadrant Reference: SW Bearing Ref: SE Cavity Type: Sinkhole x 70 Solid Geology Detail: Upper Chalk Formation Superficial Geology Detail: Brickearth/head, Raised beach and marine deposits	A14SW (SE)	412	6	495600 106900
	Non Coal Mining Areas of Great Britain Risk: Likely Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	5	495192 107081
	Non Coal Mining Areas of Great Britain Risk: Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	6	5	495170 107109
	Potential for Collapsible Ground Stability Hazards No Hazard				
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	5	495192 107081
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	5	495000 107081
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	5	495192 107081
	Potential for Ground Dissolution Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	15	5	495175 107125
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	103	5	495100 107175
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	137	5	495192 107250
	Potential for Ground Dissolution Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	5	495000 107081
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	151	5	495000 107050
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	159	5	495325 107225
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	184	5	495275 107275
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	194	5	495000 107200
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	215	5	494975 107200
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	229	5	494925 107100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	5	495192 107081
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	5	495000 107081
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	5	495192 107081
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	5	495000 107081
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	225	5	494925 107081
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	5	495192 107081
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	84	5	495075 107025
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	5	495000 107081
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	151	5	495000 107050
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	226	5	494925 107081
	Radon Potential - Radon Affected Areas Affected Area: The property is in a radon affected area, as between 5 and 10% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	5	495175 107081
	Radon Potential - Radon Affected Areas Affected Area: The property is not in a radon affected area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	5	495192 107081
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	5	495175 107081
	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	A13SW (N)	0	5	495192 107081

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	**Contemporary Trade Directory Entries** Name: Shell (Uk) Ltd Location: Arundel Road, Fontwell, Arundel, West Sussex, BN18 0SB Classification: Petrol Filling Stations - 24 Hour **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	0	-	495201 107080
28	**Contemporary Trade Directory Entries** Name: G M Trust Location: Arundel Rd, Fontwell, Arundel, West Sussex, BN18 0SB Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	153	-	495356 106998
28	**Contemporary Trade Directory Entries** Name: John Roffey Location: 1, Orchard Crescent, Arundel Road, Fontwell, Arundel, West Sussex, BN18 0SD Classification: Gunsmiths **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	167	-	495388 107024
28	**Contemporary Trade Directory Entries** Name: Rabbits Unlimited Location: 1, Orchard Crescent, Arundel Road, Fontwell, Arundel, West Sussex, BN18 0SD Classification: Pest & Vermin Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	167	-	495388 107024
29	**Contemporary Trade Directory Entries** Name: Heason Technologies Group Ltd Location: Claremont Lodge, Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 3RY Classification: Machinery - Industrial & Commercial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	570	-	494905 106547
30	**Contemporary Trade Directory Entries** Name: Adrians Auto Services Location: Arundel Rd, Walberton, Arundel, West Sussex, BN18 0QP Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (E)	639	-	495856 106938
31	**Contemporary Trade Directory Entries** Name: S & G Motor Centre Location: Arundel Road, Walberton, ARUNDEL, West Sussex, BN18 0QP Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	707	-	495918 106904
31	**Contemporary Trade Directory Entries** Name: Westbourne Motors Location: Arundel Road, Walberton, Arundel, West Sussex, BN18 0QP Classification: Breakdown and Recovery **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	739	-	495948 106894
32	**Contemporary Trade Directory Entries** Name: Globel Technologies Racing Location: Denmans La, Fontwell, Arundel, West Sussex, BN18 0SU Classification: Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	718	-	494434 107106
33	**Contemporary Trade Directory Entries** Name: F L Gamble & Son Location: Foxfield, Slindon Bottom Road, Fontwell, Arundel, West Sussex, BN18 0SN Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	732	-	495106 107841
34	**Contemporary Trade Directory Entries** Name: Fontwell Joinery Location: Unit A8, Holmdale Estate, Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 6YJ Classification: Joinery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	746	-	494926 106347

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	**Contemporary Trade Directory Entries** Name: Easterchem Location: Unit A9, Holmdale Estate, Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 6YJ Classification: Chemists' & Pharmacists' Suppliers & Wholesalers **Status:** **Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A8SW (SW)	792	-	494867 106321
35	**Contemporary Trade Directory Entries** Name: Tempcon Instrumentation Ltd Location: B1-B3, Unit, Holmdale Estate, Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 6YJ Classification: Temperature Monitoring Systems Manufacturers **Status:** **Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A8SW (SW)	792	-	494867 106321
35	**Contemporary Trade Directory Entries** Name: Welcome Engineering Location: Unit C, Holmdale Estate, Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 6YJ Classification: Precision Engineers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	824	-	494826 106303
36	**Contemporary Trade Directory Entries** Name: Peter Rowe Joinery Location: Unit C2,Holmdale Ind Est,Fontwell Av, Eastergate, Chichester, West Sussex, PO20 3YJ Classification: Joinery Manufacturers **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7SE (SW)	870	-	494773 106278
37	**Contemporary Trade Directory Entries** Name: Robinsons Haulage Location: Eastergate La, Eastergate, Chichester, West Sussex, PO20 3SJ Classification: Road Haulage Services **Status:** **Active** Positional Accuracy: Manually positioned within the geographical locality	A3NE (S)	992	-	495238 106060
38	**Fuel Station Entries** Name: Shell Fontwell Location: Arundel Road, Fontwell Avenue, Fontwell, ARUNDEL, West Sussex, BN18 0SB Brand: SHELL Premises Type: Petrol Station **Status:** **Open** Positional Accuracy: Automatically positioned to the address	A13SE (E)	0	-	495201 107080

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	**Environmentally Sensitive Areas** Name: South Downs Multiple Areas: N Total Area (m2): 690432994.81 Source: Natural England	A13NE (N)	186	7	495213 107297
40	**National Parks** Name: South Downs Multiple Area: N Area (m2): 1652679314.31 Source: Natural England **Status: Fully Designated - designated as a National Park** Designation Date: 2nd November 2009	A13NE (N)	177	7	495213 107288
41	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water and Groundwater Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A13SW (N)	0	8	495192 107081
42	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water - Designated 2006 Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A8NE (S)	637	8	495223 106415

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Chichester District Council - Environmental Health Department	August 2010	Annual Rolling Update
Arun District Council - Environmental Health Department	July 2010	Annual Rolling Update
Discharge Consents		
Environment Agency - Southern Region	October 2010	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Southern Region	August 2010	Quarterly
Integrated Pollution Controls		
Environment Agency - Southern Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Southern Region	October 2010	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Arun District Council - Environmental Health Department	July 2010	Annual Rolling Update
Chichester District Council - Environmental Health Department	May 2010	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Arun District Council - Environmental Health Department	July 2010	Annual Rolling Update
Chichester District Council - Environmental Health Department	May 2010	Annual Rolling Update
Worthing Borough Council - Environmental Health Department	May 2010	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Arun District Council - Environmental Health Department	July 2010	Annual Rolling Update
Chichester District Council - Environmental Health Department	May 2010	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2010	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - Southern Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Southern Region	August 2010	Monthly
Prosecutions Relating to Controlled Waters		
Environment Agency - Southern Region	October 2010	Monthly
Registered Radioactive Substances		
Environment Agency - Southern Region	October 2010	Quarterly
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	January 2010	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	January 2010	Annually
Substantiated Pollution Incident Register		
Environment Agency - Southern Region - Solent and South Downs	October 2010	Quarterly
Environment Agency - Southern Region - Sussex Area	October 2010	Quarterly
Water Abstractions		
Environment Agency - Southern Region	October 2010	Quarterly
Water Industry Act Referrals		
Environment Agency - Southern Region	October 2010	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	January 1999	Not Applicable
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Source Protection Zones		
Environment Agency - Head Office	October 2010	Quarterly

Agency & Hydrological	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	November 2010	Quarterly
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	November 2010	Quarterly
Areas Benefiting from Flood Defences		
Environment Agency - Head Office	November 2010	Quarterly
Flood Water Storage Areas		
Environment Agency - Head Office	November 2010	Quarterly
Flood Defences		
Environment Agency - Head Office	November 2010	Quarterly
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Southern Region - Solent and South Downs	October 2010	Quarterly
Environment Agency - Southern Region - Sussex Area	October 2010	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Southern Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Southern Region - Solent and South Downs	October 2010	Quarterly
Environment Agency - Southern Region - Sussex Area	October 2010	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Southern Region - Solent and South Downs	October 2010	Quarterly
Environment Agency - Southern Region - Sussex Area	October 2010	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
Registered Landfill Sites		
Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
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	May 2010	Bi-Annually
Explosive Sites		
Health and Safety Executive	January 2009	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 2010	Annual Rolling Update
Chichester District Council - Planning Department	February 2010	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 2010	Annual Rolling Update
Chichester District Council - Planning Department	February 2010	Annual Rolling Update
West Sussex County Council - Environment & Development	October 2006	Annual Rolling Update

Geological	Version	Update Cycle
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	October 2010	Bi-Annually
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
Brine Compensation Area		
Cheshire Brine Subsidence Compensation Board	November 2002	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Mining Report Service	January 2006	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	February 2009	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2010	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	May 2007	As notified
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	May 2007	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	August 2010	Quarterly
Fuel Station Entries		
Catalist Ltd - Experian Catalist	April 2010	Quarterly

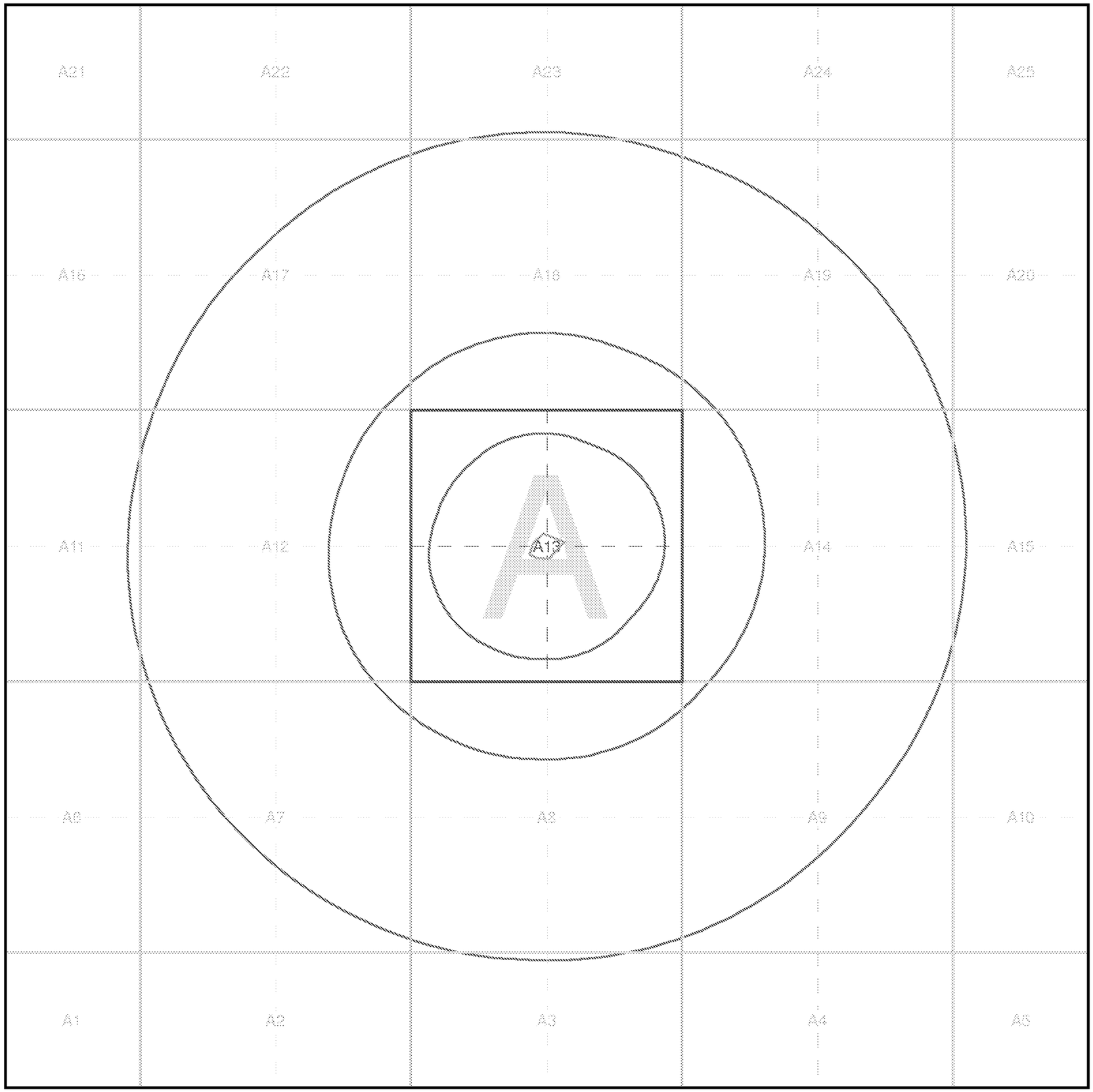
Sensitive Land Use	Version	Update Cycle
Areas of Outstanding Natural Beauty Natural England	July 2010	Bi-Annually
Environmentally Sensitive Areas Natural England	July 2010	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	October 2010	Bi-Annually
Marine Nature Reserves Natural England	September 2010	Bi-Annually
National Nature Reserves Natural England	October 2010	Bi-Annually
National Parks Natural England	August 2010	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2009	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2009	Annually
Ramsar Sites Natural England	August 2010	Bi-Annually
Sites of Special Scientific Interest Natural England	August 2010	Bi-Annually
Special Areas of Conservation Natural England	October 2010	Bi-Annually
Special Protection Areas Natural England	August 2010	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Health Protection Agency	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	[redacted]
2	**Arun District Council - Environmental Health Department** Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF	
3	**Worthing Borough Council - Environmental Health Department** Portland House, Richmond Road, Worthing, West Sussex, BN11 1HS	
4	**West Sussex County Council - Environment & Development** County Hall, Tower hall, Chichester, West Sussex, PO19 1RH	
5	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
6	**Peter Brett Associates** Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN	
7	**Natural England** Northminster House, Northminster Road, Peterborough, Cambridgeshire, PE1 1UA	
8	**Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)** Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	
9	**Arun District Council - Technical Support Unit** Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF	
-	**Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	
-	**Landmark Information Group Limited** The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	

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



Envirocheck®

Index Map

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

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

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

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

A selection of organisations who provide data within this report:

Ordnance Survey Licensed Partner

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

English Heritage ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Client Details
Ms E Corby, URS Corporation Ltd, 2nd Floor, St Georges House, 5 St Georges Road, London, SW19 4DR

Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details
Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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

ARUN DISTRICT COUNCIL WA/92/11

LANDMARK TERMS AND CONDITIONS

Version 6.04 28 Jul 2007

Definitions

"**Authorised Reseller**" means an agent or reseller of Landmark whom Landmark has duly appointed to resell its Reports and Services.

"**Content**" means any data, computing and information services and software, and other content and documentation or support materials and updates included in and/or supplied by or through the Websites, in Reports or Services or in any other way by Landmark and shall include Landmark developed and Third Party Content.

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"**First Purchaser's Lender**" means the funding provider for the First Purchaser

"**Information Pack**" means a pack compiled by or on behalf of the owner or prospective buyer of the Property Site, designed to aid the marketing or purchase of the Property Site and containing information provided by or on behalf of the owner or prospective buyer of the Property Site.

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"**Suppliers**" means any organisation who provides data or information of any form to Landmark.

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1. Terms & Conditions

a. These Terms govern the relationship between You and Landmark whether You are an unregistered visitor to the Website or are purchasing Services. Where these Terms are not expressly accepted by You they will be deemed to have been accepted by You, and You agree to be bound by these Terms when You place any Order, or pay for any Services provided

b. If the person communicating with Landmark is an Authorised Reseller, they must ensure that You agree to these Terms.

c. The headings in these Terms are for convenience only and shall not affect the meaning or interpretation of any part of these Terms.

d. Landmark may modify these Terms, and may discontinue or revise any or all other aspects of the Services at our sole discretion, with immediate effect and without prior notice, including without limitation changing the Services available at any given time. Any amendment or variation to these Terms shall be posted on our Websites. Continued use of the Services by You shall be deemed an acceptance by You to be bound by any such amendments to the Terms.

e. These Terms, together with the prices and delivery details set out on our Websites, Landmark's Privacy Policy and Your Order comprise the whole agreement relating to the supply of Services to You by Landmark. No prior stipulation, agreement, promotional material or statement whether written or oral made by any sales or other person or representative on our behalf should be understood as a variation of these Terms. Save for fraud or misrepresentation, Landmark shall have no liability for any such representation being untrue or misleading.

f. These Terms shall prevail at all times to the exclusion of all other terms and conditions including any terms and conditions which You may purport to apply even if such other provisions are submitted in a later document or purport to exclude or override these Terms and neither the course of conduct between parties nor trade practice shall act to modify these Terms.

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a. Landmark will use reasonable care and skill in providing the Services to You, however, the Services are provided on the express basis that the information and data supplied in the Services are derived from third party sources and Landmark does not warrant the accuracy or completeness of such information or data. Such information is derived solely from those sources specifically cited in the Services and Landmark does not claim that these sources represent an exhaustive or comprehensive list of all sources that might be consulted.

3. Intellectual Property

a. You acknowledge that all Intellectual Property Rights in the Services are and shall remain owned by either Landmark or our Suppliers and nothing in these Terms purports to transfer, assign or grant any rights to You in respect of the Intellectual Property Rights.

b. Subject always to these Terms You may, without further charge, make the Services available to;
   i. the owner of the Property at the date of the Report,
   ii. any person who purchases the whole of the Property Site,
   iii. any person who provides funding secured on the whole of the Property Site,
   iv. any person for whom You act in a professional or commercial capacity,
   v. any person who acts for You in a professional or commercial capacity; and
   vi. prospective buyers of the Property Site as part of an Information Pack but for the avoidance of doubt, Landmark shall have no liability to such prospective buyer unless the prospective buyer subsequently purchases the Property Site, and the prospective (or actual) buyer shall not be entitled to make the Service available to any other third party.
   Accordingly Landmark shall have the same duties and obligations to those persons in respect of the Services as it has to You.

c. Each of those persons referred to in clause 3.b. shall have the benefit and the burden of Your rights and obligations under these Terms. The limitations of Landmark's liability as set out in clause 6 shall apply to all users of the Service in question in aggregate and Landmark shall not be liable to any other person.

d. All parties given access to the Services agree that they will treat as strictly private and confidential the Services and all information which they obtain from the Services and shall restrict any disclosure to employees or professional advisors to enable the relevant party to conduct its internal business. The requirement in this clause to treat the Services as confidential shall include a requirement to maintain adequate security measures to safeguard the Services from unauthorised access, use or copying.

e. Each recipient of the Services agrees (and agrees it will cause its employees, agents or contractors who may from time to time have access to the Services to agree) it will not, except as permitted herein or by separate agreement with Landmark:-
   i. effect or attempt to effect any modification, merger or change to the Service, nor permit any other person to do so; or
   ii. copy, use, market, re-sell, distribute, merge, alter, add to or carry on any redistribution, reproduction, translation, publication, reduction to any electronic medium or machine readable form or commercially exploit or in any other way deal with or utilise or (except as expressly permitted by applicable law) reverse engineer, decompile or disassemble the Services, Content or Website; or
   iii. remove, alter or in any way change any trademark or proprietary marking in any element of the Services and You shall acknowledge the ownership of the Content, where such Content is incorporated or used into Your own documents, reports, systems or services whether or not these are supplied to any third party.
   iv. create any product which is derived directly or indirectly from the data contained in the Services

f. The mapping contained in any Services is protected by Crown Copyright and must not be used for any purpose outside the context of the Services or as specifically provided by these Terms.

g. You are permitted to make five copies of any Report, but are not authorised to re-sell the Report, any part thereof or any copy thereof unless you are an Authorised Reseller. Further copies may not be made in whole or in part without the prior written permission of Landmark who shall be entitled to make a charge for each additional copy.

4. Charges

a. VAT at the prevailing rate shall be payable in addition to the Landmark Fees. You shall pay any other applicable indirect taxes related to Your use of the Services.

b. An individual or a monthly invoice showing all Orders created by You will be generated subject to these Terms. You will pay the Landmark Fees at the rates set out in Landmark's or its Authorised Reseller's invoice. The Landmark Fees are payable in full within 30 days without deduction, counterclaim or set off. You acknowledge that time is of the essence with respect to the payment of such invoices. Landmark reserve the right to amend the Landmark Fees from time to time and the Services will be charged at the Landmark Fee applicable at the date on which the Service is ordered.

c. We may charge interest on late payment at a rate equal to 3% per annum above the base lending rate of National Westminster Bank plc.

d. Landmark or its Authorised Reseller shall not be obliged to invoice any party other than You for the provision of Services, but where Landmark or its Authorised Reseller does so invoice any third party at Your request, and such invoice is not accepted or remains unpaid, Landmark or its Authorised Reseller shall have the option at any time to cancel such invoice and invoice You direct for such Services. Where Your order comprises a number of Services or severable elements within any one or more Services, any failure by Landmark or its Authorised Reseller to provide an element or elements of the Services shall not prejudice Landmark's or its Authorised Reseller's ability to require payment in respect of the Services delivered to You.

5. Termination

a. Landmark may suspend or terminate Your rights under these Terms without any liability to You with immediate effect if at any time:-
   i. You fail to make any payment due in accordance with clause 4;
   ii. You repeatedly breach or commit or cause to be committed any material breach of these Terms; or
   iii. You commit a breach and You fail to remedy the breach within 7 days of receipt of a written notice to do so; additionally, without prejudice to the foregoing, Landmark may remedy the breach and recover the costs thereof from You.

b. If Your rights are terminated under this clause and You have made an advance payment We will refund You a reasonable proportion of the balance as determined by Us in relation to the value of Services previously purchased.

c. Landmark reserves the right to refuse to supply any or all Services to You without notice or reason.

6. Liability

a. We provide warranties and accept liability only to the extent stated in this clause 6 and clause 7.

b. Nothing in these Terms excludes either party's liability for death or personal injury caused by that party's negligence or wilful default, and the remainder of this clause 6 is subject to this provision and Your statutory rights.

c. As most of the information contained in the Services is provided to Landmark by others, Landmark cannot control its accuracy or completeness, nor is it within the scope of Landmark's Services to check the information on the ground. Accordingly, Landmark will only be liable to You for any loss or damage caused by its negligence or willful default and subject to clause 6.o below neither Landmark nor any person providing information contained in any Services shall in any circumstances be liable for any inaccuracies, faults or omissions in the Services, nor shall Landmark have any liability if the Services are used otherwise than in accordance with these Terms.

d. Save as precluded by law, Landmark shall not be liable for any indirect or consequential loss, damage or expenses (including loss of profits, loss of contracts, business or goodwill) howsoever arising out of any problem, event, action or default by Landmark.

e. In any event, and notwithstanding anything contained in these Terms, Landmark's liability in contract, tort (including negligence or breach of statutory duty) or otherwise howsoever arising by reason or in connection with this Contract (except in relation to death or personal injury) shall be limited to an aggregate amount not exceeding £1 million if the complaint is in relation to a Report on residential property and an aggregate amount not exceeding £10 million in respect of any other Report or Service purchased from Landmark.

f. Landmark will not be liable for any defect, failure or omission relating to Services that is not notified to Landmark within six months of the date of the issue becoming apparent and in any event, within twelve years of the date of the Service.

g. You acknowledge that:-
   i. Subject to clause 6.o below You shall have no claim or recourse against any Third Party Content supplier nor any of our other Suppliers. You will not in any way hold us responsible for any selection or retention of, or the acts of omissions of Third Party Content suppliers or other Suppliers (including those with whom We have contracted to operate various aspects or parts of the Service) in connection with the Services (for the avoidance of doubt Landmark is not a Third Party Content supplier). Landmark does not promise that the supply of the Services will be uninterrupted or error free or provide any particular facilities or functions, or that the Content will always be complete, accurate, precise, free from defects of any other kind, computer viruses, software locks or other similar code although Landmark will use reasonable efforts to correct any inaccuracies within a reasonable period of them becoming known to us;
   ii. Landmark's only obligation is to exercise reasonable skill and care in providing environmental property risk information to persons acting in a professional or commercial capacity who are skilled in the use of property and environmental information and You hereby acknowledge that You are such a person;
   iii. no physical inspection of the Property Site reported on is carried out as part of any Services offered by Landmark and Landmark do not warrant that all land uses or features whether past or current will be identified in the Services. The Services do not include any information relating to the actual state or condition of any Property Site nor should they be used or taken to indicate or exclude actual fitness or unfitness of a Property Site for any particular purpose nor should it be relied upon for determining saleability or value or used as a substitute for any physical investigation or inspection. Landmark recommends that You inspect and take other advice in relation to the Property Site and not rely exclusively on the Services.
   iv. Subject to clause 6.o below, Landmark shall not be responsible for error or corruption in the Services resulting from inaccuracy or omission in primary or secondary information and data, inaccurate processing of information and data by third parties, computer malfunction or corruption of data whilst in the course of conversion, geo-coding, processing by computer or electronic means, or in the course of transmission by telephone or other communication link, or printing.
   v. Landmark will not be held liable in any way if a Report on residential property is used for commercial property or more than the one residential property for which it was ordered.
   vi. the Services have not been prepared to meet Your or anyone else's individual requirements; that You assume the entire risk as to the suitability of the Services and waive any claim of detrimental reliance upon the same; and You confirm You are solely responsible for the selection or omission of any specific part of the Content;
   vii. Landmark offer no warranty for the performance of any linked internet service not operated by Landmark;
   viii. You will on using the Services make a reasonable inspection of any results to satisfy Yourself that there are no defects or failures. In the event that there is a material defect You will notify us in writing of such defect within seven days of its discovery;
   ix. Any support or assistance provided to You in connection with these Terms is at Your risk;

h. All liability for any insurance products purchased by You rests solely with the insurer. Landmark does not endorse any particular product or insurer and no information contained within the Services should be deemed to imply otherwise. You acknowledge that if You Order any such insurance Landmark will deem such as Your consent to forward a copy of the Report to the insurers. Where such policy is purchased, all liability remains with the insurers and You are entirely responsible for ensuring that the insurance policy offered is suitable for Your needs and should seek independent advice. Landmark does not guarantee that an insurance policy will be available on a Property Site. All decisions with regard to the offer of insurance policies for any premises will be made solely at the discretion of the insurers and Landmark accepts no liability in this regard. The provision of a Report does not constitute any indication by Landmark that insurance will be available on the property.

i. Professional opinions contained in Reports are provided to Landmark by third parties, and such third parties are solely liable for the opinion provided. For the avoidance of doubt, those parties providing assessments or professional opinions on Landmark products include RPS Plc & Wilbourn Associates Limited, and any issues with regard to the provision of such opinion should be taken up with the relevant third party.
   If Landmark provides You with any additional service obtained from a third party, including but not limited to any interpretation or conclusion, risk assessment or environmental report or search carried out in relation to a Report on Your Property Site, subject to clause 6.o below Landmark will not be liable in any way for any information contained therein or any issues arising out of the provision of those additional services to You. Landmark will be deemed to have acted as an agent in these circumstances and the supply of these additional services will be governed by the terms and conditions of those Third Parties.

j. In any event no person may rely on a Service more than 12 months after its original date.

k. If You wish to vary any limitation of liability as set out in these Terms, You must request such variation prior to ordering the Service. Landmark shall use its reasonable endeavours to agree such variation but shall not be obliged to do so.

l. Time shall not be of the essence with respect to the provision of the Services.

m. Ordnance Survey have undertaken a positional accuracy improvement programme which may result in discrepancies between the positioning of features used in datasets in the Services and the updated Ordnance Survey mapping. Subject to clause 6.o below, Landmark and its Suppliers exclude all and any liability incurred as a result of the implementation of such positional accuracy improvement programme.

n. Where Landmark provides its own risk assessment in connection with any Report, Landmark shall carry out such assessment with all reasonable skill and care but shall have no liability for any such risk assessment conclusion which is provided for information only, save where Landmark conducted the same negligently, in which case the provisions of clause 6 shall apply. Notwithstanding the provision of any such risk assessment conclusion you should carefully examine the remainder of the Report and should not take or refrain from taking any action based solely on the basis of the risk assessment. For the avoidance of doubt, the provisions of this clause 6n apply solely to risk assessments conducted by Landmark, and the provision of any other risk assessment by a third party shall be governed by such third party's terms in accordance with the provisions of clause 6i above.

o. Landmark obtains much of the information contained in its Report from third parties. Landmark will not accept any liability to You for any negligent or incorrect entry, or error or corruption in the Third Party Content supplied to Landmark, but Landmark's Suppliers may be liable for such negligent or incorrect entries, or errors or corruptions, subject to the terms and conditions on which they supply the Third Party Content to Landmark.

7. Contribution

a. Save where expressly provided, this clause 7 shall apply solely to Envirosearch Residential Reports (regardless of the result of such Report). Nothing in this clause 7 shall operate to override or vary the provisions of clause 6.

b. Landmark are prepared to offer, at their sole discretion, and without any admission or inference of liability a contribution towards the costs of any remediation works required under a Notice (as defined below) on the terms of this clause 7 ("the Contribution")

c. In the event that a Remediation Notice is served on the First Purchaser or First Purchaser's Lender of a Property Site under Part II(A) of the Environmental Protection Act 1990 ("the Notice") Landmark will contribute to the cost of such works as either the First Purchaser or First Purchaser's Lender (but not both) are required to carry out under the Notice subject to the provisions of this clause 7 and on the following terms:
   i. the Contribution shall only apply to contamination or a pollution incident present or having occurred prior to the date of the Report;
   ii. the Contribution shall only apply where the Property Site is a single residential dwelling house or a single residential flat within a block of flats. For the avoidance of doubt, this obligation does not apply to any commercial property, nor to any Property Site being developed or redeveloped whether for residential purposes or otherwise;
   iii. the Contribution is strictly limited to the cost of works at the Property Site and at no other site.
   iv. the Contribution will not be paid in respect of any of the following:
   Radioactive contamination of whatsoever nature, directly or indirectly caused by or contributed to or arising from ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel or the radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof.
   Asbestos arising out of or related in any way to asbestos or asbestos-containing materials on or in structures or services serving the structures.
   Naturally occurring materials arising from the presence or required removal of naturally occurring materials except in circumstances where such materials are present in concentrations which are in excess of their natural concentration.
   Intentional non-compliance arising from the intentional disregard of or knowing wilful or deliberate non-compliance by any owner or occupier of the Property Site with any statute, regulation, administrative complaint, notice of violation, or notice letter of any Regulatory Authority.
   Any condition which is known or ought reasonably to have been known to the First Purchaser or the First Purchaser's Lender prior to the purchase of the Report.
   Any condition which is caused by acts of War or an Act of Terrorism.
   Any property belonging to or in the custody or control of the First Purchaser which does not form a fixed part of the Property Site or the structure.
   Any fines liquidated damages punitive or exemplary damages.
   Any bodily injury including without limitation, death, illness or disease, mental injury, anguish or nervous shock.
   Any financial loss in respect of any loss of any rental, profit, revenue, savings or business or any consequential indirect or economic loss damage or expense including the cost of rent of temporary premises or business interruption.
   Any losses incurred following a material change in use of, alteration or development of the Property Site.

d. The maximum sum that shall be contributed by Landmark in respect of any Contribution shall be limited to £60,000. In the event that more than one Report is purchased on the Property Site the Contribution will only be payable under the first Report purchased by or on behalf of any First Purchaser or First Purchaser's Lender and no Contribution will be made in respect of subsequent Reports purchased by or on behalf of such First Purchaser, First Purchaser's Lender or any person connected to them.

e. Landmark shall only pay a Contribution where the Notice is served within 36 months of the date of the Report.

f. Any rights to a Contribution under this Clause 7 are not assignable in the event of a sale of the Property Site and Landmark will not make any Contribution after the date of completion of such sale.

g. In the event the First Purchaser or First Purchaser's Lender wishes to claim any Contribution, it shall notify Landmark in writing within 3 months of the date of the Notice. The First Purchaser or First Purchaser's Lender (as applicable) shall comply with all reasonable requirements of Landmark with regard to the commission and conduct of the remediation works to be carried out under the Notice, and in the event the First Purchaser or First Purchaser's Lender (as applicable) does not do so, including without limitation, obtaining Landmark's prior written consent to any estimates for such works or complying with any other reasonable request by Landmark, Landmark shall not be required to pay any Contribution. Notwithstanding the payment of the Contribution by Landmark the First Purchaser or First Purchaser's Lender as applicable shall take all reasonable steps to mitigate any costs incurred in connection with the conduct of works required under the terms of any Notice.

h. In the event that the First Purchaser or First Purchaser's Lender receives any communication from a statutory authority to the effect that there is an intent to serve a notice received under PartII(A) of the Environmental Protection Act 1990 they will advise Landmark within a maximum period of two months from receipt of such communication. This clause 7h and the service of any notice under it shall not affect the provisions of clauses 7 e and g, and any such communications, even if advised to Landmark will not operate as notice under clause 7e.

i. Landmark reserve the right at any time prior to a claim for Contribution being made in accordance with clause 7 g) above, to withdraw the offer of payment of Contributions without further notice.

8. Events Beyond Our Control

a. You acknowledge that Landmark shall not be liable for any delay, interruption or failure in the provision of the Services which are caused or contributed to by any circumstance which is outside our reasonable control including but not limited to, lack of power, telecommunications failure or overload, computer malfunction, inaccurate processing of data, or delays in receiving, loading or checking data, corruption of data whilst in the course of conversion, geo-coding, processing by computer in the course of electronic communication, or printing.

9. Severability

a. If any provision of these Terms are found by either a court or other competent authority to be void, invalid, illegal or unenforceable, that provision shall be deemed to be deleted from these Terms and never to have formed part of these Terms and the remaining provisions shall continue in full force and effect.

10. Governing Law

a. These terms shall be governed by and construed in accordance with English law and each party agrees irrevocably submit to the exclusive jurisdiction of the English courts If any dispute arises out of or in connection with this agreement (a "Dispute") the parties undertake that, prior to the commencement of Court proceedings, they will seek to have the Dispute resolved amicably by use of an alternative dispute resolution procedure acceptable to both parties with the assistance of the Centre for Dispute Resolution (CEDR) if required, by written notice initiating that procedure. If the Dispute has not been resolved to the satisfaction of either party within 60 days of initiation of the procedure or if either party fails or refuses to participate in or withdraws from participating in the procedure then either party may refer the Dispute to the Court.

11. General; Complaints

a. Landmark may assign its rights and obligations under these Terms without prior notice or any limitation.

b. Landmark may authorise or allow our contractors and other third parties to provide to Landmark and/or to You services necessary or related to the Services and to perform Landmark's obligations and exercise Landmark's rights under these Terms, which may include collecting payment on Landmark's behalf.

c. No waiver on Landmark's part to exercise, and no delay in exercising, any right, power or provision hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or provision hereunder preclude the exercise of that or any other right, power or provision.

d. Unless otherwise stated in these Terms, all notices from You to Landmark must be in writing and sent to the Landmark registered office (or in the case of an Authorised Reseller, to its registered office address) and subject to paragraph e below all notices from Landmark to You will be displayed on our Websites from time to time.

e. Any complaints in relation to the Services should, in the first instance, be in writing addressed to the Customer Service Support Manager at the Landmark registered office. Landmark or its agents will respond to any such complaints in writing as soon as practicably possible.

f. A person who is not a party to any contract made pursuant to these Terms shall have no right under the Contract (Right of Third Parties) Act 1999 to enforce any terms of such contract and Landmark shall not be liable to any such third party in respect of any Services supplied.

g. Landmark's Privacy Policy as displayed on the Website governs the use made of any information You supply to Landmark.

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Envirocheck® Report:

BGS Boreholes Datasheet

Order Details:

Order Number:
33445435_1_1

Customer Reference:
Shell Fontwell

National Grid Reference:
495190, 107080

Slice:
A

Site Area (Ha):
0.34

Borehole Search Buffer (m):
1000

Site Details:

Shell Fontwell, Arundel Road
Fontwell
ARUNDEL
West Sussex
BN18 0SB

Client Details:

Ms E Corby
URS Corporation Ltd
2nd Floor, St Georges House
5 St Georges Road
London
SW19 4DR

ARUN DISTRICT COUNCIL WA/92/11/

Envirocheck®

BGS Boreholes Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
BGS Boreholes	pg 1	None	10	7	12

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

Report Version v47.0

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**BGS Boreholes** BGS Reference: Su90nw156 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse 3a	A13SW (W)	162	5	494990 107040
43	**BGS Boreholes** BGS Reference: Su90nw154 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse 2	A13SW (W)	166	5	494990 107020
43	**BGS Boreholes** BGS Reference: Su90nw155 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse 3	A13SW (W)	172	5	494980 107040
43	**BGS Boreholes** BGS Reference: Su90nw162 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse Tp6	A13SW (W)	172	5	494980 107040
43	**BGS Boreholes** BGS Reference: Su90nw157 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse Tp1	A13SW (W)	182	5	494970 107040
44	**BGS Boreholes** BGS Reference: Su90nw161 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse Tp5	A13SW (W)	188	5	494970 107010
44	**BGS Boreholes** BGS Reference: Su90nw158 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse Tp2	A13SW (W)	193	5	494960 107030
44	**BGS Boreholes** BGS Reference: Su90nw160 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse Tp4	A13SW (SW)	207	5	494960 106980
44	**BGS Boreholes** BGS Reference: Su90nw153 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse 1	A13SW (SW)	211	5	494960 106970
44	**BGS Boreholes** BGS Reference: Su90nw159 Drilled Length (m): Not Supplied Borehole Name: Fontwell Racecourse Tp3	A13SW (W)	222	5	494940 106990
45	**BGS Boreholes** BGS Reference: Su90nw142 Drilled Length (m): 10.15 Borehole Name: Fontwell Park Racecourse 1	A13SW (W)	308	5	494860 106960
45	**BGS Boreholes** BGS Reference: Su90nw144 Drilled Length (m): 10.55 Borehole Name: Fontwell Park Racecourse 3	A12SE (W)	331	5	494830 106980
46	**BGS Boreholes** BGS Reference: Su90nw143 Drilled Length (m): 10 Borehole Name: Fontwell Park Racecourse 2	A12SE (W)	333	5	494830 106970
47	**BGS Boreholes** BGS Reference: Su90ne78 Drilled Length (m): 4.57 Borehole Name: Wandley'S Lane Eastergate	A13SE (SE)	441	5	495530 106760
48	**BGS Boreholes** BGS Reference: Su90nw74 Drilled Length (m): 7.3 Borehole Name: Fontwell	A17SE (NW)	467	5	494850 107440
49	**BGS Boreholes** BGS Reference: Su90ne80 Drilled Length (m): 5.79 Borehole Name: Wandley'S Lane Eastergate	A8NE (SE)	478	5	495500 106680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
50	**BGS Boreholes** BGS Reference: Su90ne34 Drilled Length (m): 6 Borehole Name: Wandleys Farm	A8NE (SE)	486	5	495440 106630
51	**BGS Boreholes** BGS Reference: Su90ne81 Drilled Length (m): 4.57 Borehole Name: Wandley'S Lane Eastergate	A9NW (SE)	582	5	495630 106660
52	**BGS Boreholes** BGS Reference: Su90ne79 Drilled Length (m): 4.87 Borehole Name: Wandley'S Lane Eastergate	A9NW (SE)	605	5	495720 106730
53	**BGS Boreholes** BGS Reference: Su90nw6/A Drilled Length (m): 60.96 Borehole Name: Bognor Waterworks Eastergate Sussex	A7NE (SW)	662	5	494800 106500
53	**BGS Boreholes** BGS Reference: Su90nw6/B Drilled Length (m): 60.96 Borehole Name: Bognor Waterworks Eastergate Sussex	A7NE (SW)	662	5	494800 106500
54	**BGS Boreholes** BGS Reference: Su90ne82 Drilled Length (m): 5.18 Borehole Name: Wandley'S Lane Eastergate	A9NW (SE)	703	5	495790 106660
55	**BGS Boreholes** BGS Reference: Su90ne84 Drilled Length (m): 4.87 Borehole Name: Wandley'S Lane Eastergate	A9NW (SE)	715	5	495570 106440
56	**BGS Boreholes** BGS Reference: Su90ne83 Drilled Length (m): 4.87 Borehole Name: Wandley'S Lane Eastergate	A9NW (SE)	762	5	495790 106570
57	**BGS Boreholes** BGS Reference: Su90nw78 Drilled Length (m): 10 Borehole Name: Littleheath Road Fontwell 1	A17SW (NW)	864	5	494510 107659
57	**BGS Boreholes** BGS Reference: Su90nw79 Drilled Length (m): 9 Borehole Name: Littleheath Road Fontwell 2	A17SW (NW)	867	5	494510 107664
57	**BGS Boreholes** BGS Reference: Su90nw80 Drilled Length (m): 9 Borehole Name: Littleheath Road Fontwell 3	A17SW (NW)	870	5	494511 107669
58	**BGS Boreholes** BGS Reference: Su90nw75 Drilled Length (m): 7.7 Borehole Name: Fontwell Park Race Course	A7NW (SW)	869	5	494360 106700
59	**BGS Boreholes** BGS Reference: Su90ne33 Drilled Length (m): 5.6 Borehole Name: Slindon Park	A19NE (NE)	987	5	495870 107850

BGS Boreholes	Version	Update Cycle
BGS Boreholes British Geological Survey - National Geoscience Information Service	October 2010	Quarterly

Contact Details	Contact Logo
5 **British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, [redacted]	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
- **Landmark Information Group Limited** [redacted]	LANDMARK® Information Group



Groundwater Vulnerability

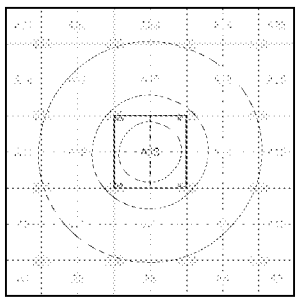
General

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

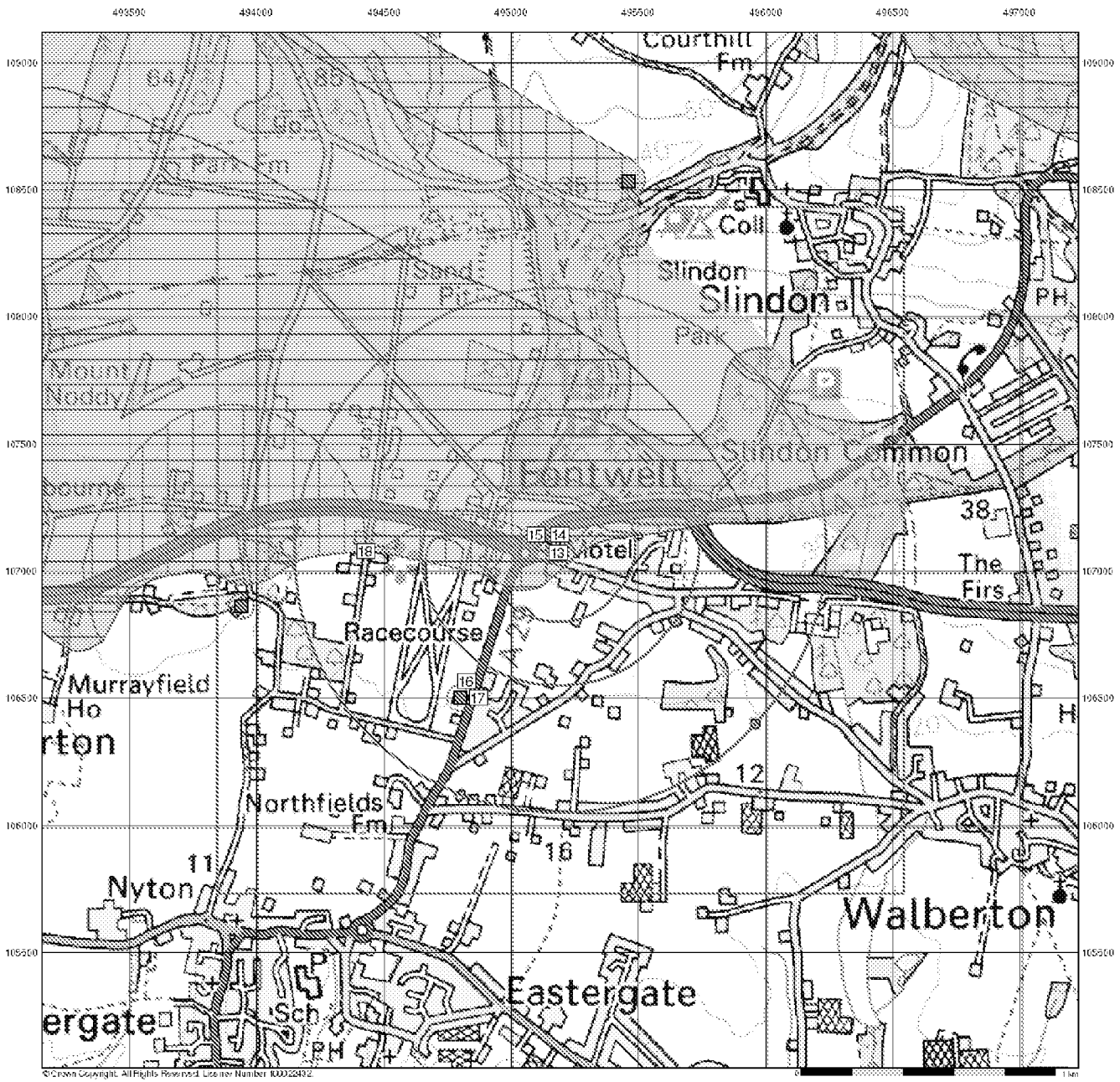


Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB



Envirocheck®

Source Protection Zones

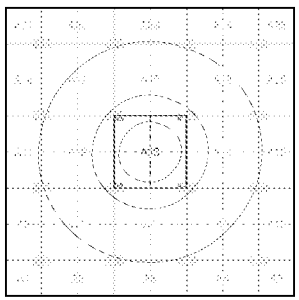
General

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

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



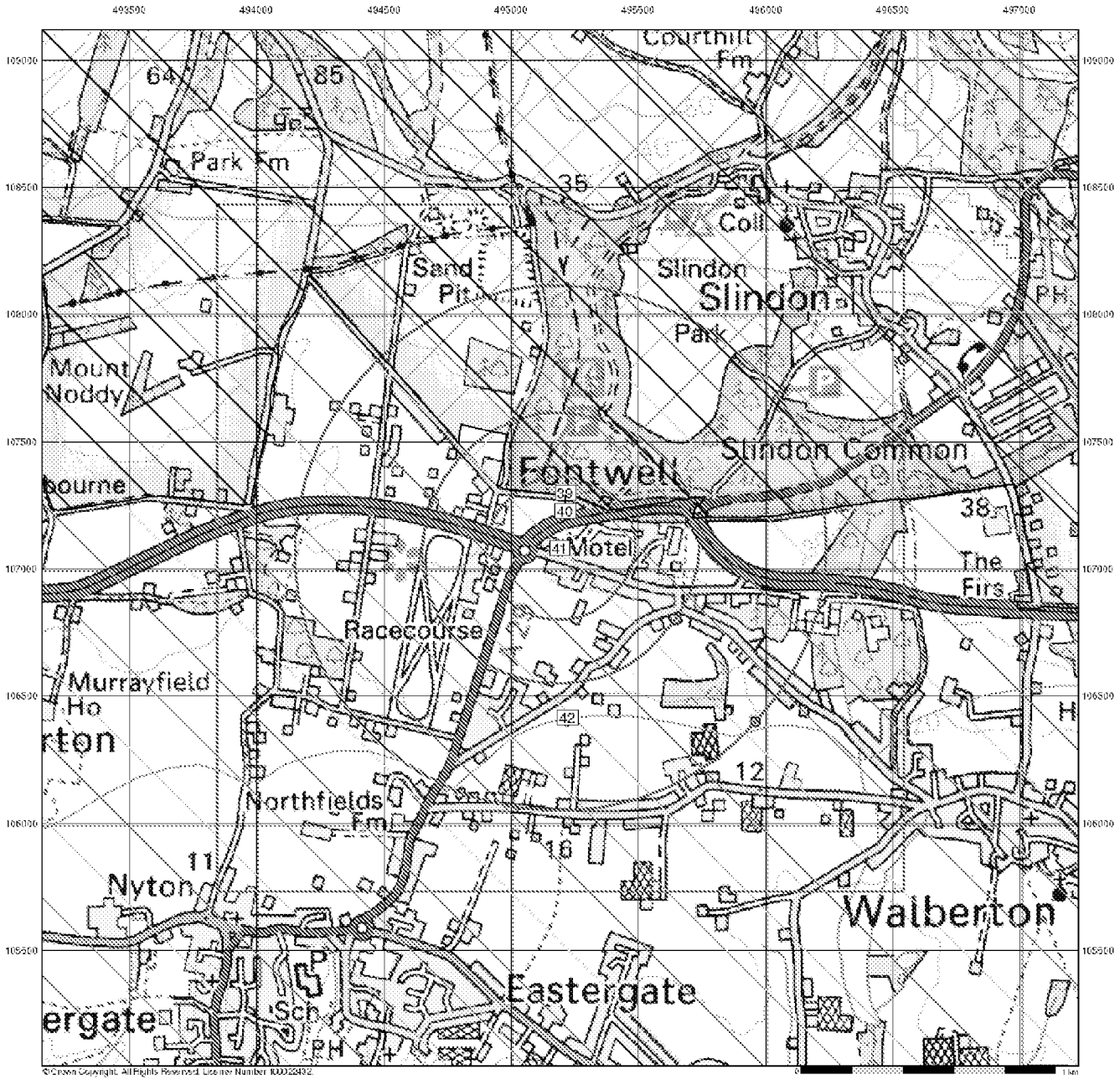
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
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Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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



Envirocheck®

Sensitive Land Uses

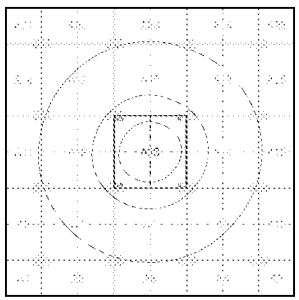
General

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

Sensitive Land Uses

- 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

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark

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	Present Day - Present Day

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Flandrian
	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
	RTDU	River Terrace Deposits (Undifferentiated)	Sand, Silt and Clay	Quaternary - Quaternary
	RBD2	Raised Beach Deposits, 2	Sand and Gravel	Quaternary - Quaternary
	RBD1	Raised Beach Deposits, 1	Sand and Gravel	Quaternary - Quaternary

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
	TACH	Tarrant Chalk Member	Chalk	Campanian - Campanian
	NCK	Newhaven Chalk Formation	Chalk	Campanian - Santonian
	LPCK	Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (Undifferentiated)	Chalk	Campanian - Turonian
		Faults		

Envirocheck® Geology

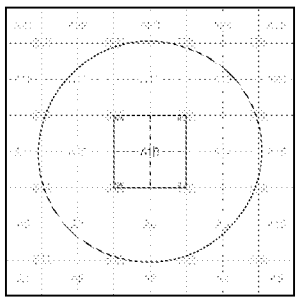
Geology 1:50,000 Maps

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 E
Map Date:	1996
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Available
Landslip:	Available
Rock Segments:	Not Available

Geology 1:50,000 Maps - Slice A



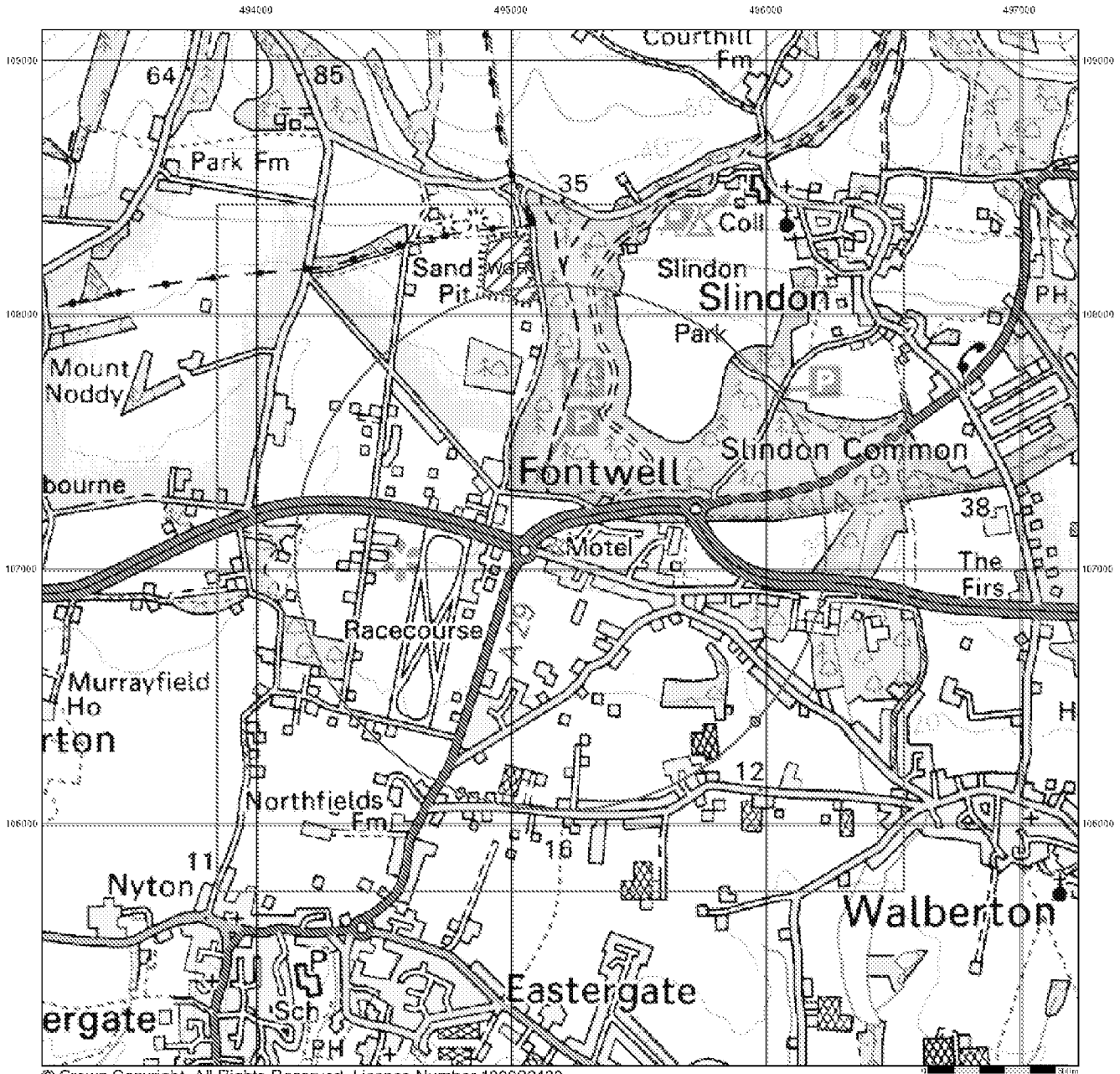
Order Details:

Order Number:	33445435_1_1
Customer Reference:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details:

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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Envirocheck® Geology

Artificial Ground and Landslip

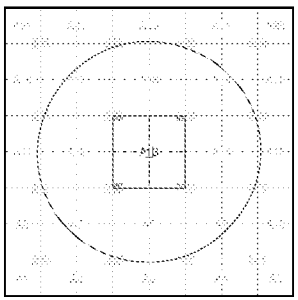
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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



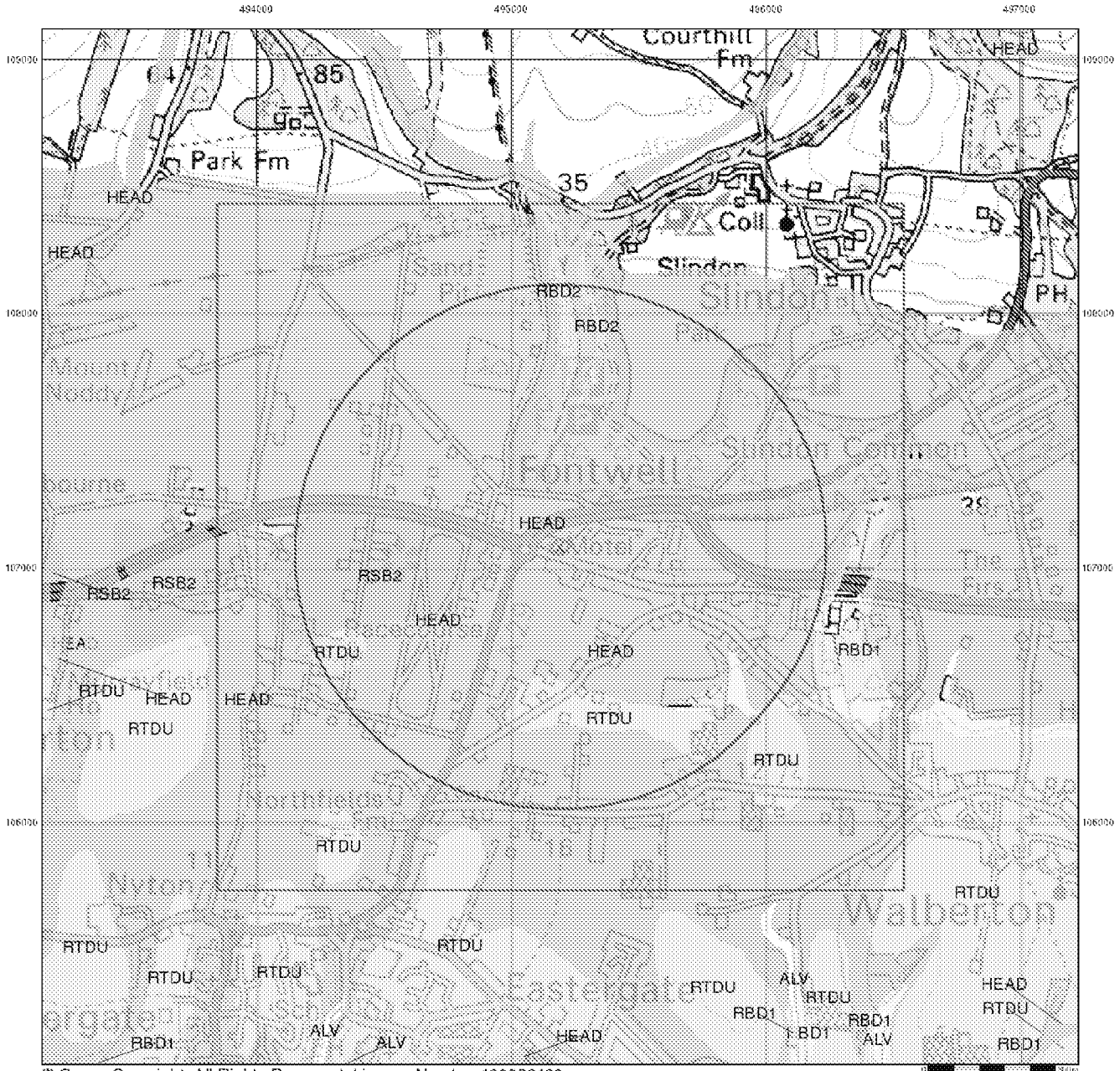
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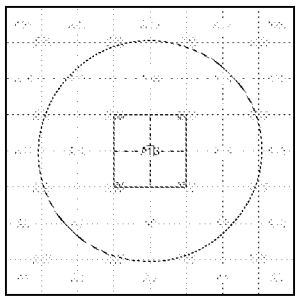
Superficial Geology

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

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

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

Superficial Geology Map - Slice A



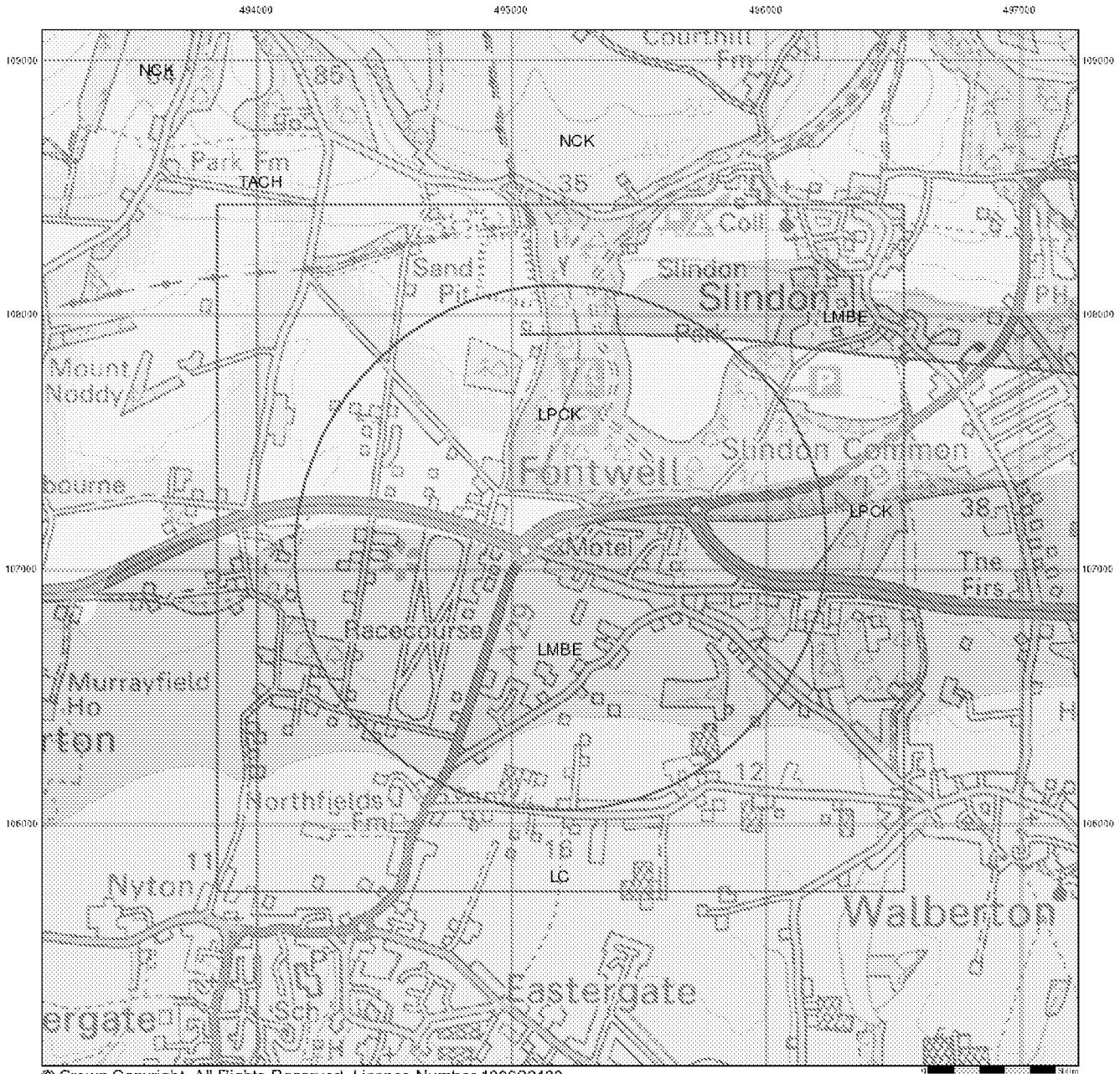
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Envirocheck® Geology

Bedrock and Faults

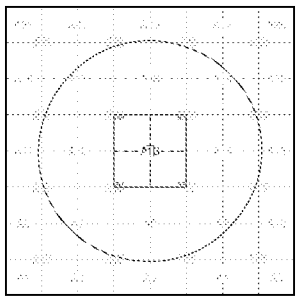
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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



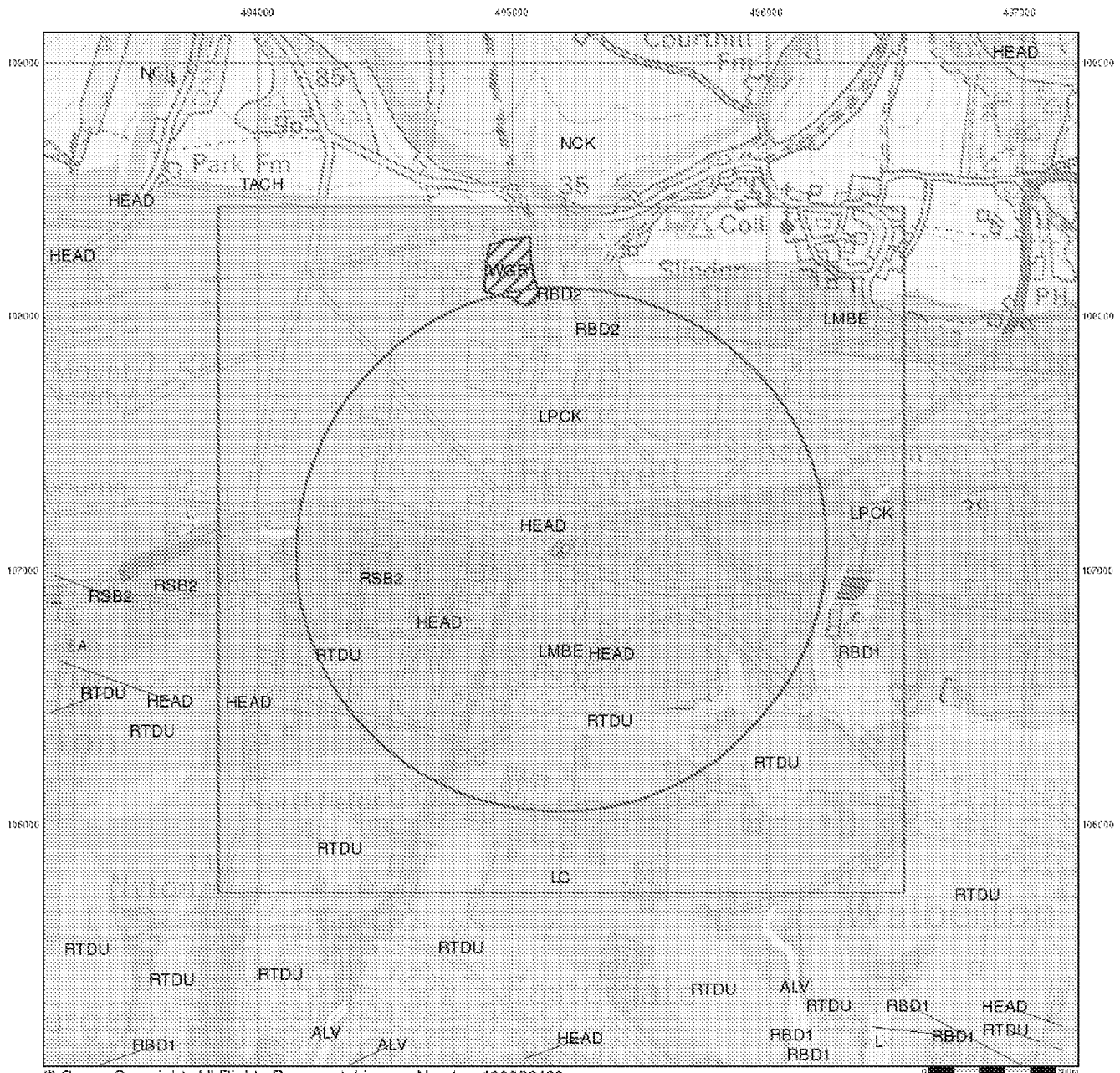
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Combined Surface Geology

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.

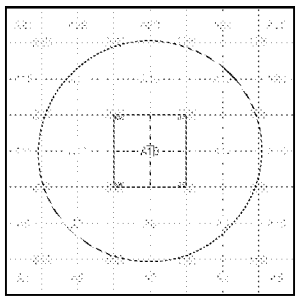
Additional Information

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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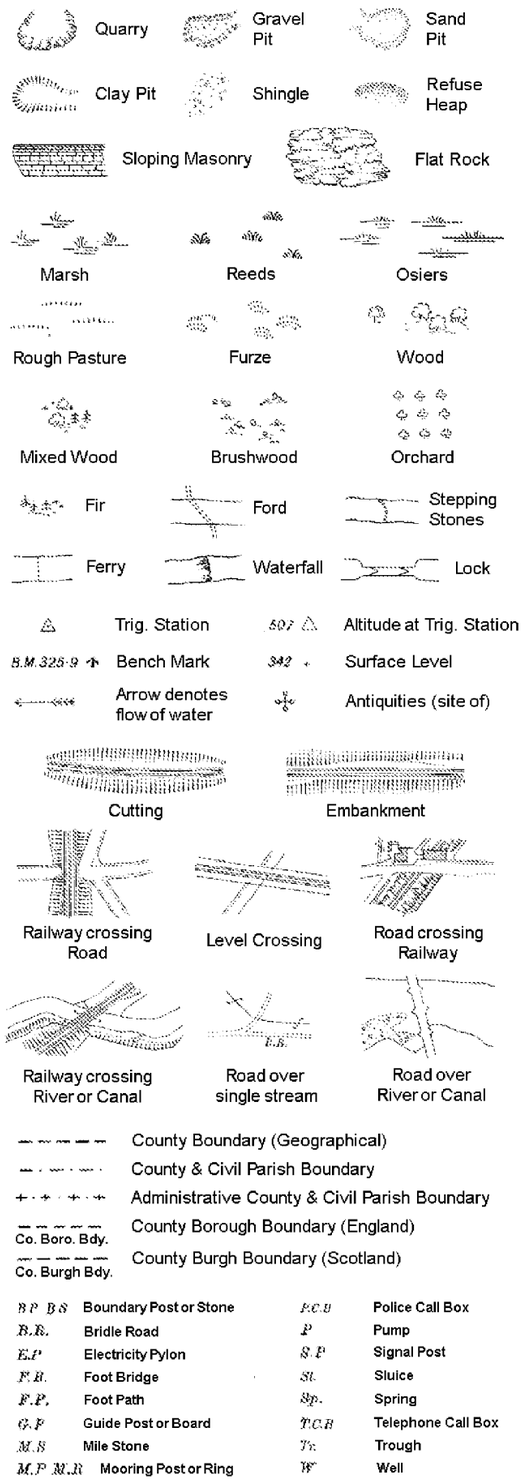
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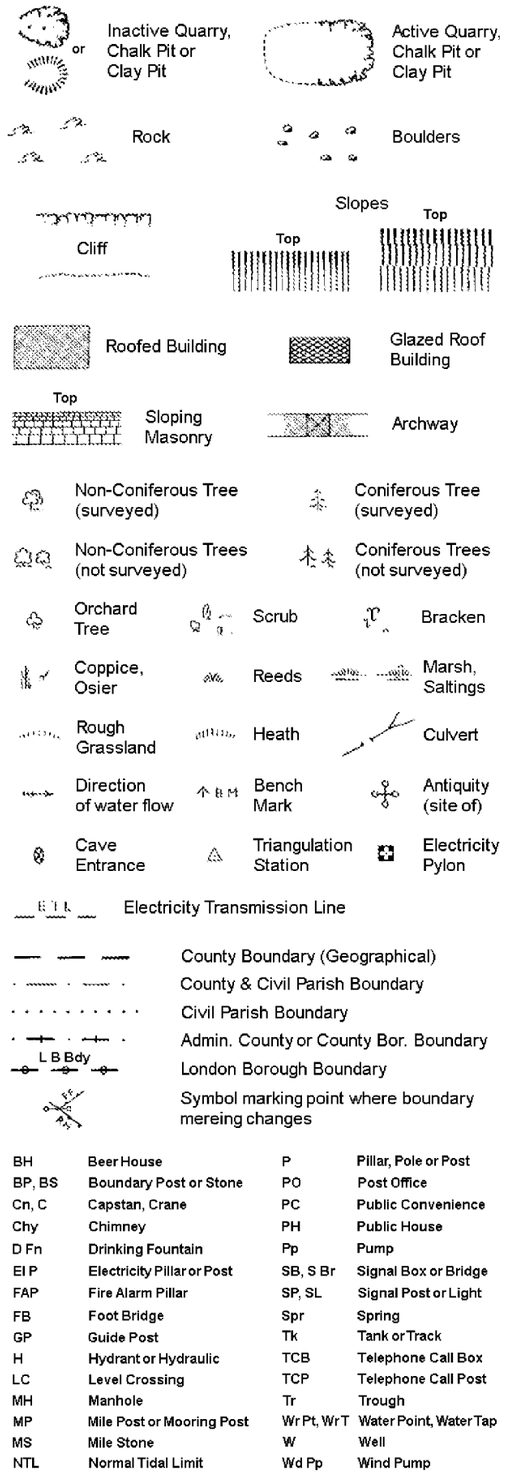
Historical Mapping Legends

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



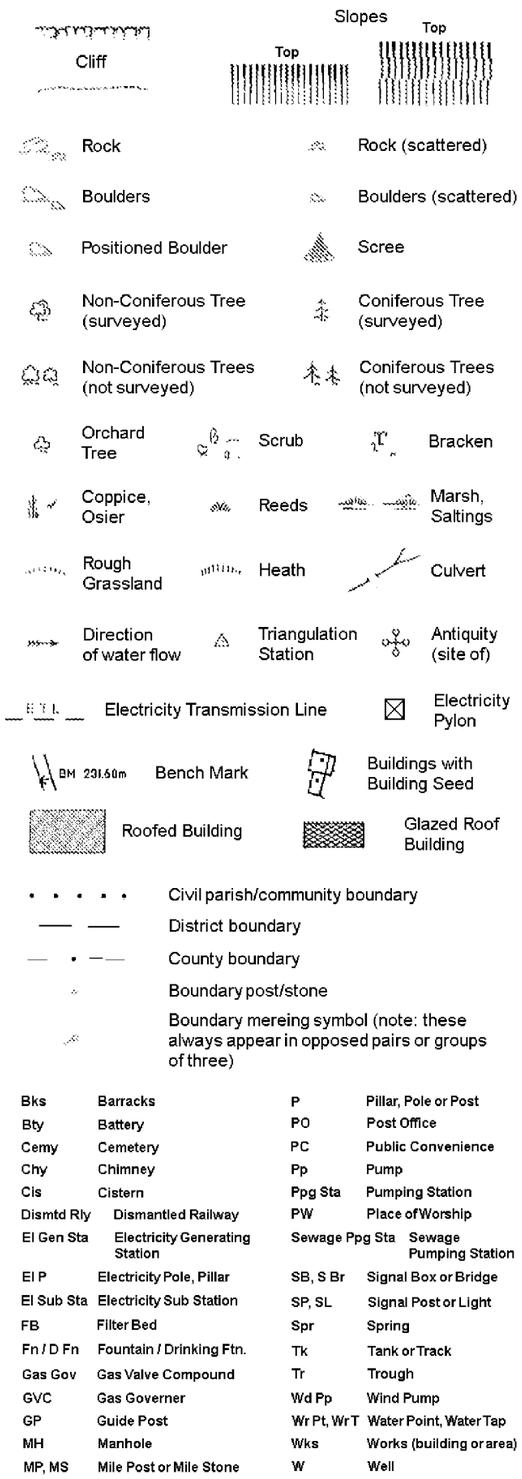
B.P. B.S.	Boundary Post or Stone	P.C.B.	Police Call Box
B.R.	Bridle Road	P.	Pump
E.P.	Electricity Pylon	S.P.	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P.	Guide Post or Board	T.C.B.	Telephone Call Box
M.S.	Mile Stone	Tr.	Trough
M.P. M.R.	Mooring Post or Ring	W.	Well

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



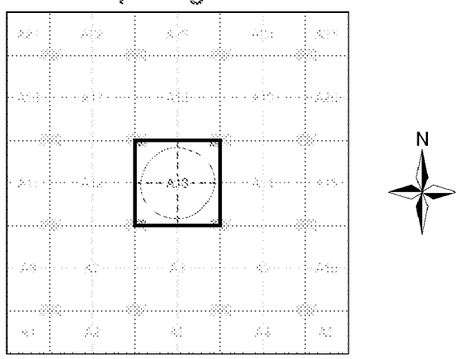
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity 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

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Sussex	1:2,500	1876	2
Sussex	1:2,500	1897	3
Sussex	1:2,500	1912	4
Sussex	1:2,500	1939	5
Ordnance Survey Plan	1:2,500	1974	6
Additional SIMs	1:2,500	1989	7
Additional SIMs	1:2,500	1991	8
Large-Scale National Grid Data	1:2,500	1994	9

Historical Map - Segment A13



Order Details

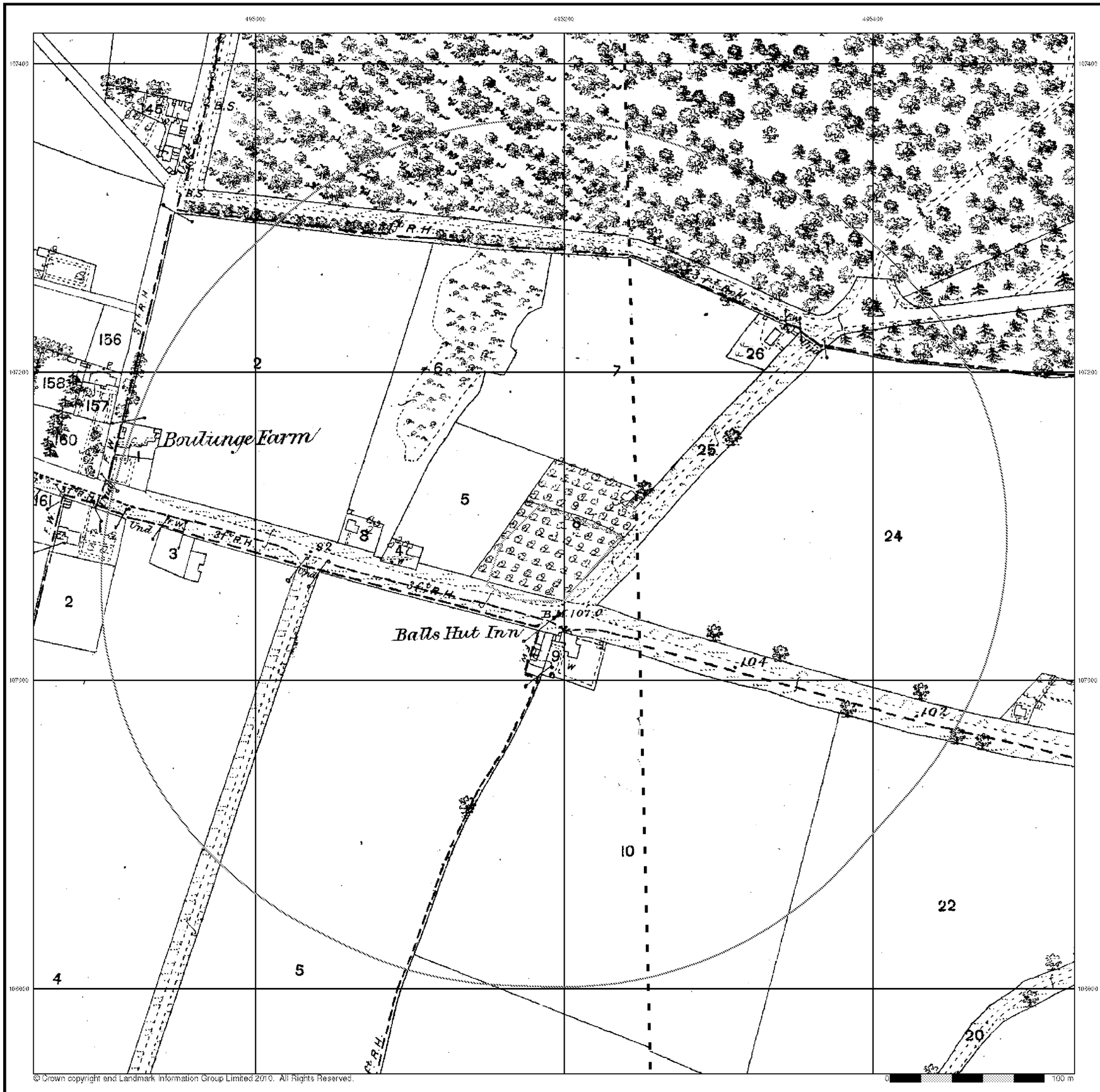
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Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 250

Site Details

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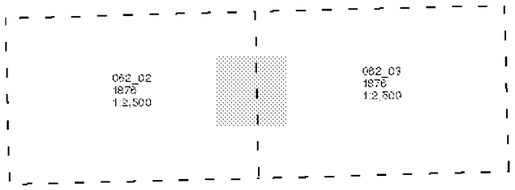
Sussex

Published 1876

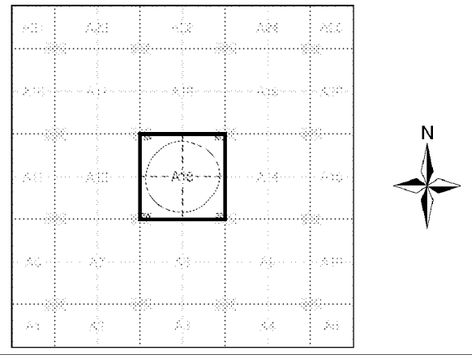
Source map scale - 1:2,500

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 A13



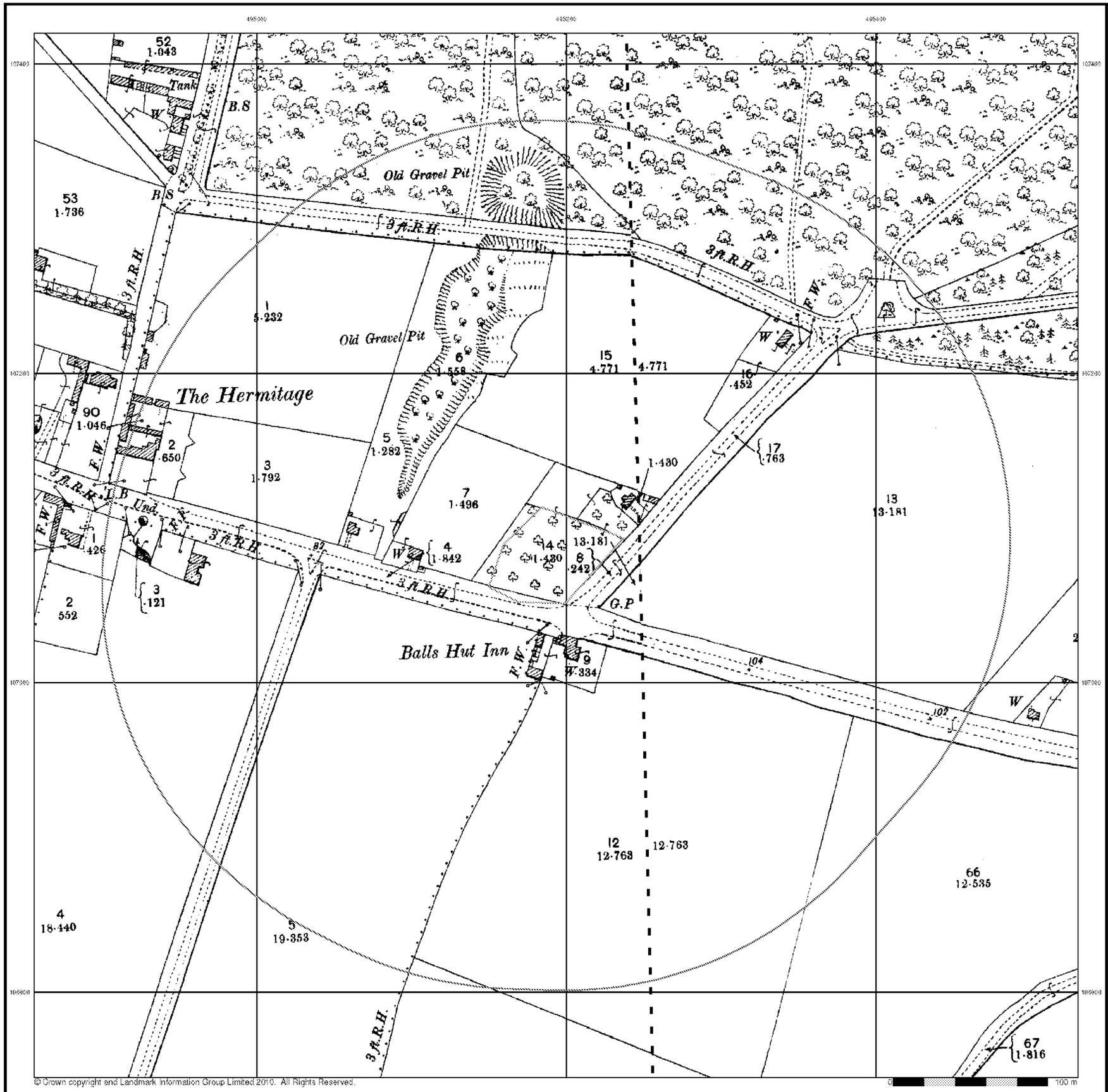
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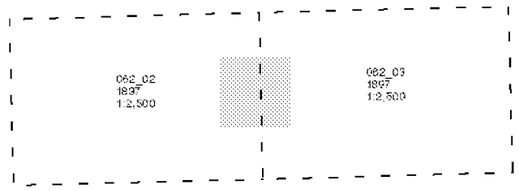
Sussex

Published 1897

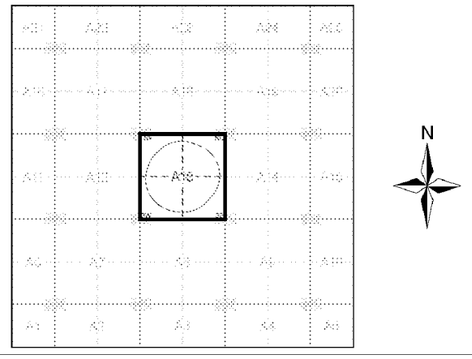
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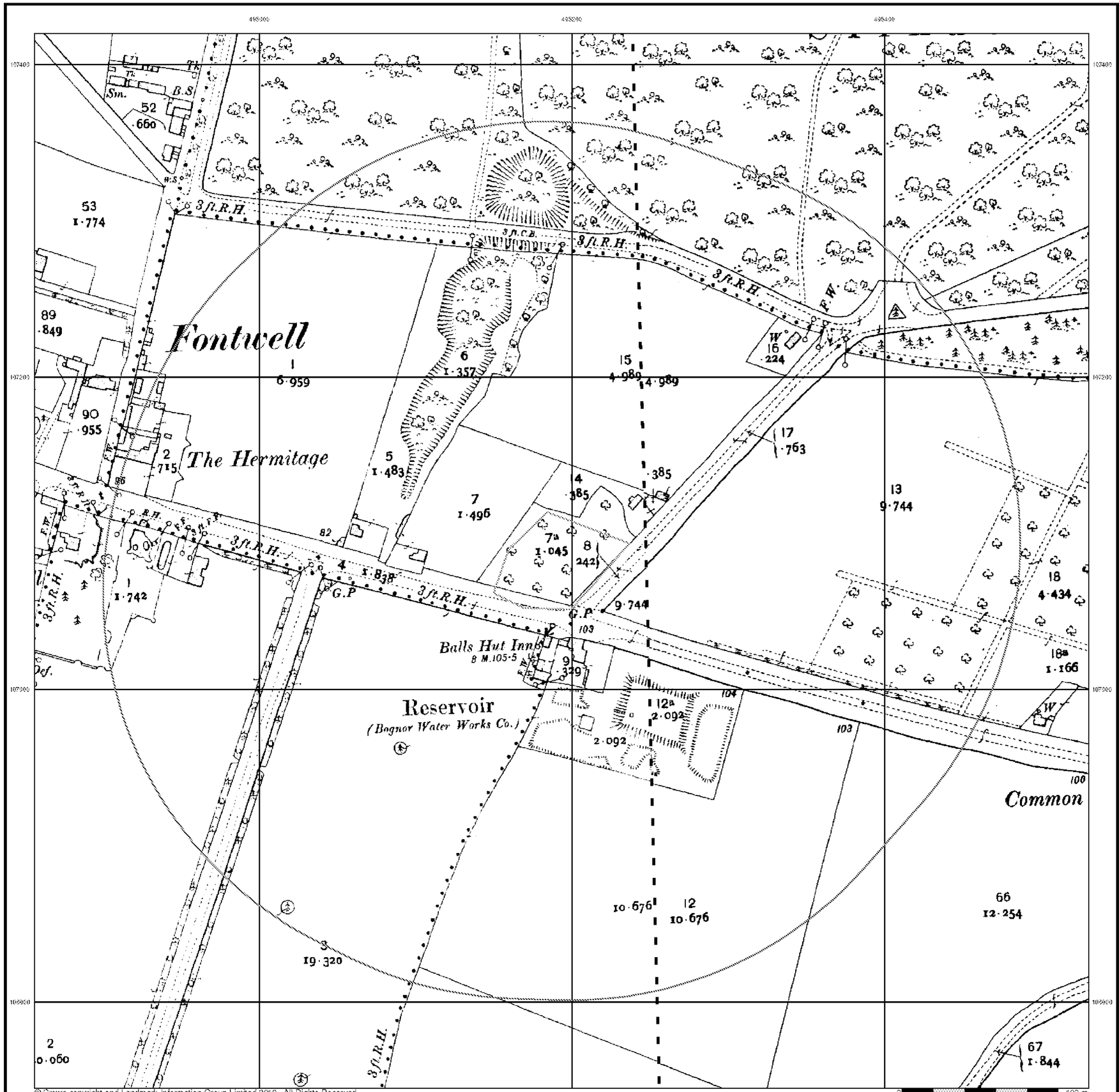
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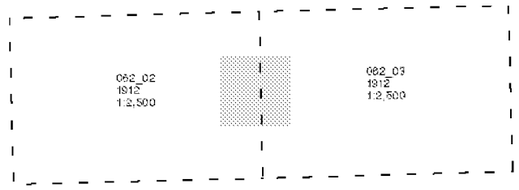
Sussex

Published 1912

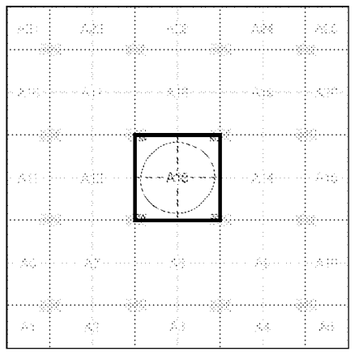
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



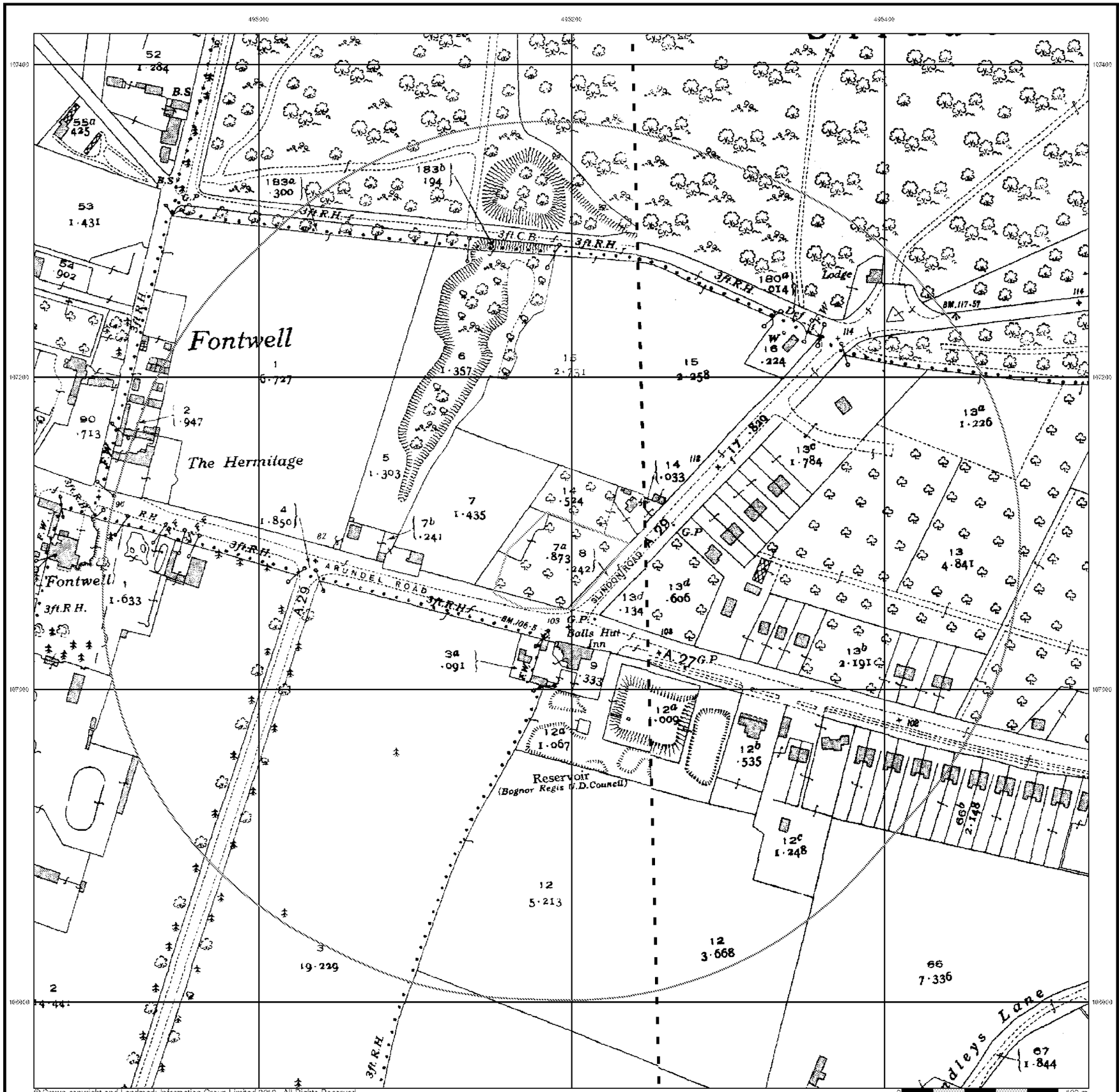
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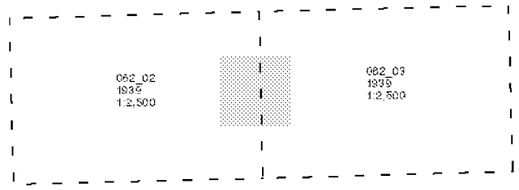
Sussex

Published 1939

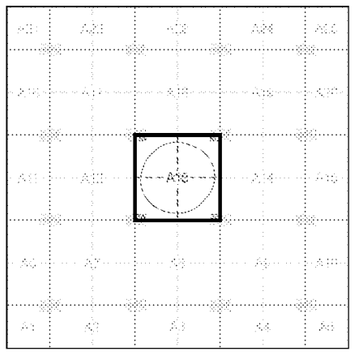
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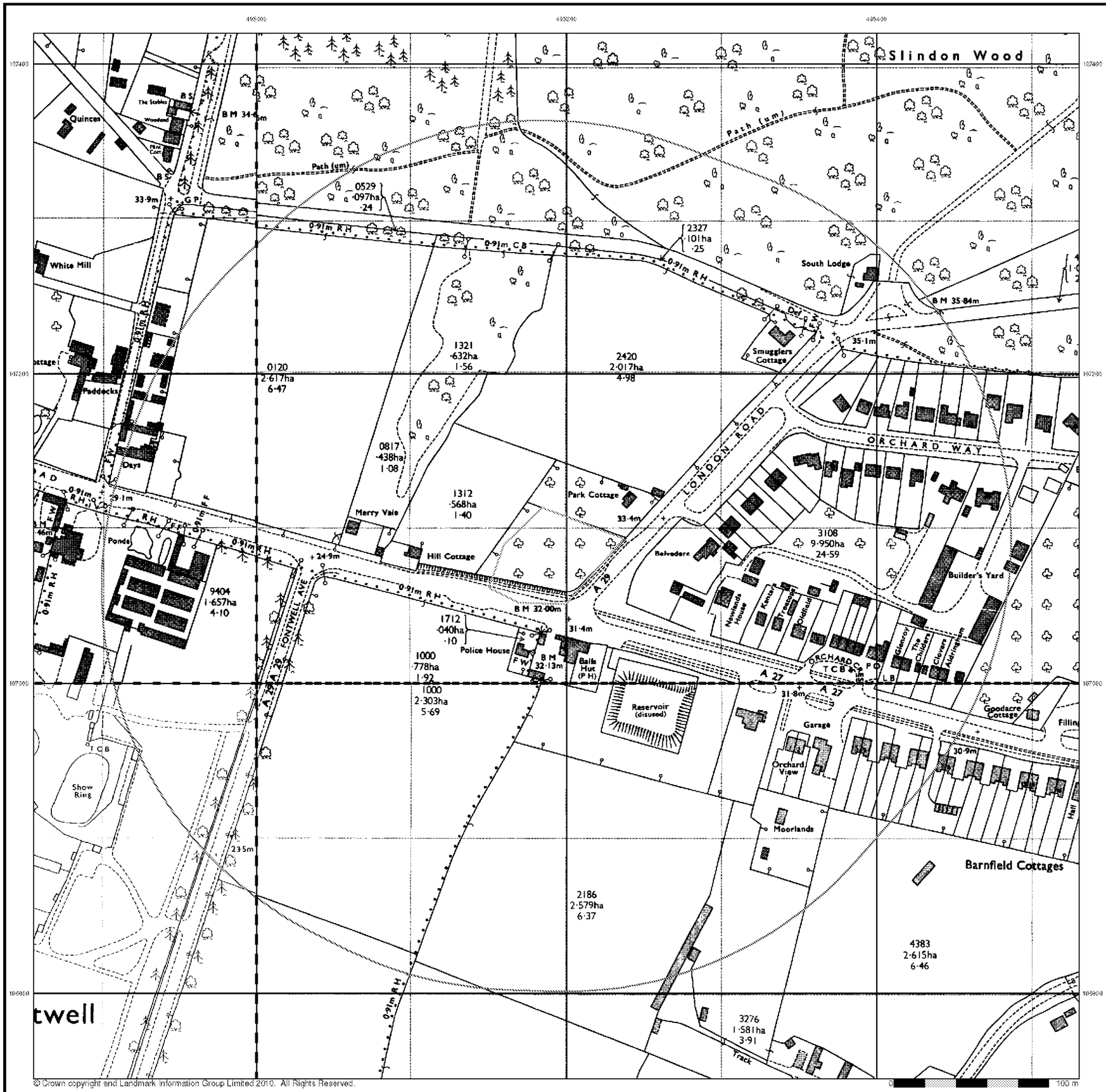
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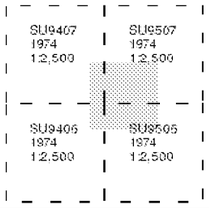
Ordnance Survey Plan

Published 1974

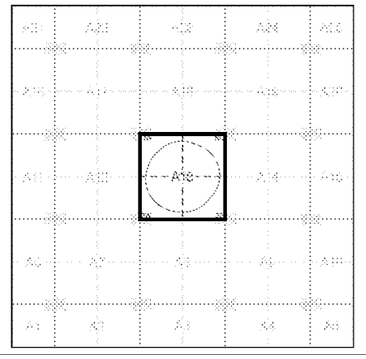
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



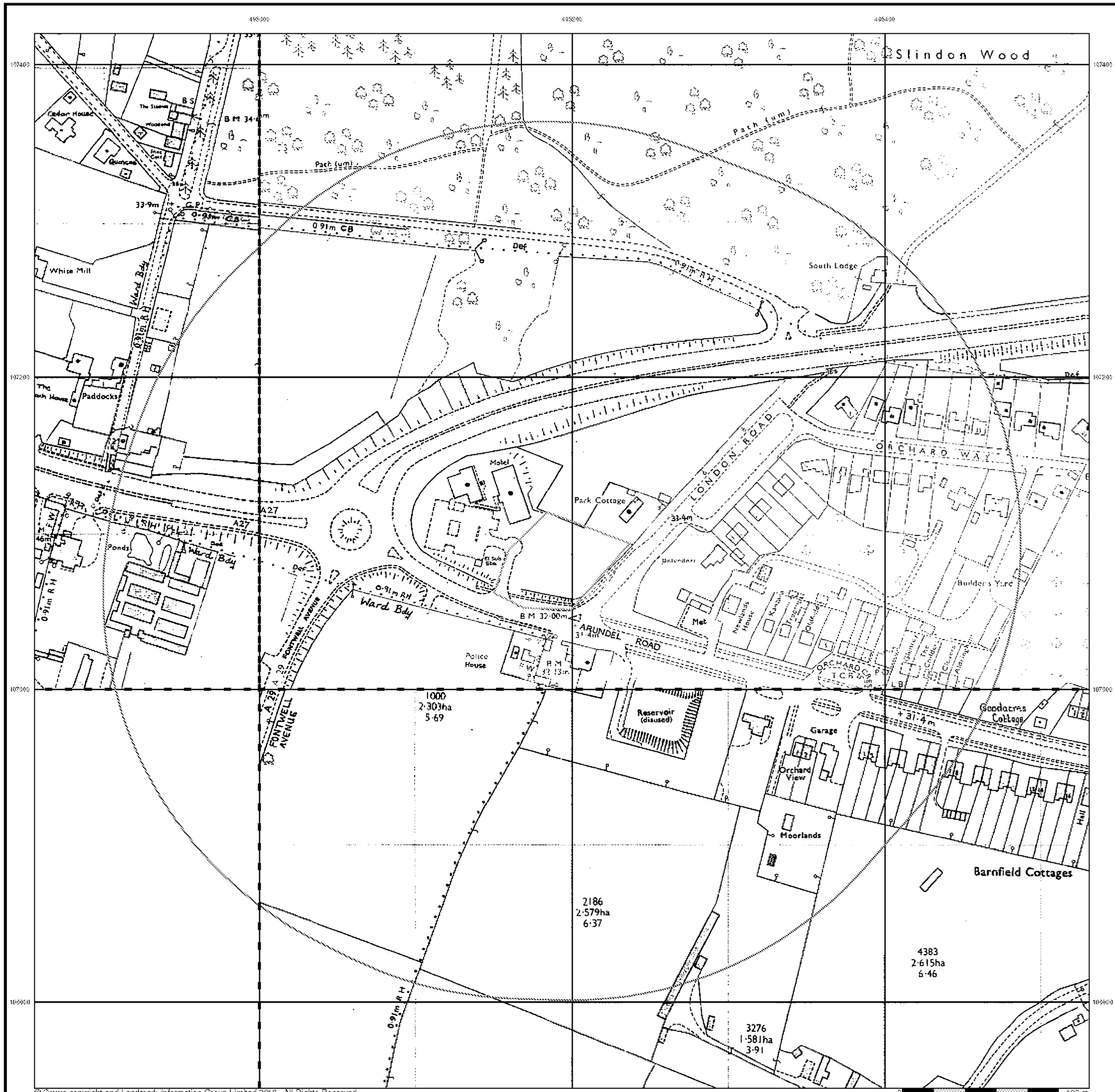
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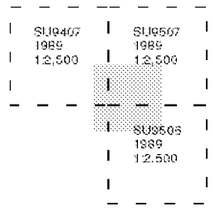
Additional SIMs

Published 1989

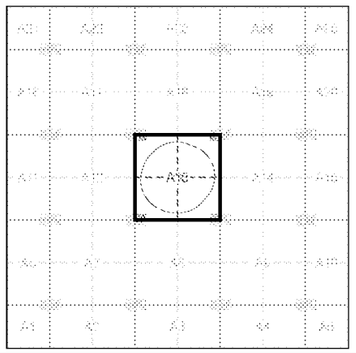
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



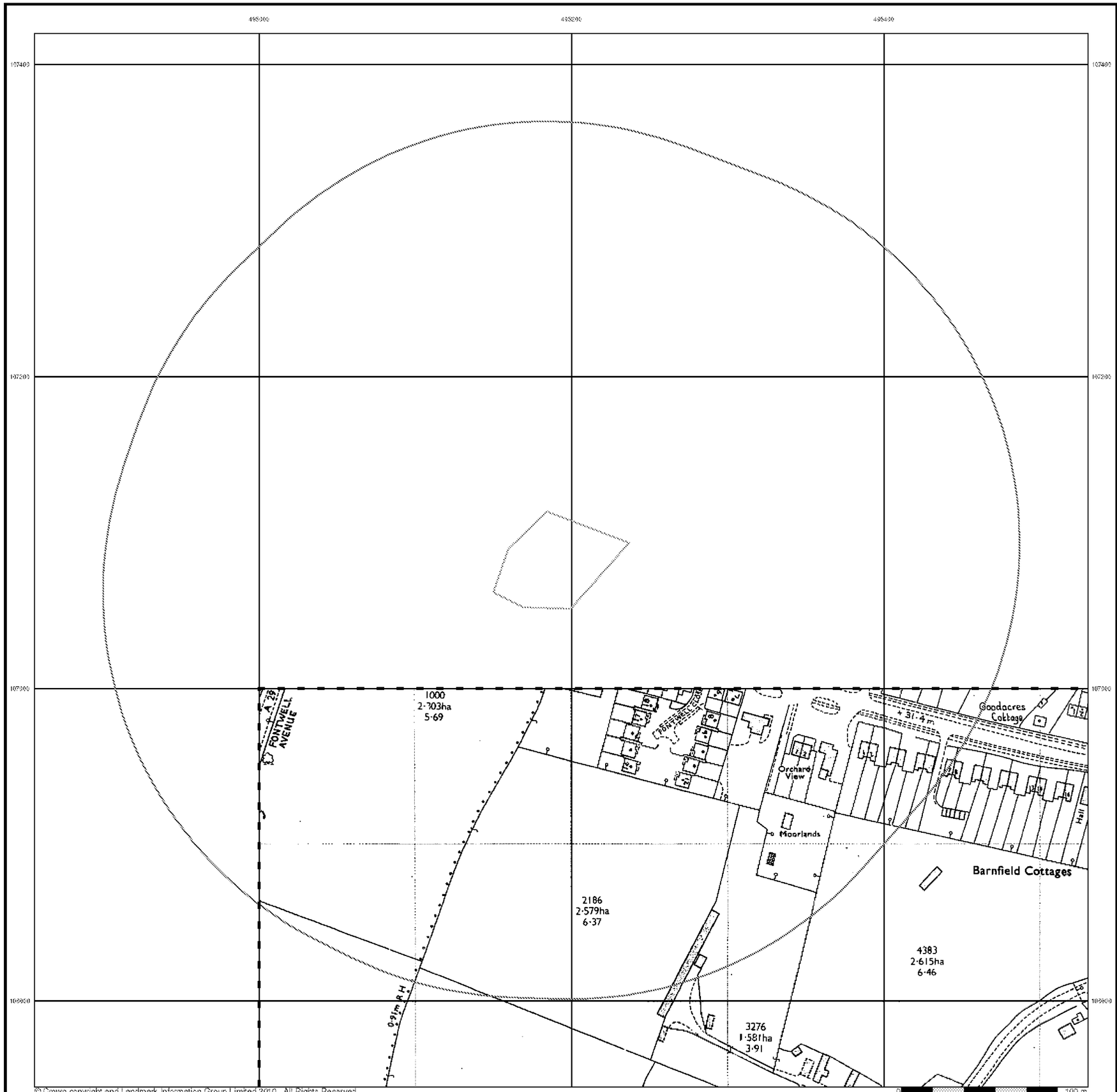
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	250

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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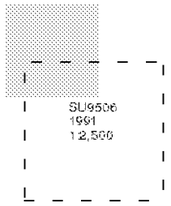
Additional SIMs

Published 1991

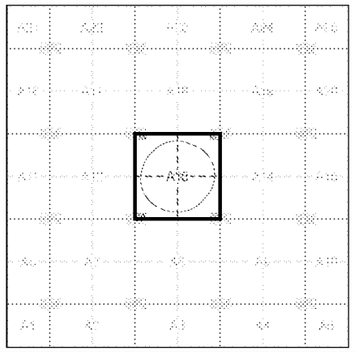
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



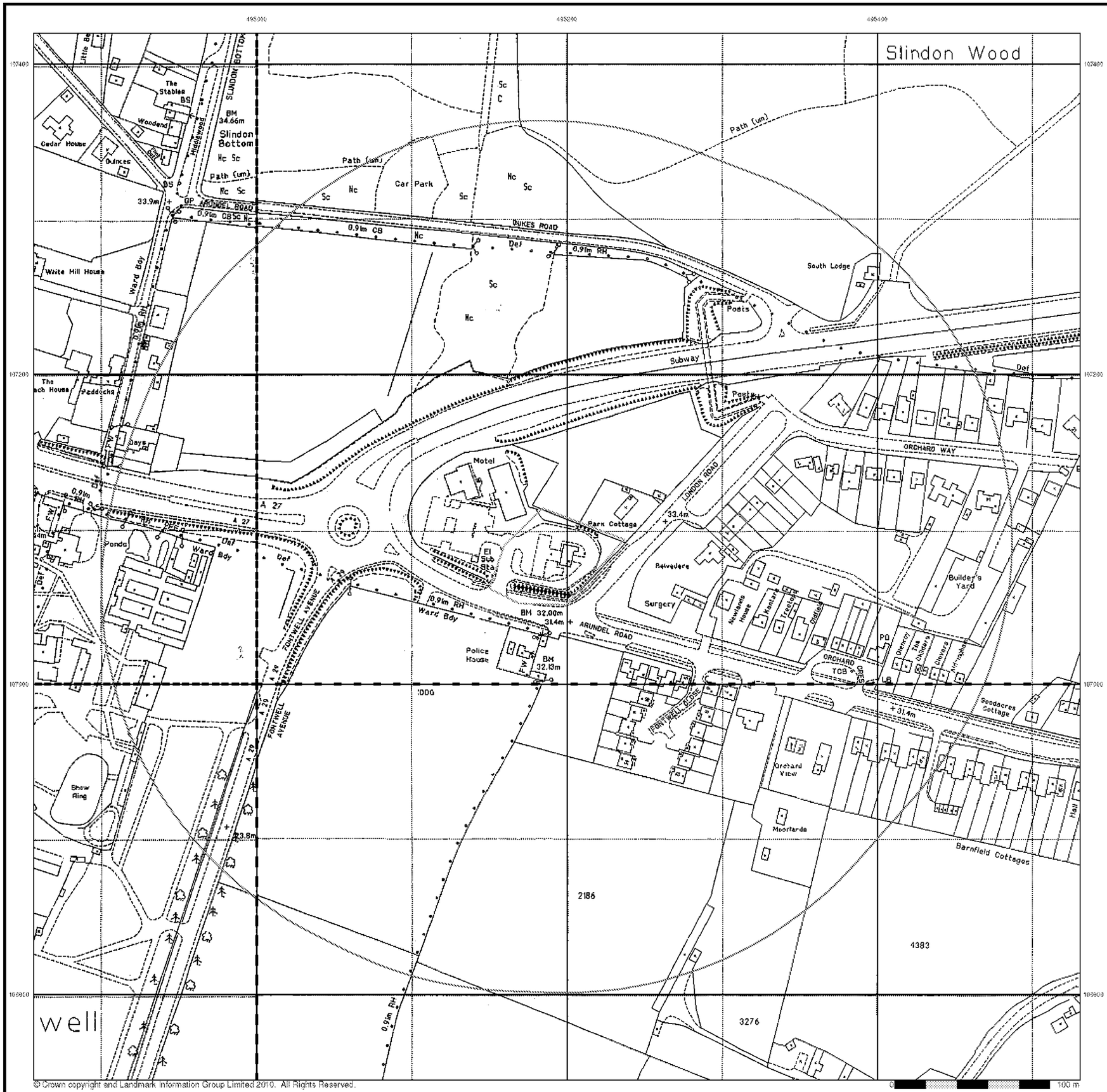
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Large-Scale National Grid Data

Published 1994

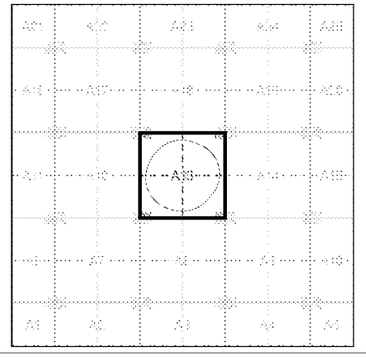
Source map scale - 1:2,500

'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)

SU9407 1994 1:2,500	SU9507 1994 1:2,500
SU9406 1994 1:2,500	SU9506 1994 1:2,500

Historical Map - Segment A13



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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
Electricity Transmission Line
Sloping Masonry
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

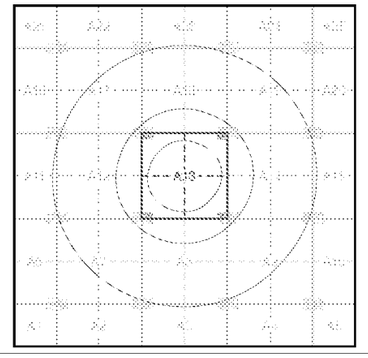
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community 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

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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 - 1949	8
Sussex	1:10,560	1951	9
Ordnance Survey Plan	1:10,000	1961	10
Ordnance Survey Plan	1:10,000	1970 - 1979	11
Ordnance Survey Plan	1:10,000	1979	12
Ordnance Survey Plan	1:10,000	1992	13
10K Raster Mapping	1:10,000	2000	14
10K Raster Mapping	1:10,000	2006	15
10K Raster Mapping	1:10,000	2010	16

Historical Map - Slice A



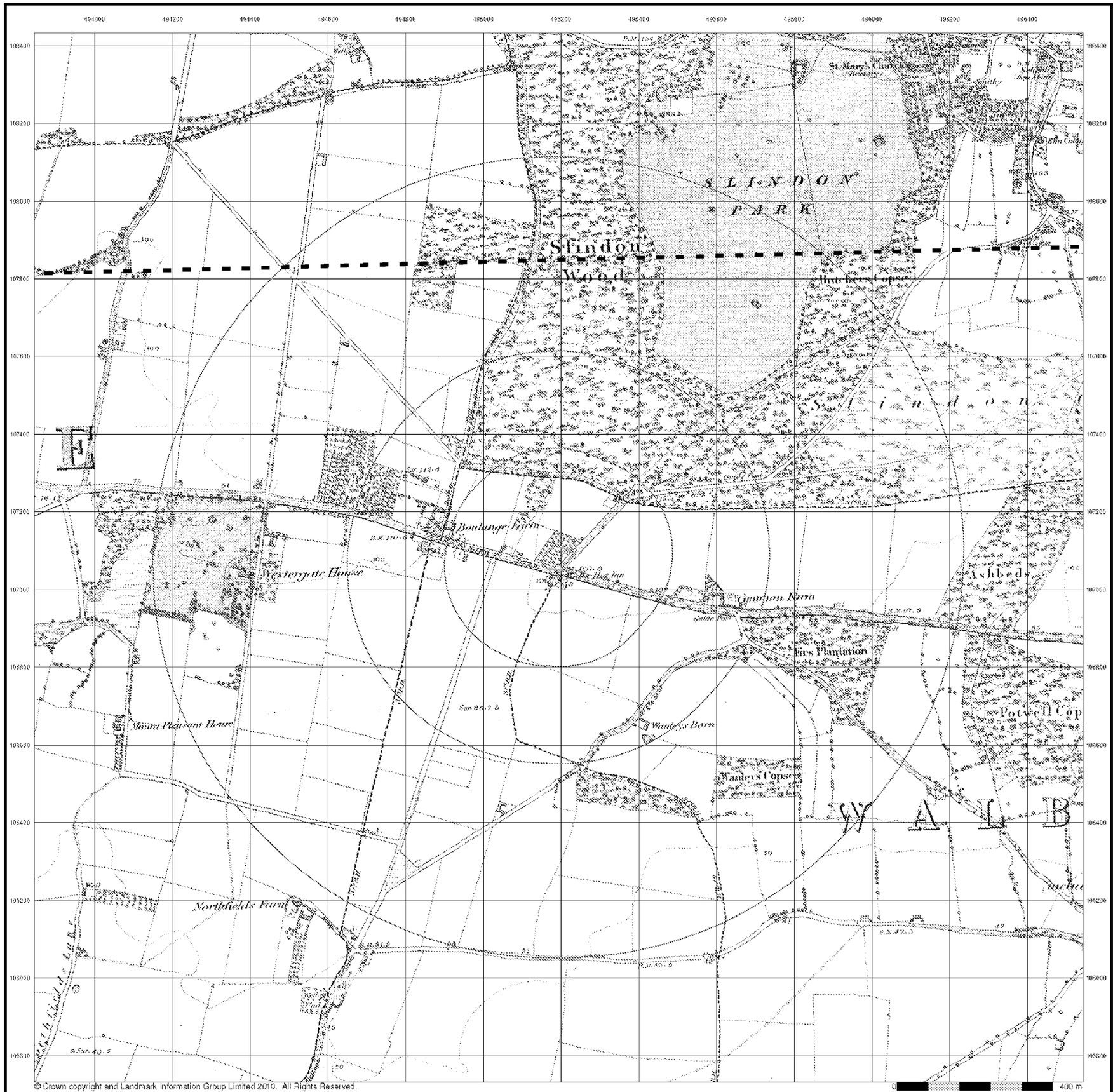
Order Details

Order Number: 33445435_1_1
Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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Sussex

Published 1880

Source map scale - 1:10,560

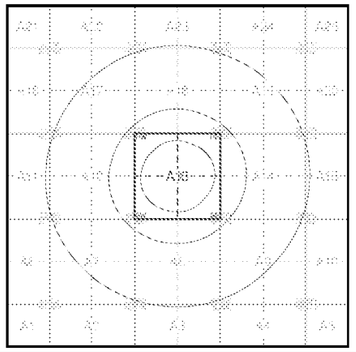
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

04900
1880
1:10,560

06200
1880
1:10,560

Historical Map - Slice A



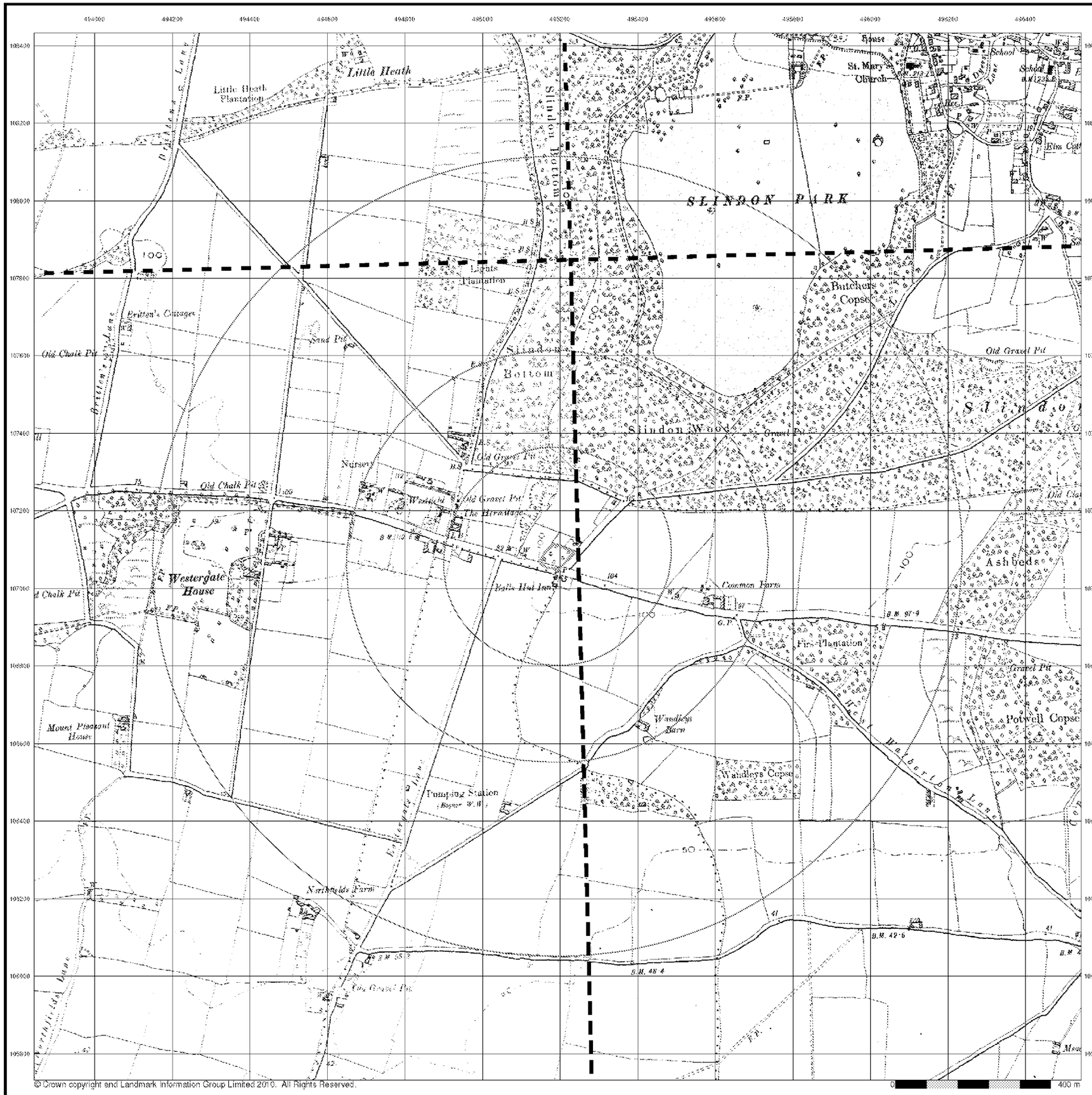
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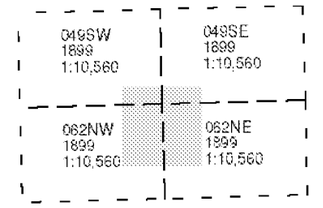
Sussex

Published 1899

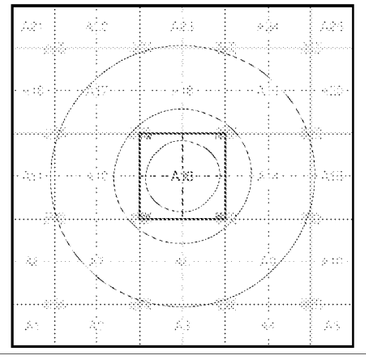
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



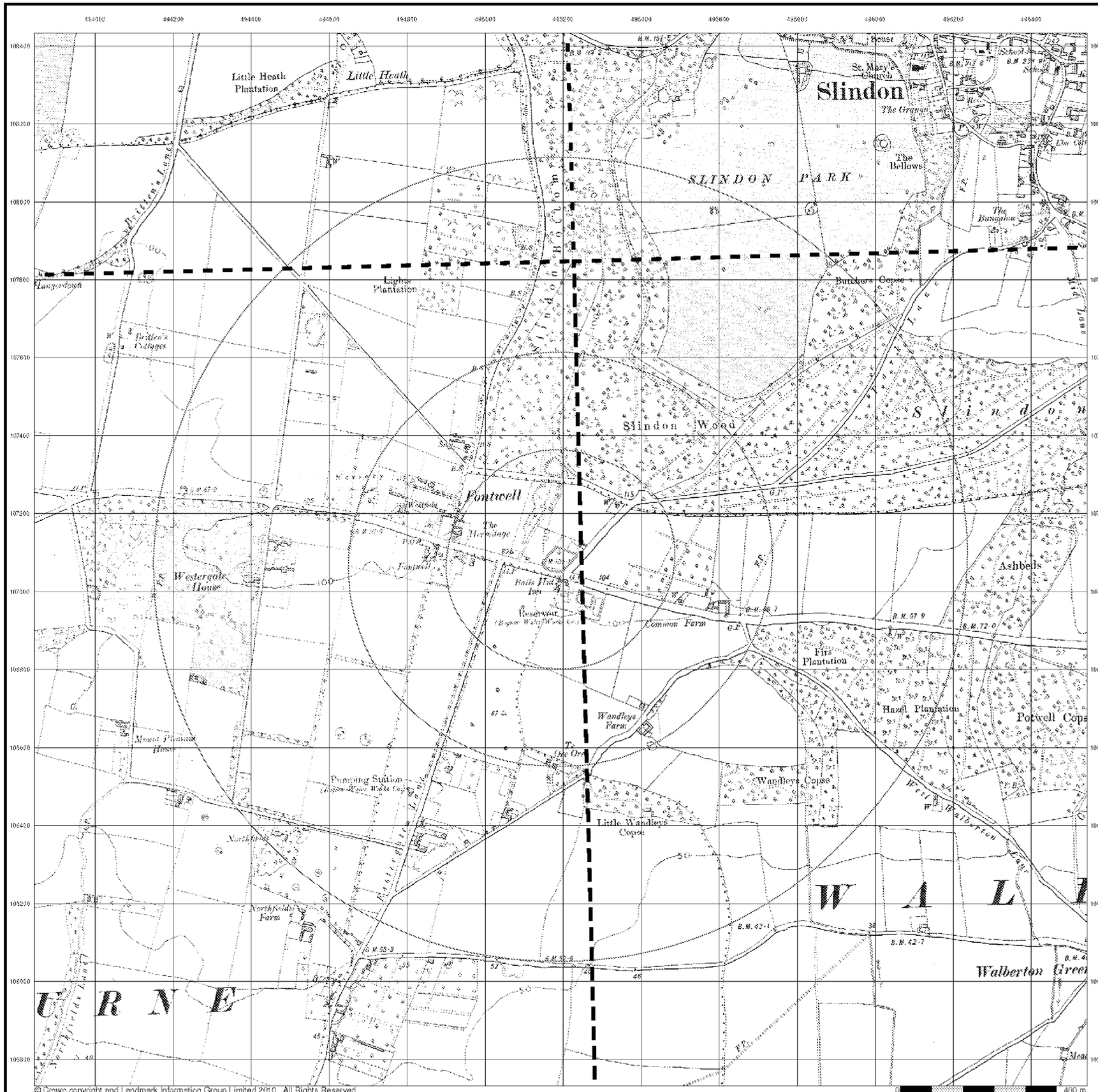
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National Grid Reference:	495190, 107080
Slice:	A
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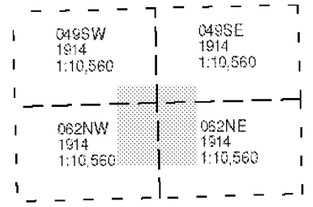
Sussex

Published 1914

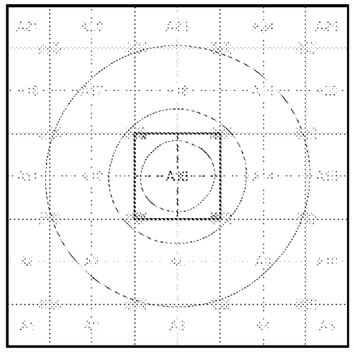
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



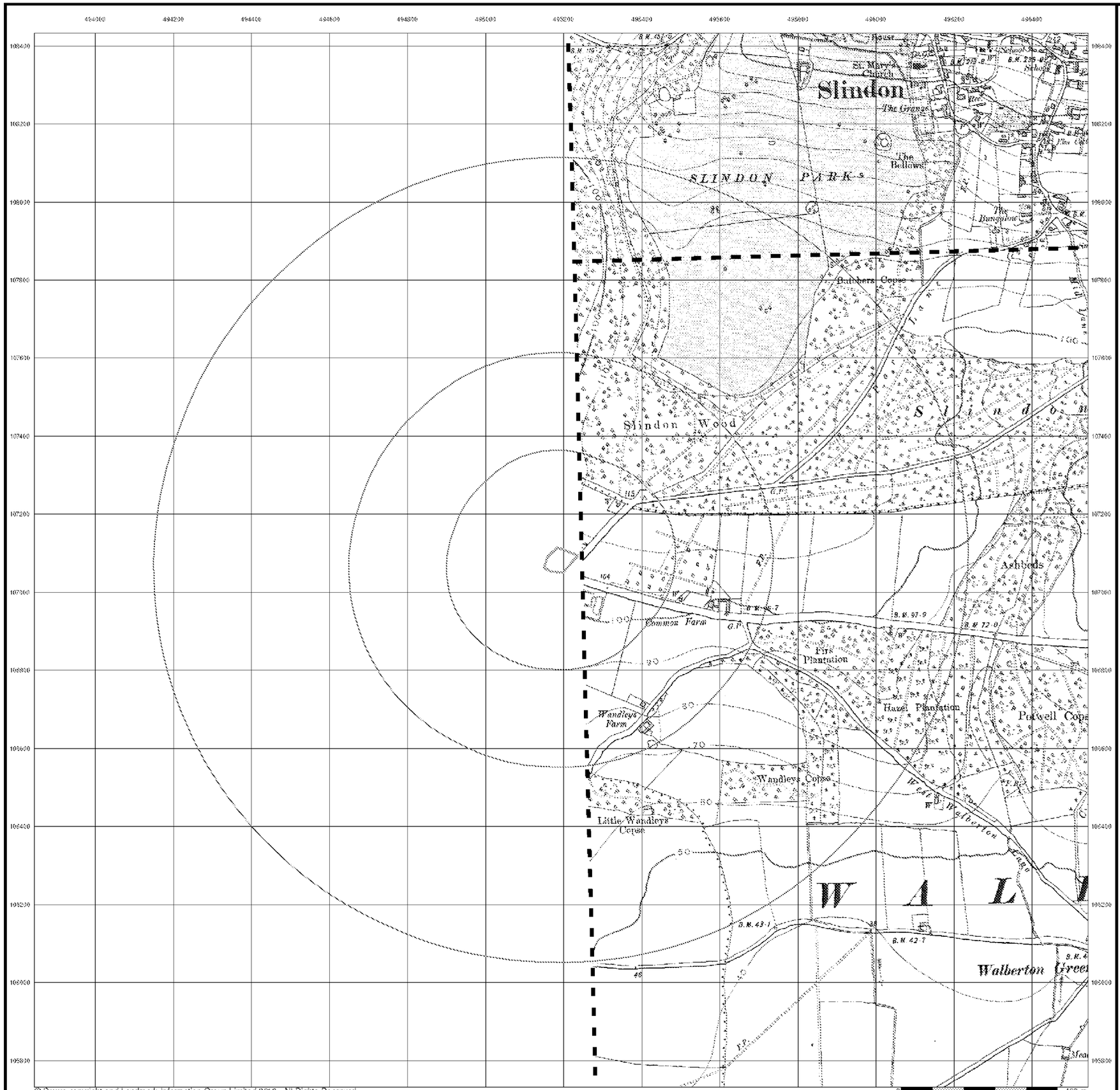
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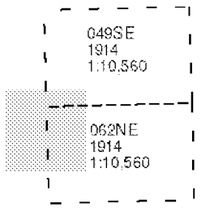
Sussex

Published 1914

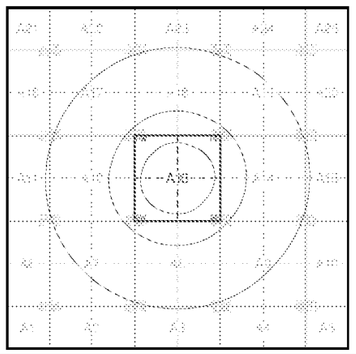
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



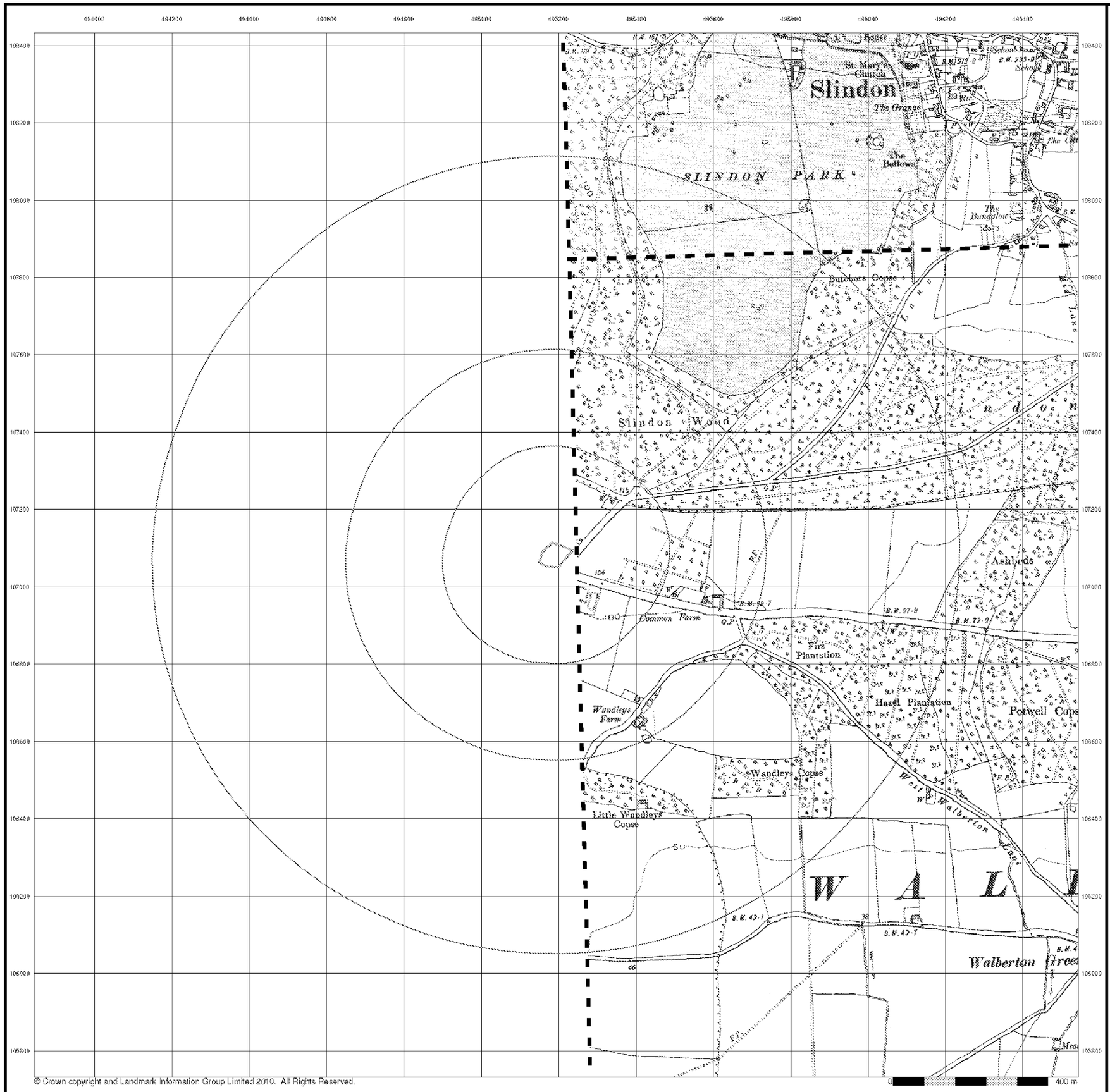
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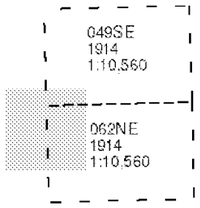
Sussex

Published 1914

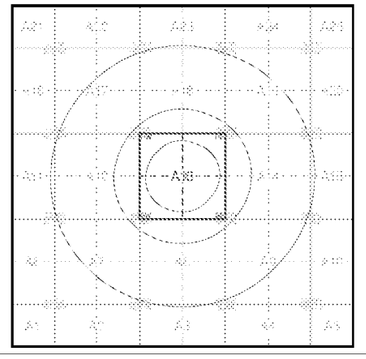
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Map Name(s) and Date(s)



Historical Map - Slice A



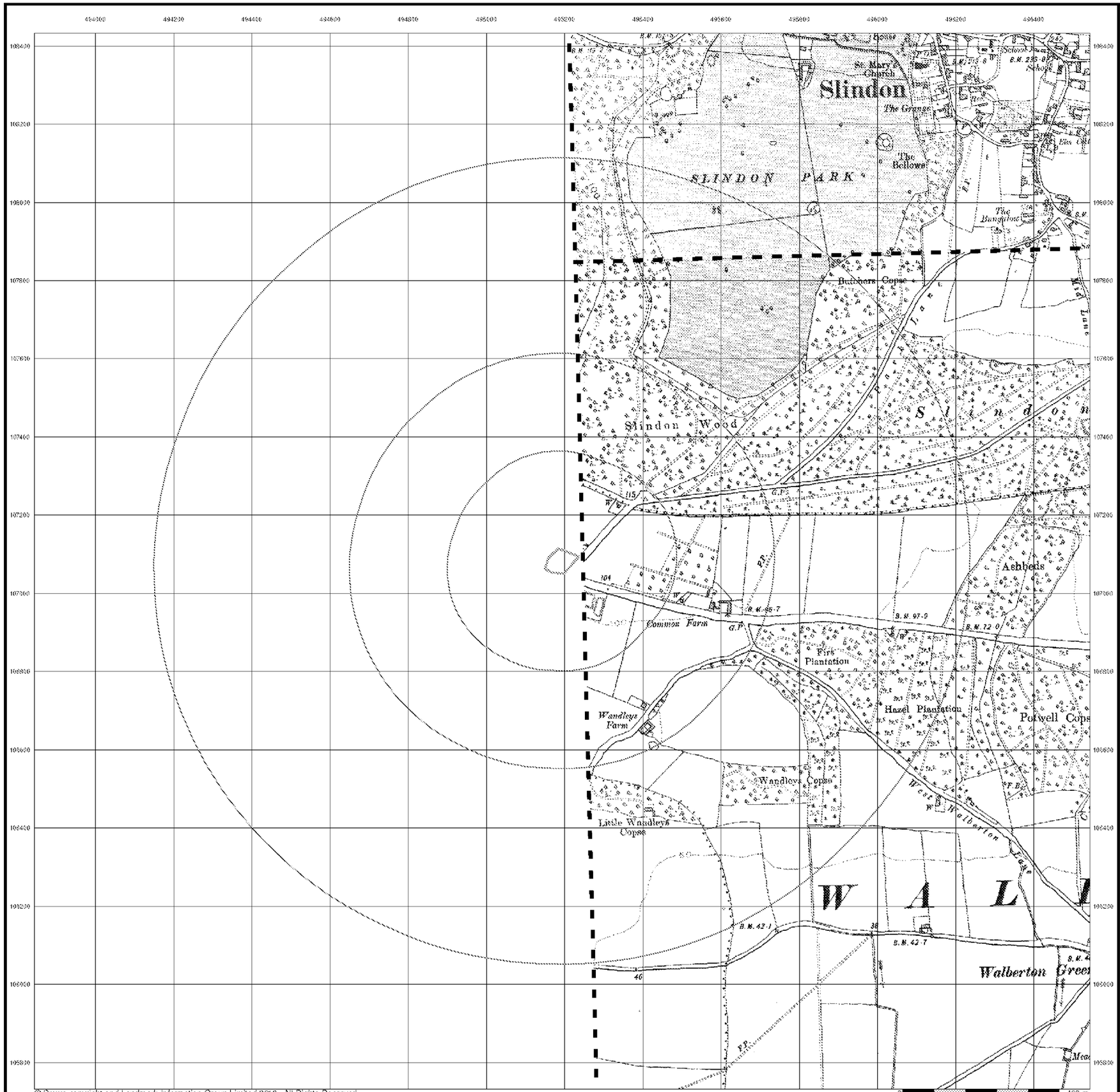
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Sussex

Published 1914

Source map scale - 1:10,560

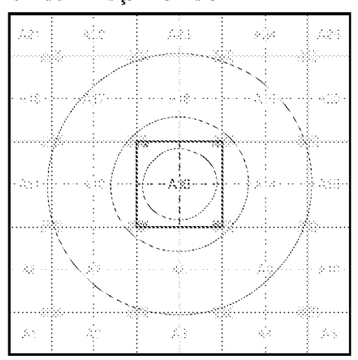
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Map Name(s) and Date(s)

049SE
1914
1:10,560

062NE
1914
1:10,560

Historical Map - Slice A



Order Details

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Historical Aerial Photography

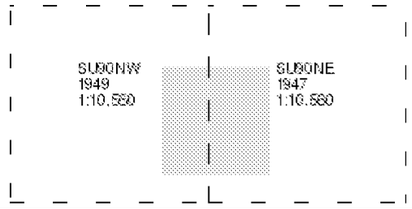
Published 1947 - 1949

Source map scale - 1:10,560

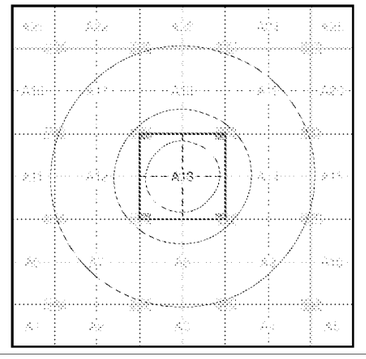
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the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

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Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



Order Details

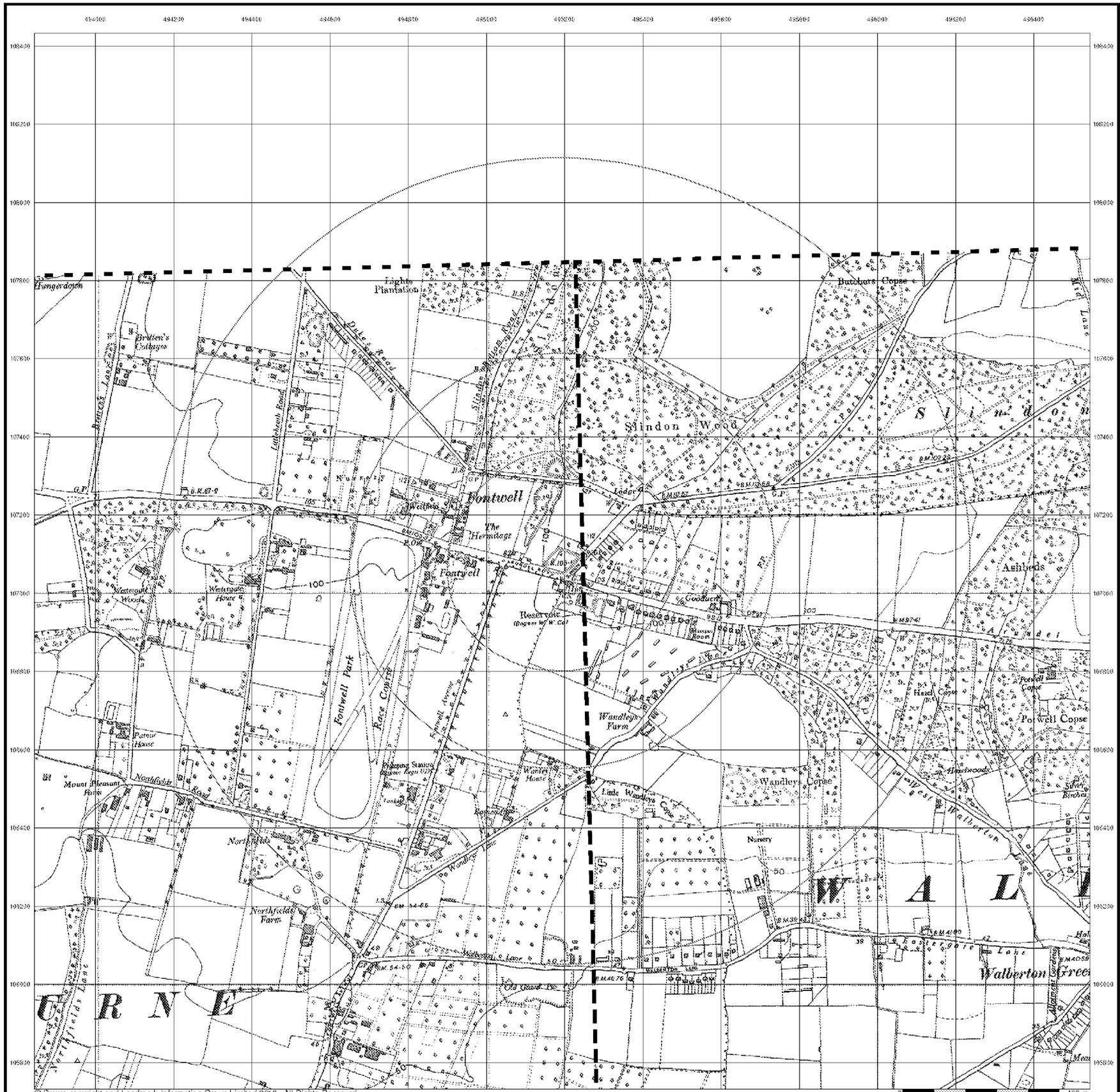
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Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark Information Group

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



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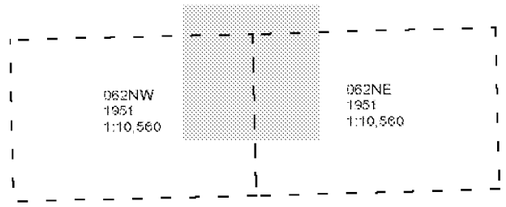
Sussex

Published 1951

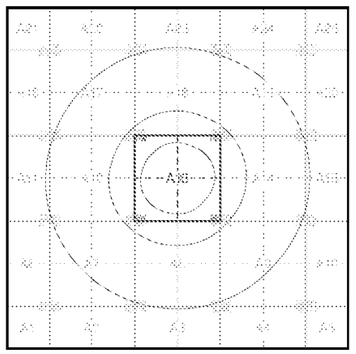
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



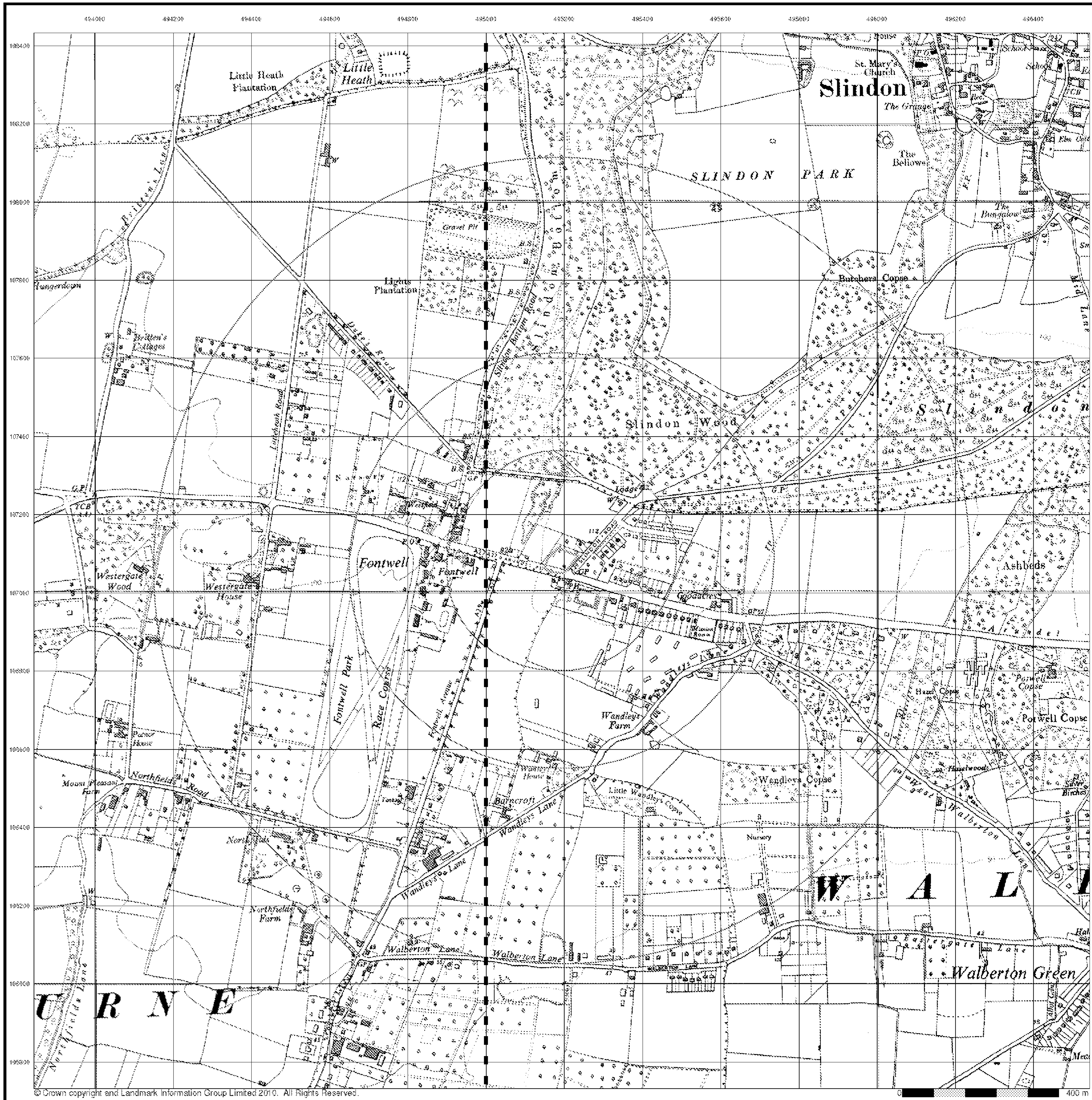
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Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

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ARUN DISTRICT COUNCIL WA/92/11

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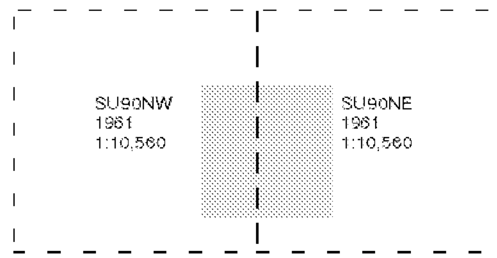
Ordnance Survey Plan

Published 1961

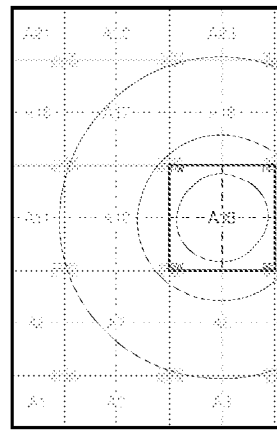
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps.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

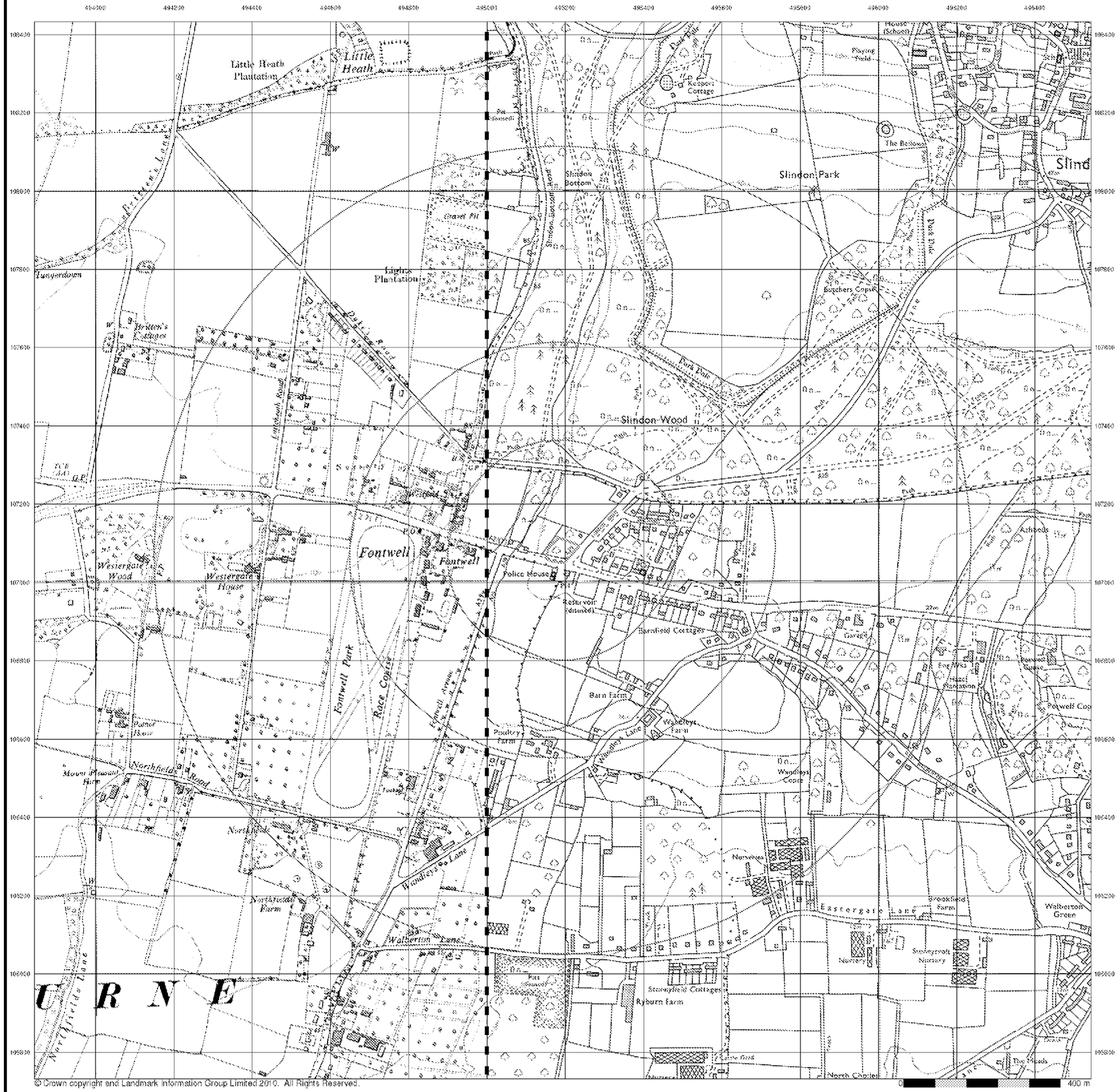
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Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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Ordnance Survey Plan

Published 1970 - 1979

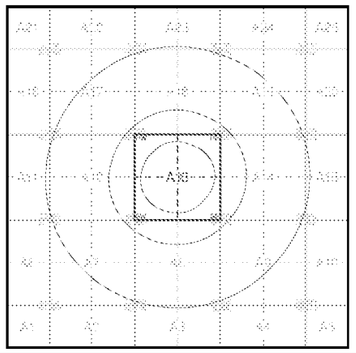
Source map scale - 1:10,000

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)

SU90NW	SU90NE
1970	1979
1:10,560	1:10,000

Historical Map - Slice A



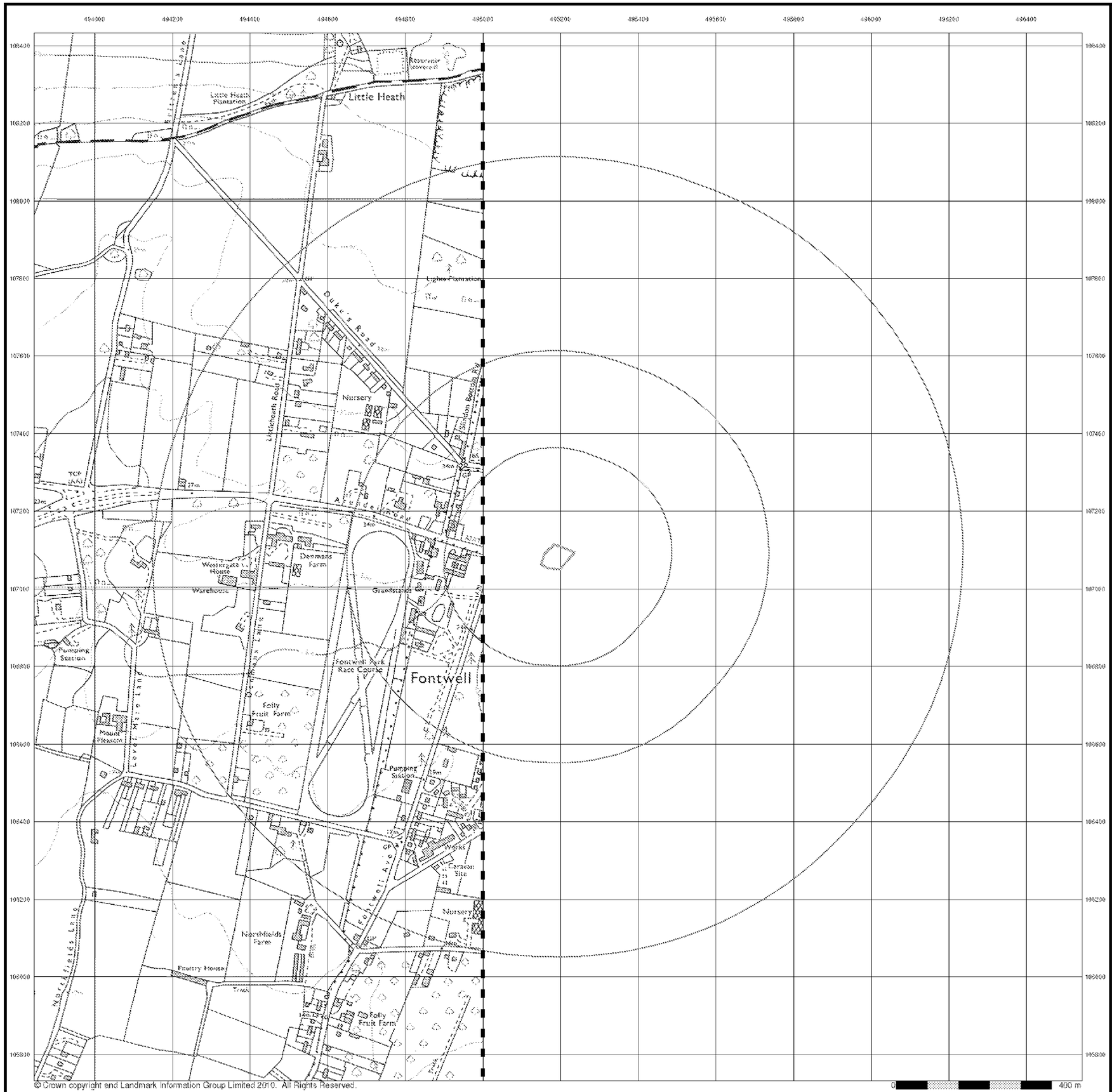
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

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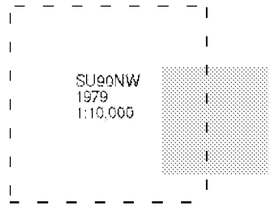
Ordnance Survey Plan

Published 1979

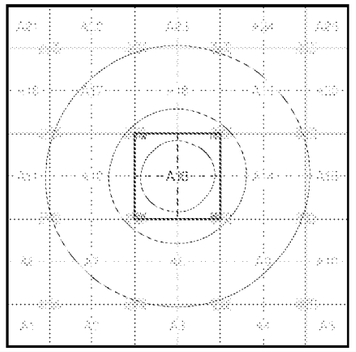
Source map scale - 1:10,000

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



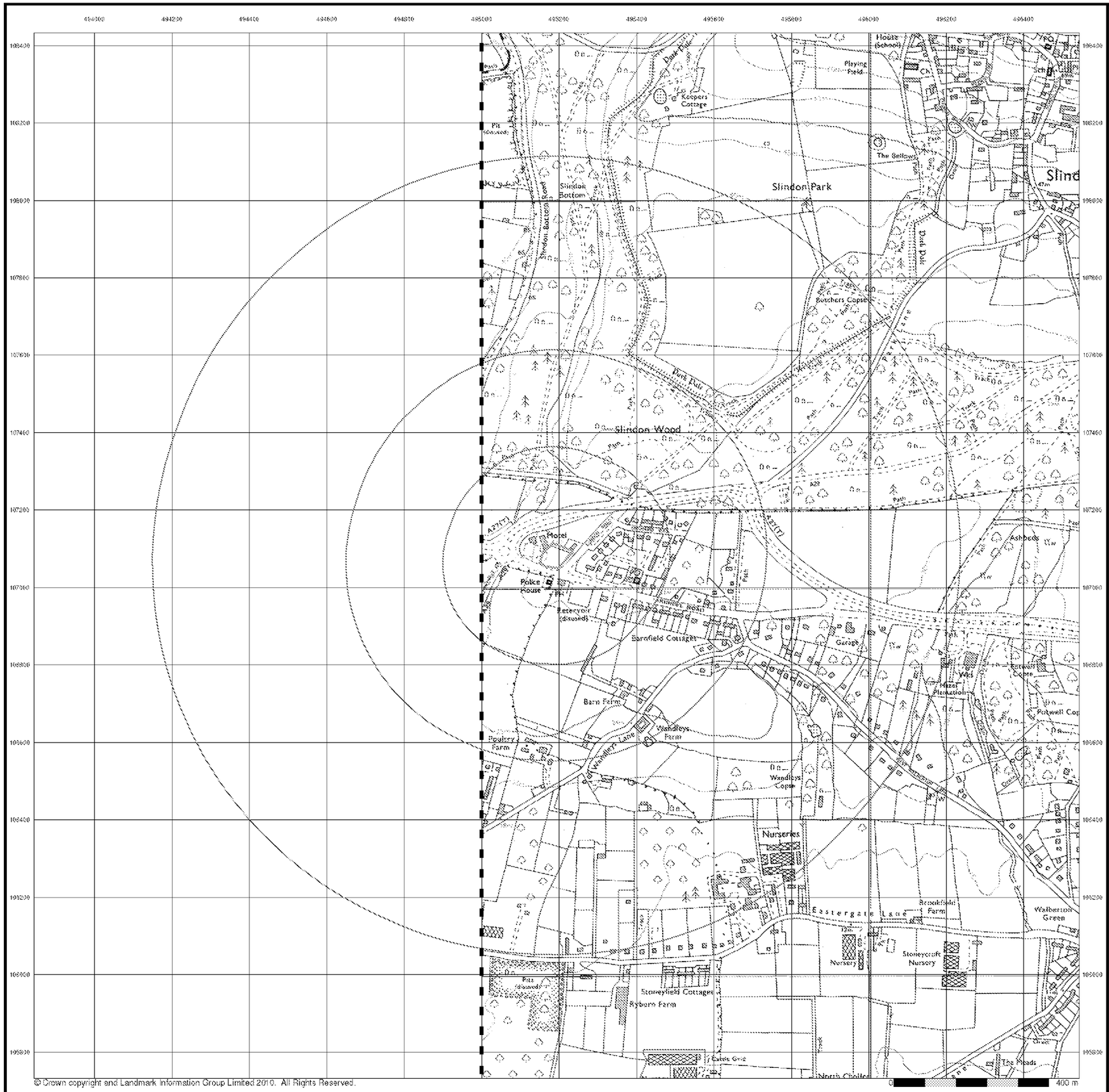
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Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
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Site Area (Ha):	0.34
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Ordnance Survey Plan

Published 1992

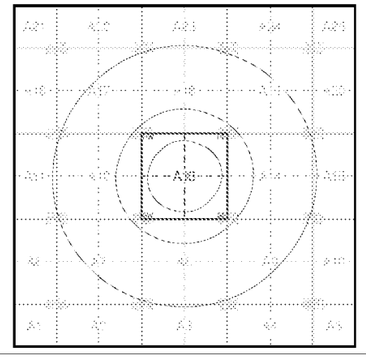
Source map scale - 1:10,000

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Map Name(s) and Date(s)

SU80NE
1992
1:10,000

Historical Map - Slice A



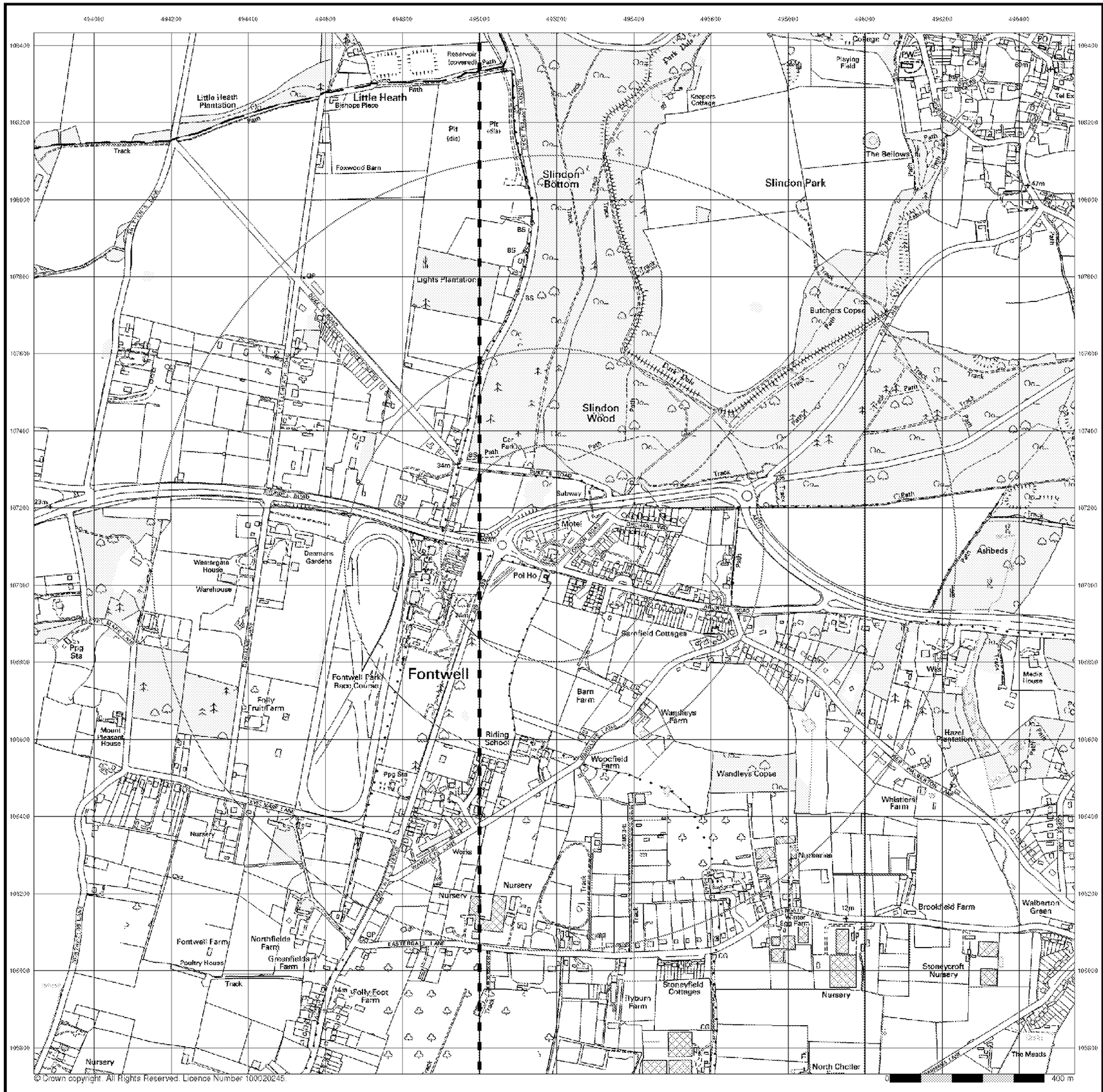
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Order Number:	33445435_1_1
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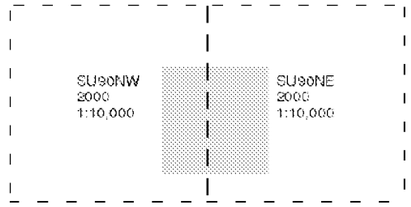
10k Raster Mapping

Published 2000

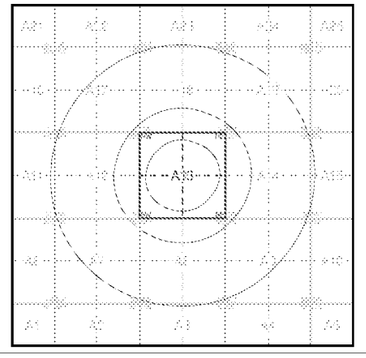
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

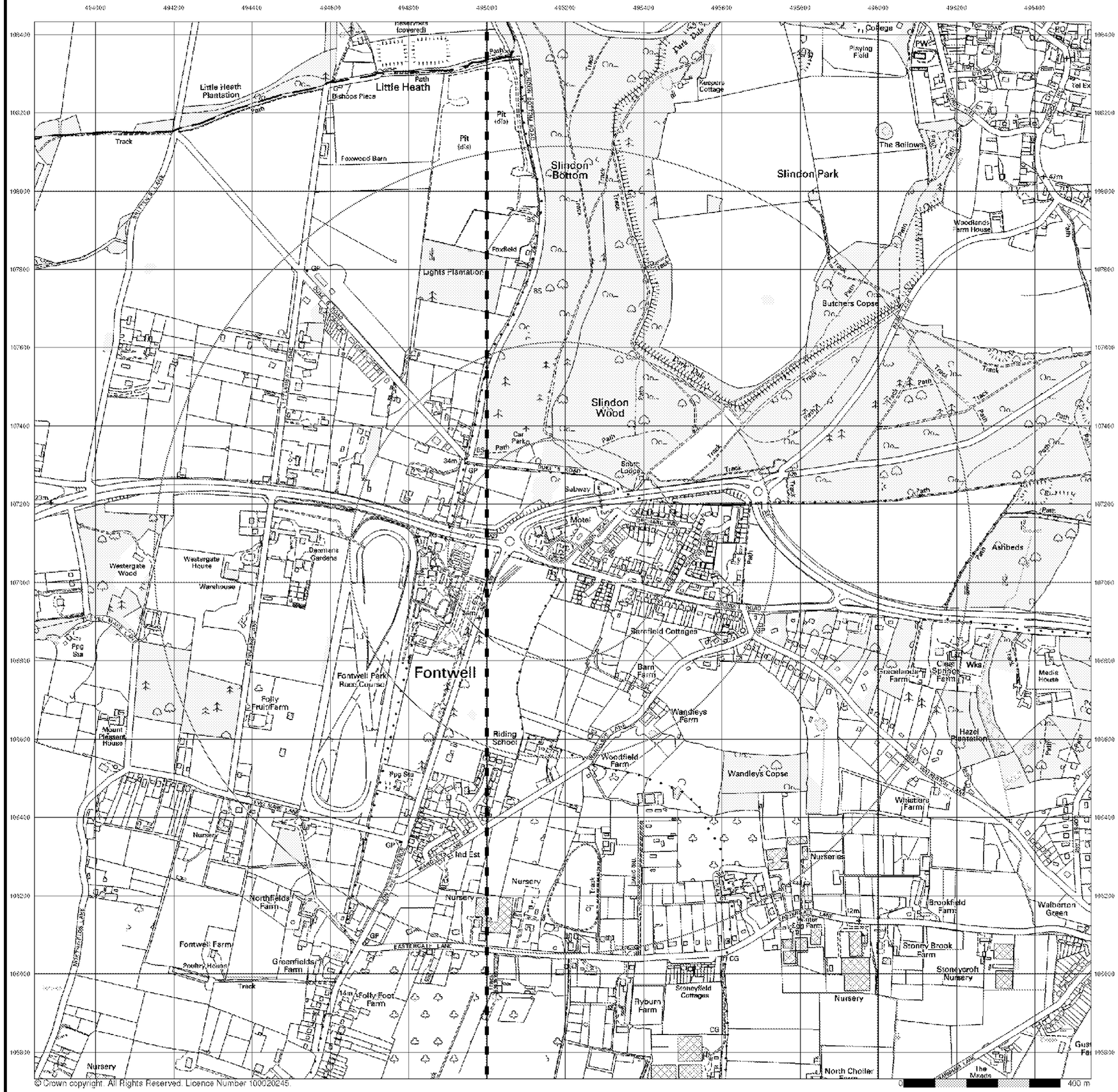
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Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

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10k Raster Mapping

Published 2006

Source map scale - 1:10,000

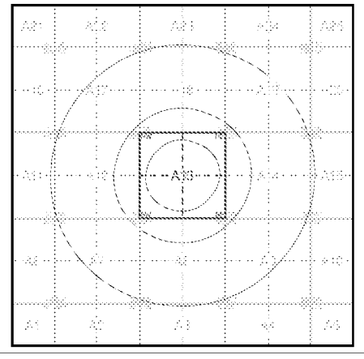
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Map Name(s) and Date(s)

SU90NW 2006 1:10,000

SU90NE 2006 1:10,000

Historical Map - Slice A



Order Details

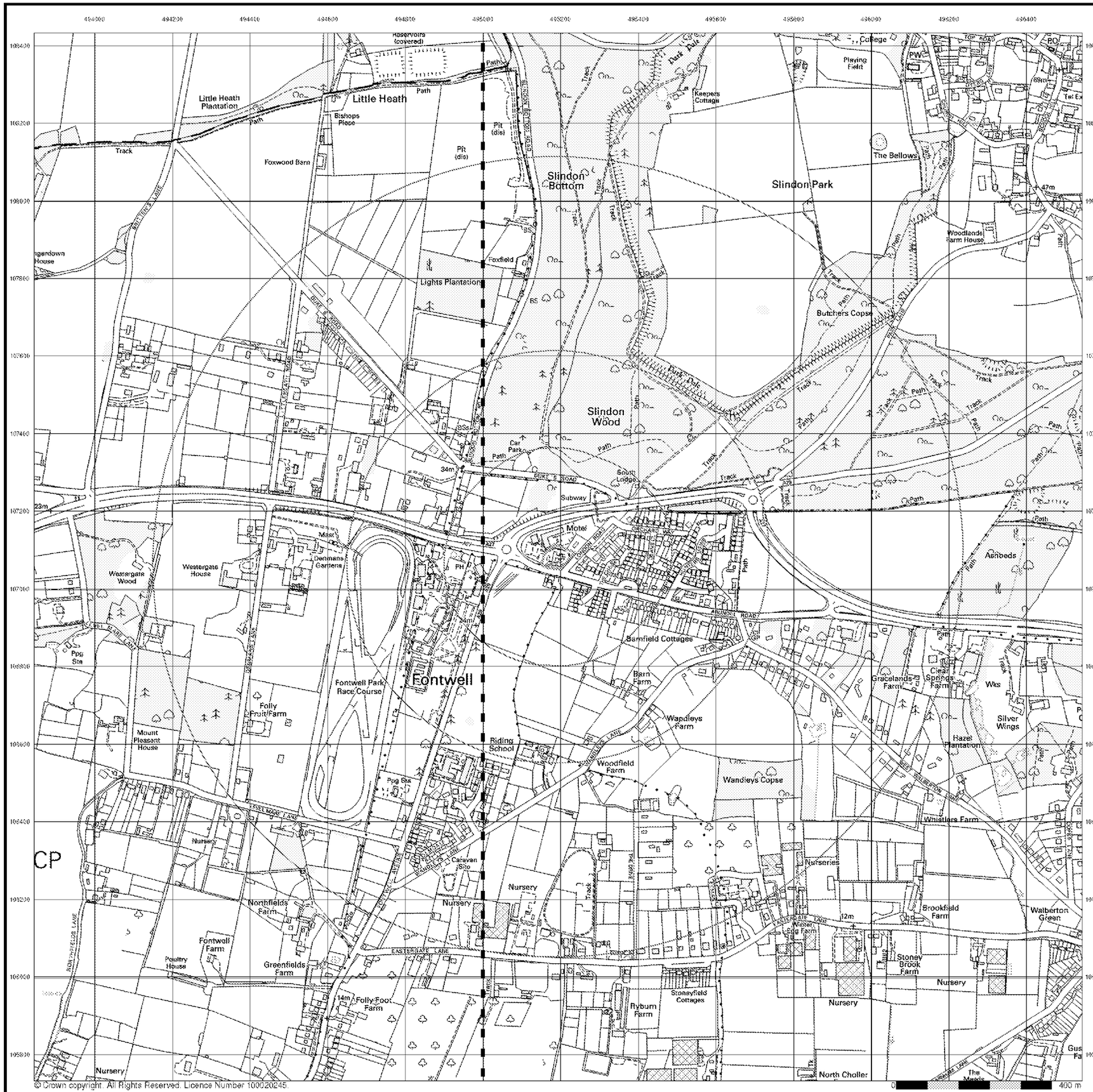
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Slice:	A
Site Area (Ha):	0.34
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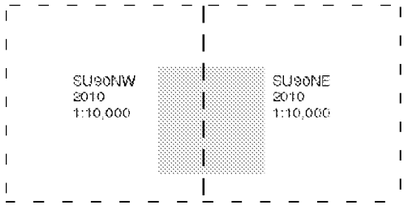
10k Raster Mapping

Published 2010

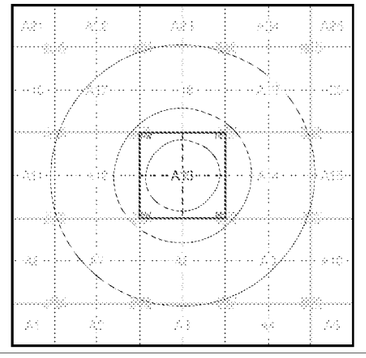
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
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Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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Envirocheck® Report:

Historical Data Report Datasheet

Order Details:

Order Number:
33445435_1_1

Customer Reference:
Shell Fontwell

National Grid Reference:
495190, 107080

Slice:
A

Site Area (Ha):
0.34

Search Buffer (m):
1000

Site Details:

Shell Fontwell, Arundel Road
Fontwell
ARUNDEL
West Sussex
BN18 0SB

Client Details:

Ms E Corby
URS Corporation Ltd
2nd Floor, St Georges House
5 St Georges Road
London
SW19 4DR

ARUN DISTRICT COUNCIL WA/92/11/

Contents

Report Section	Page Number
Summary	-
Historical Building Plans Information	-
Historical Land Use Information	1
Historical Tanks and Energy Facilities	4
Historical Map List	5
Useful Contacts and Further Information	6

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 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 v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Historical Building Plans Information					
Areas Cleared Due To Enemy Action					
Above Ground Fuel Tanks				n/a	n/a
Asbestos				n/a	n/a
Benzene/Benzole/Naphtha, Naphthalene/Kerosene				n/a	n/a
Electricity Generation				n/a	n/a
Electricity Sub-Stations				n/a	n/a
Gas Industry				n/a	n/a
Gas Storage				n/a	n/a
Gas Use				n/a	n/a
Oil Industry				n/a	n/a
Oil Storage				n/a	n/a
Oil Use				n/a	n/a
Paint based Oils				n/a	n/a
Paraffin				n/a	n/a
Petrol and Diesel Industry				n/a	n/a
Petrol and Diesel Storage				n/a	n/a
Petrol and Diesel Use				n/a	n/a
Potential Fuel Gas				n/a	n/a
Potential Fuel Oil				n/a	n/a
Potential Fuel Use				n/a	n/a
Potential Petrol and Diesel				n/a	n/a
Potential Tanks				n/a	n/a
Potentially Fuel-related Tanks				n/a	n/a
Underground Fuel Tanks				n/a	n/a
Historical Land Use Information					
Former Marshes					
Historical Flood Liabilities					
Potentially Contaminative Industrial Uses (Past Land Use)	pg 1		6		15
Potentially Infilled Land (Non-Water)	pg 2		6		12
Potentially Infilled Land (Water)	pg 2		2	1	6

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Historical Tanks and Energy Facilities					
Electrical Sub Station Facilities				n/a	n/a
Electricity Industry Facilities				n/a	n/a
Gas Industry Facilities				n/a	n/a
Gas Monitoring Facilities				n/a	n/a
Miscellaneous Power Facilities				n/a	n/a
Oil Industry Facilities				n/a	n/a
Petroleum Storage Facilities				n/a	n/a
Potential Tanks	pg 4		1	n/a	n/a
Tanks				n/a	n/a

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A13SE (S)	54	1	495203 106998
1	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A13SE (S)	81	1	495194 106971
2	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951 - 1961	A13SE (SE)	63	1	495241 107004
3	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1899	A13NW (NW)	70	1	495102 107129
4	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A13SE (SE)	106	1	495248 106958
5	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1899	A13NE (N)	194	1	495199 107306
6	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A14NW (E)	542	1	495739 107296
7	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A14NW (NE)	592	1	495779 107329
8	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Motor vehicles: maintenance & repair e.g. garages Date of Mapping: 1992	A14SE (E)	688	1	495898 106903
9	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1899	A14NW (NE)	690	1	495848 107411
10	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Factory or works - use not specified Date of Mapping: 1979	A8SW (S)	732	1	494919 106365
11	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1914	A8SW (S)	741	1	494902 106361
12	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1914 - 1961	A18NW (N)	743	1	495069 107847
13	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1880	A12NW (W)	746	1	494433 107264
14	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A14NE (E)	772	1	495994 107242
15	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1899 - 1914	A17SE (NW)	801	1	494571 107633
16	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A14NE (E)	842	1	496045 107328
17	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A8SW (S)	926	1	495170 106126
18	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1979	A18NW (N)	928	1	495057 108033
19	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A7NW (SW)	933	1	494383 106531
20	**Potentially Contaminative Industrial Uses (Past Land Use)** Use: Quarrying of sand & clay, operation of sand & gravel pits Date of Mapping: 1951	A7NW (SW)	969	1	494375 106480

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (S)	54	1	495203 106998
22	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (SE)	63	1	495241 107004
23	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13NW (NW)	70	1	495102 107129
24	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (S)	81	1	495194 106971
25	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (SE)	106	1	495248 106958
26	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13NE (N)	194	1	495199 107306
27	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (E)	542	1	495739 107296
28	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (NE)	592	1	495779 107329
29	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (NE)	690	1	495848 107411
30	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A8SW (S)	741	1	494902 106361
31	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A18NW (N)	743	1	495069 107847
32	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A12NW (W)	746	1	494433 107264
33	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NE (E)	772	1	495994 107242
34	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A17SE (NW)	801	1	494571 107633
35	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NE (E)	842	1	496045 107328
36	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A8SW (S)	926	1	495170 106126
37	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A7NW (SW)	933	1	494383 106531
38	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A7NW (SW)	969	1	494375 106480
39	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13NE (E)	69	1	495305 107083
40	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13SE (E)	165	1	495398 107060
41	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A12SE (SW)	448	1	494798 106786

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A8NW (S)	518	1	494996 106565
43	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A8NW (S)	560	1	494983 106525
44	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A7NE (SW)	605	1	494755 106603
45	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A8SW (S)	701	1	494975 106380
46	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A7NE (SW)	733	1	494719 106469
47	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A7NE (SW)	752	1	494557 106600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	**Potential Tanks** Scale of Mapping: 1:2,500 Date of Mapping: 1974	A13SE (SE)	174	1	495362 106973

No Historical Building Plans information available.

The following mapping has been analysed for Historical Land Use Information:

1:10,560	Mapsheet	Published Date
Sussex	049_00	1880
Sussex	062_00	1880
Sussex	049_SE	1899
Sussex	049_SW	1899
Sussex	062_NE	1899
Sussex	062_NW	1899
Sussex	049_SE	1914
Sussex	049_SW	1914
Sussex	062_NE	1914
Sussex	062_NW	1914
Sussex	062_NE	1951
Sussex	062_NW	1951
Ordnance Survey Plan	SU90NE	1961
Ordnance Survey Plan	SU90NW	1961
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SU90NW	1979
Ordnance Survey Plan	SU90NE	1992

The following mapping has been analysed for Historical Tanks and Energy Facilities:

1:2,500	Mapsheet	Published Date
Ordnance Survey Plan	SU9406	1974
Ordnance Survey Plan	SU9407	1974
Ordnance Survey Plan	SU9506	1974
Ordnance Survey Plan	SU9507	1974

Contact	Name and Address	Contact Details
1	**Landmark Information Group Limited** 5 - 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	[redacted]

Historical Building Plans Information

This data set contains potentially contaminative features such as asbestos, petrol, oil and tanks captured from Historical Building Plans. The Historical Building Plans were produced by the London-based firm Charles E. Goad Ltd. as fire insurance plans, dating back to 1885. The firm ceased production of fire insurance plans in 1970. Most of the important towns and cities of the British Isles are covered. Historical Building Plans are usually at the scales of 1:480 (1 inch to 40 feet) for the British Isles. They were updated every 5-6 years by means of revision sheets designed to be pasted on to the original plans.

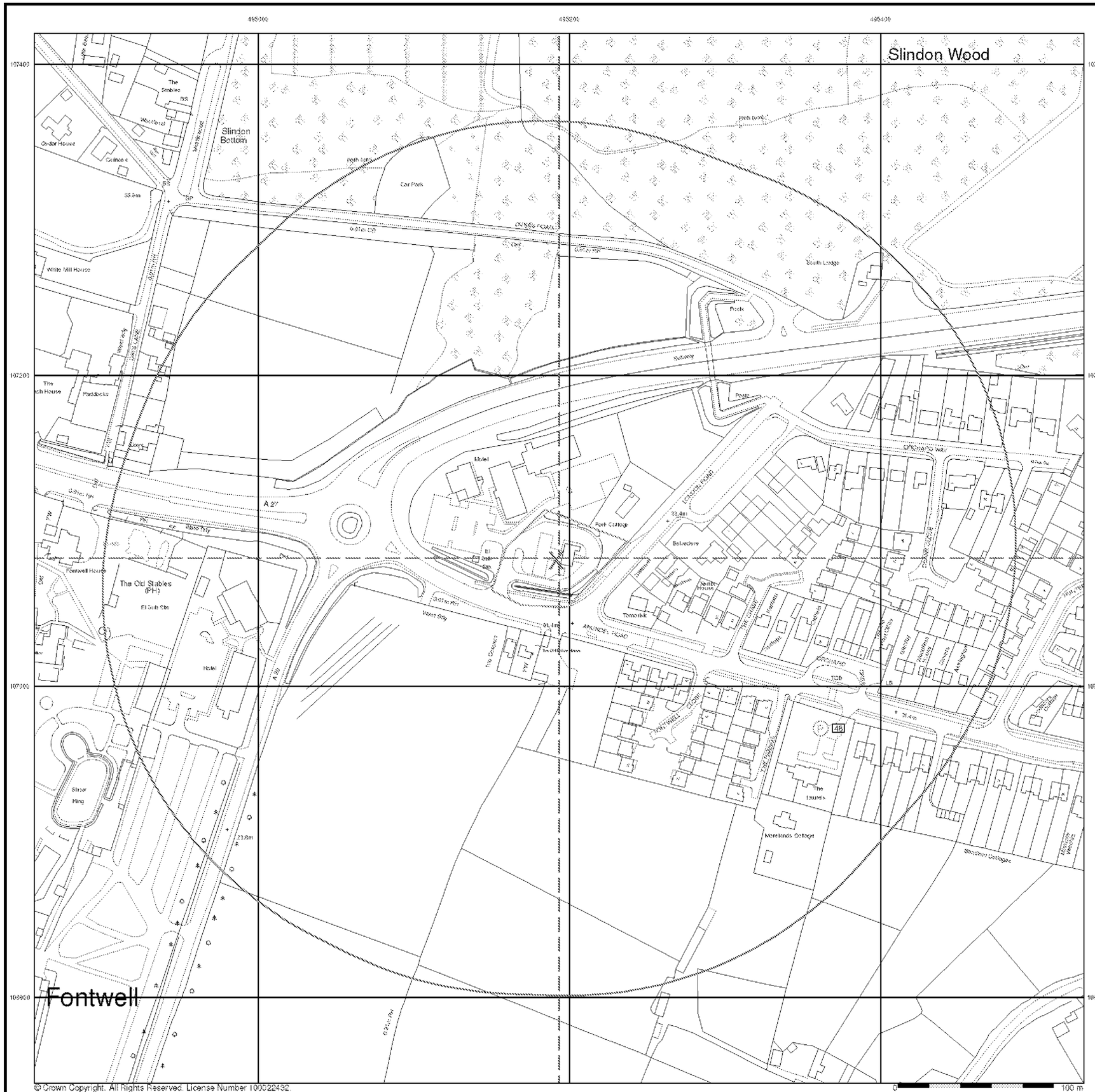
It should be noted that Historical Building Plans are only available for certain major towns and cities and in some cases there may only be partial coverage of the search area. It cannot therefore be assumed that the absence of responses under the Historical Building Plans section of this report indicates that no hazards exist. Please check the Historical Building Plans Map List table in the Historical Map List section of this report to establish if Historical Building Plans are available for this search area.

Historical Land Use Information

Landmark's Historical Land Use Data is the result of combined analysis of historical map data captured at 1:10,560 and 1:10,000. A unique comprehensive database of Historic Land Use from the 1840's to 1996 it includes 67 different types of potentially contaminated past industrial land use. This entailed analysing over 60,000 maps and is drawn from at least four, and up to six historical map editions. In addition a seventh layer was also created, known as the land use layer, containing areas of infilled land which are plotted via comparison between two or more map editions.

Historical Tanks and Energy Facilities

In addition to HLUD, additional analysis uncovered some of the most dangerous sources of contamination (past and present tanks, petrol storage, oil, gas, electricity, miscellaneous facilities). This data set covers over 390,000 Historical Tanks and Energy facilities in Great Britain and was captured from post war 1:2500 and 1:1250 Ordnance Survey historical mapping covering a period from 1943 to 1996.



Envirocheck® Historical

General

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

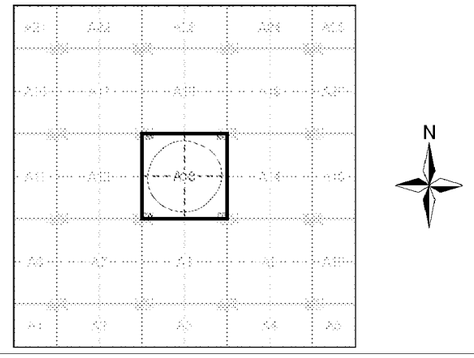
Historical Building Plans

- Area Cleared due to Enemy Action
- Asbestos
- Above Ground Fuel Tanks
- Benzene/Benzole/Naphtha, Naphthalene/Kerosene
- Electricity Generation
- Electricity Sub-Stations
- Gas Industry
- Gas Storage
- Gas Use
- Oil Industry
- Oil Storage
- Oil Use
- Paint based Oils
- Paraffin
- Petrol and Diesel Industry
- Petrol and Diesel Storage
- Petrol and Diesel Use
- Potential Fuel Gas
- Potential Fuel Oil
- Potential Fuel Use
- Potential Petrol and Diesel
- Potential Tanks
- Potentially Fuel-related Tanks
- Underground Fuel Tanks

Historical Tanks and Energy Facilities

- Electrical Sub Station Facility
- Electricity Industry Facility
- Gas Industry Facility
- Gas Monitoring Facility
- Miscellaneous Power Facility
- Oil Industry Facility
- Petroleum Storage Facility
- Potential Tank
- Tank

Historical Data Report - Segment A13



Order Details

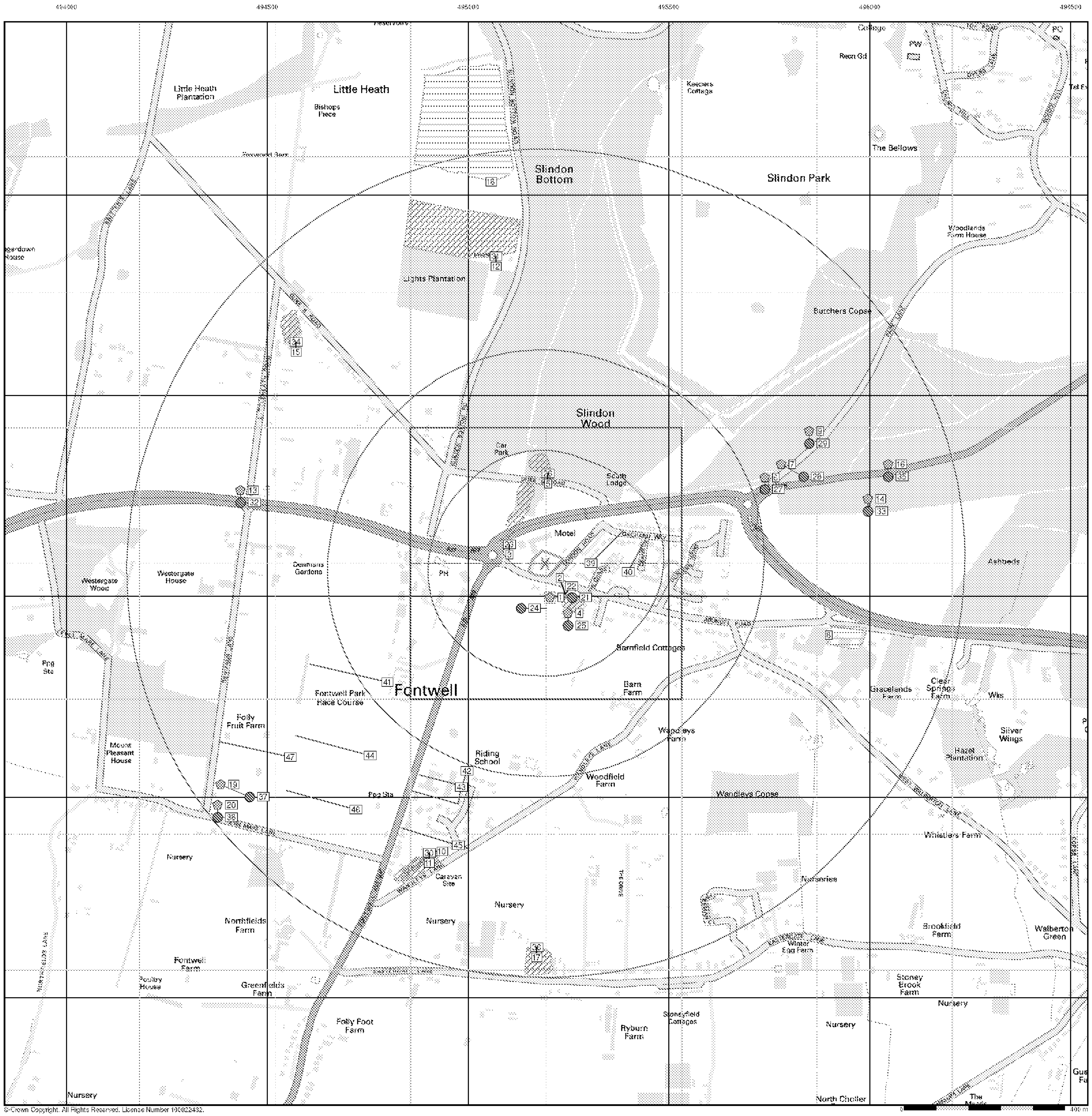
Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Plot Buffer (m):	250

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark Information Group

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



ARUN DISTRICT COUNCIL WA/92/11

Envirocheck® Historical

General

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

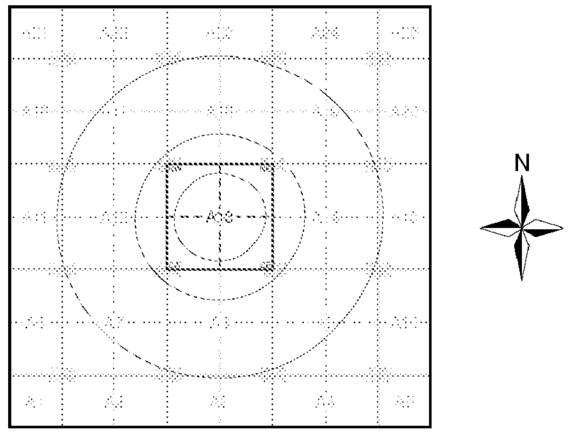
Historical Building Plans

Area Cleared due to Enemy Action

Historical Land Use

- Former Marsh
- Historical Flood Liability
- Historical Flood Liability (Location)
- Potentially Contaminative Industrial Use (Past Land Use)
- Potentially Contaminative Industrial Use (Past Land Use) (Linear)
- Potentially Contaminative Industrial Use (Past Land Use) (Location)
- Potentially Infilled Land (Non-Water)
- Potentially Infilled Land (Non-Water) (Linear)
- Potentially Infilled Land (Non-Water) (Location)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water) (Linear)
- Potentially Infilled Land (Water) (Location)

Historical Data Report - Slice Map A



Order Details

Order Number: 33445435_1_1
Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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

Envirocheck® Report:

Flood Screening Report Datasheet

Order Details:

Order Number:
33445435_1_1

Customer Reference:
Shell Fontwell

National Grid Reference:
495190, 107080

Slice:
A

Site Area (Ha):
0.34

Search Buffer (m):
1000

Site Details:

Shell Fontwell, Arundel Road
Fontwell
ARUNDEL
West Sussex
BN18 0SB

Client Details:

Ms E Corby
URS Corporation Ltd
2nd Floor, St Georges House
5 St Georges Road
London
SW19 4DR

ARUN DISTRICT COUNCIL WA/92/11/

Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer(s) selected. For ease of reference, the report is broken down into seven sections of data.	
EA / CEH Flood Data	-
This section details data from the Environment Agency and the Centre for Ecology and Hydrology. The EA data is reported to a distance of 250m from the edge of the site polygon and details both Zone 2 (extreme) and Zone 3 flood extents, as well as flood defences, flood water storage areas and areas benefiting from flood defences. The CEH data is reported to a distance of 250m from the edge of the site polygon and covers flood data for Scotland, divided into levels based on the frequency and magnitude of a predicted 100 year term. All data sets within this section are plotted and feature on the EA / CEH Flood Data (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and air heights.	
RMS Flood Data	1
This section contains the Risk Management Solutions flood data. The data is based upon the likelihood of a flood occurence for 3 flood return periods; these being 75 years, 100 years and 1000 years. Each return period is depicted on a separate 1:10,000 scale map and reports features to a distance of 250m from the edge of the site polygon. Each return period can detail both defended and/or undefended flood features, with each feature also reporting an associated flood depth. In addition pluvial flood features are also detailed where applicable, but tidal flooding is not included. For added value, OS Contour data is also plotted, detailing contours, spot heights and air heights.	
BGS Flood Data	2
This section contains two BGS data sets; namely Geological Indicators of Flooding and Groundwater Flooding Susceptibility, both of which report features out to a possible 1000m, with coverage in England, Wales and Scotland. Each data set is plotted on a seperate BGS Flood Data (1:50,000) map.	
EA Detailed River Network Data	4
This section details 3 sources of data that depict and detail the river network of England and Wales, captured primarily from the water features theme of Ordnance Survey's OS MasterMap Topography Layer. The DRN Lines data set details all the types of rivers, drains and streams which can be found in England and Wales. The DRN Nodes data set details the river, drain and stream node intersections which divide the detailed river network data. All nodes are defined as being one of the following: A source, sink, junction, or pseudo node, interactions or not assigned. The DRN Offline Drainage dataset details water features from OS MasterMap that do not connect into the river network and are generally limited in length. All data sets within this section are plotted and feature on the EA Detailed River Network (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and air heights.	
EA Historic Flood Events Data	-
This section details Historic Flood data sourced from the Environment Agency and from data held by Landmark. The EA Historic Flood Events data is reported to a distance of 1000m from the edge of the site polygon and details recorded historic flood events from 1703 to October 2008. The data also contains information on the source and cause of the flood, and how the flood outline was established. Also included in this section is Landmark's Historical Flood Liabilities data set, which identifies areas that are liable to flood based on systematic analysis of historical mapping dating back to the mid 19th century. Both data sets within this section are plotted and feature on the EA Historical Flood (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and air heights.	

EA NaFRA Data	-
This section details the National Flood Risk Assessment (NaFRA) data sourced from the Environment Agency and is reported to a distance of 1000m from the edge of the site polygon. The NaFRA data provides an indication of flood risk at a national level. The data has been created by calculating the actual likelihood of flooding to areas of land within the flood plain of an extreme flood (0.1% or 1 in 1000 chance in any year). The method considers the probability that the flood defences will overtop or breach, and the distance of the impact cell from the river or the sea. It enables a comparison of the relative risks and their distribution within each of these catchments, rather than a detailed, local assessment of the risk at a specific location. EA do not hold information on properties (including floor levels). NaFRA data can therefore only assessed if there are properties within the impact cells where EA have assessed the flood risk. The data within this section is plotted and feature on the EA NaFRA Data (1:50,000) map.	
Flood Insurance Risk Data	**5**
This section contains two sources of flood risk data from Aviva and Crawford and Company. Neither data sets are plotted on any of the associated Flood maps. Aviva has generated a detailed flood risk assessment to accurately evaluate the flood risk for individual customers. The information from this assessment has been used to define a risk model detailing 5 levels of flood risk, based on the individual properties rather than the postcode. The flood risk assessment undertaken by Aviva is for river flooding and coastal flooding only, and does not include groundwater, flash or sewerage flooding. Only the worst case flood risk is reported for the site. Crawford & Co have generated an Insurance Claims rating for Flood Risk. The risk is determined by comparing the number of flood insurance claims made to the number of properties in the postcode sector. The data will also include flood claims from domestic accidents or blocked drains, as well as flooding from river or tidal events. Flood insurance claim ratings are reported for the site only.	
Data Currency	**6**
Data Suppliers	**7**
Useful Contacts	**8**

Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
EA / CEH Flood Data					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
RMS Flood Data					
RMS 75 year Flood Return	pg 1		1	n/a	n/a
RMS 100 year Flood Return	pg 1		1	n/a	n/a
RMS 1000 year Flood Return	pg 1		4	n/a	n/a
BGS Flood Data					
BGS Geological Indicators of Flooding	pg 2				2
BGS Groundwater Flooding Susceptibility	pg 2	2	8	6	9
EA Detailed River Network Data					
Detailed River Network Lines	pg 4				3
Detailed River Network Nodes	pg 4				3
Detailed River Network Offline Drainage	pg 4				2
EA Historic Flood Events Data					
Historic Flood Events					
Historical Flood Liabilities					
EA National Flood Risk Assessment Data					
National Flood Risk Assessment					
Flood Insurance Risk Data					
Property-based Flood Risk	pg 5	1	n/a	n/a	n/a
Postcode Sector Flood Insurance Claim Ratings	pg 5	1	n/a	n/a	n/a

Report Version v47.0

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	RMS 75 year Flood Return Flood Type/Depth: 75 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13NW (W)	69	1	495086 107087
	RMS 100 year Flood Return Flood Type/Depth: 100 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13SW (W)	64	1	495086 107079
	RMS 1000 year Flood Return Flood Type/Depth: 1000 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13SW (W)	64	1	495086 107079
	RMS 1000 year Flood Return Flood Type/Depth: 1000 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13SE (E)	177	1	495404 107037
	RMS 1000 year Flood Return Flood Type/Depth: 1000 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13NE (NE)	198	1	495401 107204
	RMS 1000 year Flood Return Flood Type/Depth: 1000 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13SE (E)	244	1	495474 107038

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Geological Indicators of Flooding Flooding Type: Inland Flooding	A9NW (SE)	748	2	495860 106681
	BGS Geological Indicators of Flooding Flooding Type: Inland Flooding	A9SW (SE)	912	2	495672 106272
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A13SE (E)	0	2	495200 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A13SW (N)	0	2	495192 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Negligible Susceptibility to Groundwater Flooding	A13NW (NW)	14	2	495150 107100
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A13SW (W)	52	2	495100 107050
	BGS Groundwater Flooding Susceptibility Flooding Type: Low Susceptibility to Groundwater Flooding	A13SE (E)	64	2	495300 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Negligible Susceptibility to Groundwater Flooding	A13SW (W)	150	2	495000 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A13SW (W)	151	2	495000 107050
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A13NE (NE)	156	2	495350 107200
	BGS Groundwater Flooding Susceptibility Flooding Type: Low Susceptibility to Groundwater Flooding	A13SE (E)	164	2	495400 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A13SW (W)	250	2	494900 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A12SE (W)	300	2	494850 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A14NW (E)	314	2	495550 107100
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A13SW (SW)	346	2	495000 106750
	BGS Groundwater Flooding Susceptibility Flooding Type: Low Susceptibility to Groundwater Flooding	A12NE (W)	402	2	494750 107100
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A14NW (E)	427	2	495650 107200
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A14NW (E)	467	2	495700 107150
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A12SE (W)	504	2	494650 107000
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A8NW (S)	552	2	495192 106500
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A12SE (W)	562	2	494600 106950
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A14NW (E)	574	2	495800 107200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A9NW (SE)	723	2	495600 106450
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A14NE (E)	791	2	496000 107300
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A12NW (W)	805	2	494350 107150
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A14NE (E)	878	2	496100 107250
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A14SE (E)	964	2	496200 107081

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D007 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SW (SE)	548	3	495704 106809
2	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: D007 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A9NW (SE)	759	3	495852 106650
3	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D007 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A9NW (SE)	783	3	495862 106623
4	**Detailed River Network Nodes** River Node Type: Source Hydrographic Area: D007	A14SW (SE)	548	3	495704 106809
5	**Detailed River Network Nodes** River Node Type: Pseudo (OS MasterMap polygon boundary) Hydrographic Area: D007	A9NW (SE)	759	3	495852 106650
6	**Detailed River Network Nodes** River Node Type: Pseudo (OS MasterMap polygon boundary) Hydrographic Area: D007	A9NW (SE)	783	3	495862 106623
7	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D007	A8NE (SE)	517	3	495460 106605
8	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D007	A8NE (S)	572	3	495384 106510

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Property-based Flood Risk Flood Risk Rating: Negligible Flood Risk Rating	A13SE (E)	0	4	495201 107080
	Postcode Sector Flood Insurance Claim Ratings Insurance Rating: Low Flood Insurance Claim Rating Postcode Sector: BN18 0	A13SW (N)	0	4	495192 107081

EA / CEH Flood Data	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2010	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2010	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2010	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2010	Quarterly
Flood Defences Environment Agency - Head Office	November 2010	Quarterly
RMS Flood Data	**Version**	**Update Cycle**
RMS 75 year Flood Return Risk Management Solutions - South East Catchment	December 2008	As notified
RMS 100 year Flood Return Risk Management Solutions - South East Catchment	December 2008	As notified
RMS 1000 year Flood Return Risk Management Solutions - South East Catchment	December 2008	As notified
BGS Flood Data	**Version**	**Update Cycle**
BGS Geological Indicators of Flooding British Geological Survey - National Geoscience Information Service	September 2010	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2010	Annually
EA Detailed River Network Data	**Version**	**Update Cycle**
Detailed River Network Lines Environment Agency - Head Office	April 2010	As notified
Detailed River Network Nodes Environment Agency - Head Office	September 2008	As notified
Detailed River Network Offline Drainage Environment Agency - Head Office	September 2008	As notified
EA Historic Flood Events Data	**Version**	**Update Cycle**
Historic Flood Events Environment Agency - Head Office	April 2010	Quarterly
Historical Flood Liabilities Landmark Information Group Limited	December 1999	Not Applicable
EA National Flood Risk Assessment Data (NaFRA)	**Version**	**Update Cycle**
National Flood Risk Assessment Environment Agency - Head Office	July 2010	Annually
Flood Insurance Risk Data	**Version**	**Update Cycle**
Property-based Flood Risk Aviva - Dataservice	January 2010	Annually
Postcode Sector Flood Insurance Claim Ratings Crawford and Company	September 2010	Quarterly

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Ordnance Survey Licensed Partner
Environment Agency	Environment Agency
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Aviva	AVIVA
Risk Management Solutions	RMS

Contact	Name and Address	Contact Details
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2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
4	**Landmark Information Group Limited** 5 - 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Telephone: 01392 441761 Fax: 01392 441709 Email: cssupport@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk
-	**Landmark Information Group Limited** The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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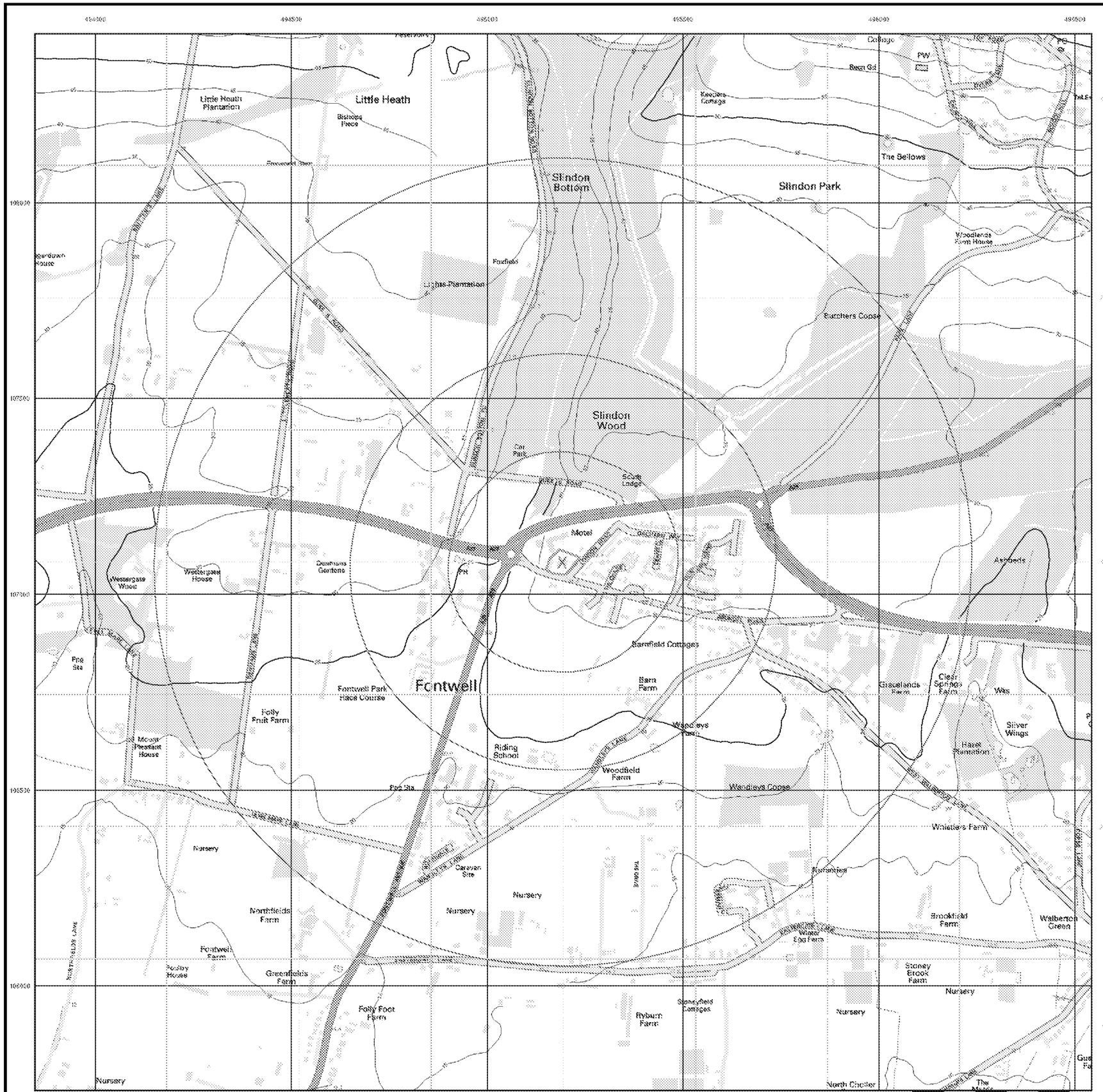
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RMS Flood Data Information

This report incorporates flood hazard maps, data and information in relation to flood risk ("information") licensed by Risk Management Solutions, Inc. ("RMS") to Landmark Information Group Ltd ("Landmark"). RMS is not engaged in the insurance, real estate, finance or related industries. The Information provided is not intended to constitute professional advice or an endorsement by RMS of any kind regarding the use and suitability of the Information. The Information is based on the scientific data, mathematical and empirical models, and encoded experience of scientists and engineers, and is inherently imprecise.

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Envirocheck® Flood

EA Flood Data Map (1:10,000)

General

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

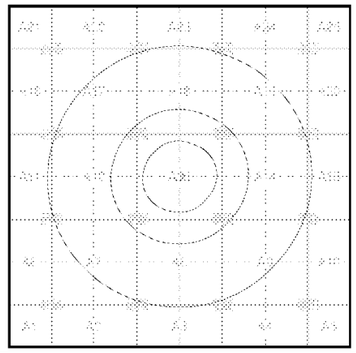
Environment Agency Flood Data

- 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

Contours (height in metres)

Standard Contour — Index Contour — Spot Height — Air Height

EA Flood Data Map - Slice A



Order Details

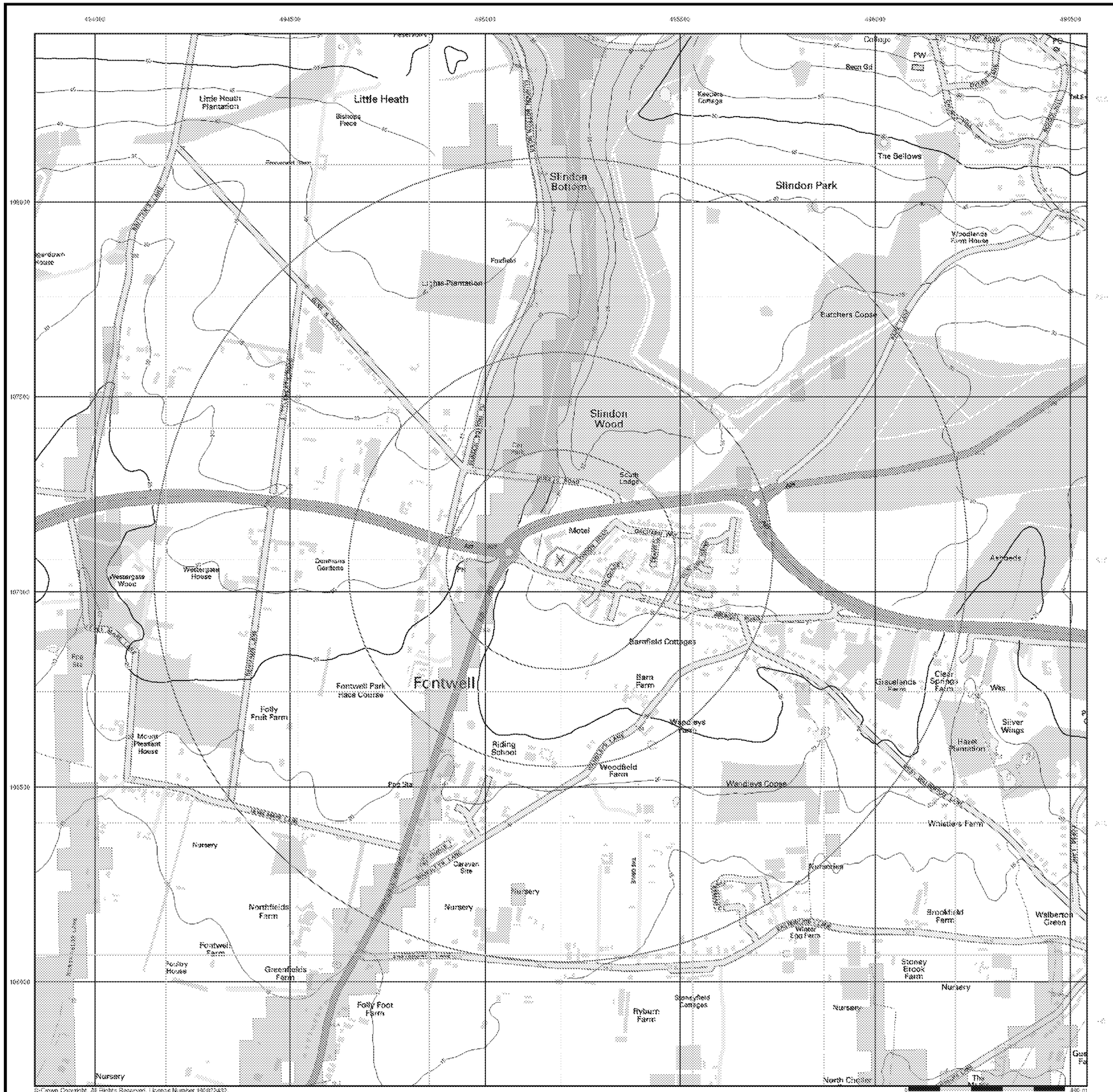
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Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark Information Group

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



Envirocheck® Flood

RMS 75 year Return Flood Map (1:10,000)

General

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

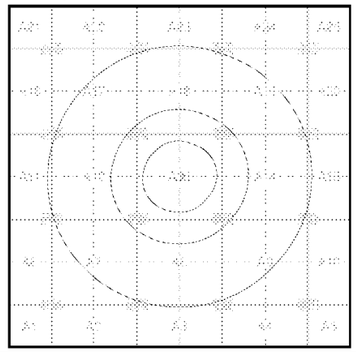
RMS 75 year Return Flood Data

Flood Depth (mm)	Flood Type: Defended Flood	Flood Type: Undefended Flood	Pluvial Flood (flood depth n/a)
0 - 200			
201 - 500			
501 - 2000			
2001 +			

Contours (height in metres)

Standard Contour — 105
Index Contour — 100
105 Spot Height
45.8 Air Height

RMS 75 year Return Flood Map - Slice A



Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

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ARUN DISTRICT COUNCIL WA/92/11

Envirocheck® Flood

RMS 100 year Return Flood Map (1:10,000)

General

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

RMS 100 year Return Flood Data

Flood Depth (mm)	Defended Flood	Undefended Flood	Pluvial Flood (flood depth n/a)
0 - 200			
201 - 500			
501 - 2000			
2001 +			

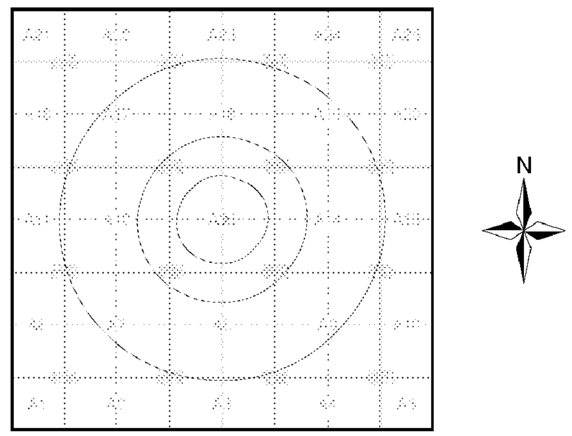
(Flood Type)

Contours (height in metres)

Standard Contour — Spot Height

Index Contour — Air Height

RMS 100 year Return Flood Map - Slice A



Order Details

Order Number: 33445435_1_1
Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

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Envirocheck Flood

RMS 1000 year Return Flood Map (1:10,000)

General

Specified Site

Specified Buffer(s)

Bearing Reference Point

RMS 1000 year Return Flood Data

Flood Depth (mm)	Defended Flood	Undefended Flood	Pluvial Flood (flood depth n/a)
0 - 200			
201 - 500			
501 - 2000			
2001 +			

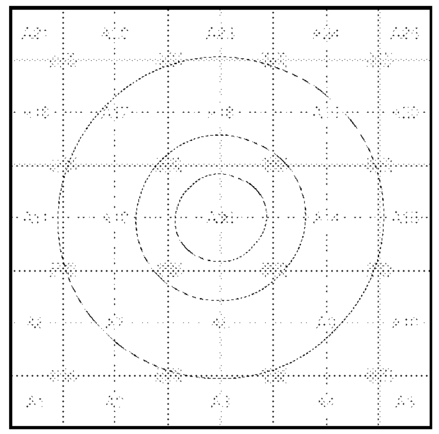
(Flood Type)

Contours (height in metres)

Standard Contour — Spot Height

Index Contour — Air Height

RMS 1000 year Return Flood Map - Slice A



N

Order Details

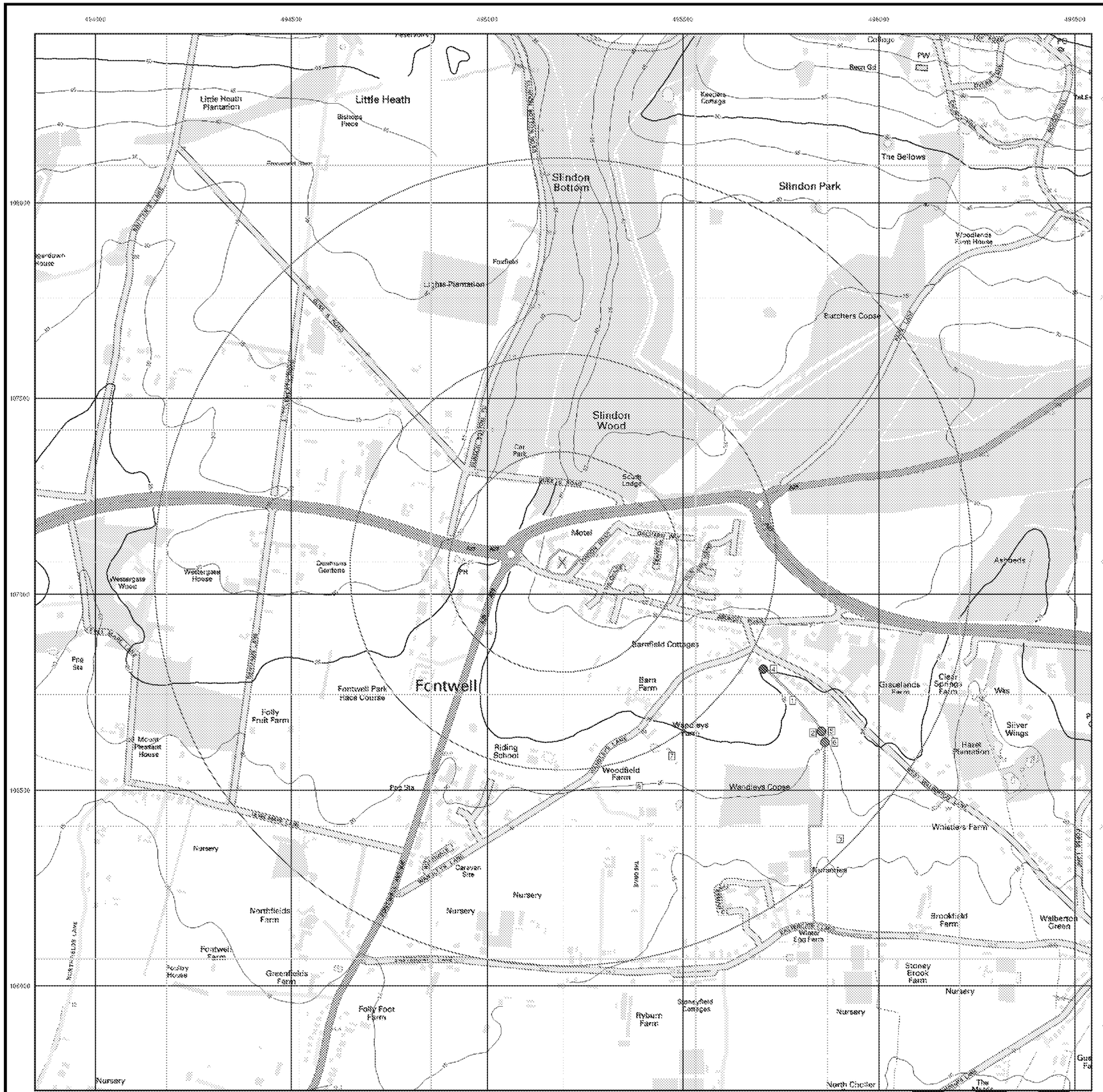
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National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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Envirocheck® Flood

EA Detailed River Network Map (1:10,000)

General

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

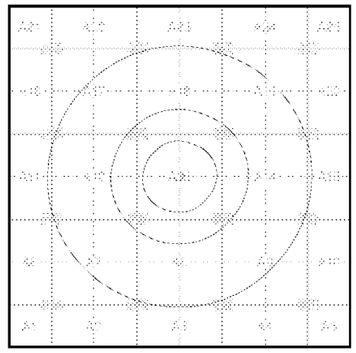
EA Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature
- Source
- Junction
- Sink
- Non-interactive Node
- Offline Drainage Feature
- Not assigned River feature
- Pseudo Node (general)
- Pseudo Node (High Water Mark)
- Pseudo Node (OS MasterMap polygon boundary)

Contours (height in metres)

Standard Contour — Index Contour — Spot Height — Air Height

EA Detailed River Network Map - Slice A



N

Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

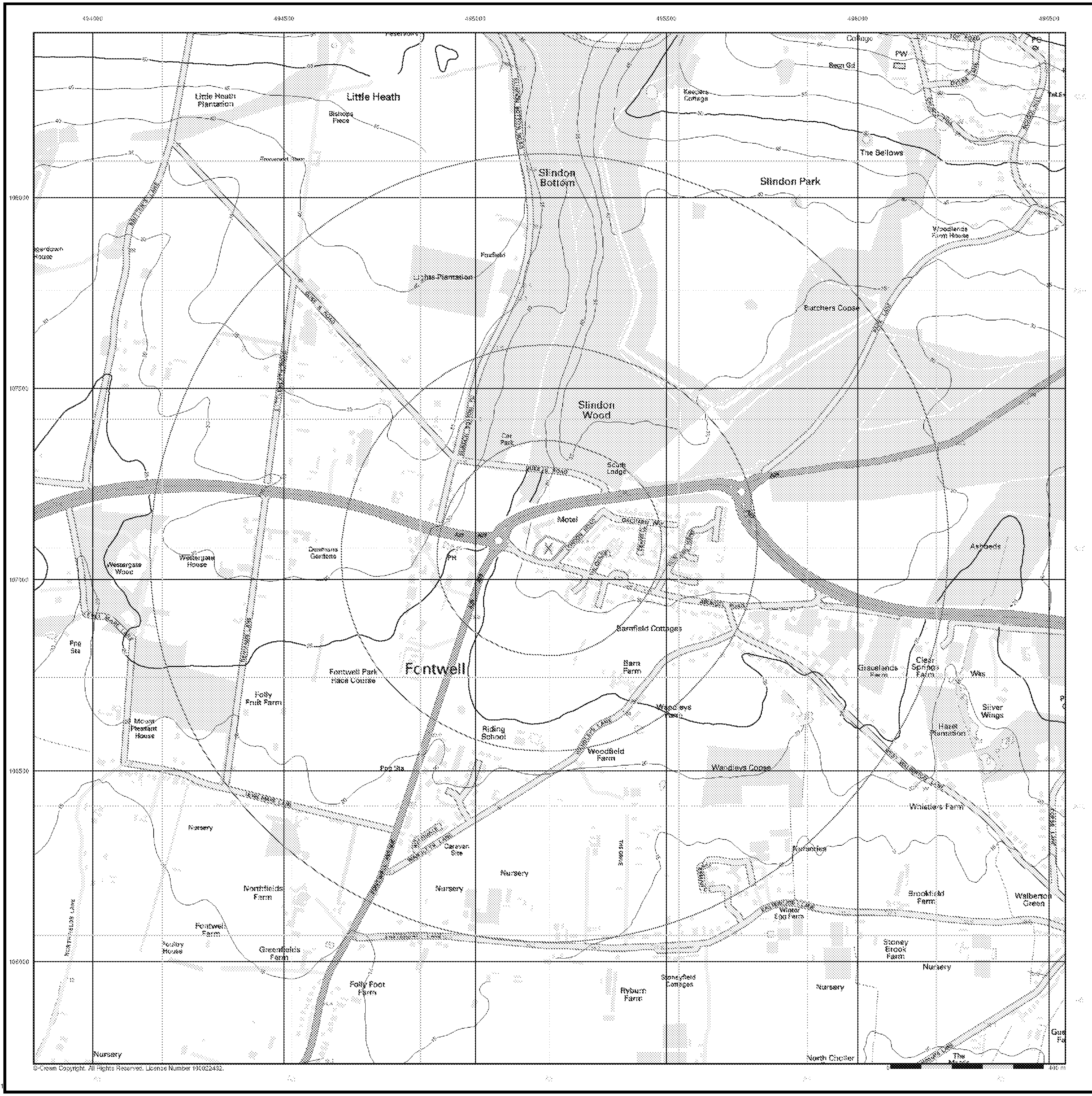
Site Details

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Envirocheck® Flood

EA Historic Flood Map (1:10,000)

General

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

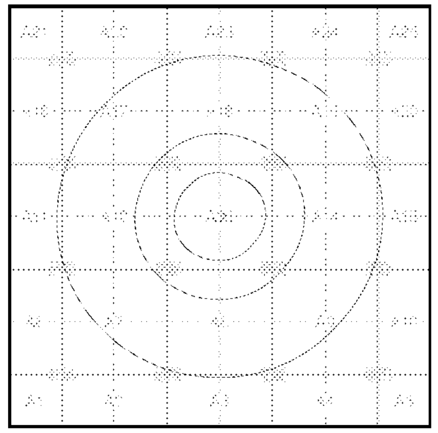
EA Historic Flood Events Data

- Channel Capacity Exceeded (no raised defences)
- Groundwater/High Water Table
- Local Drainage/Surface Water
- Mechanical Failure
- Obstruction/Blockage - Bridge
- Obstruction/Blockage - Channel
- Obstruction/Blockage - Culvert
- Obstruction/Blockage - Debris Screen
- Operational Failure/ Breach of Defence
- Other
- Overtopping of Defences
- Unknown
- Historical Flood Liabilities

Contours (height in metres)

Standard Contour — Index Contour — Spot Height — Air Height

EA Historic Flood Map - Slice A



N

Order Details

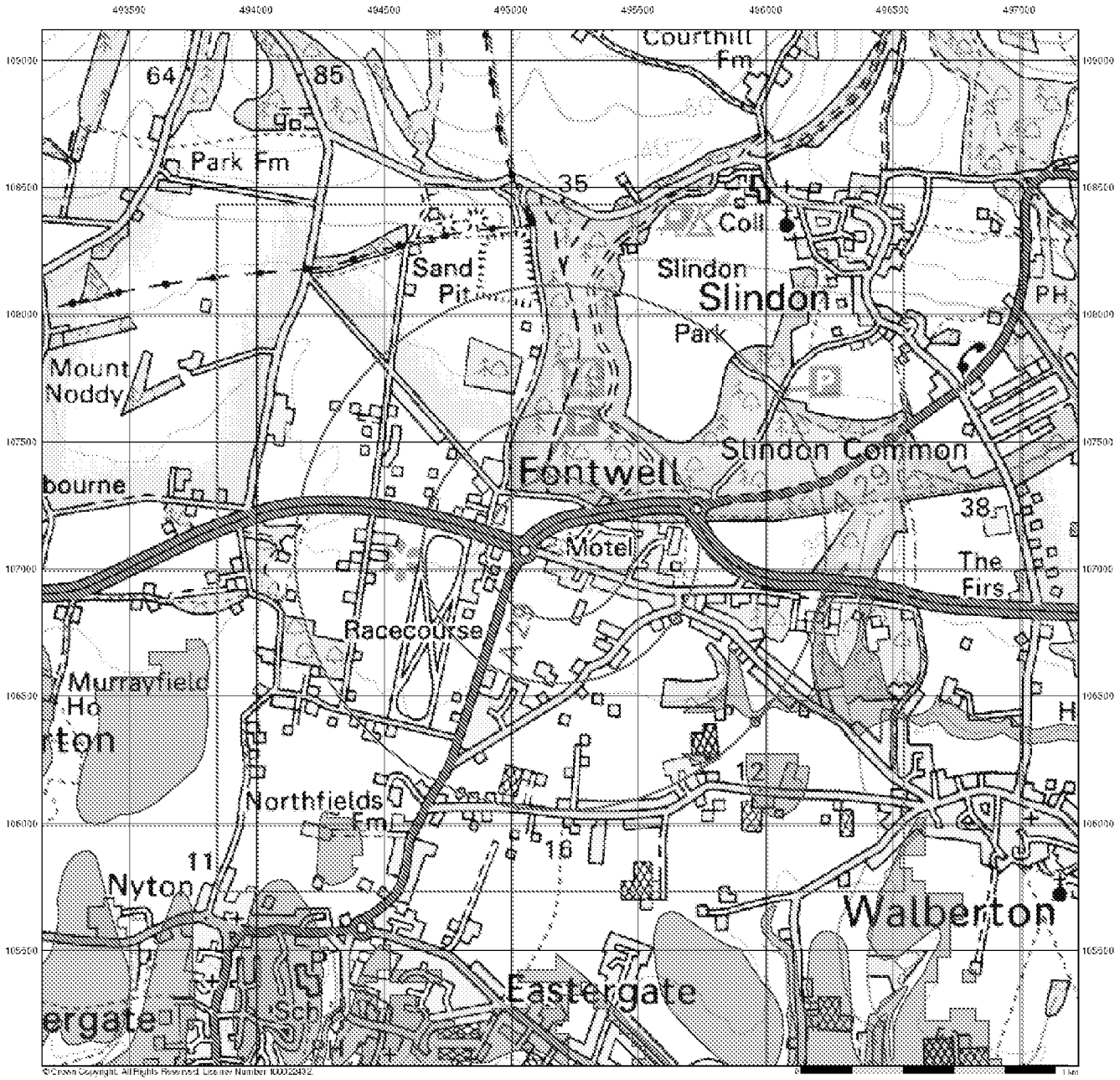
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National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

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Envirocheck® Flood

BGS Flood Data (1:50,000)

General

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

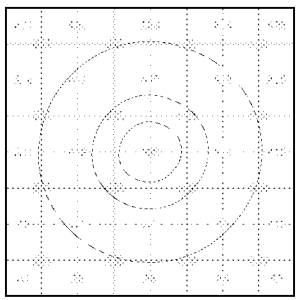
BGS Geological Indicators of Flooding

Coastal

Inland

Bodies of Water

BGS Flood Data Map - Slice A



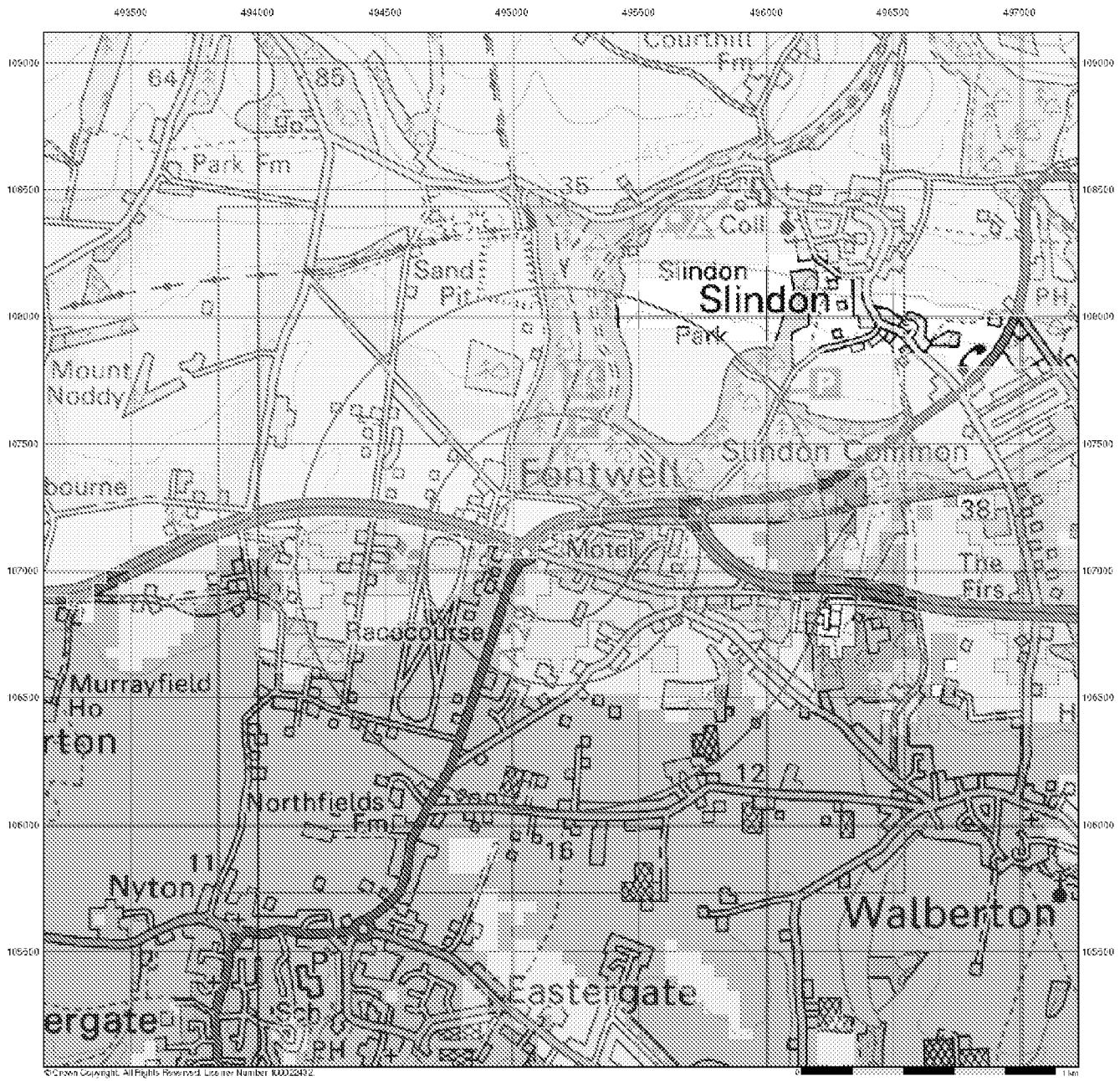
Order Details

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National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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



Envirocheck® Flood

BGS Flood Data (1:50,000)

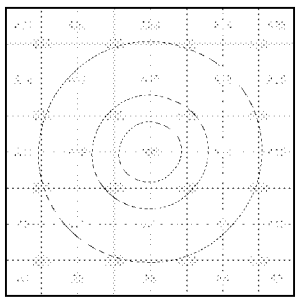
General

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

BGS Groundwater Flooding Susceptibility

- High Susceptibility
- Moderately High Susceptibility
- Moderate Susceptibility
- Low Susceptibility
- Negligible Susceptibility

BGS Flood Data Map - Slice A



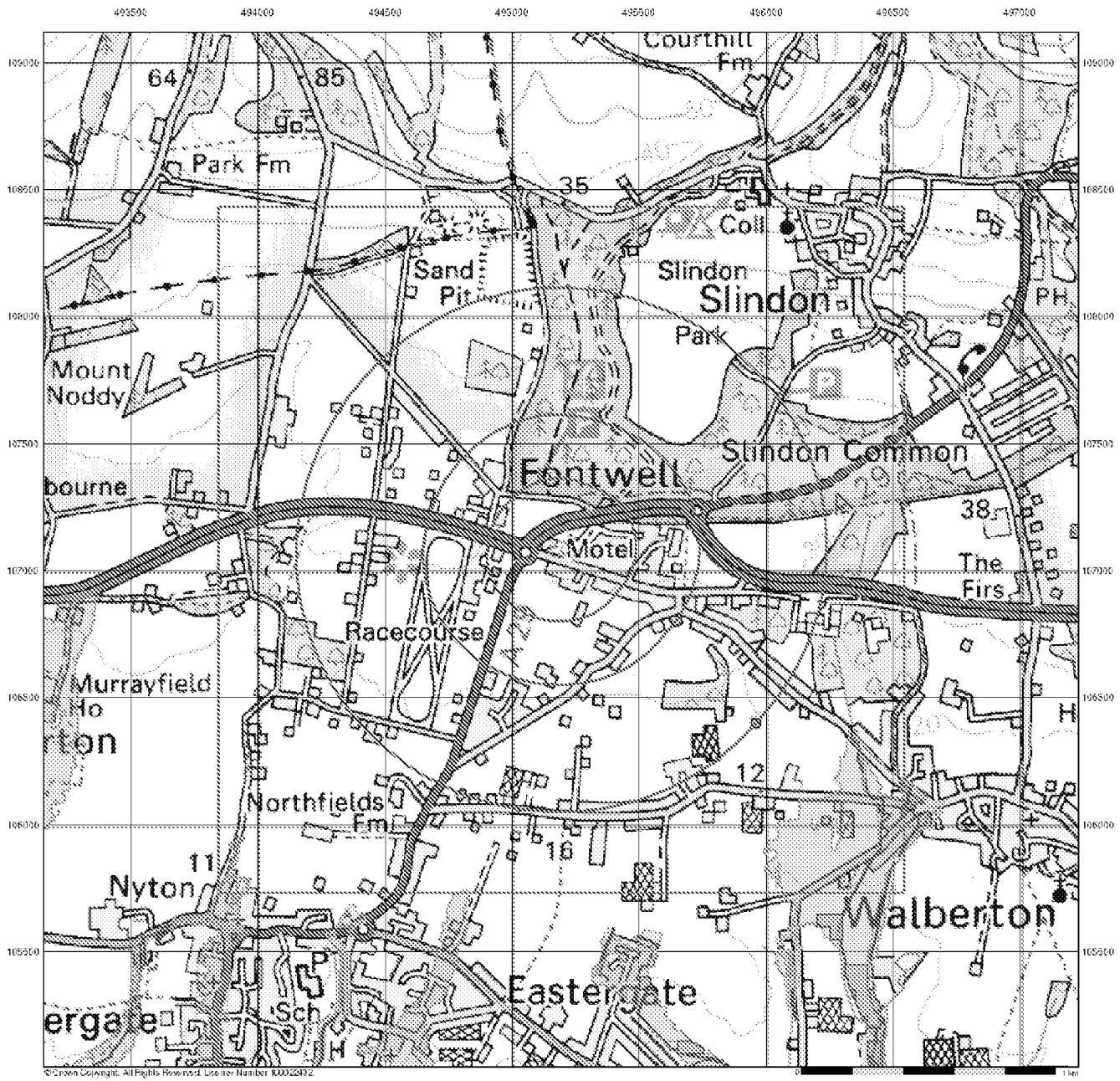
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Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

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Envirocheck® Flood

EA NaFRA Data (1:50,000)

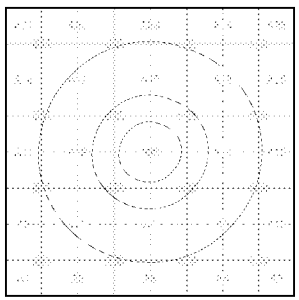
General

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

National Flood Risk Assessment (NaFRA)

- Significant Risk
- Moderate Risk
- Low Risk
- No Result

EA NaFRA Data Map - Slice A



Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark

Envirocheck® Report:

Flood Screening Report Datasheet

Order Details:

Order Number:
33445435_1_1

Customer Reference:
Shell Fontwell

National Grid Reference:
495190, 107080

Slice:
A

Site Area (Ha):
0.34

Search Buffer (m):
1000

Site Details:

Shell Fontwell, Arundel Road
Fontwell
ARUNDEL
West Sussex
BN18 0SB

Client Details:

Ms E Corby
URS Corporation Ltd
2nd Floor, St Georges House
5 St Georges Road
London
SW19 4DR

ARUN DISTRICT COUNCIL WA/92/11/

Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer(s) selected. For ease of reference, the report is broken down into seven sections of data.	
EA / CEH Flood Data	-
This section details data from the Environment Agency and the Centre for Ecology and Hydrology. The EA data is reported to a distance of 250m from the edge of the site polygon and details both Zone 2 (extreme) and Zone 3 flood extents, as well as flood defences, flood water storage areas and areas benefiting from flood defences. The CEH data is reported to a distance of 250m from the edge of the site polygon and covers flood data for Scotland, divided into levels based on the frequency and magnitude of a predicted 100 year term. All data sets within this section are plotted and feature on the EA / CEH Flood Data (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and air heights.	
RMS Flood Data	1
This section contains the Risk Management Solutions flood data. The data is based upon the likelihood of a flood occurence for 3 flood return periods; these being 75 years, 100 years and 1000 years. Each return period is depicted on a separate 1:10,000 scale map and reports features to a distance of 250m from the edge of the site polygon. Each return period can detail both defended and/or undefended flood features, with each feature also reporting an associated flood depth. In addition pluvial flood features are also detailed where applicable, but tidal flooding is not included. For added value, OS Contour data is also plotted, detailing contours, spot heights and air heights.	
BGS Flood Data	2
This section contains two BGS data sets; namely Geological Indicators of Flooding and Groundwater Flooding Susceptibility, both of which report features out to a possible 1000m, with coverage in England, Wales and Scotland. Each data set is plotted on a seperate BGS Flood Data (1:50,000) map.	
EA Detailed River Network Data	4
This section details 3 sources of data that depict and detail the river network of England and Wales, captured primarily from the water features theme of Ordnance Survey's OS MasterMap Topography Layer. The DRN Lines data set details all the types of rivers, drains and streams which can be found in England and Wales. The DRN Nodes data set details the river, drain and stream node intersections which divide the detailed river network data. All nodes are defined as being one of the following: A source, sink, junction, or pseudo node, interactions or not assigned. The DRN Offline Drainage dataset details water features from OS MasterMap that do not connect into the river network and are generally limited in length. All data sets within this section are plotted and feature on the EA Detailed River Network (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and air heights.	
EA Historic Flood Events Data	-
This section details Historic Flood data sourced from the Environment Agency and from data held by Landmark. The EA Historic Flood Events data is reported to a distance of 1000m from the edge of the site polygon and details recorded historic flood events from 1703 to October 2008. The data also contains information on the source and cause of the flood, and how the flood outline was established. Also included in this section is Landmark's Historical Flood Liabilities data set, which identifies areas that are liable to flood based on systematic analysis of historical mapping dating back to the mid 19th century. Both data sets within this section are plotted and feature on the EA Historical Flood (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and air heights.	

EA NaFRA Data	-
This section details the National Flood Risk Assessment (NaFRA) data sourced from the Environment Agency and is reported to a distance of 1000m from the edge of the site polygon. The NaFRA data provides an indication of flood risk at a national level. The data has been created by calculating the actual likelihood of flooding to areas of land within the flood plain of an extreme flood (0.1% or 1 in 1000 chance in any year). The method considers the probability that the flood defences will overtop or breach, and the distance of the impact cell from the river or the sea. It enables a comparison of the relative risks and their distribution within each of these catchments, rather than a detailed, local assessment of the risk at a specific location. EA do not hold information on properties (including floor levels). NaFRA data can therefore only assessed if there are properties within the impact cells where EA have assessed the flood risk. The data within this section is plotted and feature on the EA NaFRA Data (1:50,000) map.	
Flood Insurance Risk Data	**5**
This section contains two sources of flood risk data from Aviva and Crawford and Company. Neither data sets are plotted on any of the associated Flood maps. Aviva has generated a detailed flood risk assessment to accurately evaluate the flood risk for individual customers. The information from this assessment has been used to define a risk model detailing 5 levels of flood risk, based on the individual properties rather than the postcode. The flood risk assessment undertaken by Aviva is for river flooding and coastal flooding only, and does not include groundwater, flash or sewerage flooding. Only the worst case flood risk is reported for the site. Crawford & Co have generated an Insurance Claims rating for Flood Risk. The risk is determined by comparing the number of flood insurance claims made to the number of properties in the postcode sector. The data will also include flood claims from domestic accidents or blocked drains, as well as flooding from river or tidal events. Flood insurance claim ratings are reported for the site only.	
Data Currency	**6**
Data Suppliers	**7**
Useful Contacts	**8**

Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
EA / CEH Flood Data					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
RMS Flood Data					
RMS 75 year Flood Return	pg 1		1	n/a	n/a
RMS 100 year Flood Return	pg 1		1	n/a	n/a
RMS 1000 year Flood Return	pg 1		4	n/a	n/a
BGS Flood Data					
BGS Geological Indicators of Flooding	pg 2				2
BGS Groundwater Flooding Susceptibility	pg 2	2	8	6	9
EA Detailed River Network Data					
Detailed River Network Lines	pg 4				3
Detailed River Network Nodes	pg 4				3
Detailed River Network Offline Drainage	pg 4				2
EA Historic Flood Events Data					
Historic Flood Events					
Historical Flood Liabilities					
EA National Flood Risk Assessment Data					
National Flood Risk Assessment					
Flood Insurance Risk Data					
Property-based Flood Risk	pg 5	1	n/a	n/a	n/a
Postcode Sector Flood Insurance Claim Ratings	pg 5	1	n/a	n/a	n/a

Report Version v47.0

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	RMS 75 year Flood Return Flood Type/Depth: 75 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13NW (W)	69	1	495086 107087
	RMS 100 year Flood Return Flood Type/Depth: 100 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13SW (W)	64	1	495086 107079
	RMS 1000 year Flood Return Flood Type/Depth: 1000 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13SW (W)	64	1	495086 107079
	RMS 1000 year Flood Return Flood Type/Depth: 1000 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13SE (E)	177	1	495404 107037
	RMS 1000 year Flood Return Flood Type/Depth: 1000 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13NE (NE)	198	1	495401 107204
	RMS 1000 year Flood Return Flood Type/Depth: 1000 year pluvial flood, depth is not applicable Flood Hazard: Pluvial Flood Risk	A13SE (E)	244	1	495474 107038

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Geological Indicators of Flooding Flooding Type: Inland Flooding	A9NW (SE)	748	2	495860 106681
	BGS Geological Indicators of Flooding Flooding Type: Inland Flooding	A9SW (SE)	912	2	495672 106272
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A13SE (E)	0	2	495200 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A13SW (N)	0	2	495192 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Negligible Susceptibility to Groundwater Flooding	A13NW (NW)	14	2	495150 107100
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A13SW (W)	52	2	495100 107050
	BGS Groundwater Flooding Susceptibility Flooding Type: Low Susceptibility to Groundwater Flooding	A13SE (E)	64	2	495300 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Negligible Susceptibility to Groundwater Flooding	A13SW (W)	150	2	495000 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A13SW (W)	151	2	495000 107050
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A13NE (NE)	156	2	495350 107200
	BGS Groundwater Flooding Susceptibility Flooding Type: Low Susceptibility to Groundwater Flooding	A13SE (E)	164	2	495400 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A13SW (W)	250	2	494900 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A12SE (W)	300	2	494850 107081
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A14NW (E)	314	2	495550 107100
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A13SW (SW)	346	2	495000 106750
	BGS Groundwater Flooding Susceptibility Flooding Type: Low Susceptibility to Groundwater Flooding	A12NE (W)	402	2	494750 107100
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A14NW (E)	427	2	495650 107200
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A14NW (E)	467	2	495700 107150
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A12SE (W)	504	2	494650 107000
	BGS Groundwater Flooding Susceptibility Flooding Type: High Susceptibility to Groundwater Flooding	A8NW (S)	552	2	495192 106500
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A12SE (W)	562	2	494600 106950
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A14NW (E)	574	2	495800 107200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A9NW (SE)	723	2	495600 106450
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A14NE (E)	791	2	496000 107300
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A12NW (W)	805	2	494350 107150
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderate Susceptibility to Groundwater Flooding	A14NE (E)	878	2	496100 107250
	BGS Groundwater Flooding Susceptibility Flooding Type: Moderately High Susceptibility to Groundwater Flooding	A14SE (E)	964	2	496200 107081

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D007 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A14SW (SE)	548	3	495704 106809
2	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: D007 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A9NW (SE)	759	3	495852 106650
3	**Detailed River Network Lines** River Type: Tertiary River River Name: Not Supplied Hydrographic Area: D007 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A9NW (SE)	783	3	495862 106623
4	**Detailed River Network Nodes** River Node Type: Source Hydrographic Area: D007	A14SW (SE)	548	3	495704 106809
5	**Detailed River Network Nodes** River Node Type: Pseudo (OS MasterMap polygon boundary) Hydrographic Area: D007	A9NW (SE)	759	3	495852 106650
6	**Detailed River Network Nodes** River Node Type: Pseudo (OS MasterMap polygon boundary) Hydrographic Area: D007	A9NW (SE)	783	3	495862 106623
7	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D007	A8NE (SE)	517	3	495460 106605
8	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D007	A8NE (S)	572	3	495384 106510

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Property-based Flood Risk Flood Risk Rating: Negligible Flood Risk Rating	A13SE (E)	0	4	495201 107080
	Postcode Sector Flood Insurance Claim Ratings Insurance Rating: Low Flood Insurance Claim Rating Postcode Sector: BN18 0	A13SW (N)	0	4	495192 107081

EA / CEH Flood Data	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2010	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2010	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2010	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2010	Quarterly
Flood Defences Environment Agency - Head Office	November 2010	Quarterly
RMS Flood Data	**Version**	**Update Cycle**
RMS 75 year Flood Return Risk Management Solutions - South East Catchment	December 2008	As notified
RMS 100 year Flood Return Risk Management Solutions - South East Catchment	December 2008	As notified
RMS 1000 year Flood Return Risk Management Solutions - South East Catchment	December 2008	As notified
BGS Flood Data	**Version**	**Update Cycle**
BGS Geological Indicators of Flooding British Geological Survey - National Geoscience Information Service	September 2010	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2010	Annually
EA Detailed River Network Data	**Version**	**Update Cycle**
Detailed River Network Lines Environment Agency - Head Office	April 2010	As notified
Detailed River Network Nodes Environment Agency - Head Office	September 2008	As notified
Detailed River Network Offline Drainage Environment Agency - Head Office	September 2008	As notified
EA Historic Flood Events Data	**Version**	**Update Cycle**
Historic Flood Events Environment Agency - Head Office	April 2010	Quarterly
Historical Flood Liabilities Landmark Information Group Limited	December 1999	Not Applicable
EA National Flood Risk Assessment Data (NaFRA)	**Version**	**Update Cycle**
National Flood Risk Assessment Environment Agency - Head Office	July 2010	Annually
Flood Insurance Risk Data	**Version**	**Update Cycle**
Property-based Flood Risk Aviva - Dataservice	January 2010	Annually
Postcode Sector Flood Insurance Claim Ratings Crawford and Company	September 2010	Quarterly

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Ordnance Survey Licensed Partner
Environment Agency	Environment Agency
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Aviva	AVIVA
Risk Management Solutions	RMS

Contact	Name and Address	Contact Details
1	**Landmark Information Group Limited** Legal and Financial, The Smith Centre, Fairmile, Henley-on-Thames, Oxon, RG9 6AB	[redacted]
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	
4	**Landmark Information Group Limited** 5 - 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	
-	**Landmark Information Group Limited** The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	

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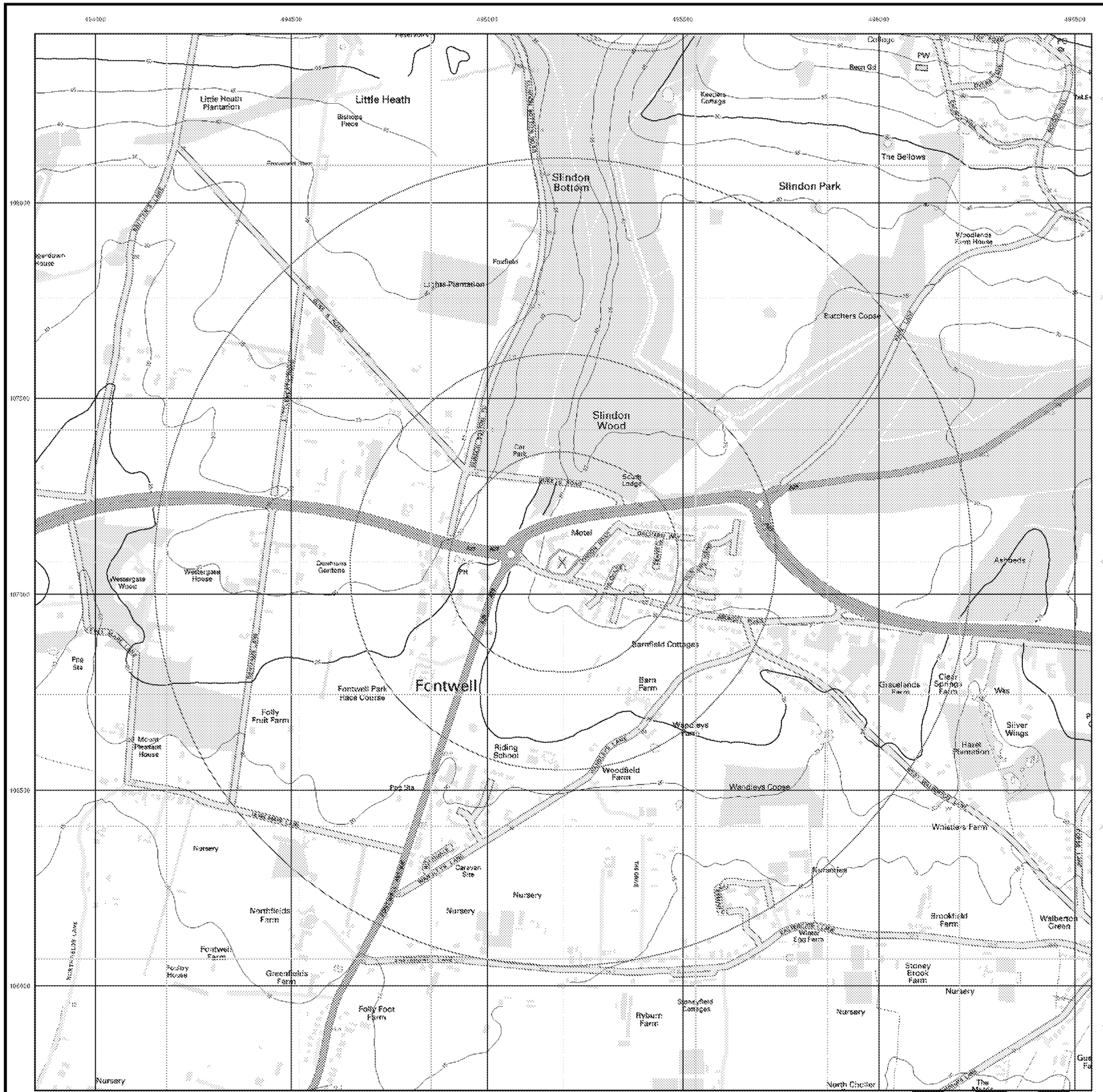
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Envirocheck® Flood

EA Flood Data Map (1:10,000)

General

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

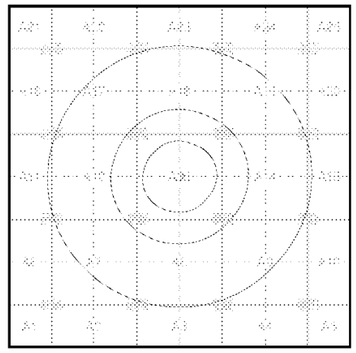
Environment Agency Flood Data

- 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

Contours (height in metres)

Standard Contour — Index Contour — Spot Height — Air Height

EA Flood Data Map - Slice A



Order Details

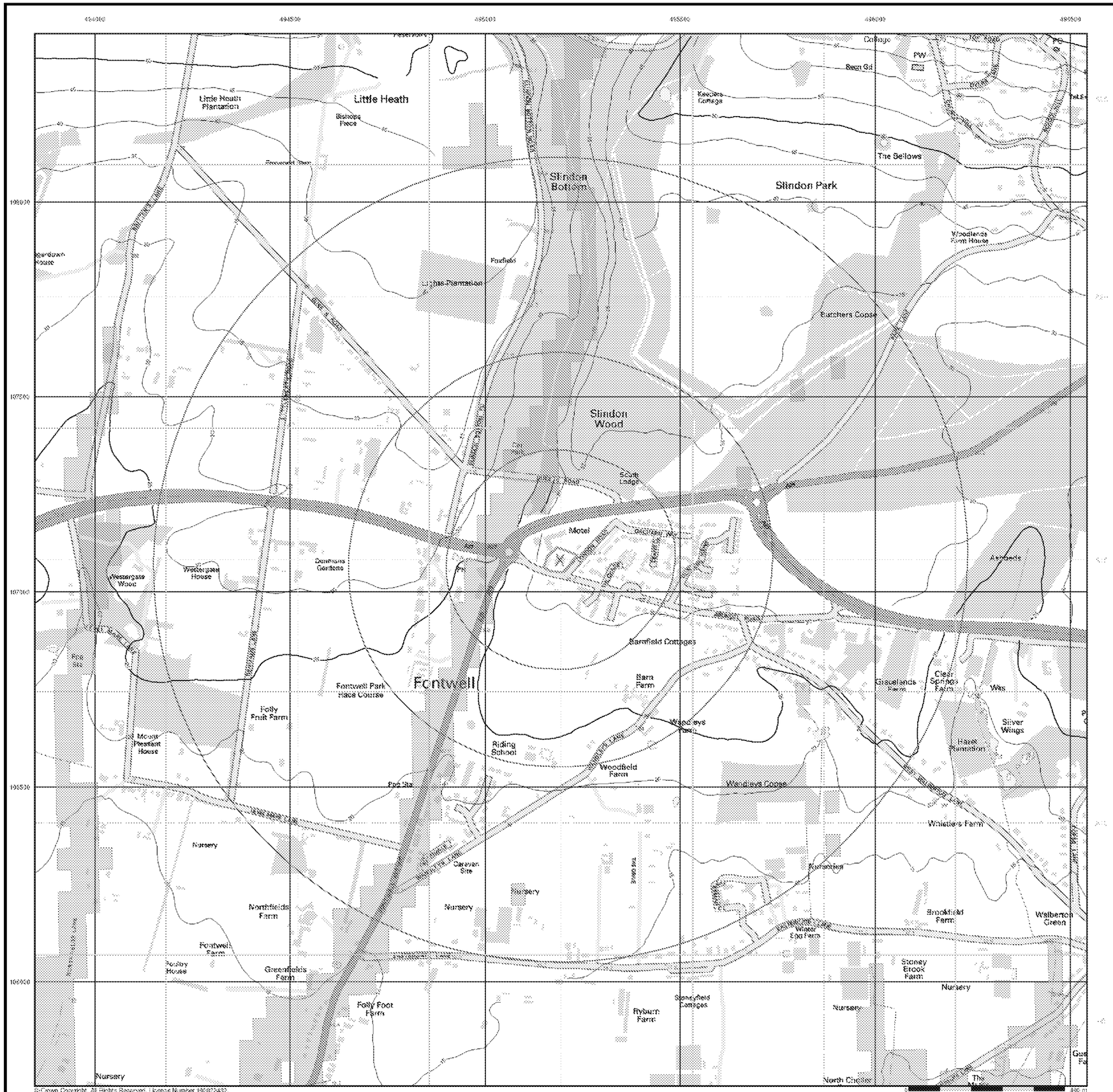
Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark Information Group

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



Envirocheck® Flood

RMS 75 year Return Flood Map (1:10,000)

General

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

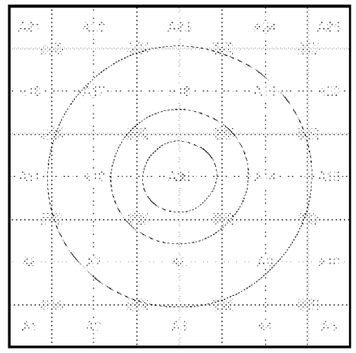
RMS 75 year Return Flood Data

Flood Depth (mm)	Flood Type: Defended Flood	Flood Type: Undefended Flood	Pluvial Flood (flood depth n/a)
0 - 200			
201 - 500			
501 - 2000			
2001 +			

Contours (height in metres)

Standard Contour — 105
Index Contour — 100
105 Spot Height
45.8 Air Height

RMS 75 year Return Flood Map - Slice A



Order Details

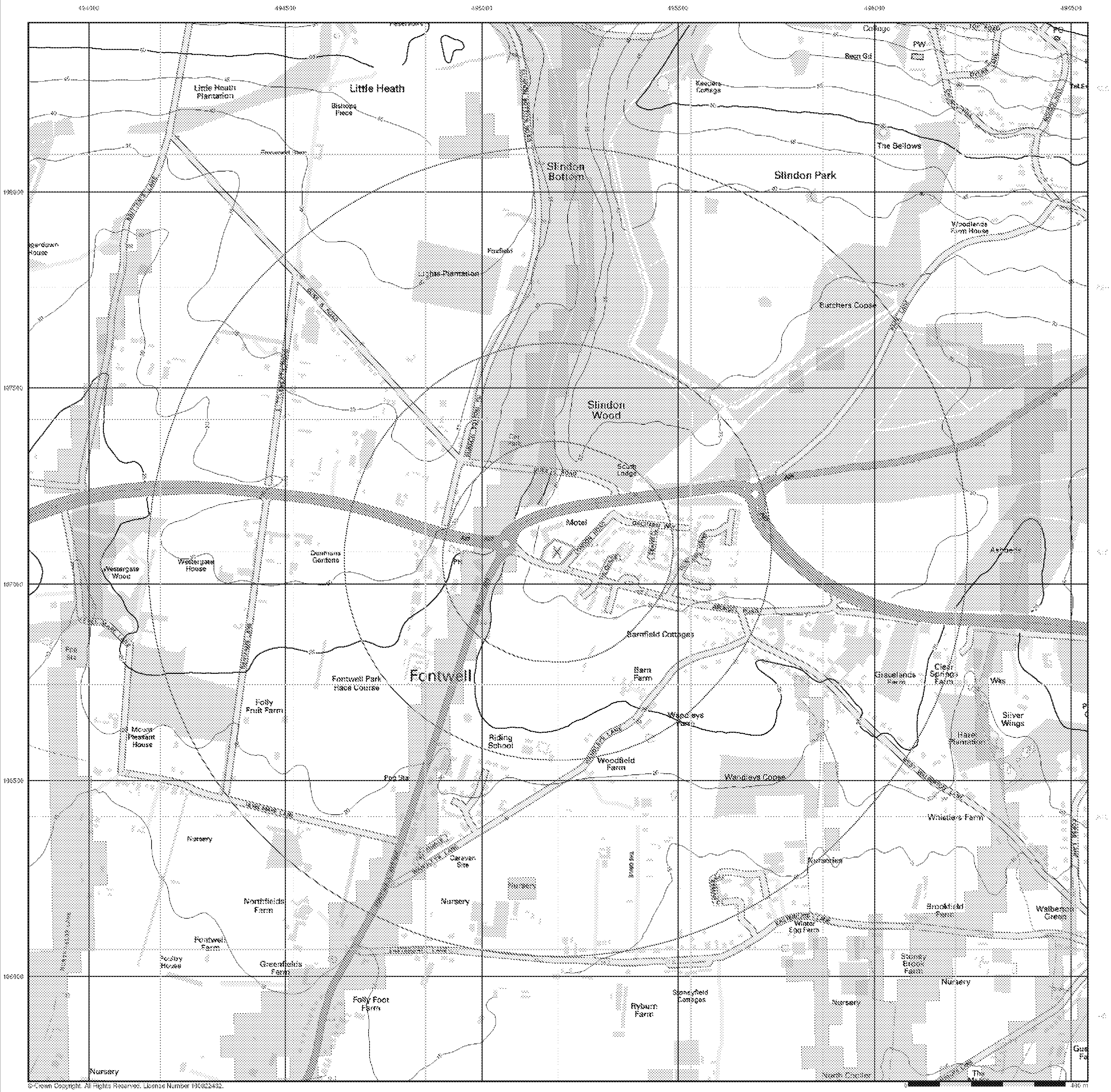
Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

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Envirocheck® Flood

RMS 100 year Return Flood Map (1:10,000)

General

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

RMS 100 year Return Flood Data

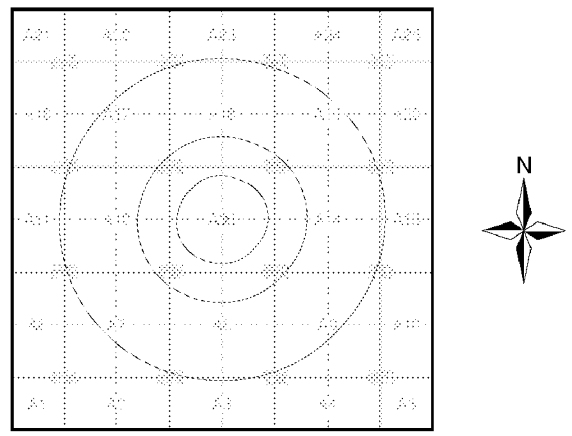
	Flood Type		
Flood Depth (mm)	Defended Flood	Undefended Flood	Pluvial Flood (flood depth n/a)
0 - 200			
201 - 500			
501 - 2000			
2001 +			

Contours (height in metres)

Standard Contour — Spot Height

Index Contour — Air Height

RMS 100 year Return Flood Map - Slice A



Order Details

Order Number: 33445435_1_1
Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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Envirocheck® Flood

RMS 1000 year Return Flood Map (1:10,000)

General

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

RMS 1000 year Return Flood Data

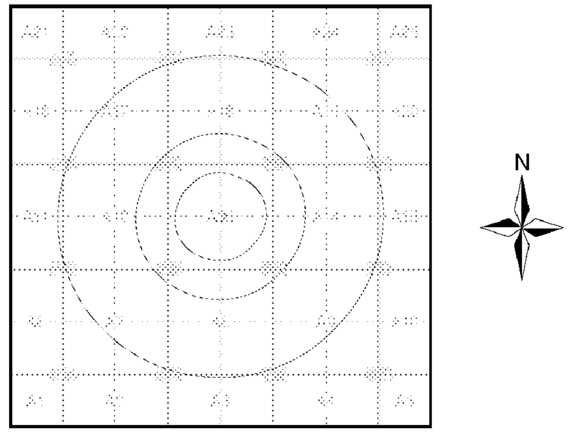
	Flood Type		
Flood Depth (mm)	Defended Flood	Undefended Flood	Pluvial Flood (flood depth n/a)
0 - 200			
201 - 500			
501 - 2000			
2001 +			

Contours (height in metres)

Standard Contour — Spot Height

Index Contour — Air Height

RMS 1000 year Return Flood Map - Slice A



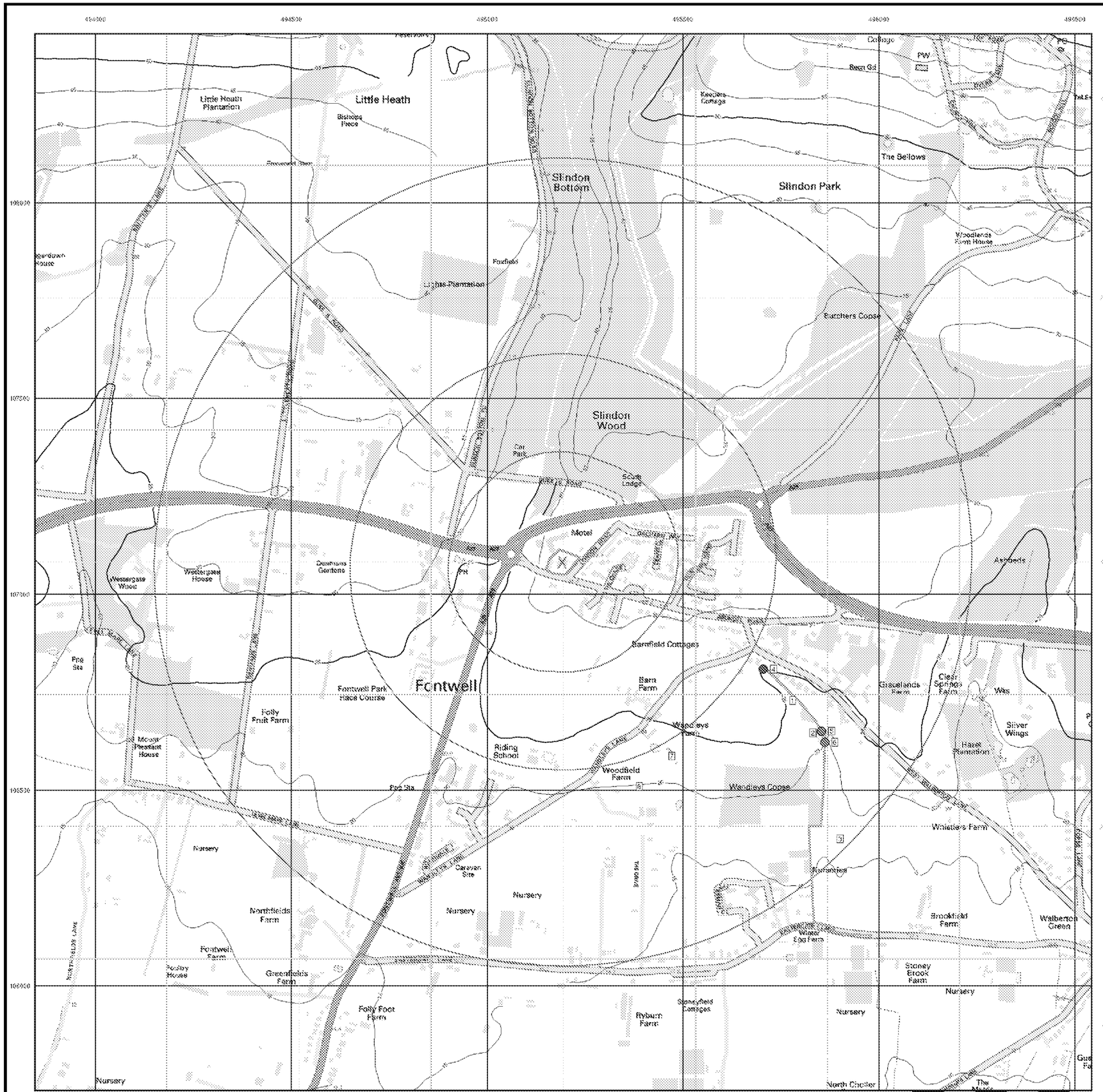
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Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

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Envirocheck® Flood

EA Detailed River Network Map (1:10,000)

General

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

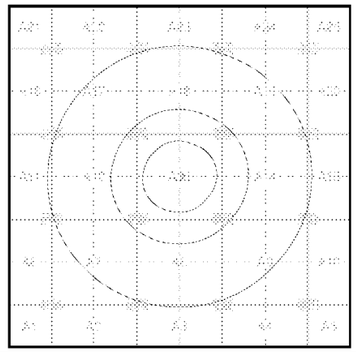
EA Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature
- Source
- Junction
- Sink
- Non-interactive Node
- Offline Drainage Feature
- Not assigned River feature
- Pseudo Node (general)
- Pseudo Node (High Water Mark)
- Pseudo Node (OS MasterMap polygon boundary)

Contours (height in metres)

Standard Contour — Index Contour — Spot Height — Air Height

EA Detailed River Network Map - Slice A



N

Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

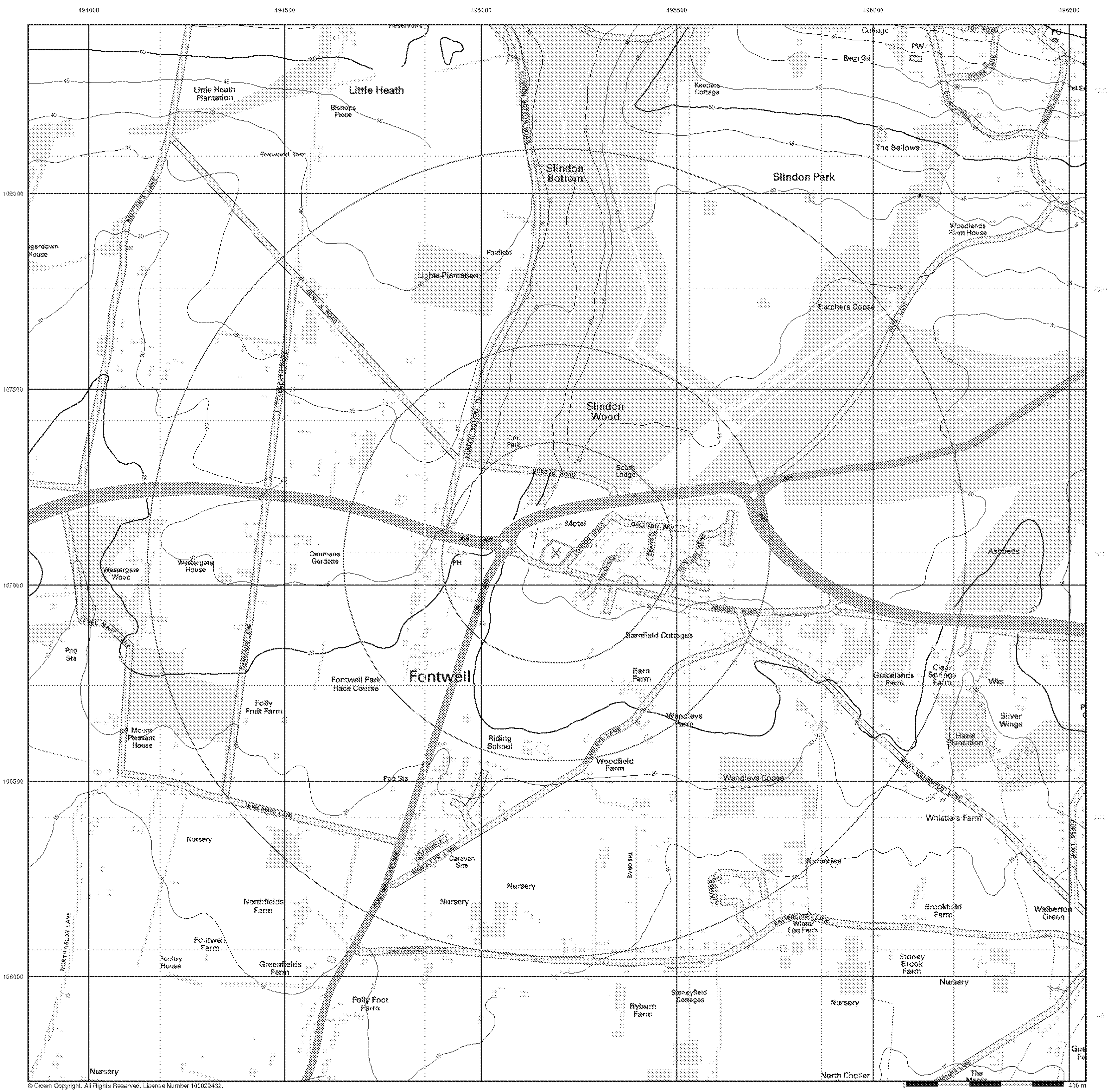
Site Details

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Envirocheck Flood

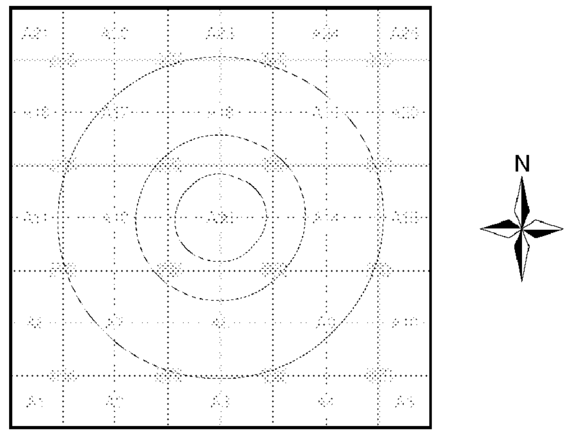
EA Historic Flood Map (1:10,000)

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

EA Historic Flood Events Data
- Channel Capacity Exceeded (no raised defences)
- Obstruction/Blockage - Culvert
- Groundwater/High Water Table
- Obstruction/Blockage - Debris Screen
- Local Drainage/Surface Water
- Operational Failure/ Breach of Defence
- Mechanical Failure
- Other
- Obstruction/Blockage - Bridge
- Overtopping of Defences
- Obstruction/Blockage - Channel
- Unknown
- Historical Flood Liabilities

Contours (height in metres)
- Standard Contour
- Index Contour
- Spot Height
- Air Height

EA Historic Flood Map - Slice A

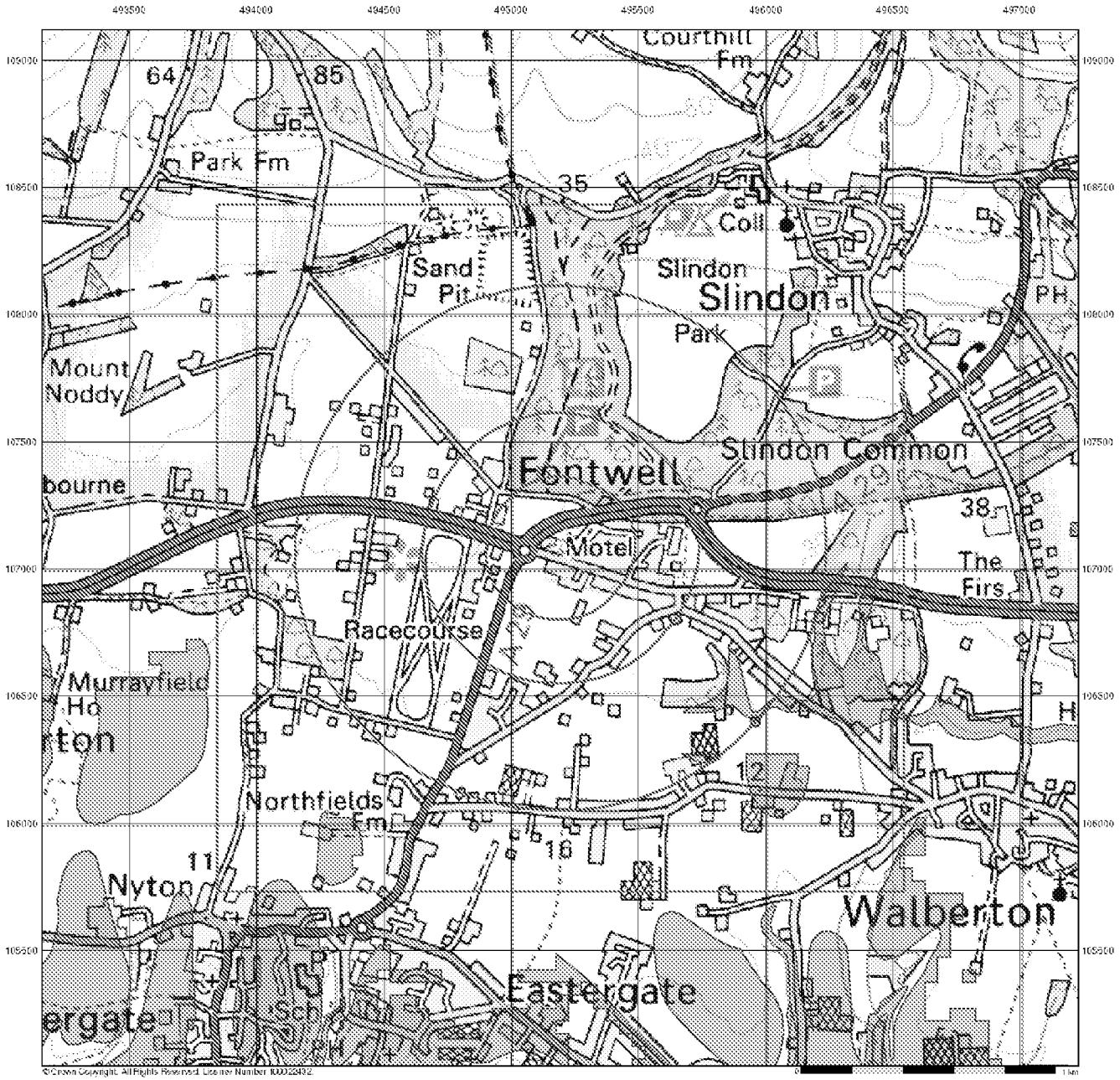


Order Details
Order Number: 33445435_1_1
Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

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BGS Flood Data (1:50,000)

General

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

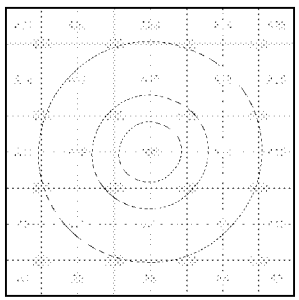
BGS Geological Indicators of Flooding

Coastal

Inland

Bodies of Water

BGS Flood Data Map - Slice A



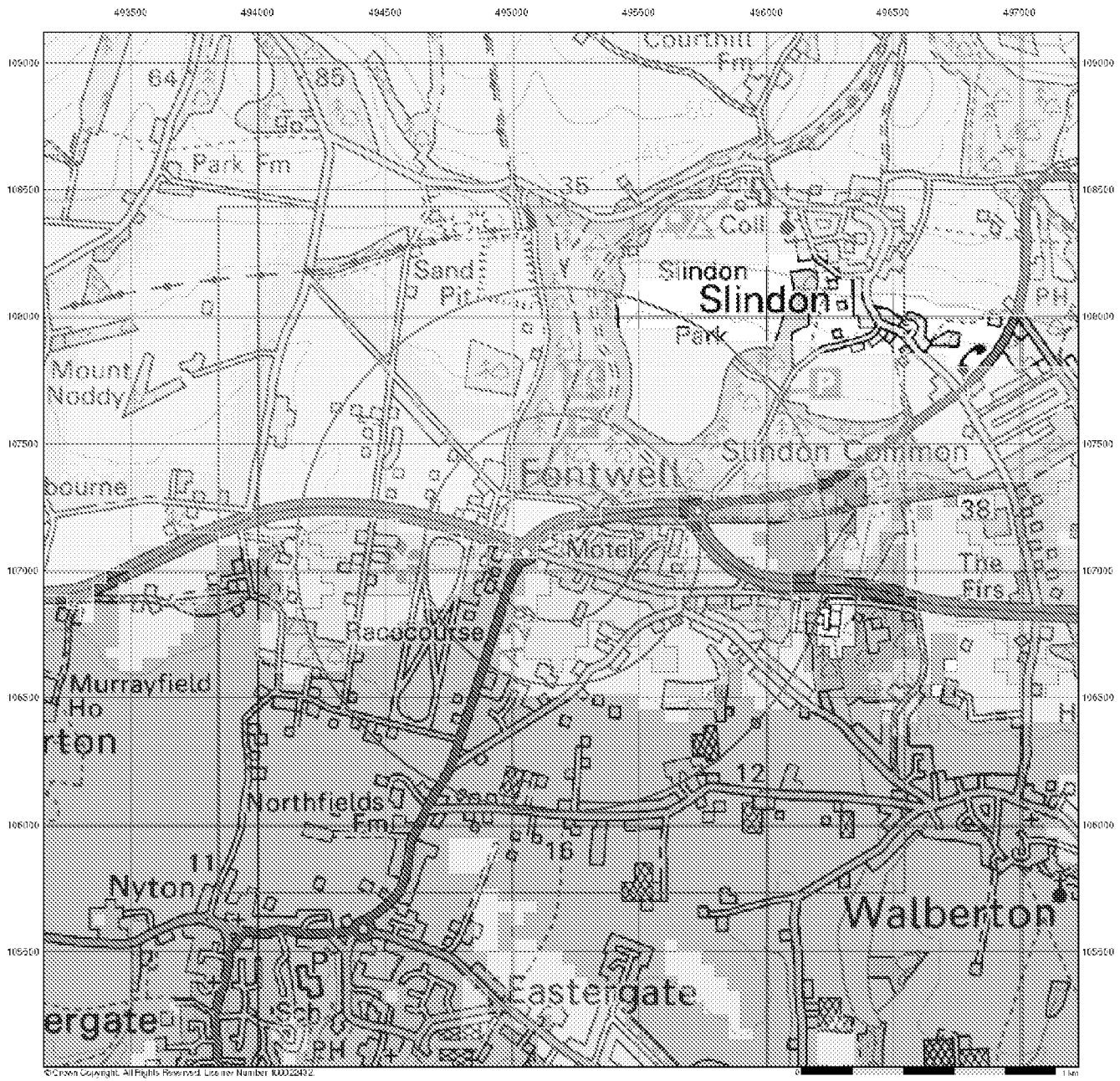
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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Envirocheck® Flood

BGS Flood Data (1:50,000)

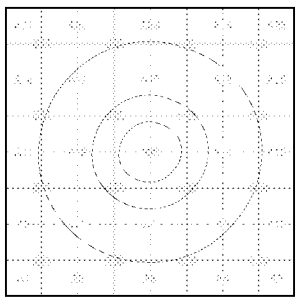
General

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

BGS Groundwater Flooding Susceptibility

- High Susceptibility
- Moderately High Susceptibility
- Moderate Susceptibility
- Low Susceptibility
- Negligible Susceptibility

BGS Flood Data Map - Slice A



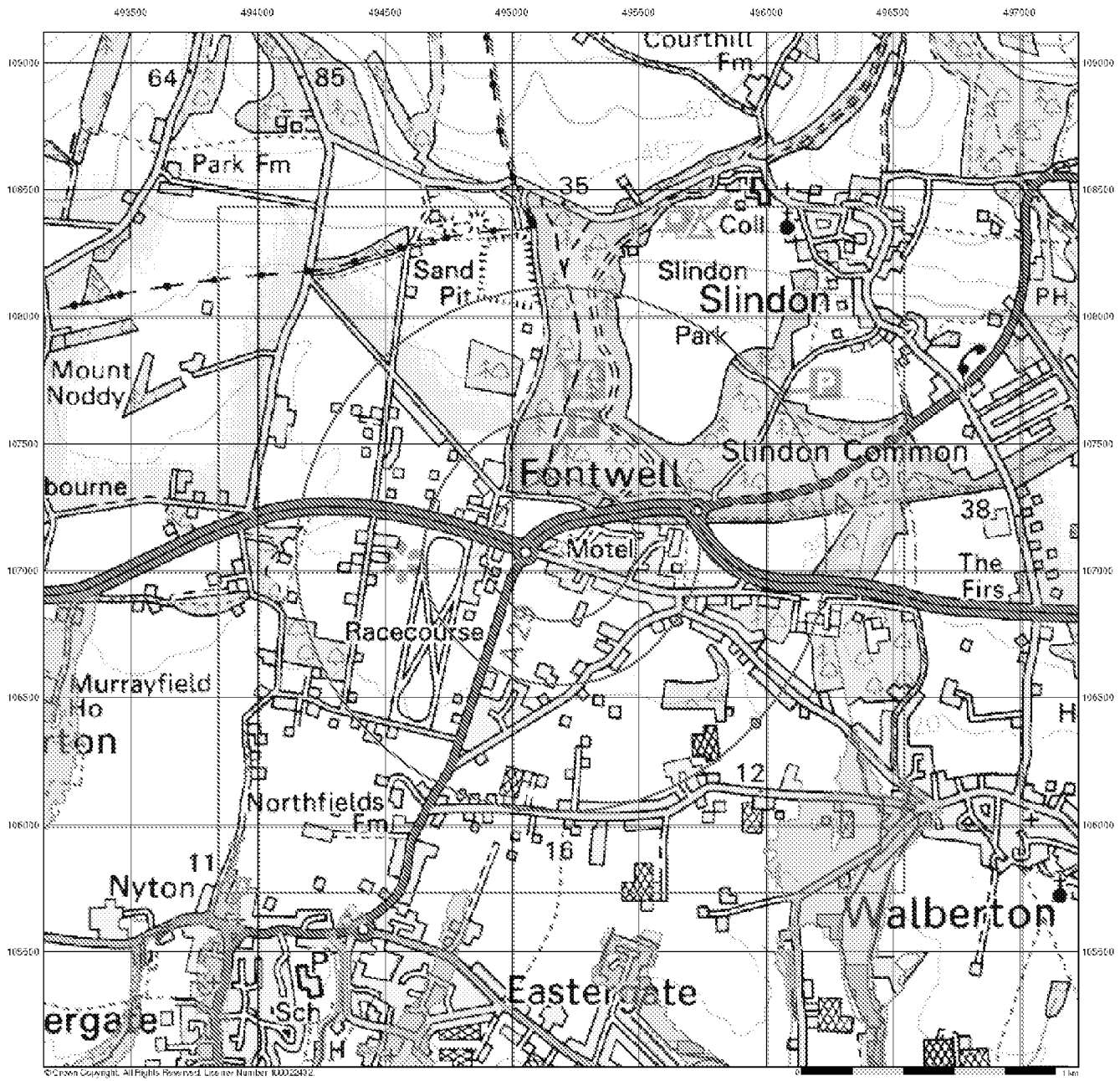
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
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Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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Envirocheck® Flood

EA NaFRA Data (1:50,000)

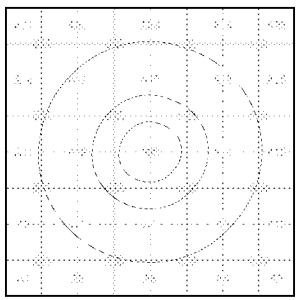
General

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

National Flood Risk Assessment (NaFRA)

- Significant Risk
- Moderate Risk
- Low Risk
- No Result

EA NaFRA Data Map - Slice A



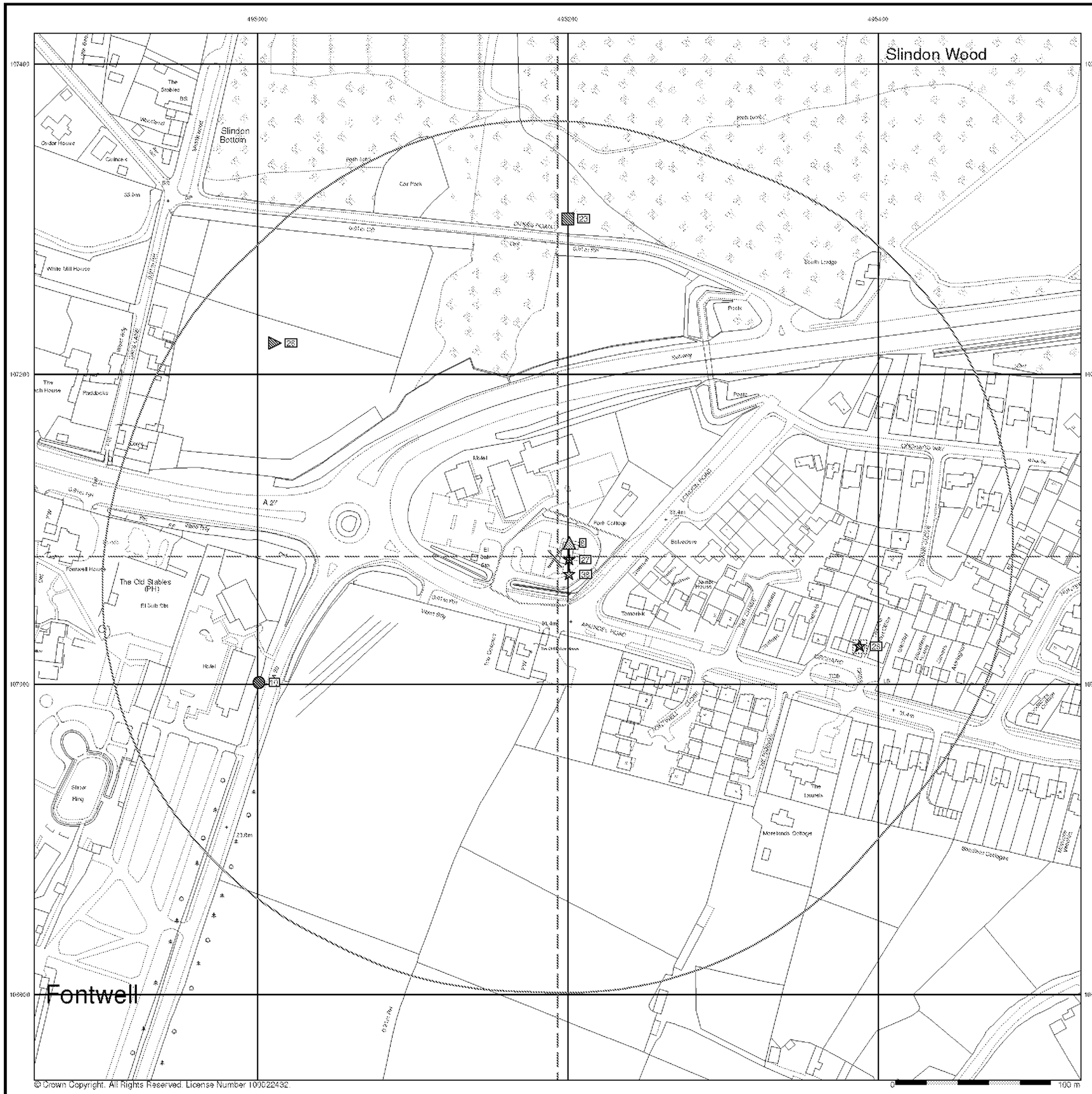
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Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark



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Envirocheck®

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

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
- 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

Geological

- BGS Recorded Mineral Site

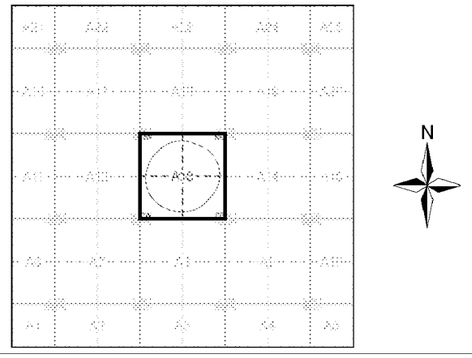
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Segment A13



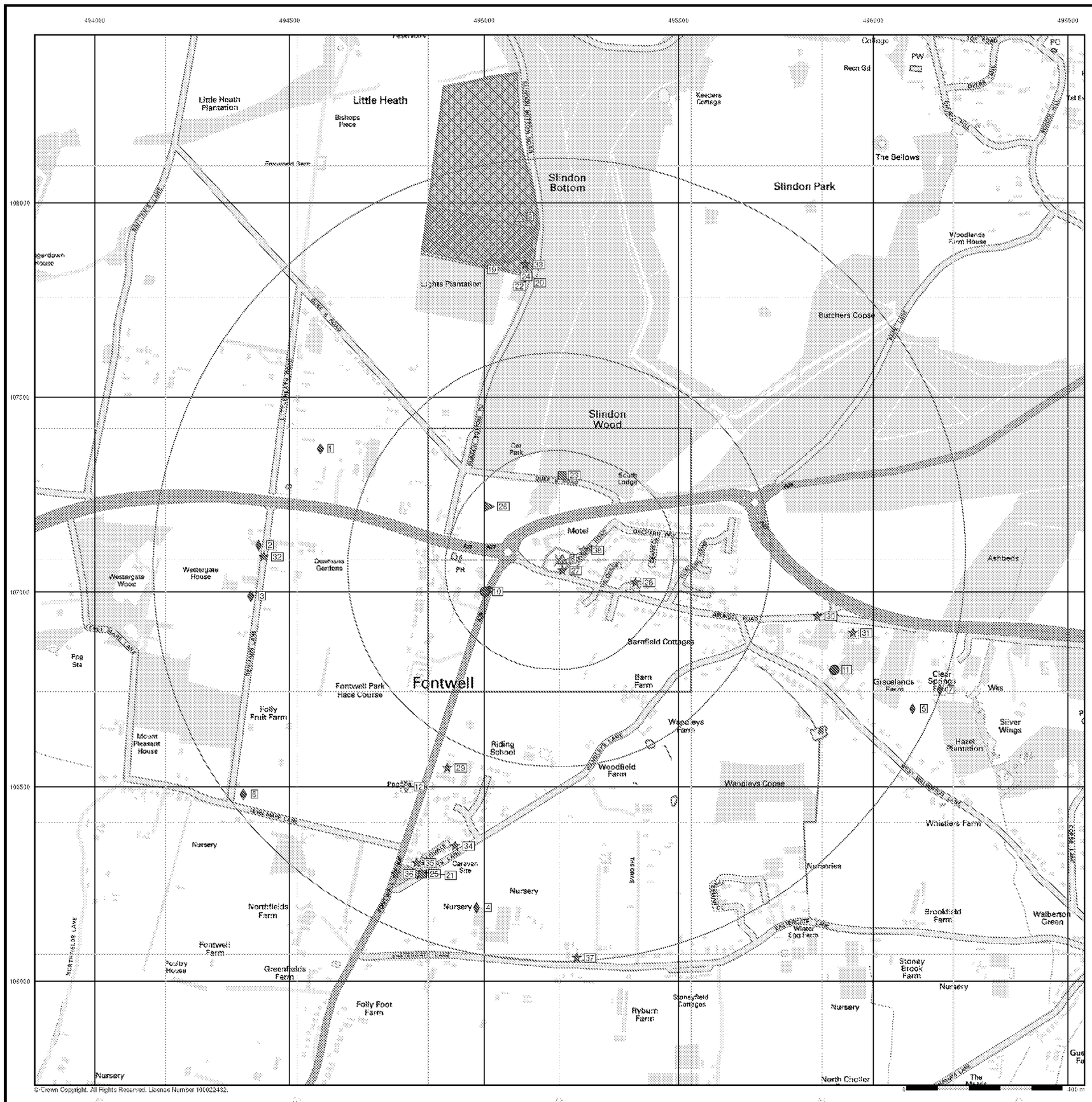
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Plot Buffer (m):	250

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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



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Envirocheck®

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

Geological

BGS Recorded Mineral Site

Industrial Land Use

Contemporary Trade Directory Entry
Fuel Station Entry

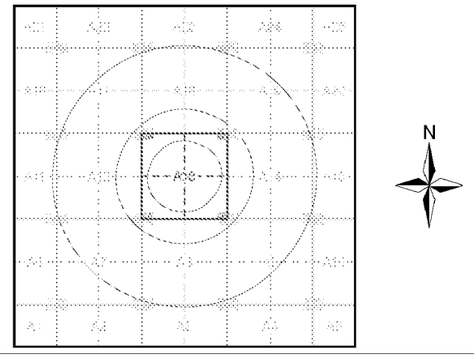
Waste

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
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

Hazardous Substances

COMAH Site
Explosive Site
NIHHS Site
Planning Hazardous Substance Consent
Planning Hazardous Substance Enforcement

Site Sensitivity Map - Slice A



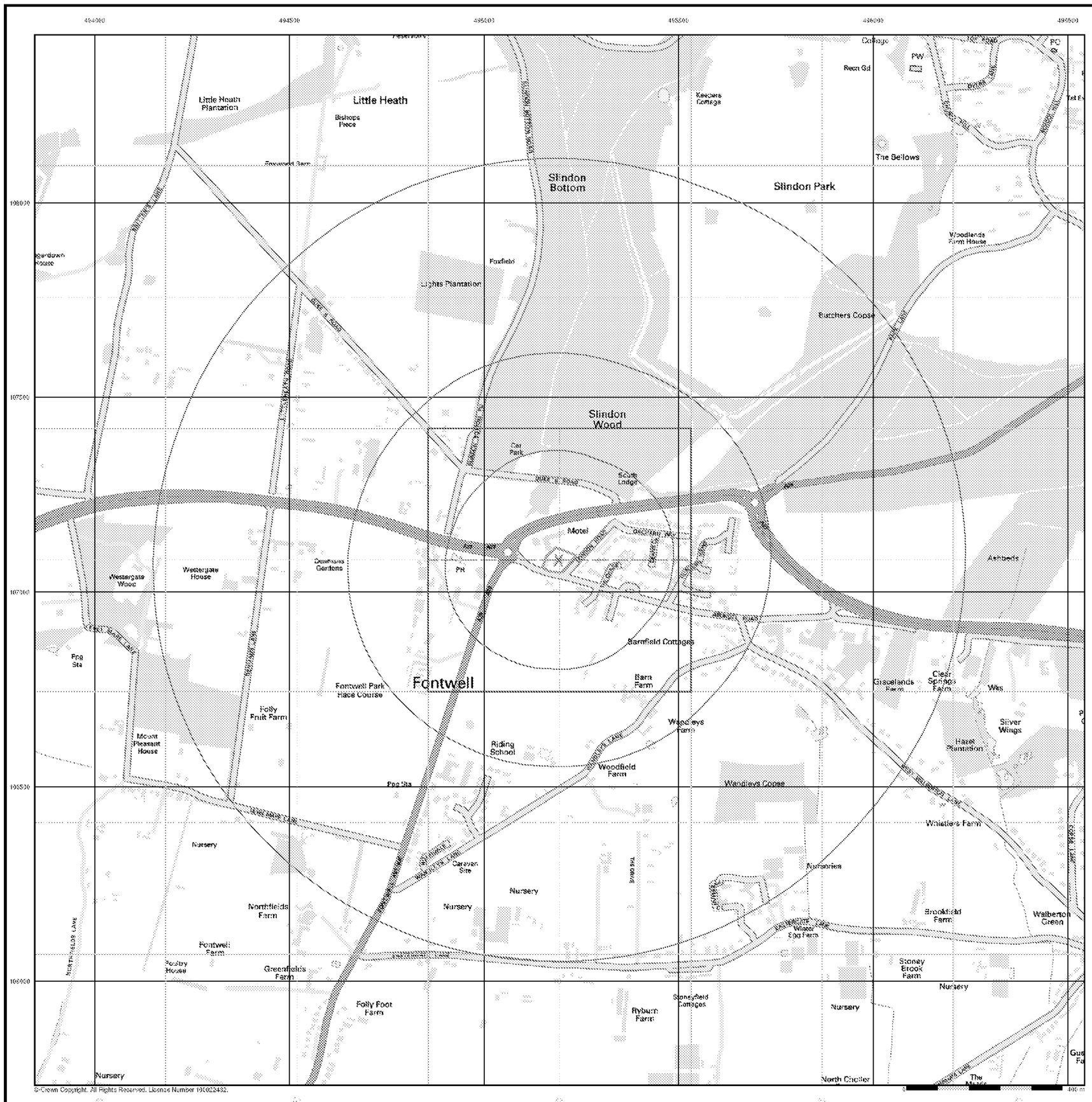
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

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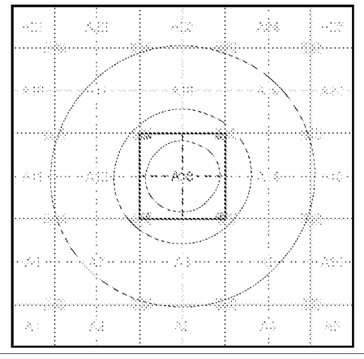
General

- 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



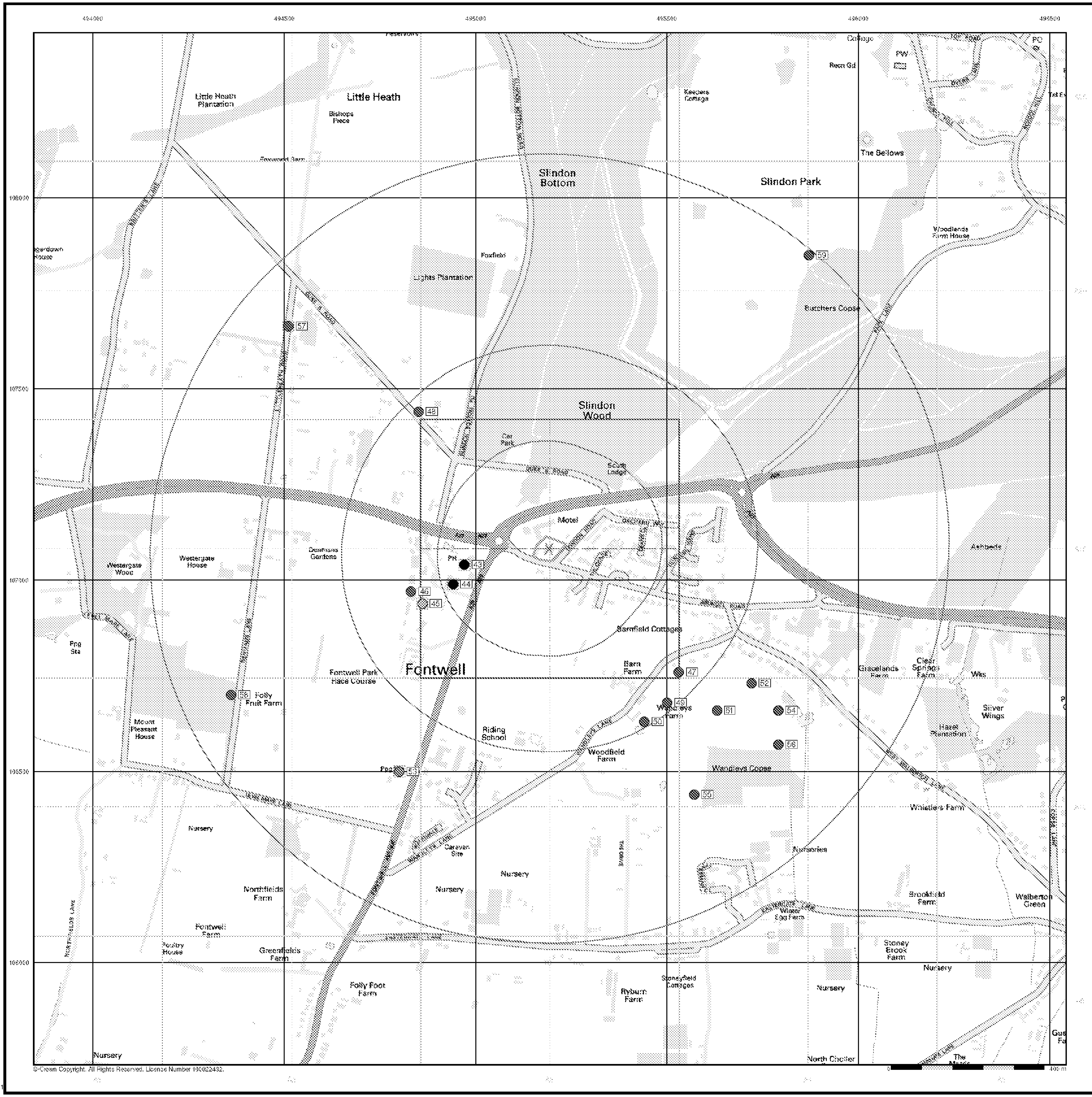
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark
Tel: 0844 844 9952
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Web: www.envirocheck.co.uk



ARUN DISTRICT COUNCIL WA/92/11

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General

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

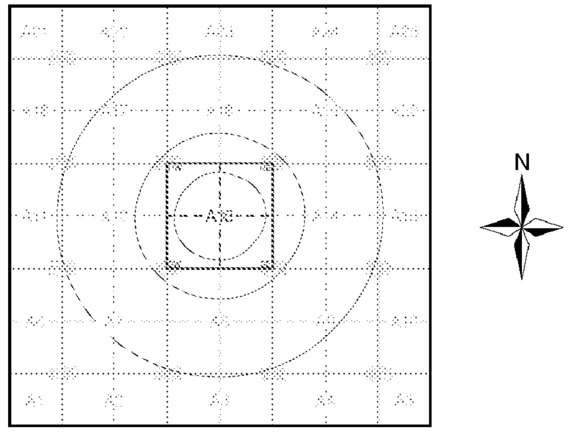
Agency and Hydrological (Boreholes)

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

For Borehole information please refer to the Borehole datasheet 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: 33445435_1_1
Customer Ref: Shell Fontwell
National Grid Reference: 495190, 107080
Slice: A
Site Area (Ha): 0.34
Search Buffer (m): 1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
33445435_1_1

Customer Reference:
Shell Fontwell

National Grid Reference:
495190, 107080

Slice:
A

Site Area (Ha):
0.34

Search Buffer (m):
1000

Site Details:

Shell Fontwell, Arundel Road
Fontwell
ARUNDEL
West Sussex
BN18 0SB

Client Details:

Ms E Corby
URS Corporation Ltd
2nd Floor, St Georges House
5 St Georges Road
London
SW19 4DR

ARUN DISTRICT COUNCIL WA/92/11/

Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	2
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	3
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	6
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
Motion Map Data (1:2,500)	8
The Motion Map Data (1:2,500) section contains data which is plotted to indicate long-term stability trends from analysis of satellite radar data.	
Historical Map List	11
The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
Data Currency	12
Data Suppliers	14
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The brine subsidence data relating to the Driotwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites					
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability			n/a	n/a	n/a
Natural Cavities	pg 1			1	
Non Coal Mining Areas of Great Britain	pg 1	Yes	Yes	n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980	pg 2		2	n/a	n/a
Subterranean Features				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents					
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits	pg 3		6		13
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 3		6		12
Potentially Infilled Land (Water)	pg 4		2	1	6

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Ground Stability Data (1:50,000)					
Brine Compensation Area			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 6	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 6	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 6	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 6	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 7	Yes	Yes	n/a	n/a
Salt Mining Related Features					
Subsidence Insurance Claims				n/a	n/a
Subsidence Investigations				n/a	n/a
Motion Map Data (1:2,500)					
Motion Map	pg 8	10	41	n/a	n/a

Report Version v47.0

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Natural Cavities Cavity Type: Sinkhole x 70 Solid Geology Detail: Upper Chalk Formation Superficial Geology Detail: Brickearth/head, Raised beach and marine deposits	A14SW (SE)	412	1	495600 106900
	Non Coal Mining Areas of Great Britain Risk: Likely Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	2	495192 107081
	Non Coal Mining Areas of Great Britain Risk: Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	6	2	495170 107109

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Extractive Industries or Potential Excavations from 1950-1980** Use: Reservoir (Disused) First Map Published Date: 1974 Last Map Published Date: N/A	A13SE (SE)	57	-	495236 107009
2	**Extractive Industries or Potential Excavations from 1950-1980** Use: Ponds First Map Published Date: 1974 Last Map Published Date: N/A	A13NW (W)	208	-	494945 107092

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A13SE (S)	54	-	495203 106998
3	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A13SE (S)	81	-	495194 106971
4	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951 - 1961	A13SE (SE)	63	-	495241 107004
5	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1899	A13NW (NW)	70	-	495102 107129
6	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A13SE (SE)	106	-	495248 106958
7	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1899	A13NE (N)	194	-	495199 107306
8	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A14NW (E)	542	-	495739 107296
9	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A14NW (NE)	592	-	495779 107329
10	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1899	A14NW (NE)	690	-	495848 107411
11	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1914	A8SW (S)	741	-	494902 106361
12	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1914 - 1961	A18NW (N)	743	-	495069 107847
13	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1880	A12NW (W)	746	-	494433 107264
14	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A14NE (E)	772	-	495994 107242
15	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1899 - 1914	A17SE (NW)	801	-	494571 107633
16	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A14NE (E)	842	-	496045 107328
17	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A8SW (S)	926	-	495170 106126
18	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1979	A18NW (N)	928	-	495057 108033
19	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A7NW (SW)	933	-	494383 106531
20	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1951	A7NW (SW)	969	-	494375 106480
21	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (S)	54	-	495203 106998
22	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (SE)	63	-	495241 107004

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13NW (NW)	70	-	495102 107129
24	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (S)	81	-	495194 106971
25	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SE (SE)	106	-	495248 106958
26	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13NE (N)	194	-	495199 107306
27	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (E)	542	-	495739 107296
28	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (NE)	592	-	495779 107329
29	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NW (NE)	690	-	495848 107411
30	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A8SW (S)	741	-	494902 106361
31	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A18NW (N)	743	-	495069 107847
32	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A12NW (W)	746	-	494433 107264
33	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NE (E)	772	-	495994 107242
34	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A17SE (NW)	801	-	494571 107633
35	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A14NE (E)	842	-	496045 107328
36	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A8SW (S)	926	-	495170 106126
37	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A7NW (SW)	933	-	494383 106531
38	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1979	A7NW (SW)	969	-	494375 106480
39	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13NE (E)	69	-	495305 107083
40	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951	A13SE (E)	165	-	495398 107060
41	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A12SE (SW)	448	-	494798 106786
42	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A8NW (S)	518	-	494996 106565
43	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A8NW (S)	560	-	494983 106525

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A7NE (SW)	605	-	494755 106603
45	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A8SW (S)	701	-	494975 106380
46	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A7NE (SW)	733	-	494719 106469
47	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A7NE (SW)	752	-	494557 106600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Brine Compensation Area The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
	Potential for Collapsible Ground Stability Hazards No Hazard				
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	2	495192 107081
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	2	495000 107081
48	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	2	495192 107081
49	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	15	2	495175 107125
50	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	103	2	495100 107175
51	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	137	2	495192 107250
52	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	2	495000 107081
53	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	151	2	495000 107050
54	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	159	2	495325 107225
55	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	194	2	495000 107200
56	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	215	2	494975 107200
57	**Potential for Ground Dissolution Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	229	2	494925 107100
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	184	2	495275 107275
58	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	2	495192 107081
59	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	2	495000 107081
60	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	2	495192 107081
61	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	2	495000 107081
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	225	2	494925 107081

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (N)	0	2	495192 107081
63	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	84	2	495075 107025
64	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	150	2	495000 107081
65	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	151	2	495000 107050
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	226	2	494925 107081

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
66	**Motion Map** Average Velocity Gradient (mmyear): -1.1	A13SW (SW)	0	-	495187 107077
66	**Motion Map** Average Velocity Gradient (mmyear): -1.1	A13SW (W)	0	-	495184 107078
66	**Motion Map** Average Velocity Gradient (mmyear): -1.4	A13NW (W)	0	-	495181 107082
66	**Motion Map** Average Velocity Gradient (mmyear): -0.7	A13NW (W)	0	-	495183 107082
67	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A13NW (N)	0	-	495191 107093
67	**Motion Map** Average Velocity Gradient (mmyear): -0.9	A13NW (NW)	0	-	495187 107089
68	**Motion Map** Average Velocity Gradient (mmyear): 1.6	A13NE (E)	0	-	495198 107083
68	**Motion Map** Average Velocity Gradient (mmyear): 2.9	A13NW (N)	0	-	495191 107085
69	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A13NW (NW)	0	-	495181 107099
70	**Motion Map** Average Velocity Gradient (mmyear): 2.2	A13SW (SW)	0	-	495160 107067
71	**Motion Map** Average Velocity Gradient (mmyear): 1.2	A13NW (NW)	8	-	495165 107106
71	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A13NW (NW)	8	-	495162 107103
71	**Motion Map** Average Velocity Gradient (mmyear): 1.4	A13NW (NW)	11	-	495166 107110
72	**Motion Map** Average Velocity Gradient (mmyear): 1.0	A13NW (W)	14	-	495143 107082
73	**Motion Map** Average Velocity Gradient (mmyear): -1.1	A13SW (S)	24	-	495189 107028
74	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A13NW (NW)	40	-	495151 107137
74	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A13NW (NW)	42	-	495152 107141
75	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A13SE (SE)	87	-	495240 106974
75	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A13SE (SE)	90	-	495244 106973
76	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A13NE (NE)	108	-	495254 107201

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A13NE (NE)	111	-	495252 107206
77	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A13SE (E)	116	-	495339 107039
78	**Motion Map** Average Velocity Gradient (mmyear): 0.9	A13NE (E)	169	-	495400 107136
79	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A13SE (E)	170	-	495386 107014
79	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A13SE (E)	172	-	495390 107017
80	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A13NE (E)	185	-	495416 107137
80	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A13NE (E)	186	-	495419 107128
80	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A13NE (E)	190	-	495423 107132
80	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A13NE (E)	192	-	495424 107135
81	**Motion Map** Average Velocity Gradient (mmyear): 1.2	A13SE (SE)	188	-	495358 106947
82	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A13NE (NE)	193	-	495412 107174
82	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A13NE (E)	196	-	495417 107169
82	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A13NE (NE)	199	-	495417 107177
83	**Motion Map** Average Velocity Gradient (mmyear): 1.7	A13SE (SE)	193	-	495360 106942
84	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A13SE (SE)	196	-	495338 106914
85	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A13SE (SE)	208	-	495377 106938
85	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A13SE (SE)	209	-	495381 106942
86	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A13NE (E)	217	-	495452 107118
87	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A13SW (W)	222	-	494930 107031
88	**Motion Map** Average Velocity Gradient (mmyear): 1.1	A13SE (SE)	228	-	495417 106955

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A13SE (SE)	235	-	495425 106953
89	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A13NW (W)	230	-	494936 107144
89	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A13NW (W)	231	-	494934 107140
89	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A13NW (W)	233	-	494931 107140
89	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A13NW (W)	235	-	494931 107145
89	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A13NW (W)	236	-	494931 107149
90	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A13SW (W)	231	-	494928 106999
91	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A13NE (NE)	234	-	495399 107262
91	**Motion Map** Average Velocity Gradient (mmyear): 1.0	A13NE (NE)	237	-	495399 107266
92	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A13NE (E)	245	-	495480 107116
92	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A13NE (E)	248	-	495483 107120

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

1:2,500	Mapsheet	Published Date
Ordnance Survey Plan	SU9406	1974
Ordnance Survey Plan	SU9407	1974
Ordnance Survey Plan	SU9506	1974
Ordnance Survey Plan	SU9507	1974

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

1:10,560	Mapsheet	Published Date
Sussex	049_00	1880
Sussex	062_00	1880
Sussex	049_SE	1899
Sussex	049_SW	1899
Sussex	062_NE	1899
Sussex	062_NW	1899
Sussex	049_SE	1914
Sussex	049_SW	1914
Sussex	062_NE	1914
Sussex	062_NW	1914
Sussex	062_NE	1951
Sussex	062_NW	1951
Ordnance Survey Plan	SU90NE	1961
Ordnance Survey Plan	SU90NW	1961
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SU90NW	1979
Ordnance Survey Plan	SU90NE	1992

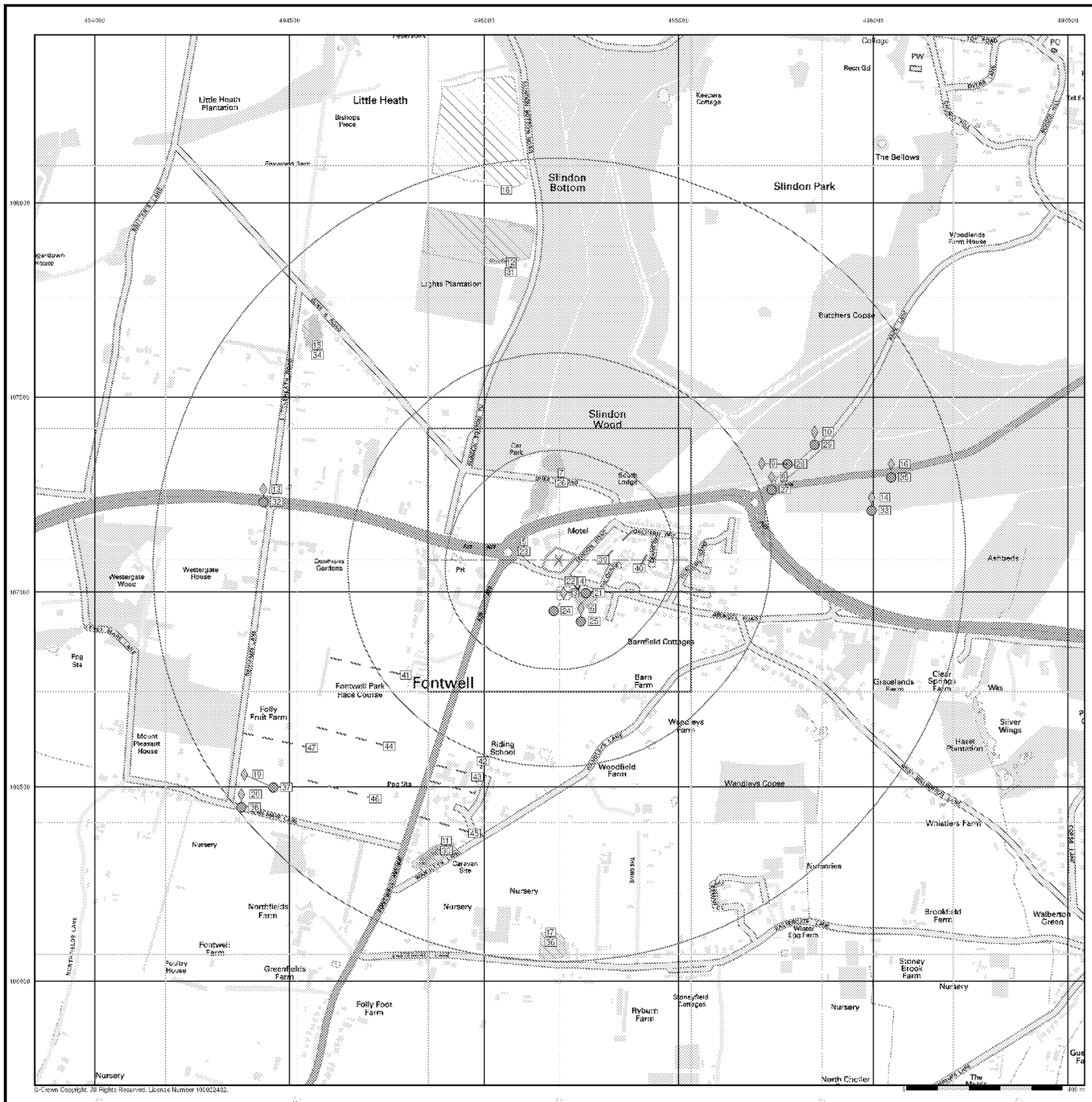
Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2010	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Mining Report Service	January 2006	As notified
Man Made Mining Cavities Peter Brett Associates	November 2010	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	November 2010	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	February 2009	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	July 2010	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	November 2002	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Subsidence Insurance Claims SP Property Services	September 2010	Quarterly
Subsidence Investigations CET Group	September 2010	Quarterly

Motion Map Data (1:2,500)	Version	Update Cycle
Motion Map		
Nigel Press Associates - Barnstaple	July 2010	As notified
Nigel Press Associates - Derbyshire	July 2010	As notified
Nigel Press Associates - Humberside	July 2010	As notified
Nigel Press Associates - Kent	July 2010	As notified
Nigel Press Associates - Lincolnshire	July 2010	As notified
Nigel Press Associates - Nottinghamshire	July 2010	As notified
Nigel Press Associates - Birmingham	May 2009	As notified
Nigel Press Associates - Bournemouth	May 2009	As notified
Nigel Press Associates - Brighton	May 2009	As notified
Nigel Press Associates - Bristol	May 2009	As notified
Nigel Press Associates - Cardiff	May 2009	As notified
Nigel Press Associates - Central London	May 2009	As notified
Nigel Press Associates - Cheltenahm	May 2009	As notified
Nigel Press Associates - Coventry	May 2009	As notified
Nigel Press Associates - Crawley	May 2009	As notified
Nigel Press Associates - Edinburgh	May 2009	As notified
Nigel Press Associates - Exeter	May 2009	As notified
Nigel Press Associates - Glasgow	May 2009	As notified
Nigel Press Associates - Isle of Wight	May 2009	As notified
Nigel Press Associates - Leeds	May 2009	As notified
Nigel Press Associates - Leicester	May 2009	As notified
Nigel Press Associates - Liverpool	May 2009	As notified
Nigel Press Associates - Manchester	May 2009	As notified
Nigel Press Associates - Milton Keynes	May 2009	As notified
Nigel Press Associates - Newcastle	May 2009	As notified
Nigel Press Associates - Northwich	May 2009	As notified
Nigel Press Associates - Nottingham	May 2009	As notified
Nigel Press Associates - Oxford	May 2009	As notified
Nigel Press Associates - Plymouth	May 2009	As notified
Nigel Press Associates - Portsmouth	May 2009	As notified
Nigel Press Associates - Preston	May 2009	As notified
Nigel Press Associates - Reading	May 2009	As notified
Nigel Press Associates - Sheffield	May 2009	As notified
Nigel Press Associates - Stoke	May 2009	As notified
Nigel Press Associates - Swindon	May 2009	As notified
Nigel Press Associates - Tonbridge	May 2009	As notified
Nigel Press Associates - North London	November 2008	As notified
Nigel Press Associates - Head Office	September 2008	As notified

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	
Johnson Poole & Bloomer	

Contact	Name and Address	Contact Details
1	**Peter Brett Associates** Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN	Telephone: 0118 950 0761 Fax: 0118 959 7498 Email: reading@pba.co.uk Website: www.pba.co.uk
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
-	**Landmark Information Group Limited** The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk



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Envirocheck® Mining

Historical Land Use Information (1:10,000)

General

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

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

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

Historical Land Use

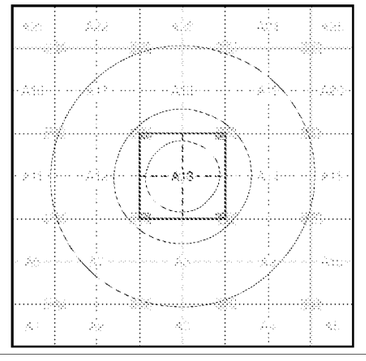
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)	●	·····	▨
Potentially Infilled Land (Water)	●	·····	▨
Former Marsh	✠		

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



Order Details

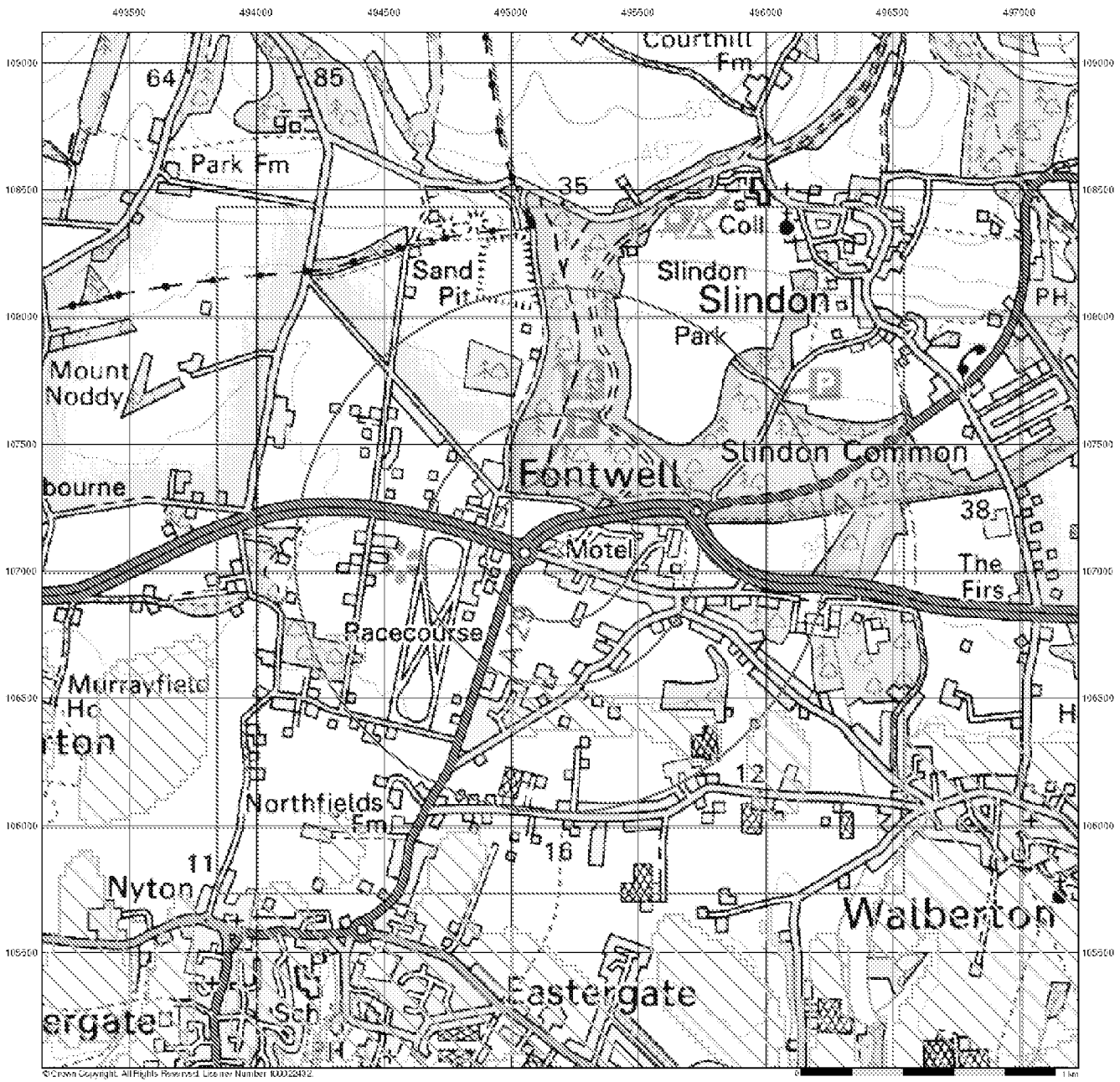
Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark Information Group

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



Envirocheck® Mining

Ground Stability Data (1:50,000)

General

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

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

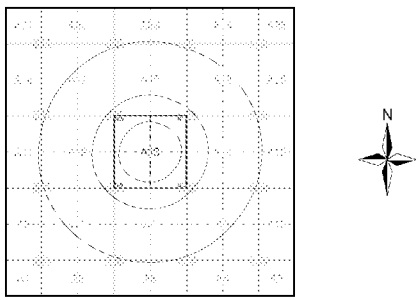
Potential for Collapsible Ground Stability Hazards

Moderate | Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice A



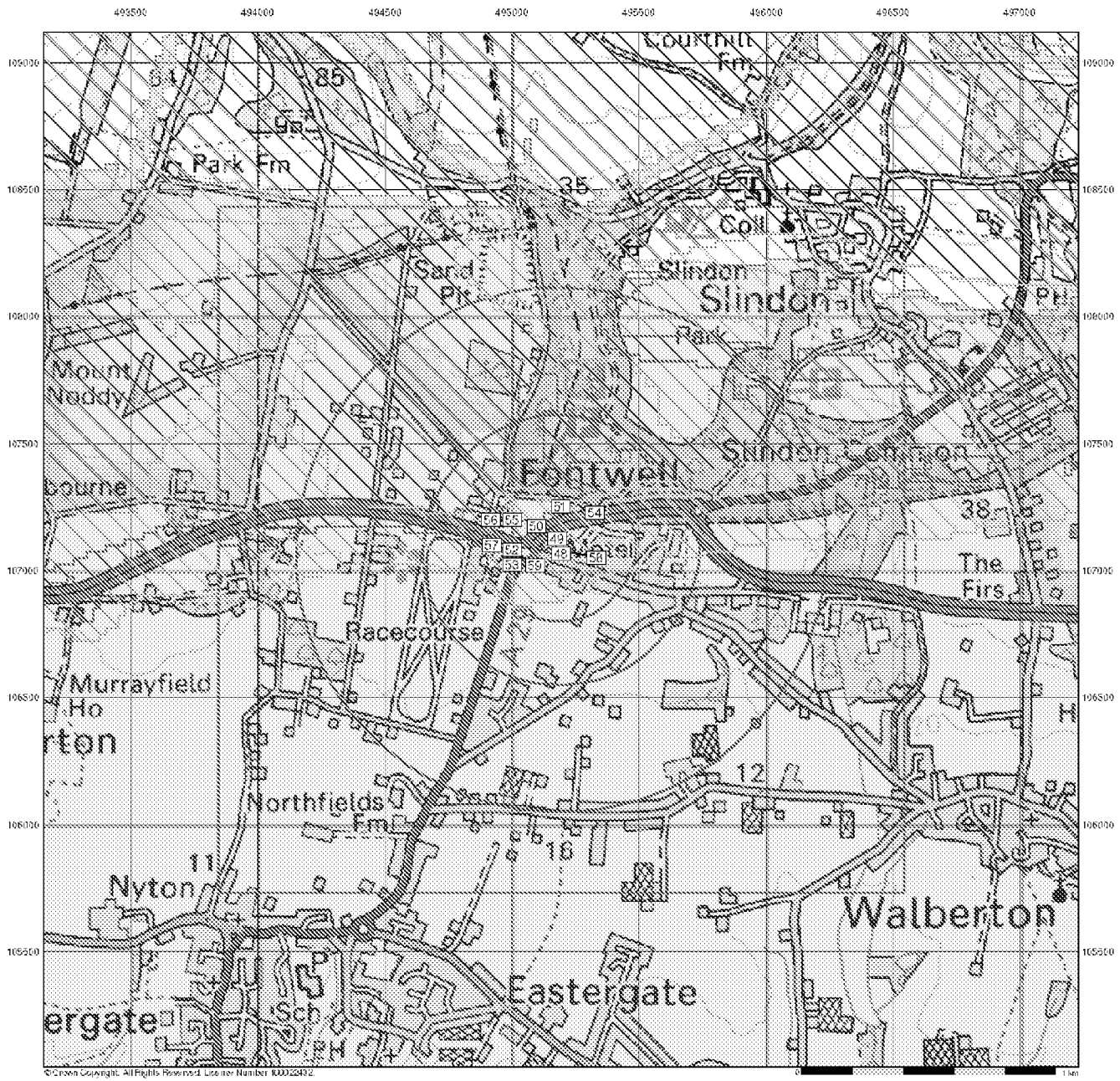
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark Information Group



Envirocheck® Mining

Ground Stability Data (1:50,000)

General

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

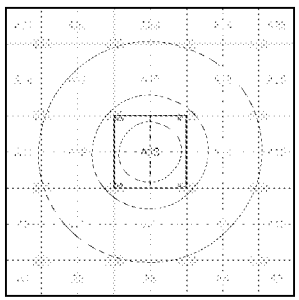
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A



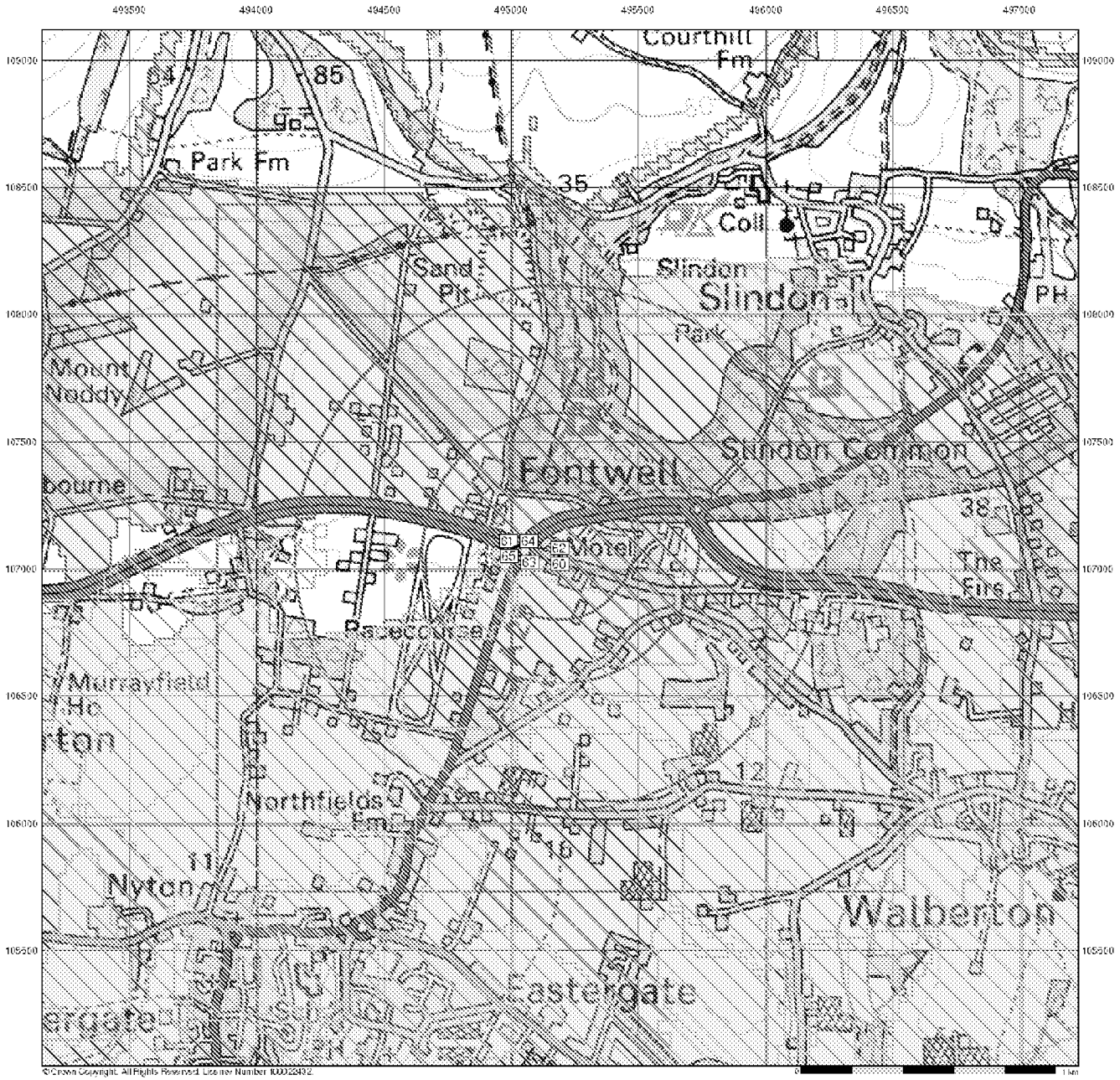
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark



Envirocheck® Mining

Ground Stability Data (1:50,000)

General

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

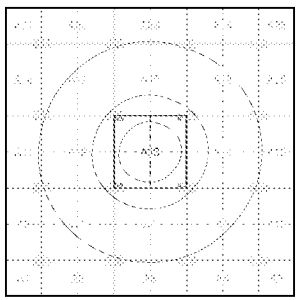
Potential for Running Sand Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A



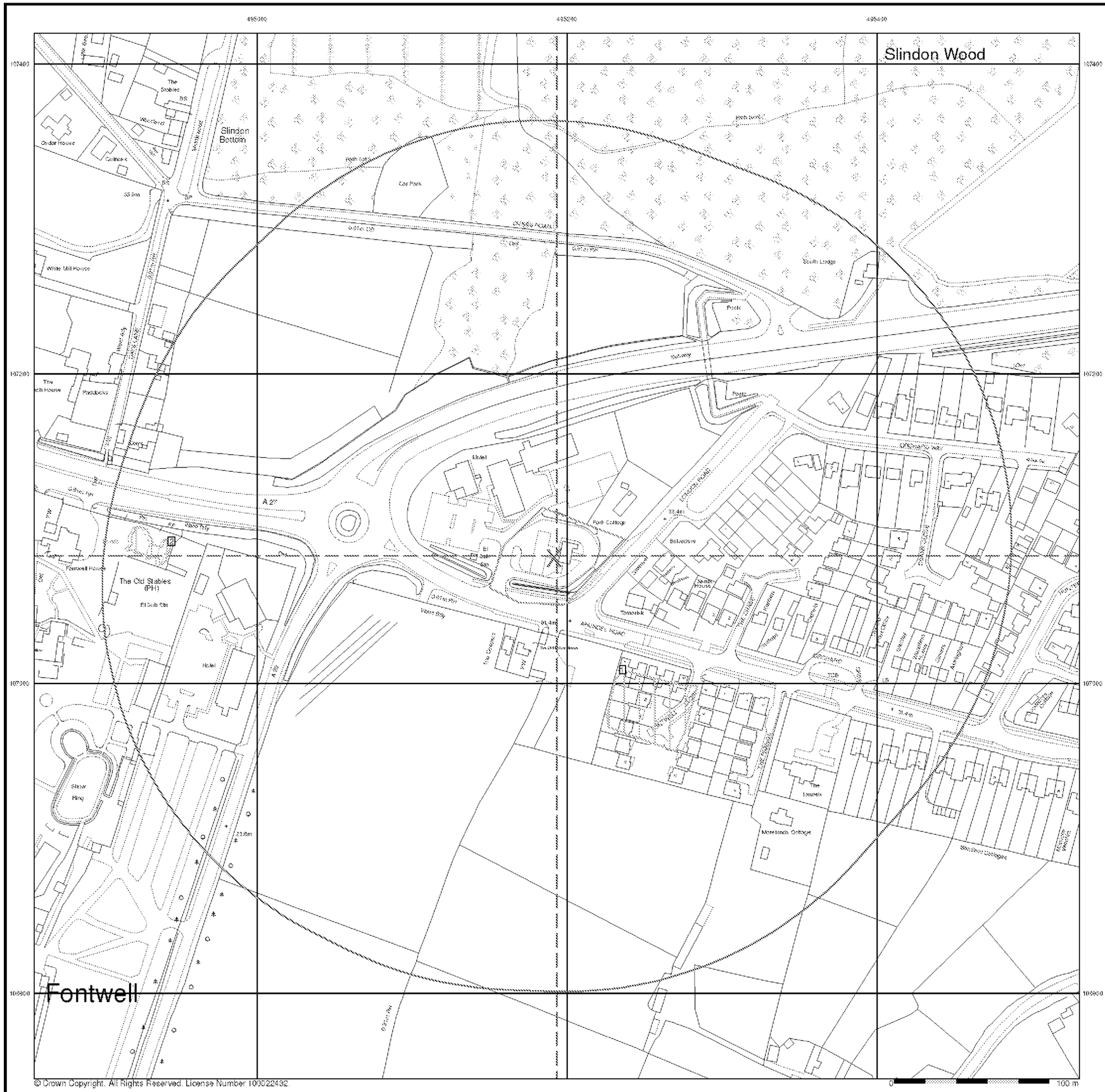
Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Search Buffer (m):	1000

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark



Envirocheck® Mining

Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID
Several of Type at Location | Pylon | Overhead Transmission Line

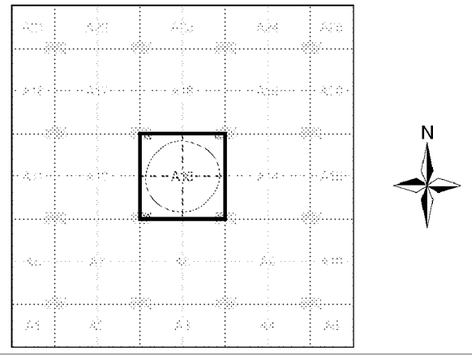
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	·····	▭
Extractive Industries Activity from 1906 - 1937	▲	·····	▭
Extractive Industries Activity from 1924 - 1949	▲	·····	▭
Extractive Industries Activity from 1950 - 1980	▲	·····	▭

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	·····	▭

Mining and Ground Stability - Segment A13



Order Details

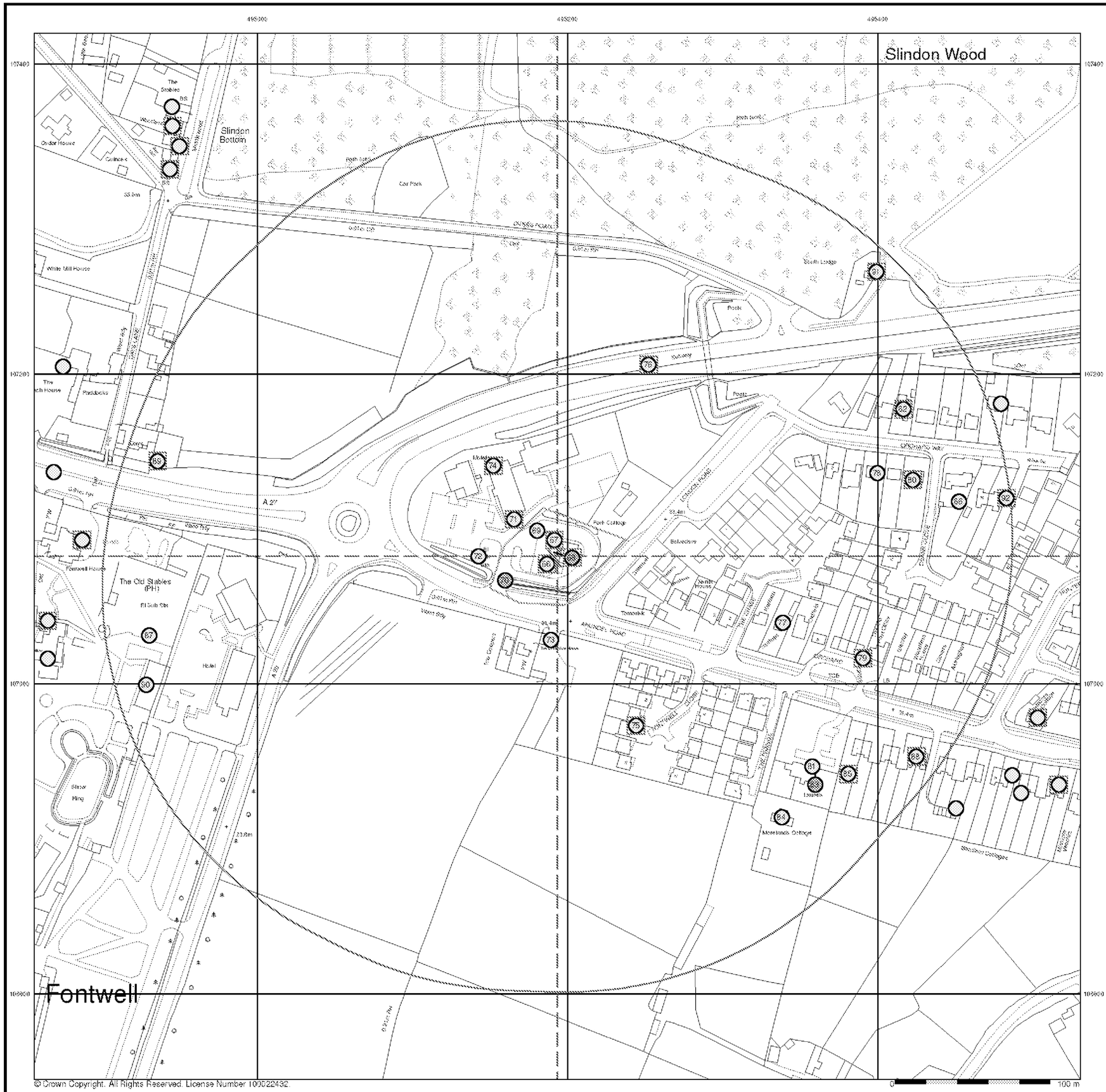
Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Plot Buffer (m):	250

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

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

ARUN DISTRICT COUNCIL WA/92/11



Envirocheck® Mining

Motion Map Data (1:2,500)

General

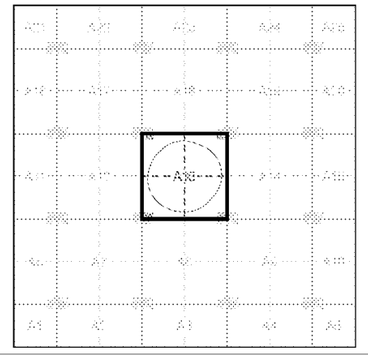
Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location | Pylon | Overhead Transmission Line

Average Velocity Gradient

Upward Movement > 3.5mm per year	
Upward Movement 1.5mm to 3.5mm per year	
Stable 1.5mm to -1.5mm per year	
Downward Movement -1.5mm to -3.5mm per year	
Downward Movement > -3.5mm per year	

Mining and Ground Stability - Segment A13



Order Details

Order Number:	33445435_1_1
Customer Ref:	Shell Fontwell
National Grid Reference:	495190, 107080
Slice:	A
Site Area (Ha):	0.34
Plot Buffer (m):	250

Site Details

Shell Fontwell, Arundel Road, Fontwell, ARUNDEL, West Sussex, BN18 0SB

Landmark Information Group

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

Appendix E - BGS Logs

ARUN DISTRICT COUNCIL WA/92/11/

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

GeoRecords Plus+

thomas eastgate
urs corp
st georgess house
wimbledon
london
sw19 4dr
United Kingdom

Borehole Data Pack:

This package provides additional data relating to your selected borehole record ordered via GeoRecordsPlus. It provides index listings of other information held in some key BGS databases for your site and a geological map extract for the surrounding area, taken from the 1:50.000 scale BGS digital geological map of Great Britain (DiGMapGB-50).

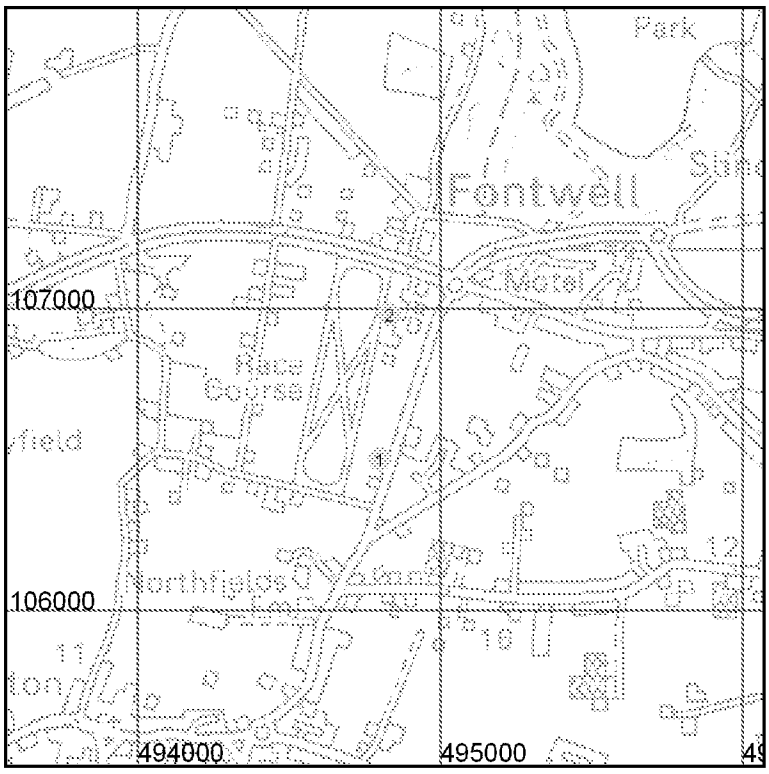
It should be noted that this package is not a comprehensive listing of all BGS data holdings and other data may be available. Note that index data is also accessible through the BGS Internet Geoscience Data Index on the BGS website at www.bgs.ac.uk If you wish to place an order for any of the index data please e-mail enquiries@bgs.ac.uk

Report Id: *BH_116487_1*

Client reference: Fontwell

Borehole location map

This map shows the locations of the boreholes you have ordered.



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Scale: 1:25 000 (1cm = 250 m)

Key

Number on Map	Borehole Number
1	SU90NW6 A
2	SU90NW144

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Geological Map Extracts

This part of the pack contains extracts of geological maps taken from the 1:50 000 scale BGS Digital Geological Map of Great Britain (DiGMapGB-50). The geological information in DiGMapGB is separated into four themes: artificial ground, landslide deposits, superficial deposits and bedrock, shown here in separate maps. The fifth 'combined geology' map superimposes all four of these themes, to show the geological formations that occur at the surface, just beneath the soil.

More information about DiGMapGB-50 and how the various geological units are classified can be found on the BGS website (www.bgs.ac.uk). The maps are labelled with two-part computer codes that indicate the name of the geological unit and its composition. Descriptions of the units listed in the map keys may be available in the BGS Lexicon of Named Rock Units, which is also on the BGS website (http://www.bgs.ac.uk/lexicon/). If available, these descriptions can be found by searching against the first part of the computer code used on the maps. Please treat this labelling with caution in areas of complex geology, where some of the labels may overlap occurrences of several geological formations. If in doubt, please contact BGS Enquiries for clarification.

In the map keys the geological units are listed in order of their age, as defined in the BGS Lexicon, with the youngest first. However, where units are of the same defined age they are listed alphabetically and this may differ from the actual geological sequence.

Artificial ground: This is ground at or near the surface that has been modified by man. It includes ground that has been deposited (Made Ground), landscaped, disturbed, excavated (Worked Ground) or some combination of these.

Landslide deposits: These are deposits formed by localised mass-movement of soils and rocks on slopes under the action of gravity. Landslides may occur within the bedrock, superficial deposits or artificial ground; and the landslide deposits may themselves be artificially modified.

Superficial deposits: These are relatively young geological deposits, formerly known as 'Drift', which lie on the bedrock in many areas. They include deposits such as unconsolidated sands and gravels formed by rivers, and clayey tills formed by glacial action. They may be overlain by landslide deposits or by artificial deposits, or both.

Bedrock: Bedrock forms the ground underlying the whole of an area, commonly overlain by superficial deposits, landslide deposits or artificial deposits, in any combination. The bedrock formations were formerly known as the 'Solid Geology'.

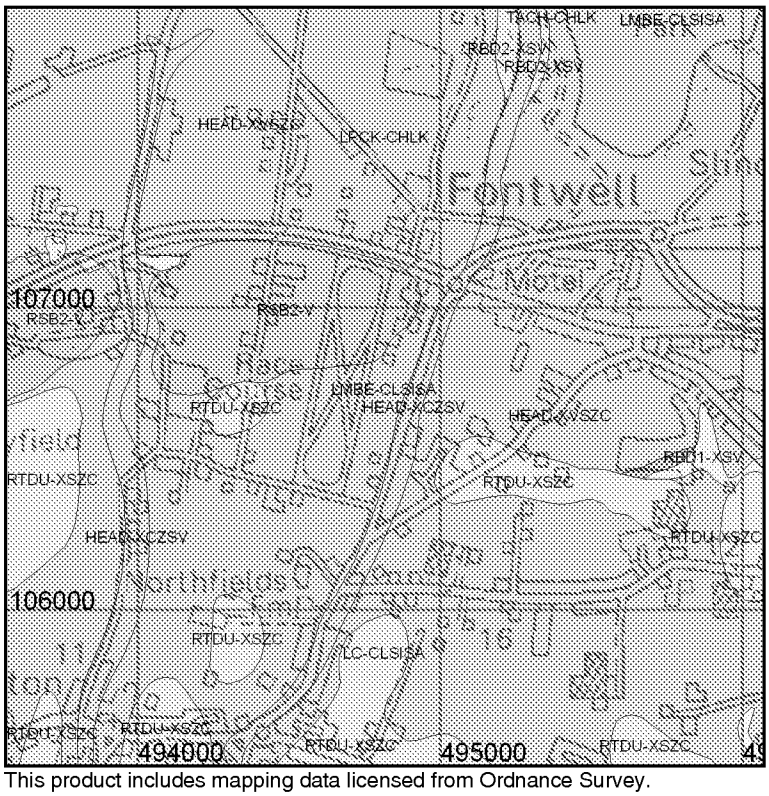
Combined 'Surface Geology' Map: This map shows all the geological themes from the previous four maps overlaid in order of age.

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Combined 'Surface Geology' Map

This map shows the surface elements of all four geological layers. Please see keys to the Artificial, Landslide, Superficial and Bedrock geology maps



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Scale: 1:25 000 (1cm = 250 m)

Fault

Coal, ironstone or other mineral vein

Note: Faults and Coals, ironstone & mineral veins are shown for illustration and to aid interpretation of the map. Not all such features are shown and their absence on the map face does not necessarily mean that none are present

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Key to Artificial ground:

No deposits found in the search area

Key to Landslide deposits:

No deposits found in the search area

Key to Superficial deposits:

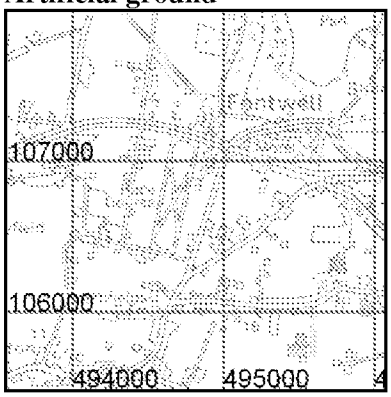
Map colour	Computer Code	Name of geological unit	Composition
	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
	HEAD-XVSZC	HEAD	GRAVEL, SAND, SILT AND CLAY
	RBD1-XSV	RAISED BEACH DEPOSITS, 1	SAND AND GRAVEL
	RBD2-XSV	RAISED BEACH DEPOSITS, 2	SAND AND GRAVEL
	RSB2-V	RAISED STORM BEACH DEPOSITS, 2	GRAVEL
	RTDU-XSZC	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND, SILT AND CLAY

Key to Bedrock geology:

Map colour	Computer Code	Name of geological unit	Rock type
	LC-CLSISA	LONDON CLAY FORMATION	CLAY, SILT AND SAND
	LMBE-CLSISA	LAMBETH GROUP	CLAY, SILT AND SAND
	TACH-CHLK	TARRANT CHALK MEMBER	CHALK
	LPCK-CHLK	LEWES NODULAR CHALK FORMATION, SEAFORD CHALK FORMATION, NEWHAVEN CHALK FORMATION, CULVER CHALK FORMATION AND PORTSDOWN CHALK FORMATION (UNDIFFERENTIATED)	CHALK

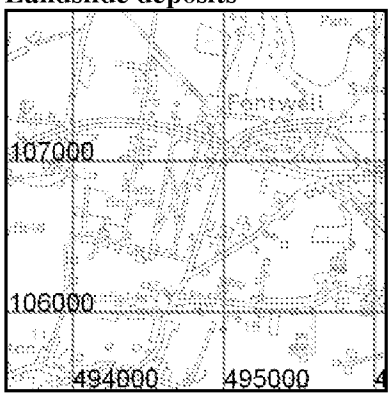
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Artificial ground



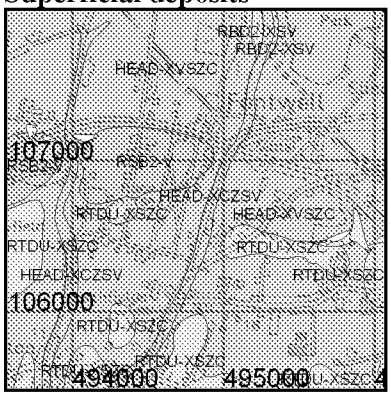
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Landslide deposits



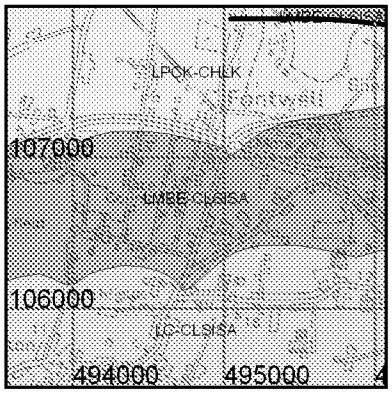
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Superficial deposits



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Bedrock



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Please see key on previous page.

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Geoscience Data List

List of available geological data

This section lists the data sets, in addition to boreholes and well records, that are held in the National Geoscience Records Centre that are relevant to your enquiry. Users with access to computing facilities can make their own index searches using the BGS Internet; go to 'Online shops' at www.bgs.ac.uk This will give access to the BGS Bookshop, Publications catalogue, GeoRecords (borehole browser) and GeoReports.

If you want to order any of the data please contact enquiries on enquiries@bgs.ac.uk. For current pricing see internet pages above or do not hesitate to contact us using the list found at the back of this pack.

Note that this list contains selective datasets and is not a definitive listing of all data held in BGS

Site investigation reports

Number of records in search area: 5

Additional laboratory and test data may be available in these reports, subject to any copyright and confidentiality conditions. The grid references used are based on an un-refined rectangle and therefore may not be applicable to a specific site. Borehole records in these reports will be individually referenced within the borehole records collection.

Number	Site investigation title
79	A27 BINSTED LANE TO SCOTLAND BARN
3893	LITTLEHEATH ROAD FONTWELL
7123	FONTWELL PARK RACE COURSE WEST SUSSEX
12154	A27 ARUNDEL BYPASS
54069	FONTWELL RACECOURSE ARUNDEL

National Grid geological maps (1:10 000 and 1:10 560 scale)

Number of records in search area: 2

Map	Type	Survey
SU90NE	C	1982
SU90NW	C	1981

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County Series geological maps (1:10 560 scale)

Number of records in search area: 6

Map	Type	Published
Sussex49FS	C	0
Sussex49SE		1890
Sussex49SW		1890
Sussex62FS	C	0
Sussex62NE		1885
Sussex62NW		1885

New Series medium scale geological maps (1:50 000 and 1:63 360 scale)

Number of records in search area: 2

Sheet number	Sheet name	Type	Published
317	Chichester	D	1902
317		X	0

Old Series one inch geological maps (1:63 360 scale)

Number of records in search area: 1

Sheet number	Sheet name	Type	Published
9	Brighton	D	1893

Hydrogeological maps (various scales)

Number of records in search area: 1

Map	Scale
South Downs	1:100,000

Geological Memoirs

Number of records in search area: 2

Geological memoir	Date
Chichester	1903
Chichester / Bognor	2002

Technical reports

Technical reports may be available for this area. Please see http://geolib.bgs.ac.uk

Waste sites

Number of records in search area: 1

Listing of some 3500 waste sites for England and Wales identified by BGS as part of a survey carried out on behalf of the Department of the Environment in 1973. Later information may be available from the Local authority.

Site Number	Site Name	Grid Reference
2563	Slindon Tip, Slindon Bottom, Fortwell, Arundel	SU 950079

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Mining plans

Number of records in search area: 1

This listing includes plans of various types, principally relating to mining activity including abandonment plans. The coverage is not comprehensive; however that for Scotland is most complete.

Record Type	Plan No.	Title
KP	18191	WESTPHALIAN A & B OF THE COALFIELDS OF ENGLAND & WALES (INCLUDING CANONBIE)

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