

GROUND INVESTIGATION REPORT
for the land at
ST MICHAEL'S CONVENT, VILLA GARDENS,
WATERLOOVILLE, PO7 7RZ
on behalf of
LINDEN HOMES SOUTHERN LIMITED





Report: GROUND INVESTIGATION REPORT
Site: LAND AT ST MICHAEL'S CONVENT, VILLA GARDENS, WATERLOOVILLE
Client: LINDEN HOMES SOUTHERN LIMITED
Date: 25 JANUARY 2012
Reference: GE8472/GIR
Version: 1.0

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APPENDIX D:	Ground Gas and Groundwater Monitoring
APPENDIX E:	Geotechnical Testing Results
APPENDIX F:	Contamination Testing Results



EXECUTIVE SUMMARY	
Scope of works	To undertake a combined geotechnical and environmental ground investigation with associated interpretation and assessment.
Form of Development	Demolition of the majority of existing structures associated with the convent, retention and refurbishment of the church and main convent buildings and development of the grounds for housing.
Site Description	The site comprised an irregularly shaped parcel of land occupied by a convent, church and ancillary structures and extensive grounds. The western half (area of buildings) was generally level, whilst the eastern half (garden, lawns and apple orchard) sloped steeply to the east. A stream was present at the toe of the slope on the eastern boundary. Some areas of the sloping lawn were observed to be hummocky.
Ground Conditions	The site was underlain by a mantle of Topsoil and/or Made Ground over Head Deposits over the London Clay Formation.
Groundwater	Groundwater was only encountered within the Bognor Sand Member of the London Clay Formation (WS5) during the investigation, although localised seepages were noted elsewhere on site. In addition, groundwater was encountered during subsequent gas and groundwater monitoring at depths ranging from 0.20m to 1.54m bgl.
Foundations	It is considered that conventional foundations may be suitable for the proposed development and ground conditions encountered. However it may be necessary to construct deep strip foundations (2.0m+) in some areas due to desiccation identified and the removal of trees to facilitate the proposed development. In addition heave precautions will be required.
Excavations	Shallow excavations in the Head Deposits and London Clay Formation could remain stable in the short term on level ground. Excavations on sloping ground will need careful consideration of geo-hazards prior to excavation. Shallow excavations in the Bognor Sand are unlikely to remain stable. Deeper excavations and those where water ingress occurs are likely to be accompanied by instability and could require shoring and dewatering.
Pavements	It is recommended that a CBR of 4% be assumed for pavement design. However allowance for removal of soft spots will be required. Given the presence of Made Ground the formation is considered to be frost susceptible.
Sub-surface concrete	Sub-surface concrete should be designed to Class DS1 (AC1) of BRE Special Digest 1.
Ground Gases	Whilst the desk study identified a possible area of landfill immediately to the south-east of the site and possibly encroaching on to the south-eastern corner of the site. This portion of the site is either on the opposite side of the stream and valley or at a lower elevation than the off-site landfill. The assessment to date indicates the site's gassing regime to be Characteristic Situation 1/Green, for which no gas protection measures are considered to be required.
Radon Gas	No protection measures are required.
Soil contamination	Several contaminants of concern have been identified above appropriate screening criteria for the proposed residential end use and as such it is considered that limited remedial action is required.
Site workers	A COSHH assessment is recommended for all site workers and safe systems of work adopted.
End users	Whilst widespread contamination has not been identified several contaminants of concern above the respective SGV/GAC have been identified which would require remedial action.
Soft landscaping	A minimum cover of 150mm of certified clean/suitable Topsoil is recommended in the soft landscaped areas.
Built Environment	Consideration will be required for the selection of appropriate materials for buried services on the site.
Controlled waters	Whilst low levels of PAH have been identified within the groundwater it is considered



	that no remedial action is required to protect controlled waters.
Waste Disposal	Analytical results and WAC testing indicate that any excess soils on site would most likely fall into the Inert Waste category with the exception of TOC which may require the soils to be classified as stable non-reactive hazardous waste.
Discovery strategy	A discovery strategy should be employed, so that any evidence of possible unidentified contamination can be dealt with appropriately.
<i>This Executive Summary is intended to provide a brief summary of the main findings and conclusions of the investigation. For detailed information, the reader is referred to the main report ref. GE8472/GIR.</i>	



1.0 INTRODUCTION

1.1 General

Geo-Environmental Services Limited (Geo-Environmental) was instructed by Linden Homes Southern Limited, to undertake an investigation of the geotechnical and geo-environmental factors pertaining to land at St Michael's Convent, Villa Gardens, Waterloooville, PO7 7RZ (the site). The site's location is presented in Figure 1 and the current site layout is presented in Figure 2.

1.2 Form of Development

It is understood that the development proposal is to comprise the demolition of the majority of existing ancillary structures associated with the convent, retention and refurbishment of the church and main convent buildings and development of the grounds for housing assumed to be with private gardens and soft landscaping, driveways, access road and associated infrastructure.

1.3 Objectives

The data from the geotechnical investigation was to form the basis of an interpretation with respect to foundation design, pavement construction, concrete specification, excavation stability and other pertinent construction issues.

A Preliminary Risk Assessment (PRA) was undertaken as part of the desk study in accordance with CLR11, in order to provide a basis for the scope and rationale of the subsequent Phase II ground investigation. The data from Phase I and Phase II were then to form the basis of a subsequent Tier 1 Generic Quantitative Risk Assessment (GQRA). The objective of the risk assessments was to evaluate the risks posed to the proposed redevelopment, adjacent land uses and the wider environment, in the context of likely planning requirements, immediate liabilities under the Environment Act 1990 and risks posed to Controlled Waters under the Water Resources Act.

1.4 Standards

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

- Planning Policy Statement 23 – Planning and Pollution Control;
- Model Procedures for the Management of Contaminated Land, CLR11, DEFRA and Environment Agency 2004;
- Environment Agency Guidance on Requirements for Land Contamination Reports, Version 1 dated July 2005;
- BS10175:2011 - Investigation of Potentially Contaminated Sites - Code of Practice, BSI 2011;
- BS5930: 1999 - Code of Practice for Site Investigations, BSI 1999;
- EN ISO 14688 Geotechnical Investigation and Testing Part 1-2002 and Part 2-2004;



- BS1377: 1990 - Soils for Civil Engineering Purposes, BSI1990;
- NHBC Standards Chapter 4.1 Land Quality - Managing Ground Conditions, September 1999.
- NHBC Standards Chapter 4.2 Building Near Trees
- CIRIA C665 - Assessing risks posed by hazardous ground gases to buildings (2007)
- NHBC 10627-R01(04)- Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present (2007)
- BS8485:2007 Code of practice for the characterisation and remediation from ground gas in affected developments

1.5 Conditions

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

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

Information contained in this report is intended for the use of the Client and Geo-Environmental can take no responsibility for the use of this information by any party for uses other than that described in this report. Geo-Environmental makes no warranty or representation whatsoever express or implied with respect to the use of this information by any third party. Geo-Environmental does not indemnify the Client or any third parties against any dispute or claim arising from any finding or other result of this investigation report or any consequential losses.

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



2.0 DESK STUDY

The findings of the Phase I Desk Study are presented in the following section. A series of photographs of the site are presented in Appendix A and a copy of the information obtained as part of the desk study is presented in Appendix B.

Comments made in the following sections regarding possible ground conditions on the site are based purely on the desk study. Confirmation of ground conditions can only be provided through undertaking site specific intrusive investigation.

2.1 Site Description

The site comprised an irregularly shaped parcel of land occupied by a convent, church, ancillary structures and grounds. The buildings were located on the western half of the site whilst the eastern half of the site comprised terraced gardens (ornamental and allotment/vegetable plot), lawns and an apple orchard. Ground levels on the western half of the site were generally level whilst the area occupied by lawns and the apple orchard sloped more steeply to the east. A stream (flowing north to south) was present at the toe of the slope and formed the site's eastern boundary.

Some areas of the sloping lawn were observed to be hummocky, particularly the portion immediately downslope of the terraced garden (immediately east and downslope of WS7).

Geo-Environmental was advised that the buildings to the north of the main convent building had been used historically as a laundry and boiler house. The laundry comprised part of the convent operations used wet processes only, i.e. no dry cleaning processes were used. The boiler house was understood to have housed two coal fired boilers providing heating and hot water to the convent and ancillary buildings. It is understood that the coal fired boilers were replaced by an oil fired system, with the boilers housed in the same building but with an above ground oil tank located to the north of the boiler house. Oil supply pipes were located within a concrete duct connecting the tank to the boilers. Whilst the boilers and tank were no longer present, the fuel line was observed within a concrete duct. No visual evidence of fuel spillage was observed. It was understood from site personnel that the laundry ceased operations in 1974.

Numerous trees were present on and around the site and with reference to the proposed development layout, it is probable that several trees will be removed as part of the site clearance.

2.2 Geology

British Geological Survey geological mapping indicated the geology of the site to comprise Head Deposits over the London Clay Formation including the Bognor Sand Member.

Head Deposits are drifts produced by solifluxion, the downslope movement of debris outwash during the periglacial period, and characteristically comprise poorly sorted sand, gravel, clay and chalk of local derivation.



In the Hampshire area, the **London Clay Formation** varies in composition and can comprise firm to very stiff silty clay, silty sand, interbedded silt, sand and clay. The granular strata are often water bearing. Occasional concretions of mudstone can also be present. Crystals of gypsum (Selenite) are often found within the weathered part of the London Clay, and precautions against sulphate attack to concrete are sometimes required.

The **Bognor Sand Member** of the London Clay Formation comprises a silty sand.

2.3 Hydrogeology

The former NRA Groundwater Vulnerability Maps have been superseded with new aquifer designations replacing the older system of classifying aquifers as Major, Minor and Non-Aquifer. This new system is in line with Groundwater Protection Policy (GP3) and the Water Framework Directive (WFD). New designations equate to Principal Aquifers, Secondary Aquifer A, B and Undifferentiated Aquifer and Unproductive Strata.

With reference to the Environment Agency website and the Groundwater Vulnerability Map No 52 entitled Southern Hampshire, the site is indicated to overlie a Secondary Aquifer (formerly referred to as a Minor Aquifer) over Unproductive Strata. Secondary Aquifers are defined as fractured or potentially fractured rocks which do not normally have a high primary permeability. Although these formations will seldom produce large quantities of water for abstraction they are important both for local supplies and in supplying base flow to rivers.

According to information provided from the Environment Agency the site is not located within a groundwater Source Protection Zone (SPZ). An SPZ is a protection zone placed around a well or borehole that supplies groundwater of potable quality. An SPZ is divided into three zones defined as follows:

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

The desk study identified two substantiated pollution incidents to ground within 500m of the site boundary, details of which are provided below:

- Organic Wastes: other suspended solids, 30 bottles of milk spilt on the road. Hulbert Road, Waterlooville, 20th June 2002, 44m south-east.
- Surcharged Sewage: domestic/residential, adjacent to 34 Sapphire Ridge, Waterlooville, 24th December 2003, 318m south-east.

Given the type and location of the pollution incidents identified, it is considered that they are unlikely to pose a risk to the subject site and as such have not been considered further.

The desk study did not identify any discharge consents to land to groundwater within 500m of the site boundary.



In addition the desk study did not identify any groundwater abstractions within 1km of the site boundary.

2.4 Hydrology

A surface water course, the Hermitage Stream was identified flowing north to south along the eastern boundary of the site. The river quality data available from Environment Agency from 2000 shows the Hermitage Stream Tidal Limit-Source reach (21m to the west of the site) to be good quality (Grade B) in terms of chemical and biological classification.

The site is indicated to be outside of any current indicative tidal or fluvial flood plain, or any associated flood warning area.

The desk study did not identify any licensed surface water abstractions within a radius of 1km of the site boundary.

The desk study identified seven discharge consents to surface water within 500m of the site boundary, details of which are provided below:

- Discharge of other matter i surface water to freshwater stream/river, by Southern Water Services Ltd at St Michaels Convent, Waterlooville located on the south-eastern boundary of the site.
- Storm water overflow from a water treatment works to freshwater stream/river by Clerk of the Council at Hulbert Road, Havant, 293m south-east.
- Discharge of other matter i surface water to freshwater stream/river by AW Kingdom and Co. Ltd located at Riverdale, Tempest Avenue, off Hulbert Road, Waterlooville, 395m south-east, 409m south-east, 424m south-east and 455m south-east.
- Trade effluent discharge, site drainage to freshwater stream/river from Jalducts Ltd at Units 13 and 14 Aston Road, Waterlooville, 463m north-west.

The desk study also identified three pollution incidents to surface water within a radius of 500m of the site boundary, details of which are provided below:

- Organic chemicals: solvent based paints/varnishes to freshwater stream/river on 19th August 1999 due to deliberate action, at a domestic/residential property in Avondale Road, 20m north-west.
- Organic chemical: Domestic Fuel Oils to freshwater stream/river on 8th October 1999 due to structural failure of below ground pipe at a domestic/residential property by Hermitage Stream to the rear of Bramley Road, Waterlooville. 333m north-east.
- Inert suspended solids (white discharge) from pipe to stream, by the roundabout on Hulbert Road/Tempest Avenue, 472m south-east.

Given the type and distance of the discharge consents and pollution incidents identified, it is considered unlikely that they would result in an impact to the subject site and as such they have not been considered further.



2.5 Sensitive Land Uses

A search was made of environmentally sensitive areas, including areas of green belt, scenic or natural beauty, parks, reserves, nitrate zones, or protected conservation and scientific areas. The site was identified as being located within a Nitrate Vulnerable Zone.

2.6 Radon

Data supplied by the Health Protection Agency and British Geological Survey (BGS) indicate the site is not located in a radon affected area, as less than 1% of homes are above the action level. The BGS also state that no radon protection measures are necessary in the construction of new dwellings on the subject site.

2.7 Environmental Data

The desk study did not identify any pertinent records in relation to industrial and commercial land uses in the area with the exception thirteen contemporary trade directory entries identified within 250m of the site boundary details of which are provided in Table 1 below:

Name	Location	Classification	Location
Capella Communications	23 Cavendish Close, Waterlooville PO7 7PP	Telecommunications Equipment and Distributors (inactive)	27 m E
Driveways Southern Ltd	Flat 2 Redwood Court, Winfred Road, Waterlooville PO7 7TQ	Building Block Manufacturers and Distributors (Active)	53m NW
Jewson Ltd	344 London Road, Waterlooville PO7 7SN	Builders Merchants (Active)	106m W
Hulbert Road Cemetery	Hulbert Road, Waterlooville PO7 7NT	Cemeteries and Crematoria (Inactive)	142m SE
Denton Rubber Sheeting	8 Hulbert Road, Waterlooville PO7 7NT	Rubber and Plastic Products Manufacturers (Inactive)	173m SW
British Engineering Productions Ltd	Unit 19 Arnside Road, Waterlooville, PO7 7UP	Hydraulic Equipment and Accessories Sales and Service (Inactive)	200m W
Creative Fires (UK) Ltd	Unit 14, Arnside Road, Waterlooville, PO7 7UP	Fireplaces and Mantle Pieces (Inactive)	203m W
Creative Fires (UK) Ltd	Unit 14, Arnside Road, Waterlooville, PO7 7UP	Electrical Heating Equipment and Systems (Active)	203m W
Simer Environmental Services Ltd	Unit 15, Arnside Road, Waterlooville,	Air Conditioning Equipment and	204m N



	PO7 7UP	Systems (Active)	
Outside Cleaning	7 High Trees, Waterloooville PO7 7XP	Cleaning Services i Domestic (Active)	215m N
D L Webb	Unit 18, Arnside Road, Waterloooville, PO7 7UP	Joinery Manufactures (Inactive)	218m W
Redwood Innovations	Unit 18, Arnside Road, Waterloooville, PO7 7UP	Adhesives Glues and Sealants (Active)	219m W
South Coast Films	37 Winifred Road, Waterloooville PO7 7RJ	Window Tinting (Inactive)	239m NW

Table 1 Contemporary Trade Directory Entries within 250m of the site.

Given the types of industries identified, their locations in relation to the site and that over half are listed inactive, it is considered unlikely that they would have resulted in a detrimental impact to the subject site.

2.8 Geotechnical Data

The site lies within an area that is considered by the Coal Authority as being unlikely to be affected by coal mining activity.

National databases for a number of different geological hazards have been compiled by the BGS, and a summary of the hazard data pertaining to the site itself is presented in Table 2.

Hazard	Designation
Shallow mining	Low hazard
Collapsible ground	Very Low hazard
Compressible ground	No hazard
Ground dissolution	No hazard
Landslide	Very low hazard
Running sand	Low Hazard
Swelling clay	Low hazard

Table 2 Summary of BGS Geological Hazards

2.9 Landfill and Waste Management Facilities

A search of BGS recorded landfill sites, IPC registered waste sites, licensed waste management facilities, local authority recorded landfill sites, other registered landfill sites, waste transfer stations and other waste treatment or disposal sites was undertaken as part of the desk study. Such sites may form an artificial source of ground gases, such as carbon dioxide and methane, where wastes are buried or disposed of to landfill.

The desk study identified one Historical Landfill Site and two Local Authority Recorded Landfill sites within 500m of the site boundary, details of which are provided in Table 3:



Type/Site	Name/Site	Specified Waste	Location
Historical Landfill Site	Old Council Depot - South of Cemetery, Hulbert Road, Waterloooville	Deposited waste includes household waste	275m S
Local Authority Recorded Landfill Site	Hulbert Road (3a), Waterloooville	Not supplied	Boundary extends on to the SE corner of the site
Local Authority Recorded Landfill Site	Hulbert Road (3b), Waterloooville	Not supplied	277m S

Table 3 Summary of Landfill and Waste Facilities within 500m of site

Whilst a Local Authority Recorded Landfill site was identified as being present on the south-east corner of the site, the historical mapping (Section 2.10) indicates that a sewage works was situated immediately beyond the site's south eastern corner and the landfill record may well relate to this. Whilst ground levels in the south-eastern corner of the site were not observed to differ from adjoining areas of the site, the land to the south and east of the site was noted to be at a higher elevation than the site itself. It is therefore likely that the area of infilling, as referred to in Table 3 (if any has occurred) relates to land adjacent to, and at a higher elevation than, the site and not the site itself. Furthermore the landfill area was shown to extend over the burial ground attached to the convent and situated on the opposite side of the valley and Hermitage Stream approximately 100m to the east of the development area.

2.10 Historical Data

Historic maps dating back to 1870 were obtained as part of the desk study. A summary of the apparent key features observed on the map extracts both on the site and within the local area is presented within Table 4:

Date	On Site	Off Site
1870	The site was shown to comprise open land and fields to the rear of a number of residential properties. The access strip on the western portion of the site was shown to be between two residential properties.	The surrounding land was shown to comprise primarily open space and woodland with a number of residential properties located along the road running north to south to the west of the site. A stream is shown running north to south along the eastern boundary of the site.
1978 to 1981	The site is shown to comprise open space assumed to be farmland to the rear of Fair Oaks and Grove Cottage. Fair Oaks cottage was shown to cover the westernmost portion of the site.	No significant changes noted.
1897	Two buildings were shown on site, one within the central portion for which the use is not shown but presumed to be the convent or church and one along the northern boundary which was labelled as a laundry.	Further residential development was shown to have occurred c.100m to the north, north-west of the site. A further main road was shown running from west to east c.100m to the south of the site.
1897 to	Whilst the layout of the site was shown	A sand pit was shown c.1.1km to the



Date	On Site	Off Site
1898	to be unchanged, the building located within the central portion of the site was labelled as a chapel.	north of the site otherwise no significant changes noted.
1909	The site was labelled as St Michaels Convent. No changes were noted in relation to the chapel however the Laundry to the north of the site was shown to have .	Further residential development with private gardens was shown to have occurred to the north of the site. A burial ground was shown c.80m to the east of the site; a sewage works c.10m to the south of the south-eastern corner of the site.
1909 to 1910	No significant changes noted.	The sand pit c.1.1km to the north of the site was labelled as an old sand pit. A further sewage works was shown c.250m to the west of the site. Otherwise no significant changes noted.
1932	The chapel on site was labelled as the Church of the Sacred and was shown to have been extended. An orchard was shown within the north-eastern corner of the site.	The sewage works to the south of the site was shown to have extended onto land adjacent to the south-eastern boundary of the site. Portsdown and Horndean Light Railway (part of the local tram network which served Portsmouth and outlying areas) was labelled along the western boundary of the site. The road to the west of the site was labelled as London Road.
1933	No significant changes noted.	No significant changes noted.
1938 to 1942	The boundary for the sewage treatment works immediately to the south was shown to extend onto the south-eastern corner of the site.	A further sewage disposal works was shown c.150m to the south-east of the site. The boundary for the sewage treatment works immediately to the south was shown to extend onto the south-eastern corner of the site.
1953	The layout of St. Michaels Convent was shown to have altered slightly, with a tennis court shown within the central portion of the site. The orchard within the eastern portion of the site was shown to have extended southwards slightly. Filters beds and a drain associated with the sewage treatment works were within the south-eastern corner and within the south-eastern boundary of the site.	A cemetery was shown c.100m to the south of the site, to the south of Hulbert Road. Further residential development with private gardens was noted to have occurred to the south of Hulbert Road and west of London Road.
1961	The sewage works previously shown within the south-eastern corner of the site were no longer shown. However the maps indicate that some regrading and filling of this area may have occurred as earthworks are shown. The area of orchard located on the eastern portion of the site is shown to have reduced.	Further residential development was shown to the south of Hulbert Road, to the west of the cemetery and c.100m to the east of the site beyond the burial ground.
1962 to 1963	No significant changes within the main body of the site. However the land associated with the south-eastern	No significant changes noted.



Date	On Site	Off Site
	corner of the site was labelled as works with a small building located just south of the site boundary.	
1966	A number of smaller buildings were shown within the northern central portion of the site.	St Peters Primary School was shown on land immediately to the north of the site. The stream along the southern boundary was labelled as the Hermitage Stream.
1972	A further tennis court was shown on the southern portion of the site. A pipe line was also marked on the eastern boundary of the site, otherwise no significant changes noted.	Further residential development with private gardens was shown on the land immediately to the south of the site, with the exception of a thin strip of land to the south of the western portion of the site which was shown to remain as open space. Further residential development with private gardens was shown c.50m to the north-east of the site.
1973 to 1974	The smaller buildings to the north of the site were labelled as Poultry Houses. The area of possible earthworks within the south-eastern corner of the site is no longer shown. A sub-station was shown within on the northern site boundary. In addition two tanks were labelled to the north and south of the building labelled as a Laundry and one adjacent to the Poultry House. A second access to the site was shown off of Hulbert Road.	The vacant land immediately to the south of the western portion of the site was labelled as allotment gardens.
1977 to 1988	No significant changes noted.	No significant changes noted.
1980 to 1982	No significant changes noted.	No significant changes noted.
1989 to 1990	The poultry house and tanks were no longer evident.	No significant changes noted.
1991 to 1992	No significant changes noted.	No significant changes noted.
1993	No significant changes noted.	Residential development was shown to have occurred on the former allotment gardens to the south of the western portion of the site.
2000	No significant changes noted.	No significant changes noted.
2006	No significant changes noted.	No significant changes noted.
2011	No significant changes noted.	The school adjacent to the northern boundary of the site was no longer shown, otherwise no significant changes noted.

Table 4 Summary of Historic Map extracts

In addition to information gained from the historical maps for the site Geo-Environmental was informed by a member of staff with c.70 years of the site, that the Convent was historically a closed order and thus self-sufficient. Much of the soft landscaped grounds were reported to have been used for domestic provisions i.e. orchards, vegetable beds/allotment gardens, animal rearing (chicken runs and the like).



The laundry served the convent and associated buildings, including a church/convent run school and children's homes which were located on London Road, to the north of the convent. In addition, the tanks shown on mapping from the 1970s were understood to have stored process water (clean and dirty) with the exception of the tank located to the north of the laundry which comprised an above ground oil tank. A salt store was located in a small ancillary structure on the eastern end of the laundry, the salt being used in the laundry process as a water softener. Geo-Environmental was advised that the laundry as closed in 1974 and the tanks removed at that time. Historic mapping appears to corroborate this.

Geo-Environmental was also advised that the hummocky ground observed during the site walkover was close to the site of a bonfire following the Great Storm (1987).

2.11 Previous Ground Investigations

Geo-Environmental was not aware of any previous ground investigations that had been undertaken on the site.

2.12 Potential Contamination

The information obtained from the desk study has shown that the subject site as a whole has not been subject to any potentially polluting land uses. However, activities have been noted within certain areas of the site that may have resulted in contamination of the underlying soils and groundwater. Historical mapping has shown the site to have remained as open space prior to being developed for a church and convent (with attached laundry) throughout the mapping period. A poultry house and three tanks were also identified on the northern portion of the site from 1973 to 1989, together with an electricity sub-station. In addition an area of potentially infilled land was identified within the south eastern corner of the site understood to have been associated with the former sewage works that was located immediately to the south of the site. As such it was considered that intrusive investigation should be undertaken across the site for the specific sources identified and testing of soil and water samples for a range of commonly occurring potential contaminants to confirm the findings of the desk study and site walkover survey.

In addition, given that the site has been developed before there remains the possibility that Made Ground may be present on site as well as the potential that elevated concentrations of contaminants of concern may be present naturally within the soils underlying the site. Thus it was considered that analysis for commonly occurring brownfield contaminants, including detailed hydrocarbon speciation, should be undertaken to confirm the presence or absence and to clarify potential pollutant linkages. The desk study identified the following potential contaminants most likely to be associated with historic and/or current site activities:

- Generic contaminants associated with any Made Ground/Infilled ground, if present on site including possible elevated metals, non-metals, organic contaminants and asbestos.
- General background quality of shallow soil, including commonly occurring metals, metalloids and sulphate.



- Hydrocarbons associated with the presence of the above ground oil tank previously located on site.
- Poly-chlorinated Biphenyls (PCBs) associated with the sub-station identified on site.
- Potential ground gases associated with any Made Ground/Infilled Ground, if present on site, including, methane, carbon dioxide, oxygen and flow.

2.13 Ground Gas Summary

The desk study has identified the presence of potentially infilled land within the south eastern corner of the site and on land immediately to the south of the site (albeit at a higher elevation) which could present a potential source of gas on the subject site. In addition given the development of the site there is a possibility that Made Ground may be present on site. As such it is recommended that a period of gas monitoring be undertaken on site to verify the findings of the desk study report and to ensure that ground gas hazards are fully assessed in order to clarify the risk of harm to the proposed development and end users.

CIRIA C665 prescribes minimum monitoring periods, as summarised within Table 5:

Example of generation potential		Generation potential of source ^{1,2}				
		Very Low	Low	Moderate	High	Very High
		Inert Made Ground	Alluvium or dock silt	Pre-1960 landfill	Shallow mine workings	Post 1960's domestic landfill
Sensitivity of development	Low (Commercial)	4/1	6/2	6/3	12/6	12/12
	Moderate (Flats)	6/2	6/3	9/6	12/12	24/24
	High (Residential with Gardens)	6/3	9/6	12/6	24/12 ³	24/24 ³

Table 5 Summary of likely gas monitoring requirements

Notes:

1 [†] First number is the minimum number of readings and the second number is minimum period in months, for example 4/1 [†] Four sets of readings over 1 month.

2 [†] At least two sets of readings must be at low and falling atmospheric pressure (but not restricted to periods below <1000mb) known as worst case conditions.

3 [†] The frequency and period states are considered to represent typical minimum requirements. Depending on specific circumstances fewer or additional readings may be required. The NHBC guidance is also recommending these periods/frequency of monitoring.

4 [†] Historical data can be used as part of a data set.

5 [†] Not all sites will require gas monitoring however, this would need to be confirmed with demonstrable evidence.

6 [†] Placing high sensitivity end use on a high hazard site is not normally acceptable unless the source is removed or treated to reduce its gassing potential. Under such circumstances long-term monitoring may not be appropriate or required.

Methane is an asphyxiating flammable and toxic gas with a density about two-thirds that of air. Methane is toxic at concentrations in excess of 30%v/v and flammable at concentrations of between 5% and 15% by volume in air. Such a methane-air mixture will explode where confined in some way and ignited. The 5% by volume concentration is termed the lower explosive limit (LEL).

Carbon dioxide is a non-flammable toxic and asphyxiating gas which is about 1.5 times heavier than air. In addition, the presence of elevated carbon dioxide may be in conjunction with depleted concentrations of oxygen. Carbon dioxide is inflammable and



may affect the flammability of methane by correspondingly reducing the concentration of oxygen within an atmosphere.

With reference to Table 5, the proposed development is considered a ~~high~~ sensitivity. Information obtained from the desk study suggests that the historical land uses of the site and surrounding land are generally ~~very low risk~~ with the exception of the south-eastern corner of the site and the land adjacent to the south east corner of the site which has been shown as being potentially infilled land as a Local Authority Registered Landfill site, although it is considered that this relates to land offsite.

As such it is considered that a period of gas monitoring should be undertaken on site in line with best practice to confirm the findings of the desk study. Therefore, in order to assess the potential for gas generation and/or release of such gases which could warrant the incorporation of gas protection measures into new development, it is recommended that an initial gas monitoring visit be undertaken on site. Should the ground investigation identify adverse ground conditions or the initial gas monitoring visit identify potentially harmful concentrations of carbon dioxide and/or methane beneath the site then a minimum of six monitoring visits over a three month period is recommended.

Thus, it was recommended that an initial monitoring visit be undertaken with the potential to increase to a programme of six monitoring rounds at approximately fortnightly intervals to assess the site's gassing regime and to confirm the requirement for and scope of gas protection measures.



3.0 PRELIMINARY ASSESSMENT

Based on the findings of the desk study, the following sections summarise the anticipated geotechnical and environmental factors likely to impact the site in the context of the proposed redevelopment. A justification and rationale for the subsequent ground investigation is given.

3.1 Geotechnical Factors

The information reviewed in the desk study indicated that the site is likely to be underlain by a succession of Head Deposits and the London Clay Formation. Given the topography and geology of the site, groundwater is anticipated to be present at varying depth beneath the site.

The following provisional assessment is based on the findings of the desk study:

- The possible presence of Made Ground/infilled Ground on site, which may affect the foundation design and construction.
- The presence of laterally and vertically variable strata and the impact these could have on construction.
- The presence of shrinkable and/or desiccated soils which could affect foundation design and construction.
- The possibility of a shallow groundwater table, which may affect construction methods.
- The potential for soakaways to be used to dispose of storm water run-off.

3.2 Environmental Conceptual Model

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

A risk may only exist where a plausible SPR linkage (pollutant linkage) is present and where the quantity or concentration of a contaminant is sufficient so as to pose harm. Under the statutory definition, "Contamination" may only strictly exist where contaminants pose a risk of harm to a receptor. Risk may be defined as a function of the magnitude and severity of any adverse effects arising from contamination.

For the purpose of the Preliminary Risk Assessment, risk is expressed as a function of the nature of the source, the sensitivity of a receptor, and the magnitude or likelihood of any associated pathway(s) between the source and receptor. The source, pathway(s) and receptor are each rated on a ten-point qualitative scale, with the overall level of risk being expressed as a multiple of those ratings. A summary of the criteria is given in Table 6.



Category	Individual Sources, Pathways and Receptors	Overall Risk Rating (product of SxPxR)
Negligible	0	<1
Very Low	1	1-5
Very Low to Low	1.5	6-9
Low	2	10-14
Low to Moderate	2.5	15-22
Moderate	3	23-35
Moderate to High	3.5	36-55
High	4	56-79
High to Very High	4.5	80-110
Very High	5	111-125

Table 6 Summary of Risk Ranking Scheme

Possible sources of contamination identified or discounted as part of the desk study are summarised in Table 7. Potential contaminants impacting the site have been determined from onsite observations together with reference to DoE Industry Profiles and joint EA and NHBC R&D publication 66

Source	Description	Comments	Rating
Shallow Soils	General background quality of natural soils.	Possible elevated metals, non-metals and organic contaminants.	Low (2)
Made Ground/infilled Ground	The desk study has identified the potential for Made Ground/infilled ground to be present on site. As such generic contaminants could be associated with any Made Ground/Infilled Ground, if present on site.	Possible elevated metals, non-metals, organic contaminants and asbestos.	Moderate (3)
Hydrocarbons	The desk study has identified the presence of an above ground fuel tank previously located on site, together with associated pipework leading to the old boiler house.	Polycyclic Aromatic Hydrocarbons (PAH) and Total Petroleum Hydrocarbons (TPH).	Moderate (3)
PCBs	The desk study has identified the presence of an electricity sub-station within the north portion of the site.	Polychlorinated Biphenyl (PCB)	Low (2)
Ground Gases	The desk study has identified the potential for Made Ground/infilled ground to be present on/in the vicinity of the site. If present this could generate ground gases on site.	Possible migration of ground gas associated with potential Made Ground/ Infilled Ground e.g. methane, carbon dioxide, oxygen and flow.	Moderate (3)

Table 7 Possible Sources of Contamination



Furthermore, potential receptors associated with the site and its redevelopment, identified or otherwise discounted, are summarised in Table 8.

Receptor	Description	Comments	Rating
Site Workers	Persons involved in construction and future maintenance of the proposed development.	Ground workers could become exposed during demolition, construction and maintenance.	High (4)
End Users	Users of the proposed redevelopment	Occupation of the proposed residential properties.	High (4)
Soft Landscaping	Areas of planting including lawns, shrubs, trees, etc.	Lawns and soft landscaping.	Moderate (3)
Built Environment	Buried concrete for foundations etc. and plastics for potable water supply pipes should contaminated soils be identified.	Consideration will need to be given to potentially aggressive conditions impacting on long term performance of the built environment.	Low (2)
Adjacent Land Users	Sensitive land uses identified within the immediate vicinity.	Residential land use was identified in all directions from the site.	Moderate (3)
Groundwater	Controlled Waters contained within the aquifer(s) beneath the site	The site overlies a Secondary A (Minor) aquifer, and is outside of any SPZ and remote from any abstractions.	Moderate (3)
Surface Water	Controlled Waters within lakes, rivers and ponds, etc. or coastal waters.	The nearest surface water feature the Hermitage Stream was identified running north south along the eastern boundary of the site.	Moderate (3)
Ecological Receptors	Sensitive areas of ecological significance	The site was not identified as being located within any sensitive areas.	Negligible (0)

Where risk is considered negligible these have not been considered further

Table 8 Possible Receptors of Contamination

Whilst the above sources and receptors have been identified, Table 9 illustrates the actual exposure pathways by which a contaminant linkage might plausibly exist (overleaf). Migration pathways include:

- Human health exposure through: dermal contact, inhalation of soil dust (including tracked back dust), ingestion of soil, bio-accumulation and ingestion of home grown produce and inhalation of soil derived vapour;
- Dissemination and/or diffusion throughout the soil mass;
- Natural higher permeability zones such as sand lenses, gravel beds, bedding planes, joints and the like;
- Migration along service trenches;
- Vertical migration associated with in-ground structures, e.g. foundations, drainage and soakaways;
- Chemical attack on building materials.
- Contamination migration as a plume within the saturated or unsaturated zone.



		Sources				
		Natural Soils (2)	Made Ground/ Infilled Ground (3)	Hydrocarbons (3)	PCBs (2)	Ground Gas (3)
Receptors	Site Workers (4)	Ingestion, Dermal Contact, Inhalation (3)	Ingestion, Dermal Contact, Inhalation (3.5)	Ingestion, Dermal Contact, Inhalation (3.5)	Ingestion, Dermal Contact, Inhalation (3)	Asphyxiation, Poisoning, Explosion (3)
	End Users (4)	Ingestion, Dermal Contact, Inhalation (3)	Ingestion, Dermal Contact, Inhalation (3.5)	Ingestion, Dermal Contact, Inhalation (3.5)	Ingestion, Dermal Contact, Inhalation (3)	Asphyxiation, Poisoning, Explosion (3)
	Soft Landscaping (3)	Plant Uptake (2.5)	Plant Uptake (3)	Plant Uptake (3)	Plant Uptake (2.5)	Asphyxiation, or Poisoning (3)
	Built Environment (2)	Chemical attack (2)	Chemical attack (2.5)	Chemical attack (2.5)	Chemical attack (2)	Chemical attack or explosion (2)
	Adjacent Land Users (3)	Ingestion, Dermal Contact, Inhalation (2)	Ingestion, Dermal Contact, Inhalation (2.5)	Ingestion, Dermal Contact, Inhalation (2.5)	Ingestion, Dermal Contact, Inhalation (2)	Lateral Migration, Asphyxiation, Poisoning, Explosion (2.5)
	Groundwater (3)	Downward Migration, Lateral Migration (2)	Downward Migration, Lateral Migration (3)	Downward Migration, Lateral Migration (3)	Downward Migration, Lateral Migration (2)	None (0)
	Surface Water (3)	Downward Migration, Lateral Migration (2)	Downward Migration, Lateral Migration (3)	Downward Migration, Lateral Migration (3)	Downward Migration, Lateral Migration (2)	None (0)

Table 9 Possible Receptors of Contamination

A summary of the preliminary risk ratings is given in Table 10:



		Sources				
		Natural Soils	Made Ground/ Infilled Ground	Hydrocarbons	PCBs	Ground Gas
Receptors	Site Workers	Moderate	Moderate to High	Moderate to High	Moderate	Moderate
	End Users	Moderate	Moderate to High	Moderate to High	Moderate	Moderate
	Soft Landscaping	Low to Moderate	Moderate	Moderate	Low to Moderate	Moderate
	Built Environment	Low	Low to Moderate	Low to Moderate	Low	Low
	Adjacent Land Users	Low	Low to Moderate	Low to Moderate	Low	Low to Moderate
	Groundwater	Low	Moderate	Moderate	Low	Negligible
	Surface Water	Low	Moderate	Moderate	Low	Negligible

Table 10 Potential Pollutant Linkage Risk Rating Summary

3.3 Scope of Works

In summary, the following scope of works for the intrusive investigation was agreed with the Client.

- The construction of 7No. window sampler boreholes to provisional depths of 4.0m together with in-situ testing and sampling.
- The construction of 4No. trial pits to provisional depths of 1.0 - 1.5m together with in-situ testing and sampling.
- The installation of a ground gas monitoring well within three boreholes sealed using bentonite pellets and with filter pack response zones, to enable groundwater and gas monitoring to be undertaken.
- A ground gas and groundwater monitoring visit on an initial single occasion.
- Soil sampling and analysis to be undertaken to confirm the findings of the desk study report. Sampling undertaken to target specific sources and to provide a general coverage of the site, geological features and the like.
- Testing to comprise Dynamic Cone Penetrometer (DCP) tests adjacent to a number of site investigation locations coupled to aid pavement design.
- Geotechnical laboratory testing on recovered soil samples to support geotechnical interpretation.
- Geochemical laboratory testing on recovered soil samples to support a Tier 1 Risk Assessment.



3.4 Investigation Strategy

The general positioning of exploratory holes was selected to target specific sources identified within the desk study and to provide general coverage of the site with respect to the proposed development. It was not possible to undertake investigation within or in close proximity to a number of the buildings due to unsafe/inaccessible buildings and live services. Table 11 sets out the general strategy adopted for the environmental assessment, which accounts for the findings of the desk study. Table 12 sets out the geotechnical investigation strategy.

Environmental Area of Concern	Investigation	Positions
General ground conditions	Window sampler boreholes and trial pits located across the site, coupled with sampling and laboratory analysis.	All
Garage block, Former ASTs.	Window sampler borehole located, coupled with sampling and laboratory analysis.	WS1
Potentially infilled area.	Window sampler borehole located on land closest to the marked landfill area, coupled with sampling and laboratory analysis.	WS4
Laundry sluice tank.	Window sampler borehole located to target a former sluice tank associated with the laundry, discharge from which passed through a baffle bed before discharging (via a pipe) downslope into the stream, coupled with sampling and laboratory analysis.	WS6
Raised Ground	Window sampler borehole located to target an area of raised ground created to form a terrace on to the slope at the rear of the convent, coupled with sampling and laboratory analysis.	WS7
Sub station	Trial pit located adjacent to sub-station, coupled with sampling and laboratory analysis.	TP4
Area of hummocky ground	Trial pits located to target an area of hummocky ground identified during the site walkover, coupled with sampling and laboratory analysis. This was a possible bonfire/burning ground area.	TP1, TP2 and TP3
Ground gas quality and groundwater levels and quality	Window sampler borehole and monitoring well installation at selected positions to assess whether ground gas was present and any impact from the off-site historic landfill.	WS1, WS4 and WS5

Table 11 Summary of Environmental Investigation Strategy

Soil samples were collected and placed into amber jars and cool boxes on site for transit to the office, where they were stored under chilled conditions (<4°C) prior to final transportation in cool boxes to the laboratory by their in-house courier. Both the geotechnical and contamination testing were undertaken by UKAS accredited laboratories. All water samples were collected in amber jars/bottles. Samples were stored in temperature controlled conditions from sampling until receipt at the laboratory



from which time sample preparation and storage was determined by testing requirements and in line with laboratory protocols.

Geotechnical Factor	Investigation	Positions
Competent strata	Construction of window sample boreholes and trial pits across the site with in-situ testing, sampling and laboratory analysis.	All
Shallow ground conditions	Construction of window sampler boreholes and trial pits across the site together with sampling and laboratory analysis.	All
Area of hummocky ground	Trial pits located to target an area of hummocky ground identified within the site walkover, coupled with sampling and laboratory analysis. This was a possible burning ground or landslip.	TP1, TP2 and TP3
Pavement construction	Dynamic Cone Penetrometer testing adjacent to investigation locations to provide CBR values.	WS3 (DCP3), WS5 (DCP1), TP1 (DCP4) and near WS7 (DCP2)
Potential Desiccation	Construction of window sampler boreholes to target trees close to the proposed new development.	WS2 and WS3
Groundwater depths	Installation of monitoring wells in window sampler boreholes	WS1, WS4 and WS5

Table 12 Summary of the Geotechnical Investigation Strategy

In-situ permeability testing was not undertaken as it was understood from the Client's Drainage Consultant that the drainage strategy comprises a continuance of discharge to Hermitage Stream under riparian rights.



4.0 ENCOUNTERED CONDITIONS

A factual record of the conditions encountered during the physical investigation of the site is presented in the following sections.

For further details of the ground conditions, reference should be made to the exploratory hole logs and presented in Appendix C, the monitoring results presented in Appendix D, the geotechnical testing results in Appendix E and the geochemical testing results in Appendix F.

The physical ground investigation works were undertaken in December 2011 with the return gas and groundwater monitoring also undertaken at the end of December 2011.

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

4.1 Soils

The ground conditions encountered were broadly consistent with those anticipated from the desk study, i.e. a mantle of Topsoil and or Made Ground overlying a succession of Head Deposits and the London Clay Formation. The Bognor Sand was also encountered beneath the London Clay Formation within WS5.

The ground conditions summarised in Table 13.

Top (m bgl)	Base (m bgl)	Description
GL	0.10 - 0.20	TOPSOIL: Grass over dark brown slightly silty CLAY with rootlets
GL - 0.20	0.10 - 1.10	MADE GROUND: Dark brown silty sand and clay with occasional flint, limestone and chalk gravel and rare traces of black carbonaceous matter possibly ash/clinker, tile and concrete fragments up to coarse gravel size and rare plastic.
GL	0.40	MADE GROUND (bonfire/burning ground TP2): Grass over dark brown silty clay with some to much brick, metal, glass and plastic.
0.10 - 1.10	1.00 - 2.30	HEAD DEPOSITS: Soft to stiff yellow, brown and grey mottled slightly sandy CLAY with occasional/abundant fine to coarse flint gravel, with live roots observed within WS2, WS3 and WS6 and visually assessed to be desiccated in WS2 and WS3.
1.00 - 2.30	2.10 - 4.00+	LONDON CLAY FORMATION: Stiff to very stiff brown CLAY with very weak siltstone at 3.70-3.90m (WS1) and rare medium gravel size claystone fragments and occasional selenite crystals at depth. Areas of close fissuring were noted within WS2, WS4 and WS7 with water bearing siltstone in WS6
2.10	4.00 +	BOGNOR SAND (WS5 only): Orange brown and dark grey silty fine SAND.

Table 13 Summary of Ground Conditions



Made Ground was encountered within all of the boreholes with the exception of WS3. With the exception of the Made Ground encountered which exhibited minor inclusions of brick ash and clinker no visual or olfactory evidence of contamination was identified within the recovered soils during the intrusive investigation works on site.

The trial pitting undertaken over the hummocky ground immediately downslope of WS7 confirmed the presence of debris from a large bonfire or series of fires, with ash, partially combusted wood and metal. No evidence of landslip indicators, such as shallow shear planes, was observed in the underlying clay soils. As such, it was considered that the hummocky nature of the ground surface was due to the bonfire debris rather than slope movement.

For more detailed descriptions at specific locations, reference should be made to the exploratory hole logs presented in Appendix C.

4.2 Groundwater

Groundwater was not encountered within the majority of the exploratory holes during the intrusive investigation. However groundwater was encountered within the Bognor Sand within WS5 at 2.10m bgl, rising to 1.84m bgl after 30 mins and water bearing pockets were encountered within other investigation locations. These water bearing pockets appeared to have limited water ingress and thus could represent perched or discontinuous groundwater. Groundwater was also encountered within the monitoring wells during subsequent gas and groundwater monitoring undertaken on the 20th December 2011 at a depth of 0.20m to 1.54m bgl.

It should be noted that groundwater may be present at different depths elsewhere on the site. In addition, perched water could be present over low permeability soils.

It should also be noted that changes in groundwater levels do occur for a number of reasons including seasonal effects and variations in drainage. Such fluctuations may only be recorded by the measurement of the groundwater level within a standpipe or piezometer installed within appropriate response zones.

4.3 Obstructions

No buried obstructions were encountered during the fieldwork. However, the presence of obstructions elsewhere on the site cannot be completely discounted.

4.4 Ground Gases

Dual purpose gas and water monitoring standpipes were installed within window sampler boreholes WS1, WS4 and WS5. These positions were monitored for methane, carbon dioxide, oxygen and borehole gas flow on an initial occasion on the 20th December 2011.

During the monitoring methane was not detected, whilst carbon dioxide and oxygen were present in the range 0.0-0.7% v/v and 19.1-19.9% v/v, respectively. No positive borehole flow was detected. Atmospheric pressure was recorded at 1009mb.



4.5 Chemical Analysis

In order to assess the general chemical quality of the strata encountered, samples of soils recovered from the exploratory holes were submitted for analysis for a range of potential contaminants selected on the basis of the findings of the desk study and supported by CLR publication CLR8 and Environment Agency R&D66 publication.

A number of potential contamination sources were identified on the site from the desk study, as such the testing rationale included sampling and analysis to provide a general coverage of the subject site in relation to the proposed development and to target the specific sources identified. Testing was undertaken for a broad range of brownfield contaminants including speciated TPH and PAH, asbestos and PCBs.

Furthermore a single groundwater sample was obtained from the Bognor Sand within WS5 to assess the mobility of any potential contaminants on site and to allow for an assessment of the associated risks to controlled waters.

4.6 Geotechnical Testing

In-situ Dynamic Cone Penetrometer tests were undertaken adjacent to investigation locations as detailed below:

- DCP 1 was located adjacent to WS5
- DCP 2 was located between WS7 and the rear of the convent
- DCP 3 was located adjacent to WS3
- DCP 4 was located adjacent to TP1

The probing has indicated a variable CBR value from 2% to approximately 13%.

Atterberg Limit tests were undertaken on more cohesive samples of the Head Deposits and London Clay Formation all of which were shown to be of Medium to High Volume Change Potential, as defined in NHBC Standards Chapter 4.2.

Visually desiccated soils were identified within WS2 and WS3 during the investigation works. Soil water content test results are plotted on Figure 3 and indicate that a possible zone of lower soil water content was present to depths of up to 1.5m bgl in WS2 and WS3 and to 2.5m bgl within WS1 when the data points were compared against the remaining dataset. This could indicate the presence of desiccated soils beneath the site and this should be considered in the design of foundations.

Water soluble sulphate and pH determinations were undertaken on samples recovered from the exploratory holes. The results indicate pH values of between pH7.2 and pH7.9 and water soluble sulphate concentrations ranging between 0.08g/l and 0.17g/l.

Geotechnical laboratory test results are presented in Appendix E.



5.0 ENGINEERING CONSIDERATIONS

Subsequent to intrusive investigation of the site and receipt of the laboratory results, the following interpretative assessments have been made with respect to engineering considerations.

The ground conditions encountered comprised a general succession of Topsoil and/or Made Ground, Head Deposits and London Clay Formation, with the Bognor Sand identified beneath the London Clay Formation within WS5.

5.1 Conventional Foundations

On the basis of the proposed development and ground conditions encountered it is considered that conventional strip or pad foundations could be used on site. However deep strip foundations in excess of 2.5m deep may be required in some locations of the site.

On the basis of ground conditions encountered a net allowable bearing capacity of 125kPa is recommended for the stiff clay of the London Clay Formation for which settlement should remain within tolerable limits.

Geotechnical laboratory testing has shown the soils of the Head Deposits and the London Clay Formation to be of medium to high volume change potential as defined in BRE guidance and NHBC Standards and thus a minimum founding depth of 1.0m bgl is recommended. Heave protection measures will also be required due to the desiccation identified and proposed removal of trees.

Foundations should pass through any Made Ground, disturbed or reworked ground, root zones or desiccated soil and Head Deposits and terminate within the London Clay Formation. As noted in Section 4.6, soil water content data indicate that soils around WS2 and WS3 could be desiccated to depths of 1.5m bgl and WS1 to depths of up to 2.5m bgl. This may require foundations to be constructed to greater depths than the minimum depth stated above. In addition, foundation depths should be designed to account for the presence and or removal of trees.

Foundations should terminate wholly within soils of similar engineering characteristics in order to minimise the potential for differential settlement.

Exposure to water where present may destabilise the Bognor Sand, where encountered, thereby resulting in running sand. Therefore, foundation excavations should be concreted or blinded as soon after excavation as possible. Where concreting could take place the following day it is recommended that excavations are not taken to full depth overnight and that the final 0.5m of cover is only removed immediately prior to concreting.

5.2 Floor Slabs

Given the presence of Made Ground in excess of 0.6m deep, desiccated ground and shrinkable soils at shallow depth, it is recommended that suspended ground floor slabs are used for the proposed development.



5.3 Excavations

Shallow excavations within the Head Deposits and London Clay Formation on level ground could remain stable in the short term. Deeper excavations would require shoring and dewatering. Excavations on the sloping ground will need careful consideration of ground hazards prior to excavation.

Excavations within the Bognor Sand would become unstable in the short term due to the presence of groundwater.

Appropriate Health and Safety precautions should be adopted where man entry into excavations is required.

5.4 Pavements

In-situ CBR tests were undertaken using a Dynamic Cone Penetrometer (DCP) adjacent to investigation locations and these indicated a variable CBR value from 2% to approximately 13%. Further analysis of the results demonstrated CBRs ranging from 2% to 13% across the site. The lower values were associated with areas of softer ground. A CBR design value of 4% is recommended based on the typical values for the soil types encountered. However, an allowance for removal of soft spots should also be made. In addition, Made Ground is considered likely to be frost susceptible.

Any hard or soft spots in the formation level may induce reflective cracking in the pavement and allowance should be made for removing hard spots that may be present. In addition, an allowance should be made for proof rolling coupled with excavation and replacement of soft spots.

5.5 Sub-Surface Concrete

The results of the water soluble sulphate and pH analyses indicate that buried concrete should be designed in accordance with Class DS-1 of BRE Special Digest 1, with an ACEC class of AC-1d. The advice of this publication should be taken for the design and specification of all sub surface concrete.

5.6 Soakaways

The drainage strategy for the development utilises discharge to Hermitage Stream under a continuance of riparian rights rather than discharge to ground via soakaways. As such, in-situ permeability testing was not undertaken.

It should be noted that in order to protect water resources, the Environment Agency might have special requirements for the protection of controlled waters including soakaways accepting water from sealed roof systems, water seals, closed surface entries or interceptors. The consideration of the Agency should be sought in this respect.



6.0 ENVIRONMENTAL CONSIDERATIONS

A Generic Quantitative Risk Assessment (GQRA) incorporating the results of the desk study and ground investigation was undertaken, the findings of which are presented in the following sections.

6.1 Outline Risk Assessment

A number of plausible SPR linkages were identified as part of the desk study. Whilst the investigation did not encounter conditions that warranted a revision of the preliminary Conceptual Site Model, a second phase of investigation was required to clarify the ground conditions on the hummocky slope section where a bonfire/burning ground was reported to have been sited.

6.2 Ground Gases vs. Site Workers

Site workers may be affected by accumulations of gases within confined spaces such as manholes, chambers, deep excavations, trenches, or the like. Affects may include inhalation of asphyxiating or poisonous gases, or explosion of combustible gases. For a preliminary assessment, the results of the land gas monitoring have been compared against published occupational exposure limits.

A long-term time weighted 8-hour average (TWA) Workplace Exposure Limit (WEL) was set at 500ppm (0.5%v/v) for carbon dioxide by the Health and Safety Executive (2005). No respective TWA-WEL or short term ST-WEL was given for oxygen, although generally the safe working minimum concentration for oxygen is taken as 19.5%v/v. Furthermore, no TWA-WEL or ST-WEL was given for methane, although methane may be potentially explosive at concentrations in the order of 5% to 15% and may be toxic in concentrations exceeding 30%.

The gas monitoring undertaken to date has shown that carbon dioxide and methane were present generally in the ranges 0.0-0.7%v/v and 0%, respectively. On the basis of the monitoring to date, it is recommended that safe working practices are developed for any ground works on the site and that adequate protection is provided for ground workers during any ground works.

Additionally, site managers are responsible for the safety of persons in their employ and therefore any person working within any confined spaces should only do so after the appropriate health and safety assessments, training and development of safe working practices in accordance with the HSE guidance entitled "Work in Confined Spaces" have been undertaken. The concentrations of land gases recorded within the boreholes may not accurately reflect the conditions that may develop within some confined spaces such as manholes and chambers, which may be subject to the generation of gas from other sources and therefore pre-monitoring of any confined space is strongly recommended.



6.3 Ground Gases vs. End Users

Recommendations on acceptable gas levels recorded in the ground beneath or adjacent to buildings are given in a variety of publications. For the purpose of this assessment, the results have been evaluated in terms of CIRIA C665 [2007], BS8485 [2007] and NHBC 10627-R01 (04) [2007].

The gas assessment considers the impact of gas at pressure in the ground, since a low concentration coupled with a high flow could present a greater hazard than a high concentration with little or no flow. On the basis of the gas data collected to date and the gas assessment presented in Appendix D, it is considered that the site's gasing regime is representative of Characteristic Situation 1 (BS8485 and CIRIA) and Green (NHBC) for which no specific gas protection measures are considered to be required.

Further monitoring in line with best practice guidance is recommended to confirm this.

6.4 Ground Gases vs. Soft Landscaping

The monitoring to date has indicated the presence of low levels of carbon dioxide in the ground. However, whilst a detailed arboriculture or ecological survey was outside of the scope of the works undertaken by Geo-Environmental, no significant evidence of harm to the existing vegetation was noted either on site or in close proximity to the site.

6.5 Ground Gases vs. Adjacent Land Users

The desk study did not identify any specific ground gas hazards on the subject site, with the exception of an area of potentially infilled land on the south-eastern corner which is understood to relate to neighbouring land (if infilling actually occurred). The monitoring undertaken identified low levels of carbon dioxide on the site, however, given that no flow (0l/hr.) has been recorded during the gas monitoring undertaken it is considered that no specific action would be required to protect adjacent land users.

Care should be taken to ensure that the development does not create any new migration pathways from which a pollutant linkage to adjacent land users could be created, should any gases be identified.

6.6 Soil Contamination vs. Site Workers

Guideline concentrations for contamination with respect to the health of site workers are cited under HSE guidance document HSG66 entitled Protection of Workers and the General Public during the Development of Contaminated Land.

Despite Made Ground being encountered within the majority of investigation locations across the site, laboratory testing undertaken to date on the soils has not indicated the presence of widespread contamination on site, although some localised contamination has been identified, when compared to appropriate standards for the proposed residential end use. Exceedances against long term human health screening criteria for the proposed residential end use have been identified at the following locations:



- Benzo(a)pyrene at WS1 at GL -0.2m;
- Vanadium at WS4 at 0.5m;
- Lead at TP2 at GL-0.4m; and
- Benzo(a)pyrene, Indeno(123cd)pyrene and Dibenz(ah)anthracene at TP2 GL-0.4m.

It is recommended that a COSHH assessment is prepared in order to provide a robust assessment of safe working practices on the site. Any such assessment should account for the results of the laboratory testing.

This assessment has been prepared in order to provide an indication of possible risks posed to site workers for the purposes of environmental legislation. It remains the responsibility of the main contractor and their appointed sub-contractors to prepare their own further risk assessments in accordance with Health and Safety legislation in order to protect persons in their employ. Special consideration should be given to the provisions of the Construction (Design & Management) Regulations 2007, Health and Safety at Work Act and the Control of Substances Hazardous to Human Health regulations in order to protect the safety of persons in their employ. Additional guidance can be sought from the CIRIA publication entitled "A Guide for Safe Working on Contaminated Sites".

6.7 Soil Contamination vs. End Users

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

For determinants considered a priority in terms of human health, the results of the chemical analysis have been compared against the respective Soil Guideline Values (SGVs), Generic Assessment Criteria (GAC) published (LQM 2009) and GAC published by CL:AIRE (2010) at the time of preparing this report. Where relevant to the specific SGV/GAC, Soil Organic Matter (SOM) content has been considered. SOM was estimated from Total Organic Carbon content as reported for each individual sample.

The exploratory holes were located to include targeting of specific sources identified as part of the desk study, to provide general coverage of the site and to allow for consideration of the proposed development. Targeted analysis was undertaken on a series of soil samples collected from shallow depth across the site. The test data have been compared to the proposed residential land use with an assumption of private gardens.

Whilst the test results do not indicate site-wide contamination, several localised exceedances have been identified as summarised in Table 14.



Determinant	SGV/GAC (mg/kg)	Reported Concentration (mg/kg)	Location	Stratum
Vanadium	75	85	WS4 at 0.5m	Head Deposits
Lead	450	739	TP2 at GL ĩ 0.40m	Made Ground
Benzo(a)pyrene	0.83	0.9	WS1 at GL - 0.20m	Made Ground
		4.0	TP2 at GL ĩ 0.40m	Made Ground
Indeno(123-cd)pyrene	3.2	3.6	TP2 at GL ĩ 0.40m	Made Ground
Dibenz(ah)anthracene	0.76	1.1	TP2 at GL ĩ 0.40m	Made Ground

Table 14 Summary of Human Health Exceedances

With reference to Table 4, all of the exceedances were present within the Made Ground, except Vanadium within WS4 at 0.5m bgl. In the event that any of the exceedances are located within areas to be overlain by built footprint or permanent hard cover, these would serve to break pollutant linkages by removing or blocking exposure pathways.

The exceedances identified within TP2 are considered likely to be associated with former bonfire activates identified to have occurred at this location.

The exceedances of Benzo(a)pyrene in the vicinity of WS1 are considered to be associated with this areas use as a garage block, where an above ground oil storage tank (AST) had formerly been located, although they were noted to have been removed c 30-40yrs ago. The oil tanks were utilised to supply boilers which were removed in c.1974. The boilers had been located at the northern end of the laundry complex and were initially coal fired but changed to oil around the 1960s. In addition the sample results from WS1 identified TPH at 49.1mg/kg, whilst this is below the appropriate threshold for human health it would be prudent to undertake further investigation in the vicinity of the former AST and associated pipework in order to confirm whether the elevated Benzo(a)pyrene and low levels of TPH represent a hotspot.

A statistical assessment was carried out for Vanadium, the US95 value calculated was noted to be below the appropriate SGV/GAC for the site and no statistical outliers were identified, as such the elevated level of Vanadium identified within WS4 is considered to be variance in natural background concentrations and as such not considered to warrant any further assessment.

No other contaminant concentrations of concern were identified across the site for residential land use.

With reference to the proposed development where the exceedances of SGVs and GAC for residential land use identified are situated beneath a proposed building footprint, the development would serve to break potential exposure pathways and thus break potential pollutant linkages. As such, no plausible enduring pollutant linkage would arise and it is considered that no additional remedial action would be required.

The shallow soil (Made Ground) identified on site in the vicinity of TP2 (an area identified as being utilised for bonfires) and WS1 (in the vicinity of the former ASTs) is not considered suitable for use in gardens or areas of soft landscaping and as such it is recommended that these soils are stripped and removed from site. This should be undertaken prior to any other surface strip exercise in order that the contaminated and uncontaminated soils do not become mixed thereby causing the spread of contamination to otherwise uncontaminated soil.



Following a reduced dig it is recommended that Topsoil be placed to provide a suitable growing medium for proposed planting areas. With regards to soft landscaped areas of the site, it is recommended that Topsoil is placed to provide a suitable growing medium for proposed planting areas. A minimum thickness of 150mm is recommended, deepened where planting dictates. Should it be required to import topsoil on to the development then, prior to importation, the chemical, physical and nutritional suitability should be verified. Importation of topsoil or subsoil from unverified or unsuitable sources would require their removal from site and replacement with suitable materials. As a matter of good practice, it is recommended that the location, approximate extent and thickness of any imported topsoil are recorded and presented in the Validated/Verification Report to be prepared by the Environmental Consultant.

6.8 Soil Contamination vs. Soft Landscaping

ICRCL in publication 70/90 1990 entitled 'Notes on the Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing' provides assessment criteria for a number of potentially phytotoxic contaminants in terms of new planting. No other UK specific soil guideline concentrations were available to provide an assessment of possible phytotoxic effects on plant growth.

Given that a suitable averaging area for soft landscaping may vary considerably between the root zones of grasses to that of a juvenile immature tree, no appropriate averaging area was applicable to this assessment. Therefore, the results of the chemical analysis were evaluated for this SPR linkage singularly.

The results of the chemical analysis for determinants known to pose a potential phytotoxic risk to plant growth are summarised in Table 15, together with the respective adopted Generic Assessment Criteria (GAC) for plant growth.

Determinant	Phytotoxicity GAC Value (mg/kg)	GAC Exceedance
Zinc	1,000	No
Cadmium	50	No
Copper	250	No
Arsenic	1,000	No

Table 15 Summary of Plant Phytotoxicity Assessment

The phytotoxicity assessment indicated that no concentrations exceed the assessment criteria for phytotoxicity. The advice regarding imported topsoil as presented in Section 6.7 would also apply for soft landscaping.

6.9 Soil Contamination vs. Built Environment

Recommendations with respect to pH and sulphate in relation to buried concrete are made in Section 5.7.

With reference to UKWIR guidance, it is considered likely due to reported concentrations of phenols (up to 8.5mg/kg) and PAH (up to 29.3mg/kg) identified within the soils that ductile iron pipe will be required on this site irrespective of other remedial action, and the utility company should be consulted in order to confirm their specific requirements in this respect. As a matter of good practice and to maximise the protection to maintenance



workers, it is recommended that clean, granular backfill is used in service runs and that marker tapes are used for all buried services.

6.10 Soil Contamination vs. Adjacent Land Users

Concentrations of concern with regards to human health for residential end use have been identified within the soils on the subject site. However, the substances are not mobile and thus the potential risk to adjacent land users from the contaminants of concern identified is significantly reduced. As such it is considered that no remedial works are required in order to protect adjacent land users from the site.

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

6.11 Soil Contamination vs. Groundwater

Analysis was undertaken on a single sample of groundwater from the Bognor Sands within WS5. Given the site's location over a Secondary Aquifer and proximity to surface water, the results were compared against DWS (Drinking Water Standards) as set out in the Water Supply (Water Quality) Regulations (2004 and 1999) and EQS (Environmental Quality Standards) Surface Water regulations. These set maximum permissible concentrations prior to entering surface water bodies and at consumers' taps and in the case of the latter present a highly conservative approach as they do not allow for any dilution, attenuation or any physical or chemical processing which would take place. Similarly, use of the former guidance assumes no dilution or attenuation in the ground between the sampling point and the surface water body. Dilution and/or attenuation within surface water is not included within this assessment.

The analysis identified total PAH within the groundwater at a concentration of 7.76ug/l, compared to a DWS of 0.1ug/l. However the DWS is based on the sum of four substances Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(123-cd)pyrene and Benzo(ghi)perylene all of which were recorded at concentrations <0.01ug/l.

The groundwater analysis also identified two exceedances above the Freshwater EQS for Anthracene at 0.04ug/l and Fluoranthene at 0.03ug/l compared to an EQS of 0.02ug/l. However the concentrations of substances identified were very low and are considered unlikely to pose a risk to the Hermitage Stream, identified as the closest surface water receptor.

The source of PAH contamination identified within the groundwater within WS5 is considered to be associated with the area to the west of WS5, where it was highlighted from the investigation works undertaken that bonfires had occurred. As such in order to minimise the migration of any further contamination it is recommended that the area utilised for former bonfires be excavated and disposed of appropriately.

However should it be proposed that this former bonfire area be located beneath a proposed building footprint, this would serve to reduce the infiltration and thus reduce the mobilisation of the contaminants identified.



With the exception of the PAH identified, it is considered that no plausible risk to controlled waters exists and remedial intervention is not warranted

6.12 Groundwater Contamination vs. Site Workers

The establishment and enforcement of safe working practices and provision of suitable and adequate protection as discussed in Section 6.6 would be prudent.

6.13 Groundwater Contamination vs. End Users

Given the depth to groundwater and the findings presented above, a pollutant linkage between groundwater and end-users has not been identified and as such no specific protection measures are considered likely to be required in this respect.

6.14 Groundwater Contamination vs. Soft Landscaping

No international standards exist with respect to the chemical quality of groundwater with respect to protecting soft landscaping from effects of contamination. In addition, vegetation on and in proximity to the site did not appear to be affected. In the absence of any plausible pollutant linkage, it is concluded that negligible risk is posed in this respect and that no specific remedial measures are required.

6.15 Groundwater Contamination vs. Built Environment

Protection measures for the Built Environment as discussed in Section 6.9 are considered appropriate.

6.16 Groundwater Contamination vs. Adjacent Land Users

Surrounding land uses were identified to be broadly consistent with the current or proposed use of the subject site. With reference to previous sections, negligible risk was likely to be posed to end users on this site from groundwater and therefore negligible risk is considered to be posed to surrounding land uses.

6.17 Groundwater Contamination vs. Controlled Waters

The desk study identified a number of potential on and off site contamination sources, or historic activities which could have resulted in impact to the soils and groundwater quality beneath the site. However the investigation and analysis undertaken has not identified any widespread contamination beneath the site.

A single groundwater sample from the Bognor Sand (WS5) was submitted for analysis and the results showed low levels of PAH within the groundwater. The source of the PAH identified is thought to be associated with an area to the west of WS5 that was historically used for bonfires. As a protective measure and to reduce further mobilisation



of the PAH identified within the soil in TP2 it was recommended that this material be excavated for removal, unless it was to be located beneath a building footprint which would serve to reduce the infiltration and mobilisation of the PAH contaminants identified.

Given the low levels of PAH identified within the groundwater within WS5 and given the proposed remediation and/or mitigation measure it is considered that no specific remedial measures are required to protect the Hermitage Stream, identified as the closest controlled water receptor.

6.18 Waste Disposal

Although not part of the environmental risk assessment, the following information has been provided with respect to the disposal of arisings generated as part of the proposed redevelopment.

Waste may be defined as any substance or object in Annex 1 of the Waste Framework Directive which the holder discards, intends to discard, or is required to discard. The holder of waste is anyone in possession of waste or generates it and therefore both the contractor and ultimately the developer are responsible for safe disposal of waste. Different classification systems exist for waste disposal and, whether soils on the site may be generally considered either contaminated or uncontaminated in terms of the redevelopment, this might not necessarily be the case with landfill operators.

A sample from WS1 at 0.5m bgl was submitted to the laboratory for Waste Acceptance Criteria (WAC) testing. The results of WAC testing indicate that the substance levels within the soils on site are likely fall within the classification for inert waste with the exception of Total Organic Carbon (TOC) which was recorded at 3.3%, 0.3% higher than the acceptable level for inert waste. As such once soils requiring off-site disposal have been identified on site it is recommended that further samples are recovered and submitted for WAC testing to clarify the necessary classification of the materials.

Other materials disposed of from site as part of the demolition or remediation process may require disposal separately. All materials containing dangerous substances e.g. tar or bitumen, asbestos, mercury, hydrocarbons and PCBs are likely to be classified as Hazardous Waste and therefore susceptible to the relevant legislative controls.

6.19 Discovery Strategy

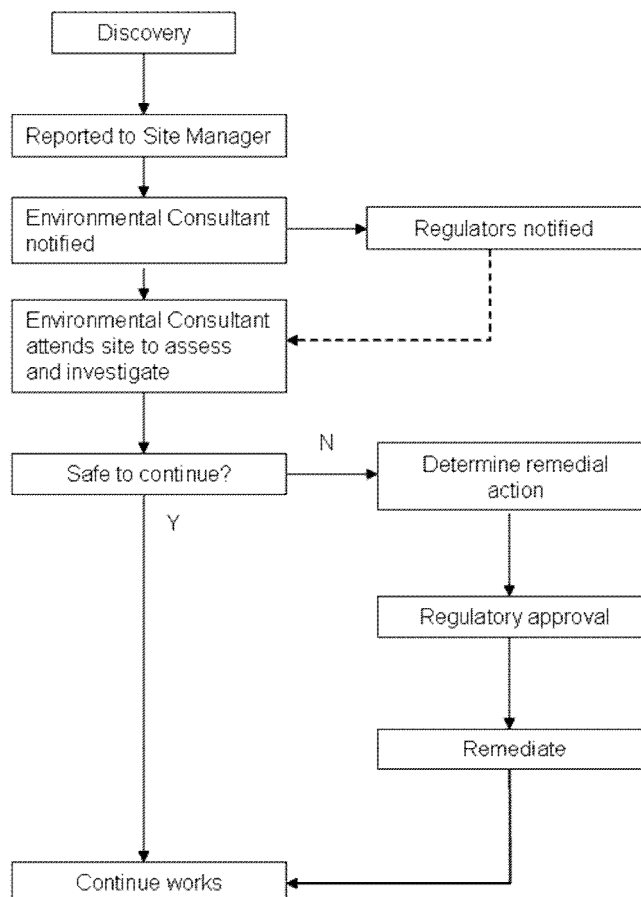
Whilst an investigation has been undertaken on the site, it remains possible that unexpected soil conditions may be encountered during the process of site demolition, clearance and construction.

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

Should previously undiscovered contamination be encountered during construction by the ground workers, this should be reported to the Site Manager immediately in order that any necessary inspection may be made. Records should be kept and samples

submitted for analysis where conditions encountered are not as anticipated. The results of any such testing should be sent to the authorities for consultation.

The process is shown overleaf.



Discovery Strategy Process

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

6.20 Recommendations

In summary, the following works and measures are recommended in order further assess the site and to break pollutant linkages where identified and thus mitigate risks in relation to the proposed development of this site.

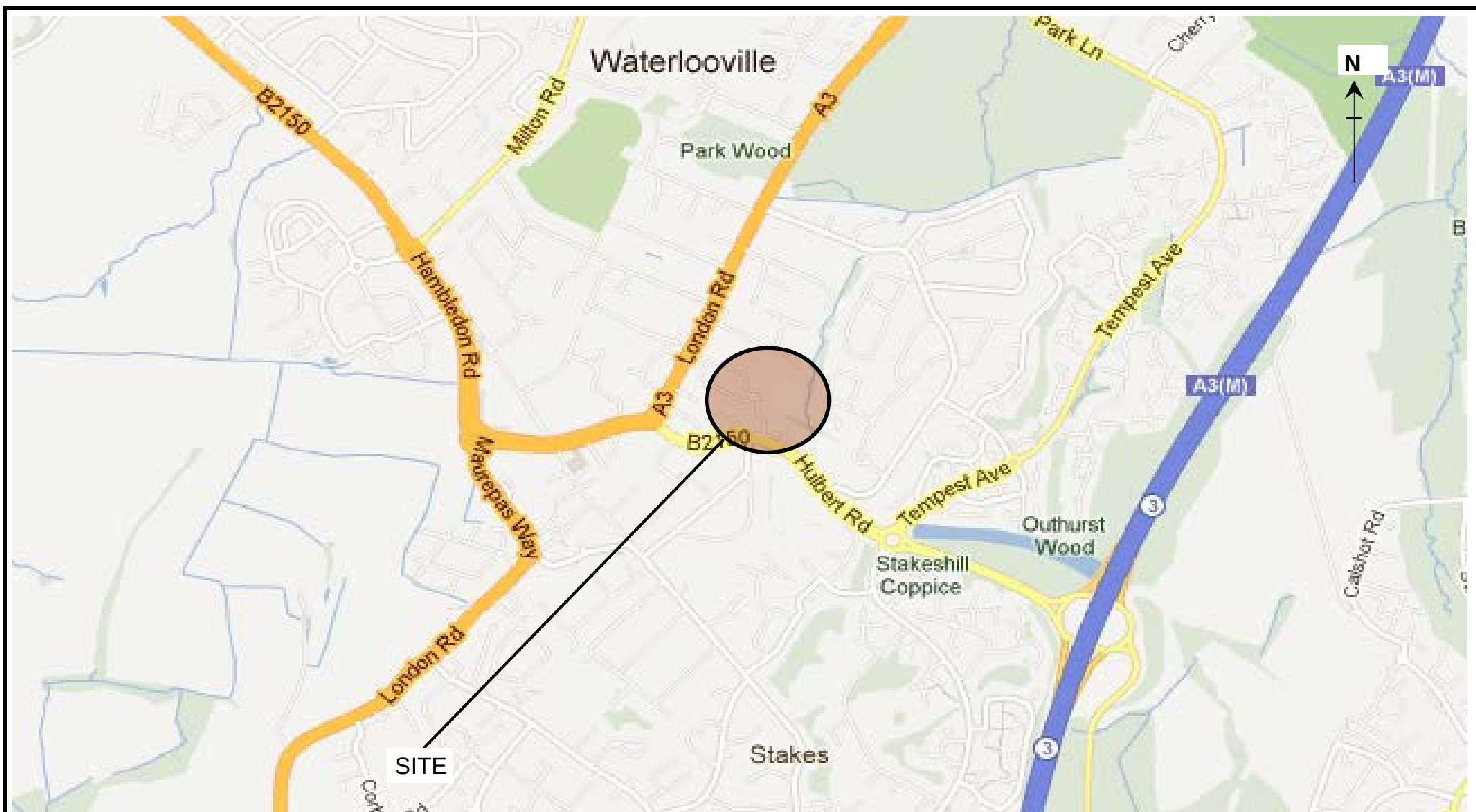
- Targeted investigation of the former boiler house and laundry complex together with the former oil tank location, post demolition. This is likely to be required to support planning condition discharge.
- Construction of deep boreholes to support foundation design of piled foundations. This may be required due to the presence of desiccated soils which could require strip foundations deeper than 2.5m bgl.



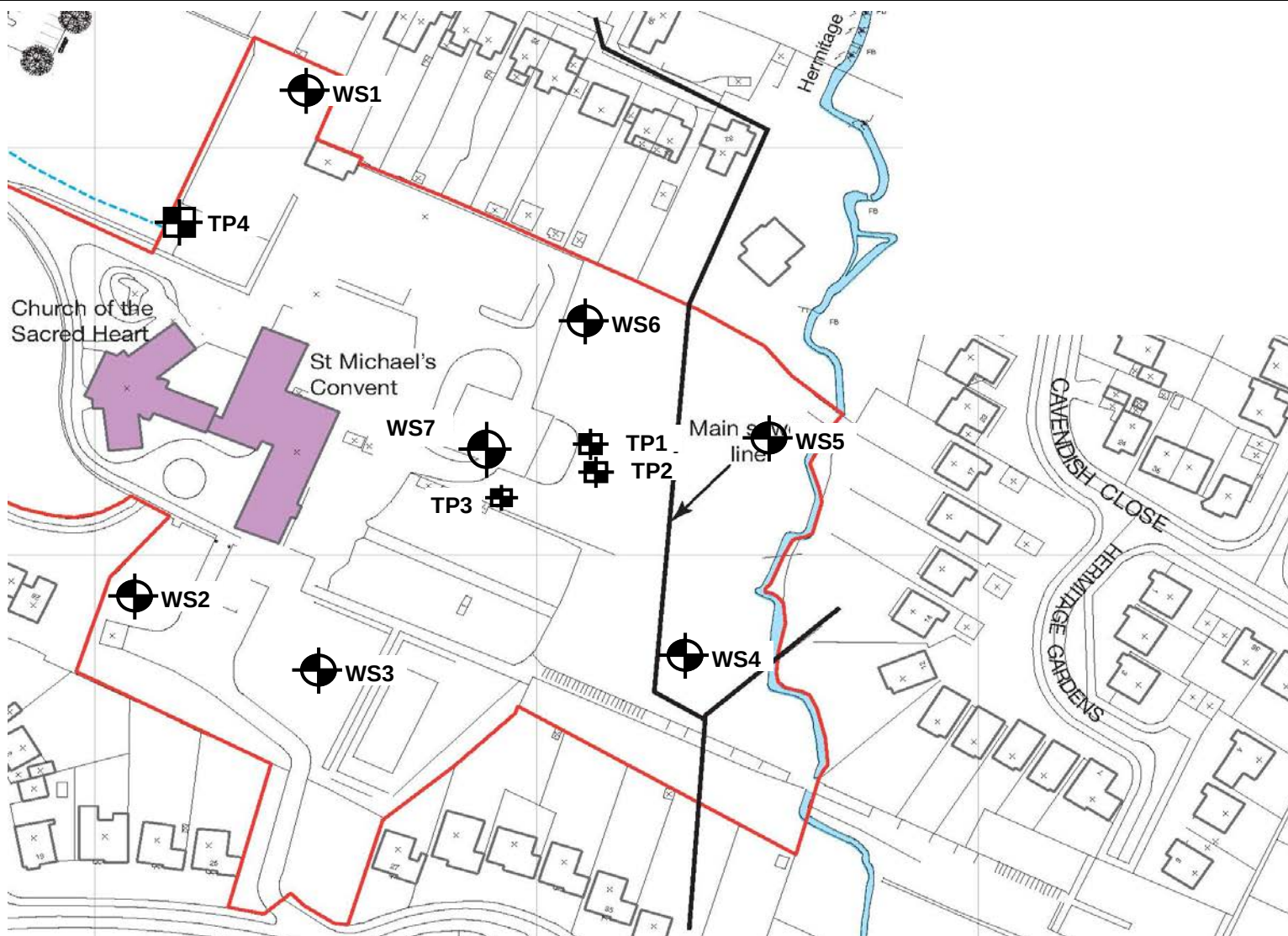
- Gas monitoring to clarify the site's gasing regime and determination of any protection measures.
- Certification of chemical, physical and nutritional suitability of any subsoil and/or Topsoil to be imported on to the development;
- Watching brief or call out attendance of the Environmental Consultant under the Discovery Strategy.



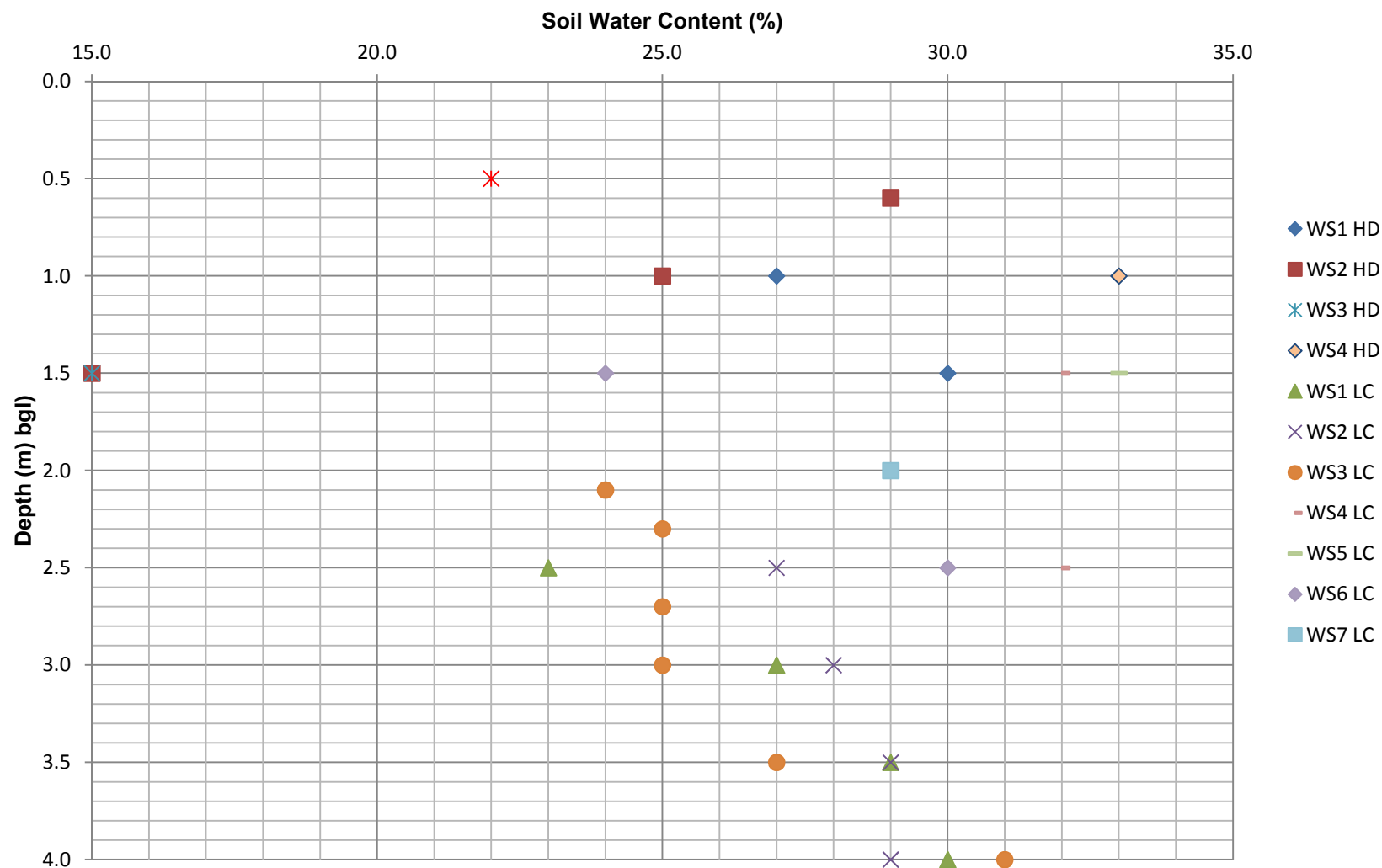
FIGURES



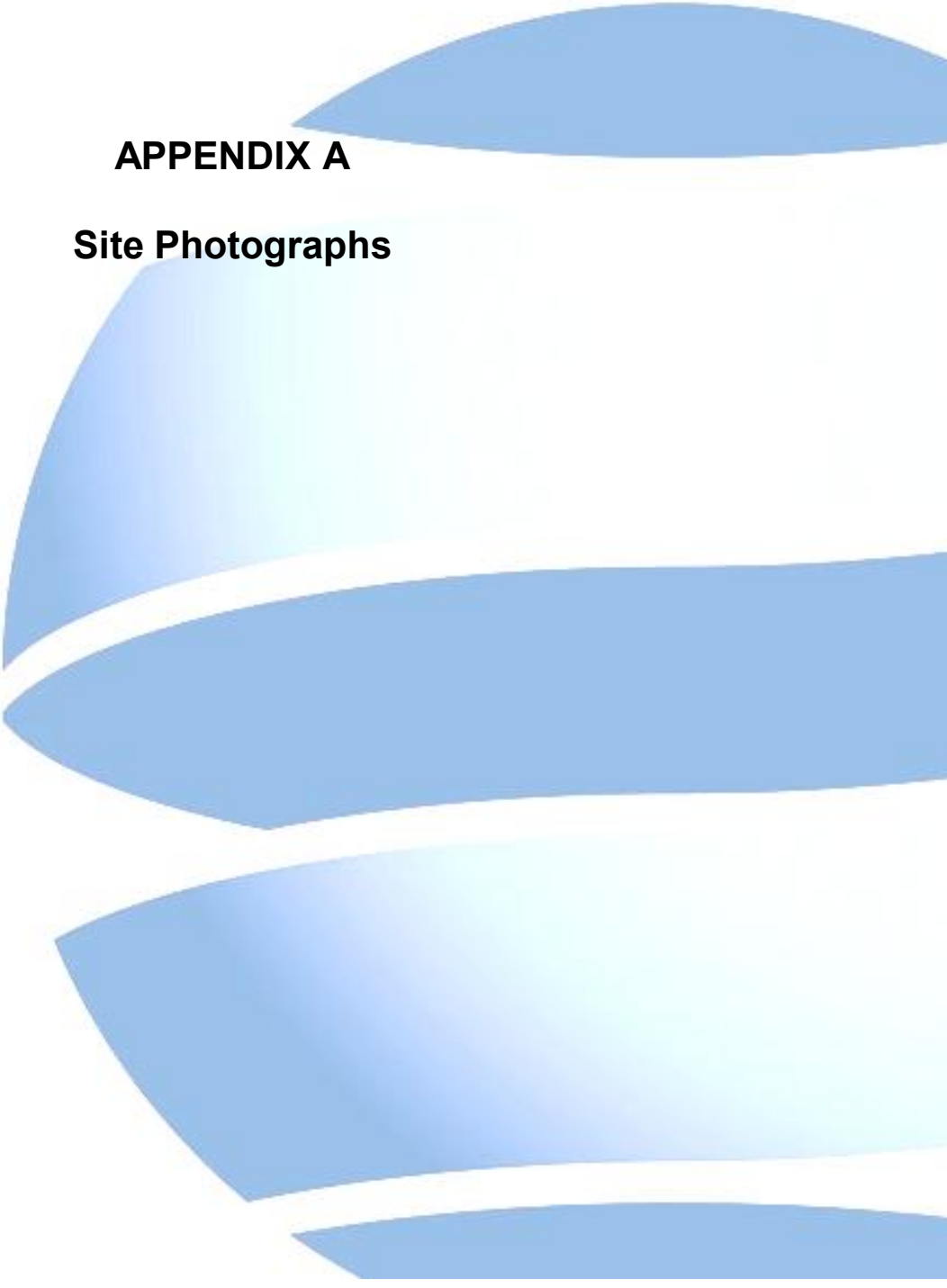
Project:	St Micahels Convent, Waterloooville			Title	Site Location Plan	
Client:	Linden Homes Southern Limited			Geo-Environmental Services Ltd 28 Crescent Road, Brighton, BN2 3RP T: 01273 699 399 F: 01273 699 388 E: mail@gesl.net W: www.gesl.net		
Ref No:	GE8472	Revision:	0			
Drawn:	GR	Date:	12/12/2011			
Figure:	1	Scale:	Not To Scale			
 Geo-Environmental						



Project:	St Micahels Convent, Waterlooville			Title	Exploratory Hole Location Plan	
Client:	Linden Homes Southern Limited			Geo-Environmental Services Ltd 28 Crescent Road, Brighton, BN2 3RP T: 01273 699 399 F: 01273 699 388 E: mail@gesl.net W: www.gesl.net		
Ref No:	GE8472	Revision:	0			
Drawn:	GR	Date:	12/12/2011			
Figure:	2	Scale:	Not To Scale			
 Geo-Environmental						



Project:	St Michaels Covent, Waterloooville			Title	Soil Water Content vs. Depth Plot		
Client:	Linden Homes Southern Limited			Geo-Environmental Services Ltd 28 Crescent Road, Brighton, BN2 3RP T: 01273 699 399 F: 01273 699 388 E: mail@gesl.net W: www.gesl.net		 Geo-Environmental	
Ref No:	GE8472	Revision:	0				
Drawn:	LL	Date:	23/01/2012				
Figure:	3	Scale:	Not To Scale				



APPENDIX A

Site Photographs



Plate 1



Plate 2



Plate 3



Plate 4



Plate 5



Plate 6



Plate 7



Plate 8



Plate 9



Plate 10



Plate 11



Plate 12



Plate 13



Plate 14



Plate 15



Plate 16



Plate 17



Plate 18



Plate 19



Plate 20



Plate 21



Plate 22



Plate 23



Plate 24



Plate 25



Plate 26



Plate 27



Plate 28



Plate 29



Plate 30



Plate 31



Plate 32



Plate 33



Plate 34



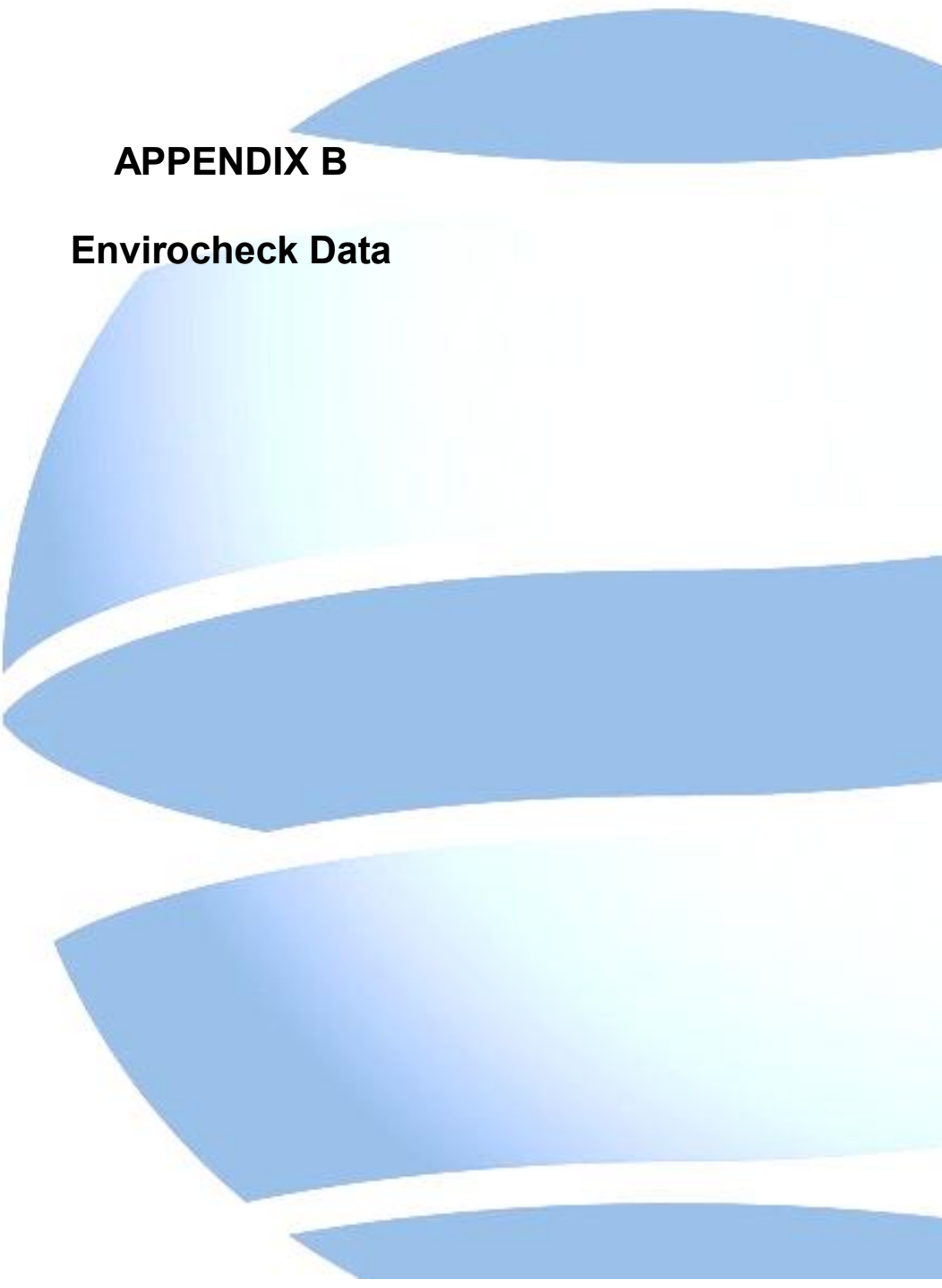
Plate 35



Plate 36

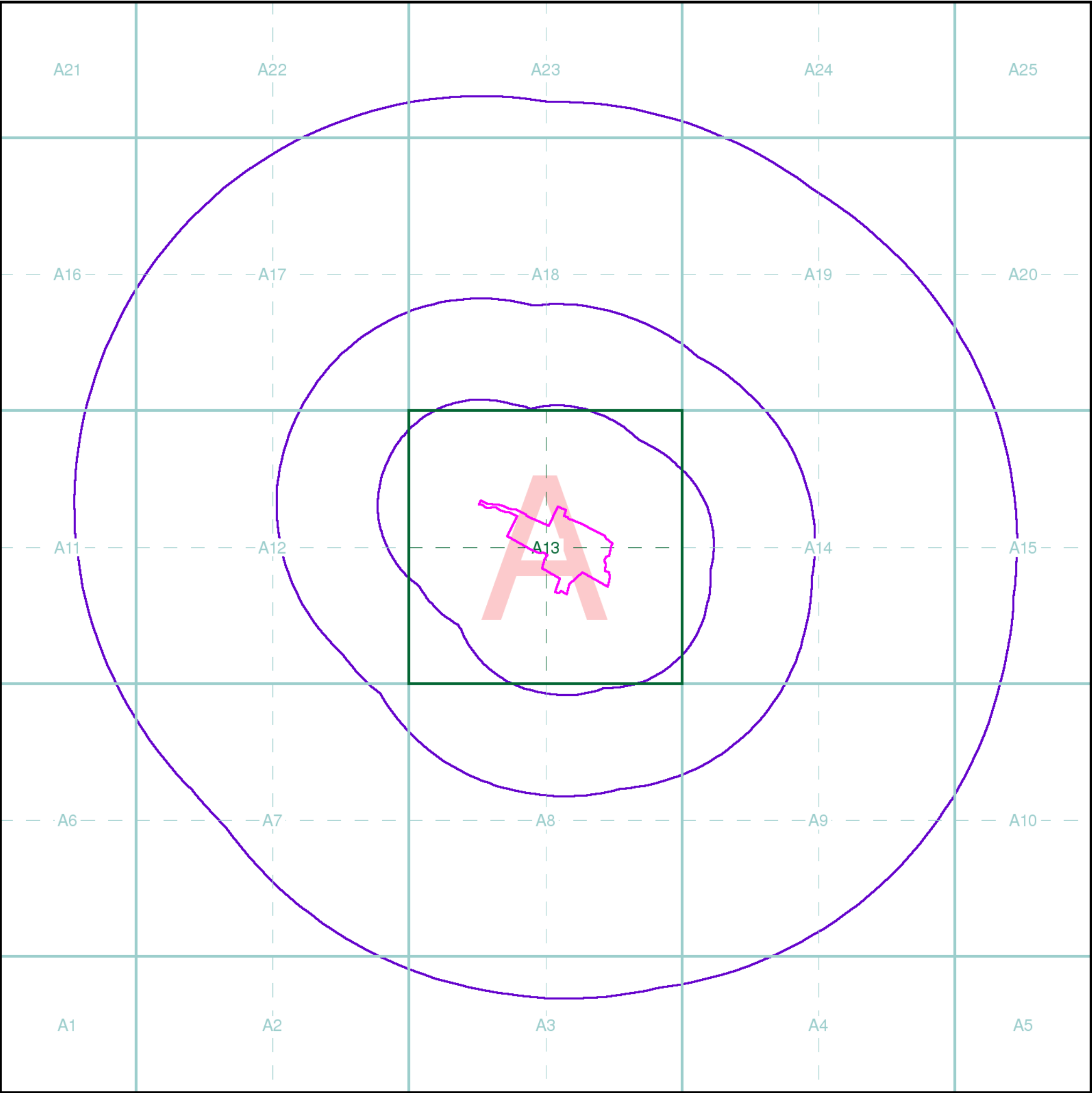


Plate 37



APPENDIX B

Envirocheck Data



Index Map

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

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

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

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

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details
MR J Tingley, Geo Environmental Services Ltd, 28 Crescent Road, Brighton, BN2 3RP

Order Details
Order Number: 36865037_1_1
Customer Ref: GE8472
National Grid Reference: 468650, 109630
Site Area (Ha): 2.94
Search Buffer (m): 1000

Site Details
St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



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"Terms" means these terms and conditions.

"Third Party Content" means the services, software, data, information and other content or functionality provided by Suppliers and linked to or contained in the Services.

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- c. We 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. You acknowledge that it shall remain Your responsibility to check Our Website from time to time for any such amendments or variation to these Terms. Continued Orders of the Services by You shall be deemed an acceptance by You to be bound by any such amendments to the Terms.
- d. These Terms together with Your Order, the Fees and delivery details in relation to Your Order and Our privacy policy, which is available on the Website, constitute the entire agreement between the parties relating to the supply of Services to You by Us ("**Agreement**"). You acknowledge that You have not relied on any statement, promise or representation made or given by or on behalf of Us which is not set out in the Agreement or delivery details. Nothing in this clause 1.d shall limit or exclude any liability for fraud.
- e. 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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- b. Subject always to these Terms You may, without further charge, make the Services available to:
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 - ii. any person who purchases the whole

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- iii. any person who provides funding secured on the whole or part of the Property Site;
- iv. any person for whom You act in a professional or commercial capacity in relation to the Property Site;
- v. any person who acts for You in a professional or commercial capacity in relation to the Property Site; and/or
- vi. prospective buyers of the whole or part of the Property Site as part of an Information Pack but for the avoidance of doubt, We 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.
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- d. You shall ensure that acknowledgements of copyright and database right ownership are included in a conspicuous position in all copies of the Content. You may not delete any of Our or the Suppliers' intellectual property protection notices (including without limitation copyright notices or trade marks) from the Content.
- e. You shall use Your best endeavours to use adequate technological and security measures, including measures We or Suppliers may reasonably recommend from time to time, to ensure that all Content which You hold or are responsible for is secure from unauthorised use or access.
- f. The Content shall only be used strictly in accordance with these Terms and not for any other purpose; nor shall any use of the Content be made that would or might be deemed to be disparaging to Us, the Suppliers or any of them. You shall not be entitled to resell or rent any Content or otherwise any supply products incorporating such Content for commercial sale or rental.
- g. You shall not reverse engineer, separate or otherwise tamper with the Content so that Content can be extracted and used for any purpose outside the scope of the Agreement.
- h. If You are a Company or public body, You agree that the licensed use of Content pursuant to the Agreement always excludes its use by any of Your subsidiaries, holding companies or subsidiaries of such holding companies (as such terms are defined in section 1159 of the Companies Act 2006) or by any government entity associated with You (in each case as applicable). You agree, and shall procure, that any such company or entity shall enter into a separate agreement with Us.
- i. All other uses of the Content are prohibited. If You wish to use the Content in a manner which is not authorised by the Terms, then You must contact Us to seek the necessary consents or licences (which may include further licences from the Suppliers), for which there may be additional Fees.
- j. You agree to notify Us as soon as You

suspect any infringement of Our or any of Our Supplier's intellectual property rights and You agree to give Us all reasonably required assistance in pursuing any potential infringement.

3. Intellectual Property and Confidentiality

- a. You acknowledge and agree that all Intellectual Property Rights in Content are and shall continue to be owned by Us or Our Suppliers and nothing in the Agreement shall transfer, assign or grant any rights to You (save for the licence as set out above).
- b. Subject to any use of the Content in accordance with these Terms, You acknowledge and agree that You shall, and shall procure that any person to whom You provide access to the Content shall, treat as strictly private and confidential the Services, the Content and all information which they obtain from the Services and Content. You agree to indemnify Us against all liabilities, damages, penalties, costs, expenses (including legal expenses on an indemnity basis) or other loss suffered or incurred by Us in relation to any breach or alleged breach of this clause 3.b.

4. Termination

- a. At any time, We may terminate the Agreement with immediate effect by giving You written notice:
 - i. if You are in breach of the Terms and, if such breach is capable of remedy, You fail to remedy the breach within 30 days of written notice from Us specifying the breach and requiring it to be remedied; and
 - ii. if You have a receiver or administrative receiver or administrator appointed over You or any part of Your undertaking or assets or shall pass a resolution for winding up (otherwise than for the purpose of a bona fide scheme of solvent amalgamation or reconstruction) or if a court of competent jurisdiction shall make an order to that effect or if You become subject to an administration order or enter into a voluntary arrangement with Your creditors or shall cease or threaten to cease to carry on business or if You are presented with a bankruptcy petition.
- b. In the event of the termination or expiry of the Agreement:
 - i. You shall, subject to clause 4.b.iii, immediately cease to use the Report and any Content;
 - ii. You shall, subject to clause 4.b.iii, within 30 days of such termination or expiry, destroy all Content in any media which You hold or for which You are responsible and provide, at Our request, a sworn statement by a duly authorised person that You no longer hold such Content;
 - iii. except in the event of termination by Us under clause 4.a, You may retain Content in an archive following expiry of the Agreement for the sole purpose of addressing a complaint or challenge from a regulator or other third party regarding Your use of such Content during the term of the Agreement.

Your rights are on condition that: (a) the archive rights do not apply to Content that include third party Intellectual Property Rights (other than Content provided by Ordnance Survey to the extent that the Intellectual Property Rights in such Content are owned by Ordnance Survey); (b) You shall not disclose Content retained under this clause 4.b.iii to any regulator or other third party except strictly to the extent necessary for the relevant purpose of addressing a complaint or challenge from a regulator or other third party and in paper or read-only electronic format only; (c) You must store such Content separately from any other data which You hold; and (d) subject to clause 6.a, We shall have no liability for Your use of it following termination or expiry of the Agreement; and

iv. the parties shall have no further obligations or rights under the Agreement, without prejudice to those which have accrued to either party prior to termination or expiry save that the "Definitions", clauses 2.c to 2.j (inclusive), this clause 4.b, clauses 5.d, 6, 7, 9, 10 and 11 together with those other clauses the survival of which is necessary for the interpretation or enforcement of the Agreement or which by their nature can be reasonably interpreted as surviving the expiry or termination of the Agreement, shall continue to have effect after such expiry or termination.

5. Payments

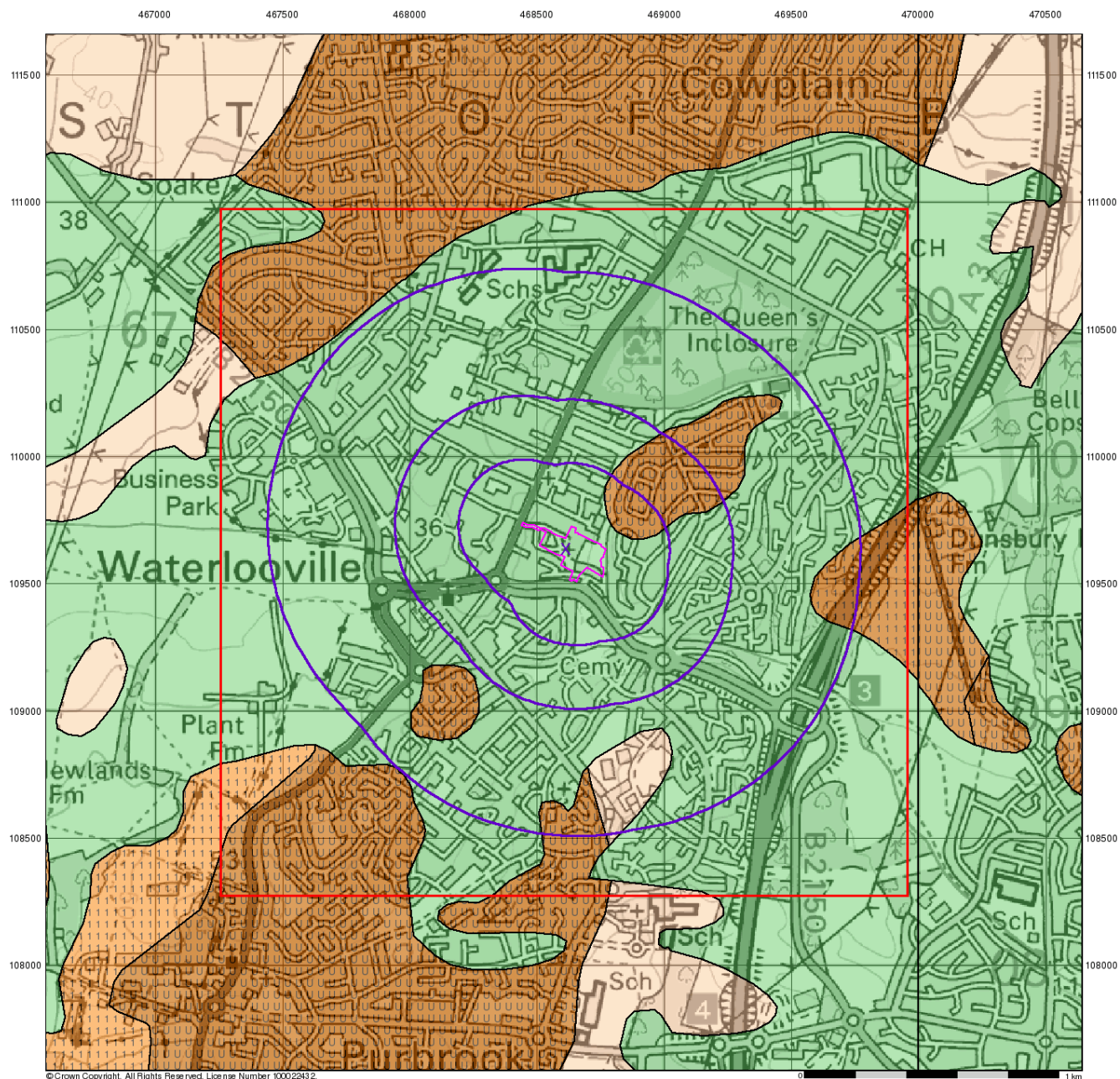
- a. An individual or a monthly invoice showing all Orders created by You will be generated subject to these Terms. You will pay the Fees at the rates set out in Our or Our Authorised Reseller's invoice within 30 days of the date of each invoice without deduction, counterclaim or set off. Where Your order comprises a number of Services or severable elements within any one or more Services, any failure by Us or its Authorised Reseller to provide an element or elements of the Services shall not prejudice Our or Our Authorised Reseller's ability to require payment in respect of the Services delivered to You. You acknowledge that time is of the essence with respect to the payment of such invoices.
- b. VAT shall be due in addition to any Fees. You shall pay any other applicable indirect taxes related to Your use of the Services.
- c. Neither We nor any Authorised Reseller shall be required to notify You in advance of any amendment to the Fees and the placing of any further Order for Services shall be deemed acceptance of any revisions to the Fees.
- d. If You fail to pay by the due date any amount due and payable by You under the Agreement, We shall be entitled, but not obliged to, charge You interest on the overdue amount, payable by You immediately on demand, accruing from the due date up to the date of actual payment, after as well as before judgment, at the rate set out in the Late Payment of Commercial Debts (Interest) Act 1998 from

time to time and fixed sum compensation under the Late Payment of Commercial Debts Regulations 2002. Such interest shall accrue on a daily basis.

6. Liability

- a. Nothing in these Terms excludes or limits either party's liability for death or personal injury caused by that party's negligence or wilful default or for fraud, and the remainder of this clause 6 is subject to this provision. If You are a Consumer, Your statutory rights (which include, for example, that We will provide the Services to a reasonable standard and within a reasonable time) are not affected by anything in these Terms.
- b. Save as set out in clause 6.a, We shall not be liable to You or to any End User in contract, tort (including negligence) or for breach of statutory duty or in any other way for:
 - i. any indirect or consequential losses (which includes any loss that could not have been reasonably expected by You and Us at the time of entering into these Terms);
 - ii. loss arising from or in connection with loss of revenues, profits, contracts or business or failure to realise anticipated savings; or
 - iii. loss of goodwill or reputation.
- c. Save as set out in clause 6.a, Our total liability to You and/or any End User in contract or tort (including negligence) or for breach of statutory duty shall not exceed an amount of ten million pounds (£10,000,000) per claim or series of connected claims.
- d. The Content that Services are based on is derived from third party sources. Therefore, save as set out in clause 6.l in respect of risk assessments and professional opinions, We do not warrant the accuracy or completeness of any information or Content provided, unless We should reasonably have been alerted to any omission, error or inaccuracy in the Content. Such Content is provided specifically from the sources as described by Us and We do not claim that these represent an exhaustive or comprehensive list of all sources that might be consulted.
- e. You acknowledge and agree that neither You nor any End User shall have any claim or recourse against any Supplier of Third Party Content.
- f. You acknowledge and agree that We do not warrant that the online supply of Content or Services or any internet ordering service will be: uninterrupted or error free or provide any particular facilities or functions; free from defects; free from software viruses; free of error from computer malfunction, inaccurate processing; free from corruption of data whilst geo-coding, processing by computer or electronic means or in the course of transmission; or similar, although We will use reasonable endeavours to correct any such issues within a reasonable period of them becoming known (which may be limited to notifying the relevant Supplier). Time shall not be of the essence in providing the Content or Services.
- g. You acknowledge and agree that no

physical inspection of the Property Site reported on is carried out as part of any Services offered by Us and We 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. h. You acknowledge and agree that We will not be held liable in any way if a Report is used otherwise than as provided for in these Terms and/or in the Report. i. You acknowledge and agree that the Services have not been prepared to meet Your or anyone else's individual requirements and it is Your responsibility to ensure that the Services ordered are suitable for Your (or the End User's) intended purpose. j. You acknowledge and agree that You shall, on receipt of a Report carry out a reasonable inspection to satisfy Yourself that there are no apparent defects or failures with respect to the description and location of the Property Site and shall promptly inform Us if there are any such defects or failures. k. All liability for any insurance products purchased by You rests solely with the insurer. We do 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 We will deem such as Your consent to forward a copy of the Report to the insurers. Where such policy is purchased, You acknowledge and agree that all liability shall remain with the insurers and that You are entirely responsible for ensuring that the insurance policy offered is suitable for Your needs and should seek independent advice. We do not guarantee that an insurance policy will be available on a Property Site. You acknowledge and agree that all decisions with regard to the offer of insurance policies for any premises will be made solely at the discretion of the insurers and We accept no liability in this regard. The provision of a Report does not constitute any indication by Us that insurance will be available on the Property Site. l. We may provide You with professional opinions or a risk assessment in a Report. You acknowledge and agree that We shall carry out (or procure that third parties carry out) such assessment with reasonable skill and care and that We shall be liable where any such risk assessment is carried out negligently. Notwithstanding the foregoing We shall not be liable for any inaccurate statement, opinion or risk rating in a Report which resulted from a reasonable interpretation of the Content. m. Neither You, nor any End User or any other person may rely on a Service more than 12 months after it was originally provided. n. You shall use all reasonable endeavours to	ensure that End Users acknowledge and agree to the limitations and exclusions of liability set out in this clause 6. 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. We are prepared to offer, 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 IIA of the Environmental Protection Act 1990 ("the Notice") We shall 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; and iv. the Contribution will not be paid in respect of any of the following: (1) 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; (2) asbestos arising out of or related in any way to asbestos or asbestos-containing materials on or in structures or services serving the structures; (3) 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; (4) 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; (5) 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; (6) any condition which is caused by acts of war or an act of terrorism; (7) 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; (8) any fines liquidated damages punitive or exemplary damages; (9) any bodily injury including without limitation, death, illness or disease, mental injury, anguish or nervous shock; (10) 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; and/or (11) any losses incurred following a material change in use of, alteration or development of the Property Site. d. Without prejudice to Your other rights and remedies under the Agreement, the maximum sum that shall be contributed by Us 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. We shall only pay a Contribution where the Notice is served within 36 months of the issue 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 We shall 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 Us 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 Our reasonable requirements 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 Our prior written consent to any estimates for such works or complying with any other reasonable request by Us, We shall not be required to pay any Contribution. Notwithstanding the payment of the Contribution by Us 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 Part IIA of the Environmental Protection Act 1990 You shall ensure that they advise Us within a maximum period of two months from receipt of such communication. This clause 7.h and the service of any notice under it shall not affect the provisions of clauses 7.e and 7.g, and any such communications, even if advised to Us will not operate as notice under clause 7.e. i. We 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. Assignment and Sub-contracting a. We shall be entitled to assign or transfer the Agreement as We reasonably see fit. b. The Agreement is personal to You. You shall not assign, transfer, sub-licence or otherwise deal with any of Your rights and obligations under the Agreement without Our prior written consent. c. We may authorise or allow Our contractors and other third parties to provide to Us and/or to You services necessary or related to the Services and to perform Our obligations and exercise Our rights under these Terms, which may include collecting payment on Our behalf. 9. Events Beyond Our Control a. Neither party to the Agreement shall be liable for any delay or failure to perform their obligations caused by any circumstance beyond their control, and such party shall be entitled to a reasonable extension of time for the performance of such obligation. 10.Complaints and Dispute Resolution a. Any complaints in relation to the Services should, in the first instance, be in writing addressed to the Customer Service Support Manager at Our registered office. We will (or Our agents will) respond to any such complaints in writing as soon as practicably possible. b. If any dispute arises out of or in connection with the Terms of the Agreement or their validity ("Dispute") the parties undertake, subject to clause 10.c, that prior to commencement of court proceedings they will negotiate in good faith to settle such Dispute by mediation in accordance with the Centre for Effective Dispute Resolution Model Mediation Procedure as in force from time to time, which Procedure is deemed to be incorporated by reference into this clause. Unless otherwise agreed between the parties, the mediator will be nominated by the Centre for Effective Dispute Resolution. To initiate the mediation a party shall give notice in writing to the other party to the dispute requesting a mediation. The mediation will start not later than 21 days after the date of service of such notice. If the Dispute has not been resolved to the mutual satisfaction of the parties within 60 days (or such other period as they shall agree) after the date of service of such notice then either party may refer the Dispute to the courts in accordance with clause 11.f.	c. Clause 10.b shall be without prejudice to the rights of termination stated in clause 4.a and in addition shall not prevent Us from: i. applying for injunctive relief in the case of: (1) breach or threatened breach of confidentiality; or (2) infringement or threatened infringement of Our or Our Suppliers' intellectual property rights; or ii. pursuing a debt claim for the payment of the Fees. 11.General a. If any provision of the Agreement is 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 the Agreement and never to have formed part of the Agreement and the remaining provisions shall continue in full force and effect. b. No delay, failure or omission on Our, or any Supplier's, part in enforcing, exercising or pursuing any right, power, privilege, claim or remedy conferred by or arising under the Agreement or by law shall be deemed to be or construed as a waiver of that or any other right, power, privilege, claim or remedy, nor shall any single or partial exercise of any such right, power, privilege, claim or remedy preclude the exercise of that or any other right, power, privilege, claim or remedy. c. Our privacy policy as displayed on Our Website and updated from time to time governs the use that We shall make of any information provided by You or an End User. d. A person who is not a party to any contract made pursuant to these Terms shall have no right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Agreement and We shall not be liable to any such third party in respect of the Products, save that any Supplier may enforce any of these terms and conditions against You in accordance with the Contracts (Rights of Third Parties) Act 1999. Notwithstanding any other provisions of the Agreement, We may rescind or vary the Agreement in accordance with its terms without the consent of the Suppliers and accordingly section 2(1) of the Contracts (Rights of Third Parties) Act 1999 shall not apply. e. You shall ensure that each End User complies with and is bound by the Terms and shall procure that We may in Our own right enforce such terms and conditions against the End User pursuant to the Contracts (Rights of Third Parties) Act 1999. You shall be responsible for End User's compliance with the Terms and You shall be liable for all breaches of the Terms by the End Users as if they were breaches by You. f. The Agreement and any non-contractual obligations arising out of or in connection with it shall be governed by and construed in accordance with the laws of England and, subject to clause 10.b, each party irrevocably submits to the exclusive jurisdiction of the courts of England and Wales.
		Landmark Information Group Limited, 7 Abbey Court, Eagle Way, Exeter, EX2 7HY Email: info@landmark.co.uk © Landmark Information Group Limited	Order Number: 36865037	A Landmark Information Group Service



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Groundwater Vulnerability

General

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

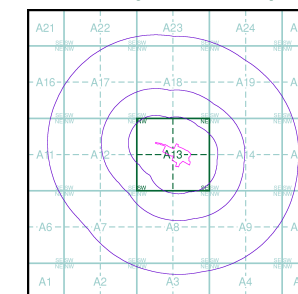
Agency and Hydrological

Geological 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)**
 - Low
- Water or Sea**
 -
- Drift Deposit**
 -

Soil Classes

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterloooville, PO7 7RZ



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



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Bedrock Aquifer Designation

General

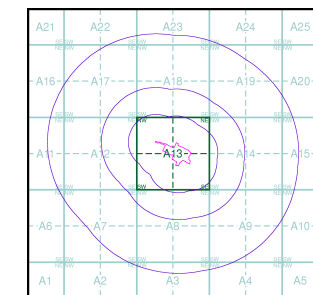
- Specified Site
- Specified Buffer(s)
- Slice
- Map ID
- Bearing Reference Point

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

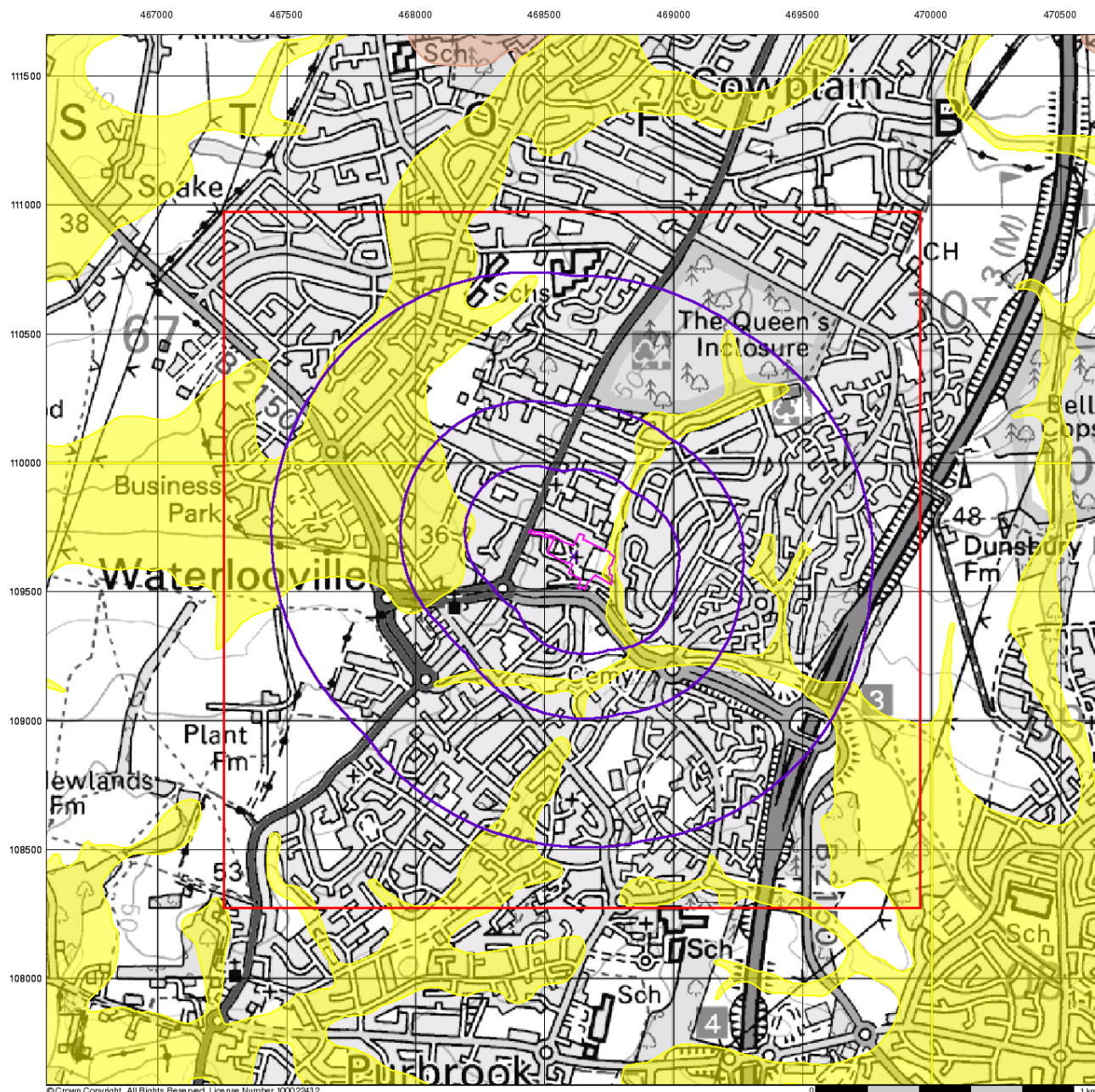
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 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



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Superficial Aquifer Designation

General

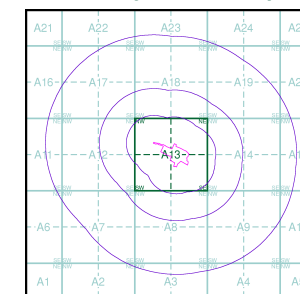
- ◊ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

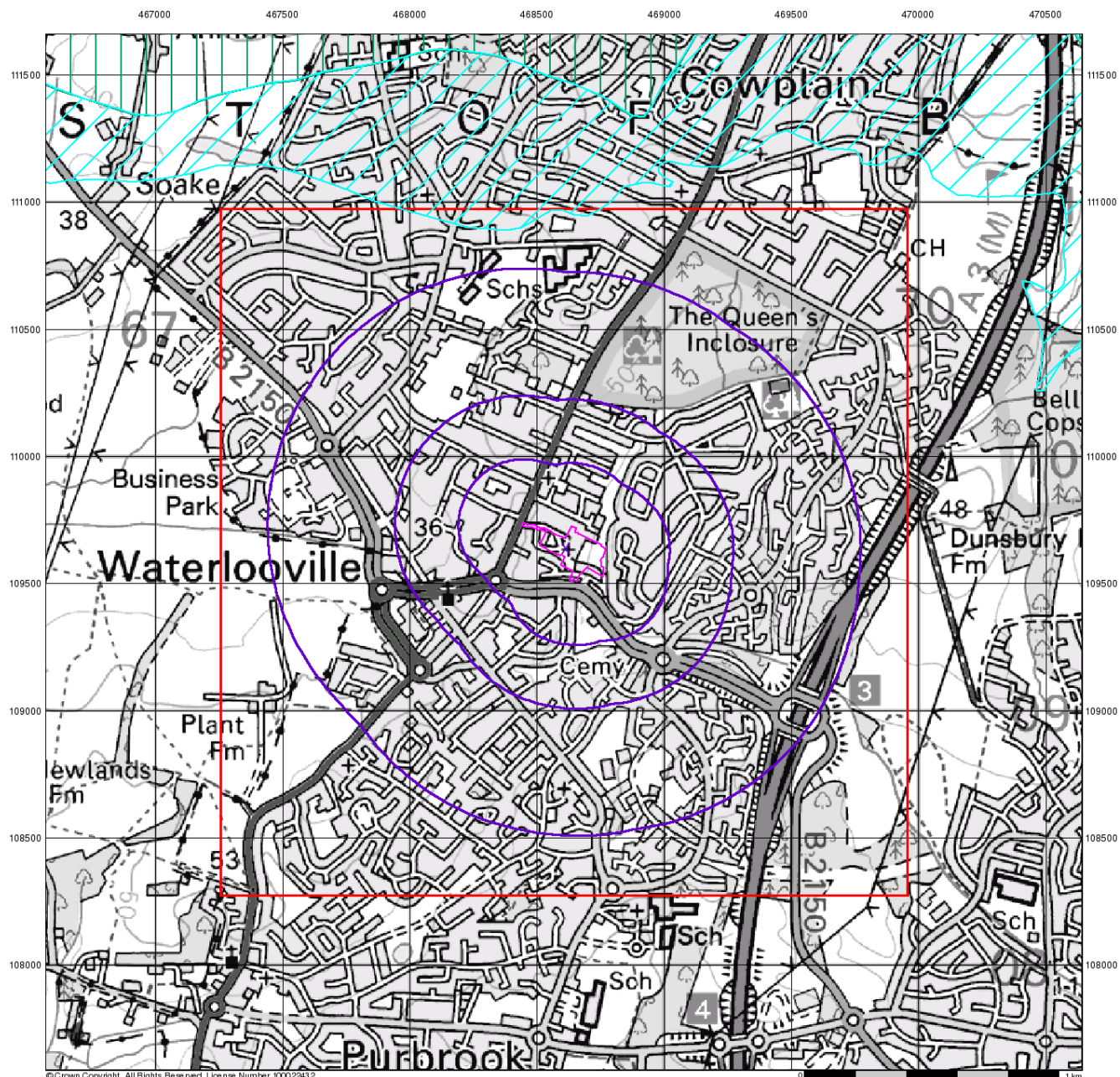
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 Search Buffer (m): 1000

Site Details

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Source Protection Zones

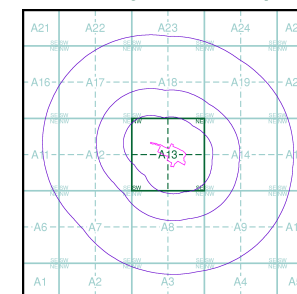
General

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

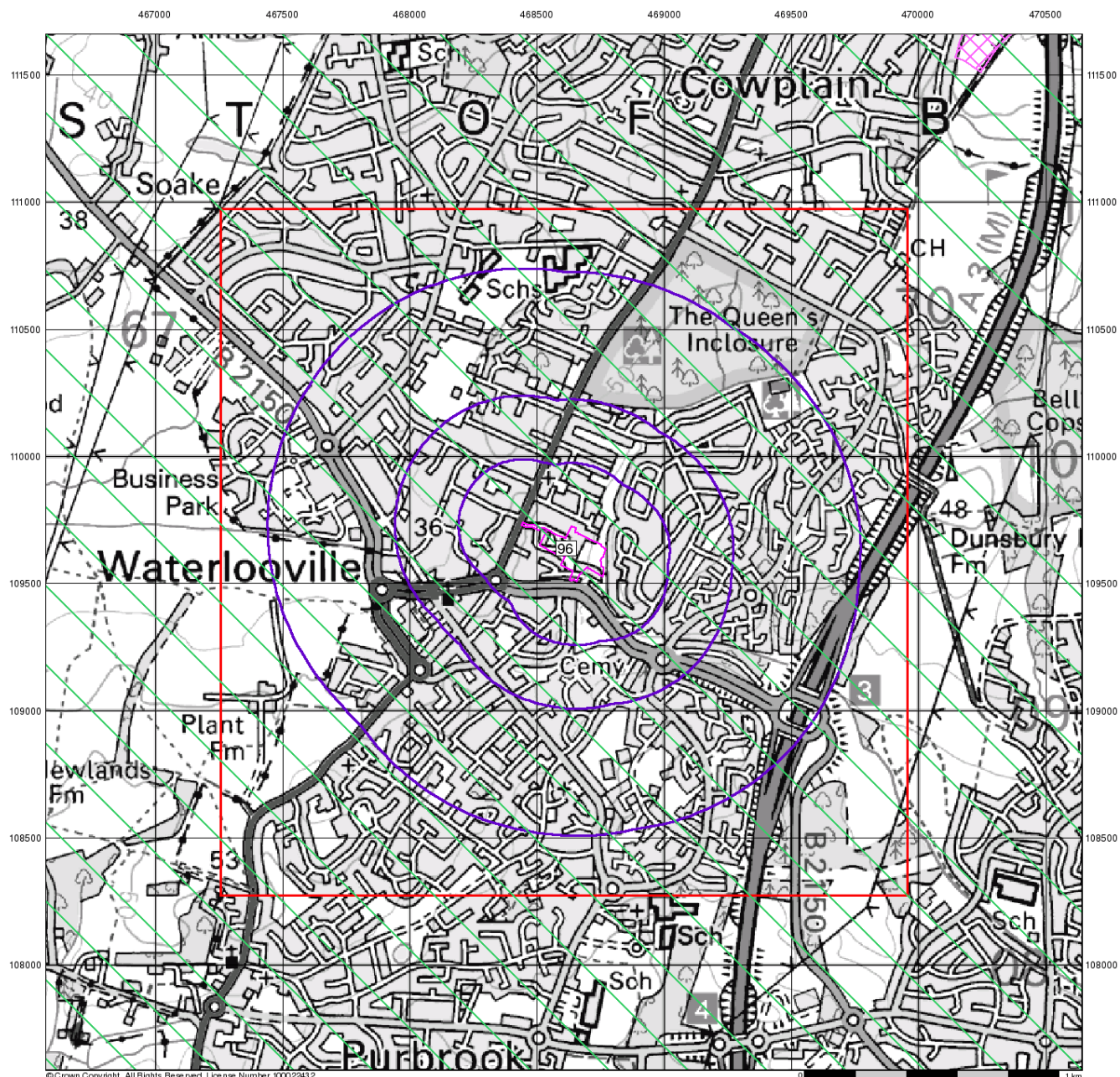
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 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

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Sensitive Land Uses

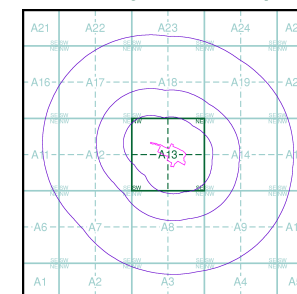
General

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

Sensitive Land Uses

- 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: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterloooville, PO7 7RZ



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

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

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

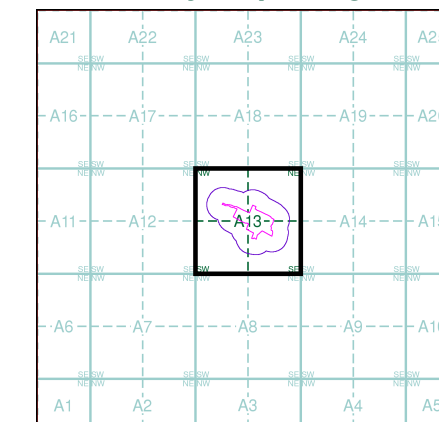
Waste

- 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 - Segment A13

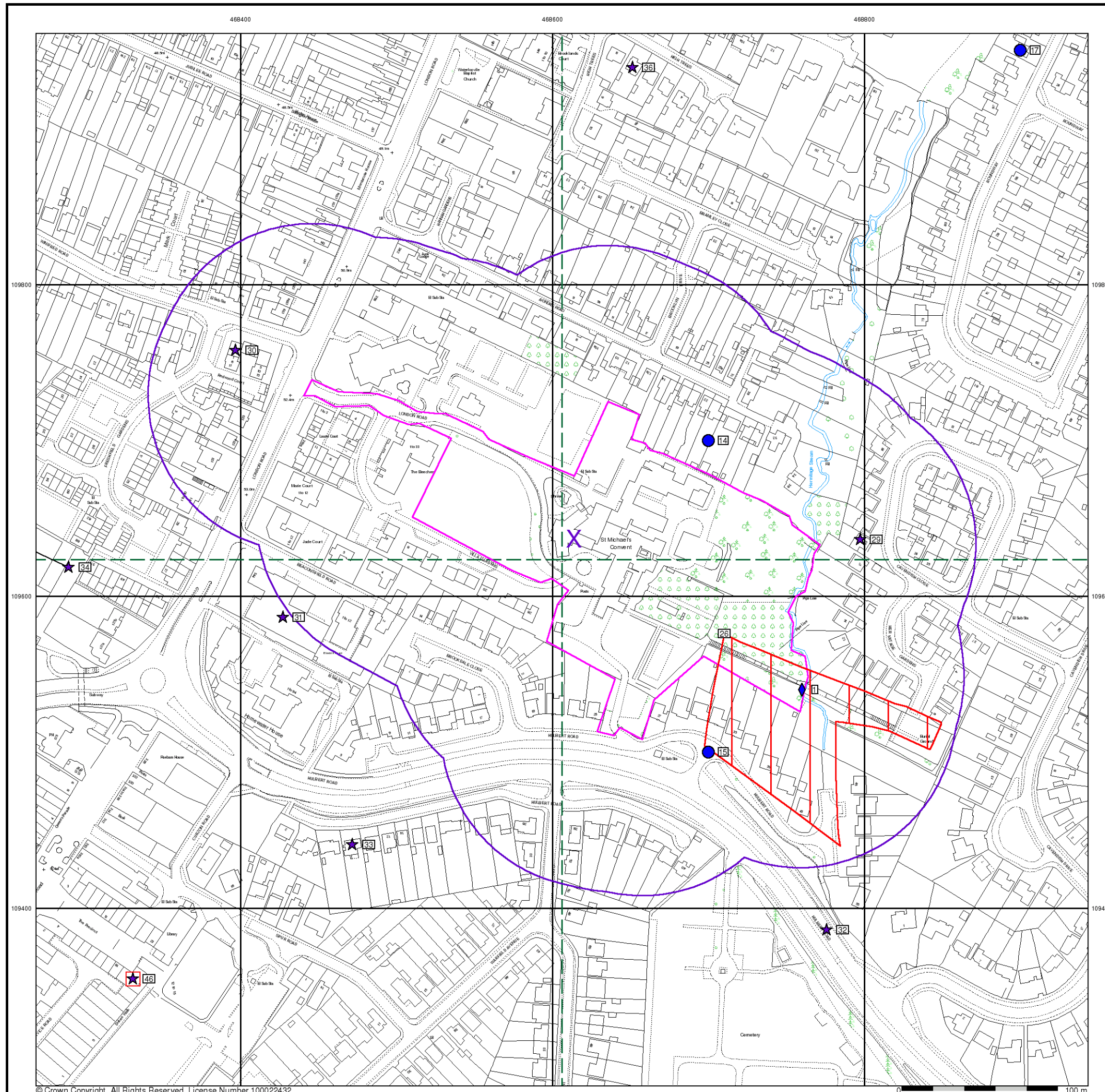


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Plot Buffer (m): 100

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



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 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
- 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

Waste

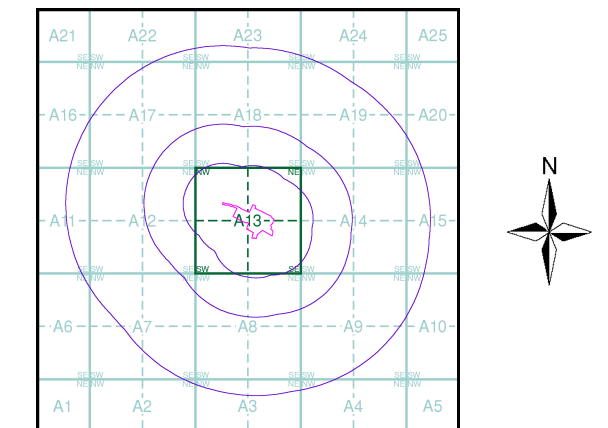
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Slice A

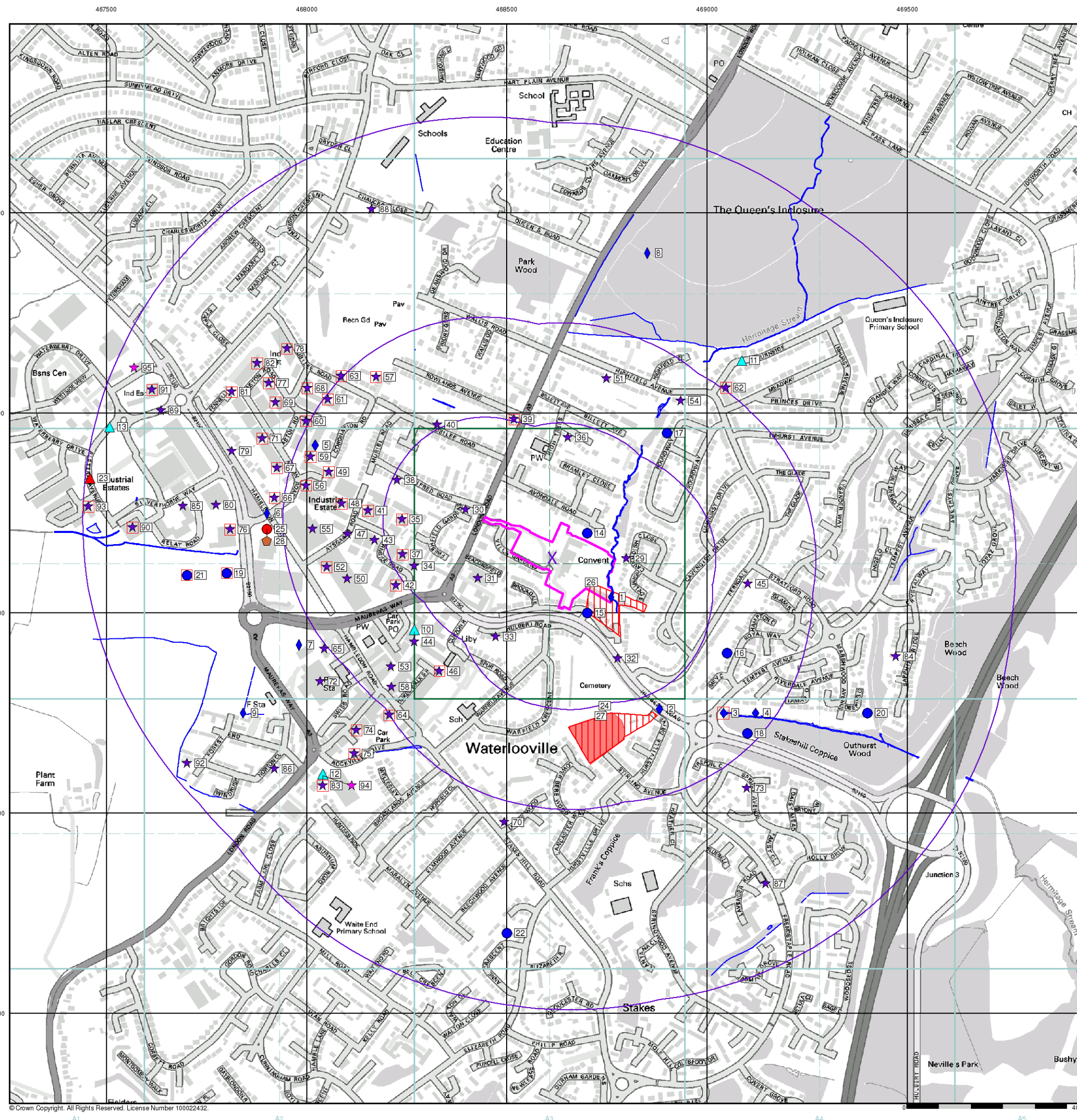


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterloooville, PO7 7RZ



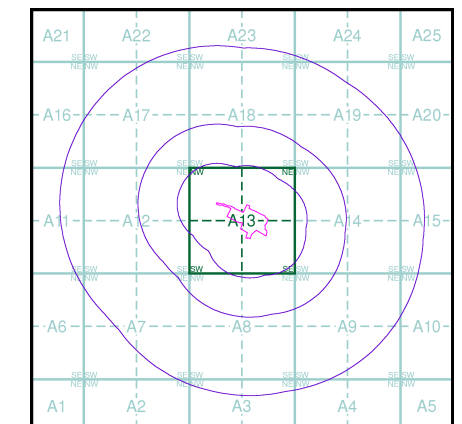
General

- 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

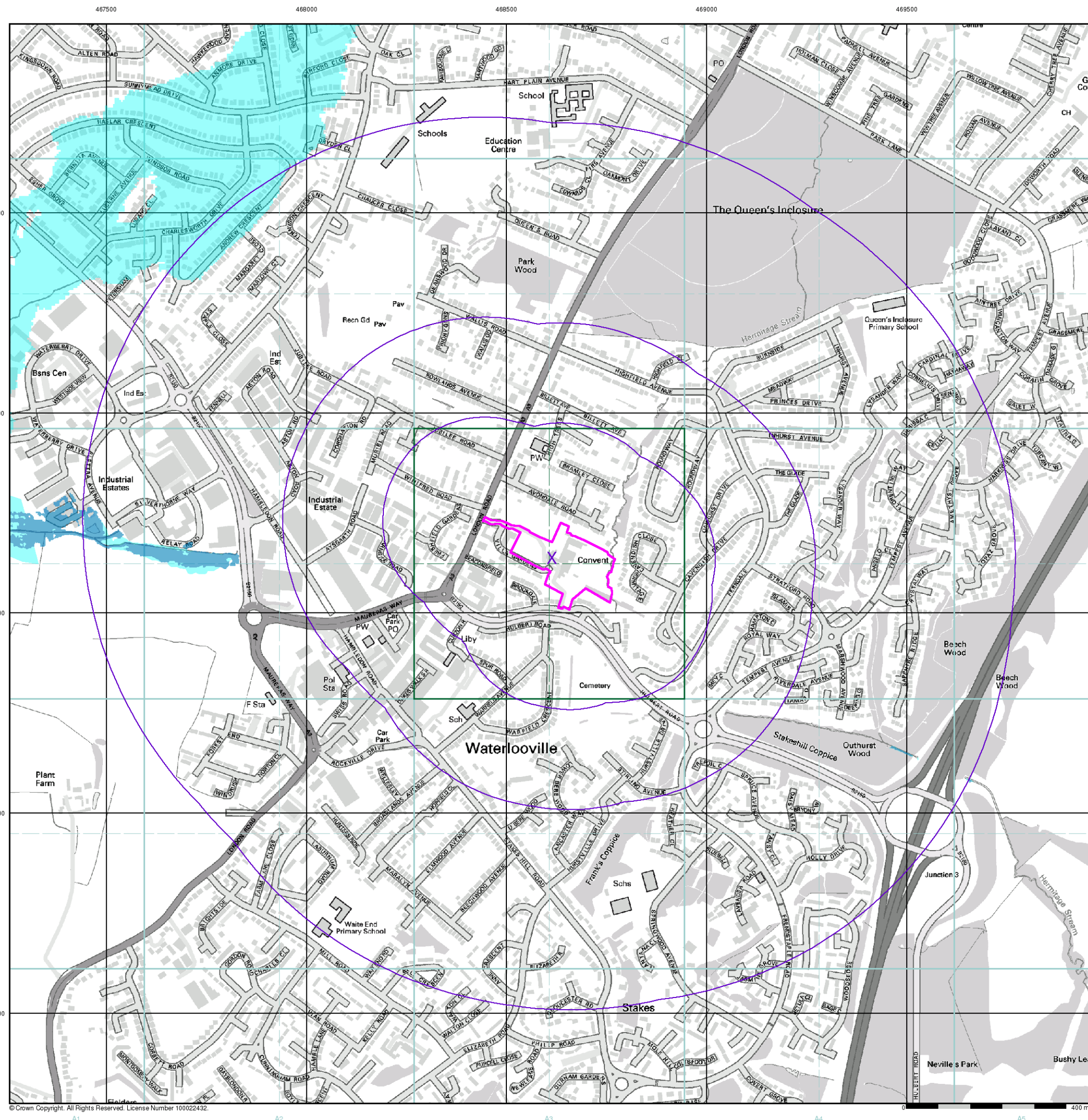


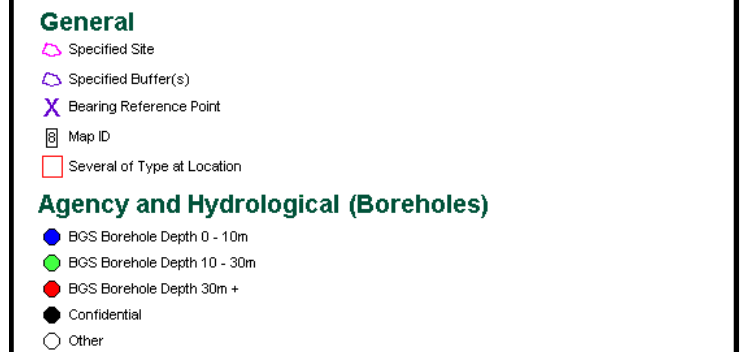
Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

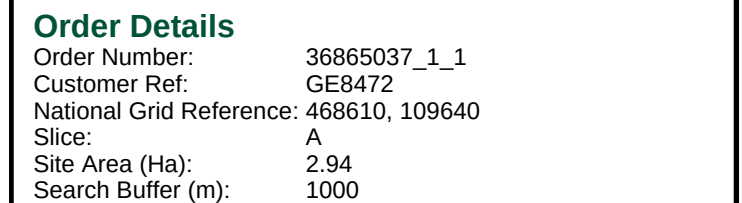
Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ





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



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Information Group

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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

36865037_1_1

Customer Reference:

GE8472

National Grid Reference:

468610, 109640

Slice:

A

Site Area (Ha):

2.94

Search Buffer (m):

1000

Site Details:

St Michael's Convent

Villa Gardens

Waterlooville

PO7 7RZ

Client Details:

MR J Tingley

Geo Environmental Services Ltd

28 Crescent Road

Brighton

BN2 3RP

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	7
Hazardous Substances	-
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Sensitive Land Use	26
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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency 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 (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1	1		6	4
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	3
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 4	Yes			
Pollution Incidents to Controlled Waters	pg 4		2	3	6
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances	pg 6				1
River Quality	pg 6		1		
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability	pg 6	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 6	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 6	Yes	n/a	n/a	n/a
Source Protection Zones					
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					
Historical Landfill Sites	pg 7			1	
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 7				1
Local Authority Recorded Landfill Sites	pg 7	1		1	
Registered Landfill Sites					
Registered Waste Transfer Sites	pg 8				1
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 9	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					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 9	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 9	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 10		13	54	112
Fuel Station Entries	pg 25				2

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					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 26	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: Southern Water Services Ltd (H) Property Type: Undefined Or Other Location: St. Michael'S Convent, Waterlooille Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: W00034 Permit Version: 1 Effective Date: 1st April 1991 Issued Date: 1st April 1991 Revocation Date: 16th February 1998 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	0	1	468760 109540
2	Discharge Consents Operator: Clerk Of The Council Property Type: Water Treatment Works Location: Storm Water Overflow, Hulbert Road, HAVANT , Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: H01151 Permit Version: 1 Effective Date: 9th January 1969 Issued Date: 9th January 1969 Revocation Date: 31st March 1997 Discharge Type: Unknown Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	293	1	468880 109260
3	Discharge Consents Operator: A.W. Kingdon & Co. Ltd. Property Type: Undefined Or Other Location: Riverdale, Tempest Avenue, Off Hulbert Road, Waterlooille Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01139 Permit Version: 1 Effective Date: 11th September 1984 Issued Date: 11th September 1984 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	395	1	469040 109250
3	Discharge Consents Operator: A.W. Kingdon & Co. Ltd. Property Type: Undefined Or Other Location: Riverdale, Tempest Avenue, Off Hulbert Road, Waterlooille Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01139 Permit Version: 1 Effective Date: 11th September 1984 Issued Date: 11th September 1984 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	409	1	469060 109250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: A.W. Kingdon & Co. Ltd. Property Type: Undefined Or Other Location: Riverdale, Tempest Avenue, Off Hulbert Road, Waterlooville Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01139 Permit Version: 1 Effective Date: 11th September 1984 Issued Date: 11th September 1984 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	424	1	469080 109250
4	Discharge Consents Operator: A.W. Kingdon & Co. Ltd. Property Type: Undefined Or Other Location: Riverdale, Tempest Avenue, Off Hulbert Road, Waterlooville Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01139 Permit Version: 1 Effective Date: 11th September 1984 Issued Date: 11th September 1984 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	455	1	469120 109250
5	Discharge Consents Operator: Jaiducts Ltd. Property Type: Industrial Parks & Estates Location: Units 13 & 14, Aston Road, Waterlooville, Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: H01132 Permit Version: 1 Effective Date: 30th December 1971 Issued Date: 30th December 1971 Revocation Date: 8th December 1992 Discharge Type: Trade Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	463	1	468020 109920
6	Discharge Consents Operator: Hopkins Recycling Ltd Property Type: Unspecified Tip Location: Waterlooville Hw Recycling Ctr, Hambledon Road, Waterlooville, Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P09132 Permit Version: 1 Effective Date: 12th September 2000 Issued Date: 12th September 2000 Revocation Date: Not Supplied Discharge Type: Trade Effluent Discharge-Site Drainage Discharge: Onto Land Environment: Receiving Water: Onto Land Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A12NW (W)	542	1	467900 109750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Discharge Consents Operator: Asda Stores Property Type: Undefined Or Other Location: West Quadrant, Hambledon Rd/London Rd, WATERLOOVILLE , Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01251 Permit Version: 1 Effective Date: 6th December 1978 Issued Date: 6th December 1978 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A12SE (W)	555	1	467980 109420
8	Discharge Consents Operator: Mrs W.M.G. Wildsmith Esq. Property Type: Livestock Production, Food Production Location: Little Wongalee (Piggeries), Pipers Hill, Denmead Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: H01291 Permit Version: 1 Effective Date: 13th June 1970 Issued Date: 13th June 1970 Revocation Date: Not Supplied Discharge Type: Agriculture - Livestock Farming Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A18NE (N)	709	1	468850 110400
9	Discharge Consents Operator: Southern Water Services Ltd (H) Property Type: Undefined Or Other Location: Forest End, Waterlooville Hampshire Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P00032 Permit Version: 1 Effective Date: 27th March 1985 Issued Date: 27th March 1985 Revocation Date: 23rd August 1999 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	769	1	467840 109250
10	Local Authority Pollution Prevention and Controls Name: Solent Cleaners Ltd Location: 2 Queens Parade, 121-123 London Road, Waterlooville, Po7 7eb Authority: Havant Borough Council, Environmental Health Department Permit Reference: HBC/IPPC/05/01964 Dated: 1st April 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	313	2	468268 109454
11	Local Authority Pollution Prevention and Controls Name: Highfield Dry Cleaners Location: 3 Highfield Parade, Waterlooville, Po7 7qh Authority: Havant Borough Council, Environmental Health Department Permit Reference: HBC/IPPC/05/01590 Dated: 1st April 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	582	2	469086 110127

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	Local Authority Pollution Prevention and Controls Name: Shell WaterlooVille Location: 222 London Road, WATERLOOVILLE, Hampshire, PO7 7AA Authority: Havant Borough Council, Environmental Health Department Permit Reference: HBC/IPPC/05/00203 Dated: 4th 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	A7NE (SW)	723	2	468040 109094
13	Local Authority Pollution Prevention and Controls Name: Lomas Service Station Location: Ellettra Avenue, WATERLOOVILLE, Hampshire, PO7 7XS Authority: Havant Borough Council, Environmental Health Department Permit Reference: Epa1/17/98 Dated: 3rd March 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	A11NE (W)	963	2	467507 109961
	Nearest Surface Water Feature	A13NE (E)	0	-	468761 109653
14	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Avondale Road, WATERLOOVILLE Authority: Environment Agency, Southern Region Pollutant: Organic Chemicals : Solvent Based Paints / Varnishes Note: Not Supplied Incident Date: 19th August 1999 Incident Reference: 2210 Catchment Area: Hermitage Stream Receiving Water: Freshwater Stream/River Cause of Incident: Deliberate Action Incident Severity: Category 3 - Minor Incident Positional Accuracy: Approximate location provided by supplier	A13NE (NE)	20	1	468700 109700
15	Pollution Incidents to Controlled Waters Property Type: Road Location: Hulbert Road, WATERLOOVILLE Authority: Environment Agency, Southern Region Pollutant: Organic Wastes: Other Suspended Solids Note: 30 Bottles Of Milk Spilt On Road Incident Date: 20th June 1992 Incident Reference: 165 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	44	1	468700 109500
16	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Adjacent To, 34 Sapphire Ridge, WATERLOOVILLE Authority: Environment Agency, Southern Region Pollutant: Surcharged Sewage Note: Sewer Surcharged Incident Date: 24th December 1993 Incident Reference: 990 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Plc Sewage Other Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	318	1	469050 109400
17	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Heritage Stream, Rear Of Bramley Road, WATERLOOVILLE Authority: Environment Agency, Southern Region Pollutant: Organic Chemicals : Domestic Fuel Oils Note: Not Supplied Incident Date: 8th October 1999 Incident Reference: 3109 Catchment Area: Hermitage Stream Receiving Water: Freshwater Stream/River Cause of Incident: Structural Failure : Pipe Failure (Below Ground) Incident Severity: Category 3 - Minor Incident Positional Accuracy: Approximate location provided by supplier	A13NE (NE)	333	1	468900 109950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Other Location: By Roundabout Hulbert Rd/Tempest Avenue Authority: Environment Agency, Southern Region Pollutant: Miscellaneous - Inert Suspended Solids Note: White Discharge From Pipe To Stream Incident Date: 7th April 1998 Incident Reference: 798161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	472	1	469100 109200
19	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Sheepwash Tributary, WATERLOOVILLE Authority: Environment Agency, Southern Region Pollutant: Oils - Gas Oil Note: Red Diesel In Stream Incident Date: 2nd March 1996 Incident Reference: 796091 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	654	1	467800 109600
19	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Down Stream , Waterloooville Industrial Estate Authority: Environment Agency, Southern Region Pollutant: Oils - Other Oil Note: Oil On The Stream And Unpleasant Odour Incident Date: 9th December 1998 Incident Reference: 798582 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Poor Operational Practice Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	655	1	467800 109595
20	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Hermitage Stream, Sapphire Ridge, WATERLOOVILLE Authority: Environment Agency, Southern Region Pollutant: Miscellaneous - Unknown Note: Sewage In Watercourse Incident Date: 13th April 1997 Incident Reference: 797193 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	699	1	469400 109250
21	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Brambles Industrial Estate, WATERLOOVILLE Authority: Environment Agency, Southern Region Pollutant: Oils - Other Oil Note: Oil On Stream Incident Date: 14th September 1993 Incident Reference: 850 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	A12SW (W)	752	1	467700 109600
21	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Sheepwash Farm Authority: Environment Agency, Southern Region Pollutant: Oils - Gas Oil Note: Oil In Sheepwash Tributary Incident Date: 22nd May 1996 Incident Reference: 796247 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Industrial - Other Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	753	1	467700 109595

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Stakes Hill Road, WATERLOOVILLE Authority: Environment Agency, Southern Region Pollutant: Oils - Petrol Note: Unknown Quantity Of Petrol Down Drain - Car Incident Date: 10th May 1993 Incident Reference: 646 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	A8SW (S)	823	1	468500 108700
23	Registered Radioactive Substances Name: Marconi Underwater Systems Ltd Location: Elettra Avenue, WATERLOOVILLE, PO7 7XS Authority: Scottish Environment Protection Agency, Head Office Permit Reference: IPB/3/3/165 Dated: 1st October 1985 Process Type: Registration under S10 RSA for the keeping and use of mobile Radioactive sources (was RSA60 S3) Description: Registration under S7 or S10 RSA for the keeping and use of radioactive material or apparatus for 1 or more tracer test sources dated pre April 1991 Status: Not Given Positional Accuracy: Manually positioned to the road within the address or location	A11NE (W)	989	3	467458 109833
	River Quality Name: Hermitage Strm GQA Grade: River Quality C Reach: Tidal Limit - Source Estimated Distance (km): 14.8 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A13NW (W)	21	1	468413 109657
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 52 Southern Hampshire Scale: 1:100,000	A13NE (NE)	0	1	468614 109637
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Desination: Secondary Aquifer - A	A13NE (E)	0	4	468653 109639
	Bedrock Aquifer Designations Aquifer Desination: Unproductive Strata	A13NE (E)	0	4	468702 109660
	Bedrock Aquifer Designations Aquifer Desination: Unproductive Strata	A13NE (NE)	0	4	468614 109637
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13SE (SE)	0	4	468733 109585
	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
24	Historical Landfill Sites Licence Holder: Not Supplied Location: South Of Cemetery, Hulbert Road, Waterlooville Name: Old Council Depot Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20827 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Deposited Waste included Household Waste Type: EA Waste Ref: Not Supplied Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: FHA11	A8NE (S)	275	1	468744 109246
25	Licensed Waste Management Facilities (Locations) Licence Number: 19984 Location: Land/ Premises At, Hambledon Road, Waterlooville, Hampshire, PO7 7UL Operator Name: Hopkins Recycling Ltd Operator Location: Not Supplied Authority: Environment Agency - South East Region, Solent & South Downs Area Site Category: Household Waste Amenity Sites Licence Status: Transferred Issued: 1st July 1993 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NW (W)	541	1	467900 109710
	Local Authority Landfill Coverage Name: Havant Borough Council - Has supplied landfill data		0	2	468614 109637
	Local Authority Landfill Coverage Name: Hampshire County Council - Had landfill data but passed it to the relevant environment agency		0	7	468614 109637
	Local Authority Landfill Coverage Name: Winchester City Council - Has supplied landfill data		535	8	467982 109455
26	Local Authority Recorded Landfill Sites Location: Hulbert Road, Waterlooville Reference: 3 A Authority: Havant Borough Council, Environmental Health Department Last Reported Status: Unknown Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A13SE (SE)	0	2	468710 109576
27	Local Authority Recorded Landfill Sites Location: Hulbert Road, Waterlooville Reference: 3 B Authority: Havant Borough Council, Environmental Health Department Last Reported Status: Unknown Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A8NE (S)	277	2	468735 109243

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	Registered Waste Transfer Sites Licence Holder: Hampshire Recycling Ltd Licence Reference: HV 008A Site Location: Hambledon Road, WATERLOOVILLE, Hampshire, PO7 7UL Operator Location: Unit 10 Bridge Farm, Curbridge, Botley, SOUTHAMPTON, Hampshire, SO30 2HB Authority: Environment Agency - Southern Region, Hampshire Area Site Category: Civic Amenity Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 18th May 1977 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Com. Waste Solely For Reuse/Recycling Maximum Waste Permitted By Licence Waste Deposited By Householders Prohibited Waste: Liq.Waste N.O.S. (Exc. Oils For Recyc) Special Wastes N.O.S. (Exc.H'olders) Waste N.O.S.	A12NW (W)	541	1	467900 109710

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: London Clay	A13NE (NE)	0	4	468614 109637
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	4	468614 109637
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	4	468614 109637
	Potential for Ground Dissolution Stability Hazards No Hazard				
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	4	468614 109637
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	4	468614 109637
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	4	468702 109660
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	4	468653 109639
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	4	468733 109585
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	11	4	468782 109628
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	13	4	468783 109639
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	84	4	468843 109508
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	4	468653 109639
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	4	468702 109660
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	4	468614 109637
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	0	4	468768 109595
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	11	4	468782 109628
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	4	468614 109637
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	4	468614 109637

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	Contemporary Trade Directory Entries Name: Capella Communications Location: 23, Cavendish Close, Waterlooville, Hampshire, PO7 7PP Classification: Telecommunications Equipment & Systems Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NE (E)	27	-	468798 109636
30	Contemporary Trade Directory Entries Name: Driveways Southern Ltd Location: Flat 2, Redwood Court, Winifred Road, Waterlooville, Hampshire, PO7 7TQ Classification: Building Block Manufacturers & Distributors Status: Active Positional Accuracy: Automatically positioned to the address	A13NW (NW)	53	-	468397 109758
31	Contemporary Trade Directory Entries Name: Jewson Ltd Location: 344, London Road, Waterlooville, Hampshire, PO7 7SN Classification: Builders' Merchants Status: Active Positional Accuracy: Automatically positioned to the address	A13SW (W)	106	-	468427 109587
32	Contemporary Trade Directory Entries Name: Hulbert Road Cemetery Location: Hulbert Rd, Waterlooville, Hampshire, PO7 7NT Classification: Cemeteries & Crematoria Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A13SE (SE)	142	-	468776 109386
33	Contemporary Trade Directory Entries Name: Denton Rubber Sheeting Location: 8, Hulbert Road, Waterlooville, Hampshire, PO7 7NT Classification: Rubber & Plastic Products - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (SW)	173	-	468472 109441
34	Contemporary Trade Directory Entries Name: British Engineering Productions Ltd Location: Unit 19, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Hydraulic Equipment & Accessories - Sales & Service Status: Active Positional Accuracy: Automatically positioned to the address	A13NW (W)	200	-	468269 109628
35	Contemporary Trade Directory Entries Name: Creative Fires (UK) Ltd Location: Unit 14, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	203	-	468241 109762
35	Contemporary Trade Directory Entries Name: Creative Fires UK Ltd Location: Unit 14, Arnside Road, WATERLOOVILLE, Hampshire, PO7 7UP Classification: Electrical Heating Equipment & Systems Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	203	-	468241 109762
35	Contemporary Trade Directory Entries Name: Simer Environmental Services Ltd Location: Unit 15, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Air Conditioning Equipment & Systems Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	204	-	468237 109734
36	Contemporary Trade Directory Entries Name: Outside Cleaning Location: 7, High Trees, Waterlooville, Hampshire, PO7 7XP Classification: Cleaning Services - Domestic Status: Active Positional Accuracy: Automatically positioned to the address	A13NE (N)	215	-	468652 109939
37	Contemporary Trade Directory Entries Name: D L Webb Location: Unit 18, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	218	-	468239 109647
37	Contemporary Trade Directory Entries Name: Redwood Innovations Location: Unit 18, Arnside Rd, Waterlooville, Hampshire, PO7 7UP Classification: Adhesives, Glues & Sealants Status: Active Positional Accuracy: Manually positioned to the address or location	A12NE (W)	219	-	468239 109646

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	Contemporary Trade Directory Entries Name: South Coast Films Location: 37, Winifred Road, Waterlooville, Hampshire, PO7 7TD Classification: Window Tinting Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (NW)	239	-	468225 109832
39	Contemporary Trade Directory Entries Name: London Road Motors Location: 179, London Road, Waterlooville, Hampshire, PO7 7RJ Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A18SW (N)	256	-	468518 109984
39	Contemporary Trade Directory Entries Name: Car Connections Location: 179, London Road, Waterlooville, Hampshire, PO7 7RJ Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SW (N)	256	-	468518 109984
40	Contemporary Trade Directory Entries Name: L K Cleaning Services Location: Jubilee Rd, Waterlooville, Hampshire, PO7 7RD Classification: Cleaning Services - Domestic Status: Active Positional Accuracy: Manually positioned within the geographical locality	A18SW (NW)	261	-	468326 109970
41	Contemporary Trade Directory Entries Name: F S R Maintenance Location: Unit 8, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	268	-	468174 109754
41	Contemporary Trade Directory Entries Name: Rimor Technical Fabrications Location: Unit 8, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Engineering Services Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	268	-	468174 109754
41	Contemporary Trade Directory Entries Name: M G Systems Location: Unit 6A, Aysgarth Road, Waterlooville, Hampshire, PO7 7UG Classification: Electronic Equipment - Manufacturers & Assemblers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12NE (W)	273	-	468173 109782
41	Contemporary Trade Directory Entries Name: Ev Engineering Ltd Location: Unit 6A, Aysgarth Road, Waterlooville, Hampshire, PO7 7UG Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	274	-	468173 109782
41	Contemporary Trade Directory Entries Name: Repro Engineering Ltd Location: Unit 6, Aysgarth Road, Waterlooville, Hampshire, PO7 7UG Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	276	-	468173 109797
41	Contemporary Trade Directory Entries Name: Mainance Engineering Ltd Location: 7, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Mechanical Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	290	-	468153 109756
42	Contemporary Trade Directory Entries Name: Staple J Location: Unit 3, 23, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	271	-	468222 109569
42	Contemporary Trade Directory Entries Name: T & D Motor Services Location: Unit 3, 23, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A12SE (W)	271	-	468222 109569

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	Contemporary Trade Directory Entries Name: Jagcare Location: Unit 4, 23, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	271	-	468222 109569
43	Contemporary Trade Directory Entries Name: Cnc Joinery Products Ltd Location: Unit 10, Arnside Rd, Waterlooville, Hampshire, PO7 7UP Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12NE (W)	289	-	468156 109682
44	Contemporary Trade Directory Entries Name: Solent Cleaners Ltd Location: 2, Queens Parade, London Road, Waterlooville, Hampshire, PO7 7EB Classification: Dry Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	313	-	468268 109453
45	Contemporary Trade Directory Entries Name: Village Distribution Location: 54, Ferndale, Waterlooville, Hampshire, PO7 7PA Classification: Distribution Services Status: Active Positional Accuracy: Automatically positioned to the address	A14SW (E)	336	-	469102 109573
46	Contemporary Trade Directory Entries Name: Robert Dyas Location: Unit 10-11, Dukes Walk, Waterlooville, Hampshire, PO7 7HS Classification: Hardware Status: Active Positional Accuracy: Automatically positioned to the address	A13SW (SW)	338	-	468331 109355
46	Contemporary Trade Directory Entries Name: Supasnaps Location: 14, The Precinct, London Road, Waterlooville, Hampshire, PO7 7DT Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (SW)	348	-	468310 109367
47	Contemporary Trade Directory Entries Name: P M Lighting Location: Victoria Ho, Aysgarth Rd, Waterlooville, Hampshire, PO7 7UG Classification: Lighting Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12NE (W)	341	-	468102 109697
48	Contemporary Trade Directory Entries Name: Wood Solutions Ltd Location: Unit 3, Aysgarth Road, Waterlooville, Hampshire, PO7 7UG Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	355	-	468089 109773
48	Contemporary Trade Directory Entries Name: Atlas Vehicle Conversions Location: Unit 3, Aysgarth Road, Waterlooville, Hampshire, PO7 7UG Classification: Disability Equipment - Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	355	-	468089 109773
48	Contemporary Trade Directory Entries Name: D M Precision Ltd Location: Unit 4, Aysgarth Road, Waterlooville, Hampshire, PO7 7UG Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	359	-	468091 109807
48	Contemporary Trade Directory Entries Name: Apricorn Systems Ltd Location: Unit 4/5, Aysgarth Road, Waterlooville, Hampshire, PO7 7UG Classification: Electronic Equipment - Manufacturers & Assemblers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	359	-	468091 109807
49	Contemporary Trade Directory Entries Name: Action Pumps Ltd Location: Unit 5, Aysgarth Rd, Waterlooville, Hampshire, PO7 7UG Classification: Pumps - Sales, Servicing & Repairs Status: Active Positional Accuracy: Manually positioned to the address or location	A12NE (W)	359	-	468094 109822

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
49	Contemporary Trade Directory Entries Name: S C E S Air Conditioning Ltd Location: Unit 5, Arnside Road, Waterlooville, Hampshire, PO7 7UP Classification: Air Conditioning & Refrigeration Contractors Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	359	-	468095 109823
49	Contemporary Trade Directory Entries Name: Roofline Installations Location: Unit 9/11, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: Fascias and Soffits Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	395	-	468064 109847
49	Contemporary Trade Directory Entries Name: A S Precision Engineering Ltd Location: Unit 12, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	399	-	468054 109823
49	Contemporary Trade Directory Entries Name: Artyzan Press Location: Unit 9,11, The Parkwood Centre, Aston Rd, Waterlooville, Hampshire, PO7 7HT Classification: Printers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12NE (W)	405	-	468055 109852
49	Contemporary Trade Directory Entries Name: Aes Environmental Systems Location: Unit 8, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: Air Conditioning Equipment & Systems Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	414	-	468047 109856
49	Contemporary Trade Directory Entries Name: United Coating Ltd Location: Unit 28, The Parkwood Centre, Aston Rd, Waterlooville, Hampshire, PO7 7HT Classification: Metal Finishing Services Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A12NE (W)	434	-	468019 109830
49	Contemporary Trade Directory Entries Name: Electrical Design Services Location: Unit 1, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: Electronic Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	440	-	468022 109862
50	Contemporary Trade Directory Entries Name: P R G Powerhouse Location: Unit 6, Wellington Retail Park, Hambledon Road, Waterlooville, Hampshire, PO7 7FG Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	369	-	468101 109586
51	Contemporary Trade Directory Entries Name: Research Analyst Defence Ltd Location: 22, Highfield Avenue, Waterlooville, Hampshire, PO7 7PX Classification: Defence Systems Status: Active Positional Accuracy: Automatically positioned to the address	A18SE (N)	378	-	468748 110086
52	Contemporary Trade Directory Entries Name: Lantrax Ltd Location: Unit 3, Aysgarth Road, Waterlooville, Hampshire, PO7 7UG Classification: Printed Circuit Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	408	-	468049 109615
52	Contemporary Trade Directory Entries Name: Solent Printers Ltd Location: Aysgarth Rd, Waterlooville, Hampshire, PO7 7UG Classification: Printers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12SE (W)	409	-	468049 109614

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	Contemporary Trade Directory Entries Name: Brooks The Cleaners Location: 97, London Road, Waterlooville, Hampshire, PO7 7EQ Classification: Dry Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	414	-	468210 109366
54	Contemporary Trade Directory Entries Name: Communication Solutions Consultants Ltd Location: A, 44, Highfield Avenue, Waterlooville, Hampshire, PO7 7PX Classification: Telecommunications Equipment & Systems Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SE (NE)	420	-	468934 110030
55	Contemporary Trade Directory Entries Name: S C Bus & Coach Builders Ltd Location: Hambledon Road, Waterlooville, Hampshire, PO7 7UA Classification: Commercial Vehicle Bodybuilders & Repairers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	428	-	468014 109710
56	Contemporary Trade Directory Entries Name: Xpress Promotions Ltd Location: Unit 26, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: T-Shirts Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	437	-	468012 109809
56	Contemporary Trade Directory Entries Name: Carousel Tee Shirt Printers Location: Unit 26, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: T-Shirts Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	437	-	468012 109809
56	Contemporary Trade Directory Entries Name: Barlow Engineering Ltd Location: Unit 27, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: Tool Design, Manufacturers & Makers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (W)	452	-	467998 109819
57	Contemporary Trade Directory Entries Name: Jubilee Road Motors Ltd Location: 76, Jubilee Road, Waterlooville, Hampshire, PO7 7RE Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	445	-	468173 110089
57	Contemporary Trade Directory Entries Name: Solentec Ltd Location: 82a, Jubilee Road, Waterlooville, Hampshire, PO7 7RE Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	473	-	468146 110104
58	Contemporary Trade Directory Entries Name: Feeds Seeds & Animal Needs Location: 282, London Road, Waterlooville, Hampshire, PO7 7DS Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	450	-	468211 109315
59	Contemporary Trade Directory Entries Name: Solent Sewing Machines Ltd Location: 5, Jubilee Business Centre, Aston Road, Waterlooville, Hampshire, PO7 7XD Classification: Sewing Machines - Industrial Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (NW)	465	-	468009 109903
59	Contemporary Trade Directory Entries Name: Charter Blinds Location: 7, Jubilee Business Centre, Aston Road, Waterlooville, Hampshire, PO7 7XD Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (NW)	465	-	468009 109903

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	Contemporary Trade Directory Entries Name: Crisp Air Ltd Location: Unit 3,48C Jubilee Business Centre,Aston Rd, Waterlooville, Hampshire, PO7 7XD Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12NE (NW)	466	-	468009 109902
59	Contemporary Trade Directory Entries Name: Apm Bmw Specialists Location: Unit 4, 19, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (NW)	508	-	467971 109923
59	Contemporary Trade Directory Entries Name: Robin Hood Coachbuilders Ltd Location: 19, Aston Road, Waterlooville, Hampshire, PO7 7XE Classification: Commercial Vehicle Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (NW)	508	-	467971 109923
59	Contemporary Trade Directory Entries Name: Tectonics Location: 19, Aston Road, Waterlooville, Hampshire, PO7 7XE Classification: Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NE (NW)	508	-	467971 109923
59	Contemporary Trade Directory Entries Name: Aston Plot Services Ltd Location: Unit 5, 19, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Printed Circuit Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12NE (NW)	508	-	467971 109923
59	Contemporary Trade Directory Entries Name: Ballard & Bailey Location: Unit 5-6,19 Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12NE (NW)	509	-	467970 109922
60	Contemporary Trade Directory Entries Name: A P S Pest Control Ltd Location: 16, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Pest & Vermin Control Status: Inactive Positional Accuracy: Manually positioned to the address or location	A12NE (NW)	468	-	468032 109955
60	Contemporary Trade Directory Entries Name: Get Acrylic Photo Frames Location: Unit 15,Aston Rd, Waterlooville, Hampshire, PO7 7XG Classification: Metal Products - Fabricated Status: Active Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	509	-	467998 109980
60	Contemporary Trade Directory Entries Name: Sunlight Plastics Ltd Location: 15, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Plastic Products - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	509	-	467998 109980
60	Contemporary Trade Directory Entries Name: Jenag Equipment Filtration Engineers Location: 17, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	510	-	467988 109964
61	Contemporary Trade Directory Entries Name: A. D. S. Precision Engineering Ltd Location: A, 53, Jubilee Road, Waterlooville, Hampshire, PO7 7RE Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	476	-	468090 110054

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	Contemporary Trade Directory Entries Name: Ultra Press Location: Unit 15, Churchill Yard Ind Est, Jubilee Rd, Waterlooville, Hampshire, PO7 7RF Classification: Printers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	482	-	468048 110011
61	Contemporary Trade Directory Entries Name: Ultra Press Location: Unit 15, Churchill Yard Ind Est, Jubilee Rd, Waterlooville, Hampshire, PO7 7RF Classification: Printers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	482	-	468048 110011
61	Contemporary Trade Directory Entries Name: A Perfect Impression Location: Unit 15, Churchill Yard Ind Est, Jubilee Rd, Waterlooville, Hampshire, PO7 7RF Classification: Printers Status: Active Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	492	-	468052 110034
61	Contemporary Trade Directory Entries Name: Skeens Precision Engineering Ltd Location: 55-55a, Jubilee Road, Waterlooville, Hampshire, PO7 7RE Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	499	-	468067 110064
61	Contemporary Trade Directory Entries Name: Crm Saw & Tool Co Ltd Location: 13-14, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Tool Sharpening, Repairing & Servicing Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	503	-	468022 110009
61	Contemporary Trade Directory Entries Name: F & S Engineering Ltd Location: 13-14, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	503	-	468022 110009
61	Contemporary Trade Directory Entries Name: L S Autos Location: Unit 4, Churchill Yard Industrial Estate, Jubilee Road, Waterlooville, Hampshire, PO7 7RF Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	506	-	468034 110032
61	Contemporary Trade Directory Entries Name: Waterlooville Fabrications Location: Unit 5, Churchill Yard Industrial Estate, Jubilee Road, Waterlooville, Hampshire, PO7 7RF Classification: Sheet Metal Work Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	506	-	468034 110032
61	Contemporary Trade Directory Entries Name: Clarks Auto Service Location: Churchill Yard Industrial Estate, Jubilee Road, Waterlooville, Hampshire, PO7 7RF Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	506	-	468034 110032
61	Contemporary Trade Directory Entries Name: Ultra Press Location: 15 Churchill Yard Ind Est, Jubilee Rd, Waterlooville, Hampshire, PO7 7RF Classification: Printers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	508	-	468039 110042
61	Contemporary Trade Directory Entries Name: Martin Goddard Engineering Ltd Location: 12, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Sheet Metal Work Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	519	-	468012 110023

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	Contemporary Trade Directory Entries Name: Agtool Engineering Ltd Location: Jubilee Road, Waterlooville, Hampshire, PO7 7RE Classification: Plastics - Injection Moulding Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	527	-	468028 110060
61	Contemporary Trade Directory Entries Name: Alliance Uk Cleaning Services Location: 57, Jubilee Road, Waterlooville, Hampshire, PO7 7RE Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	529	-	468039 110078
61	Contemporary Trade Directory Entries Name: Alliance (Uk) Cleaning Location: 57, Jubilee Road, Waterlooville, Hampshire, PO7 7RE Classification: Commercial Cleaning Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	529	-	468039 110078
61	Contemporary Trade Directory Entries Name: Lines Engineering Location: Churchill Yard Industrial Estate, Jubilee Road, Waterlooville, Hampshire, PO7 7RF Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	530	-	468012 110043
61	Contemporary Trade Directory Entries Name: Croesus Trading Ltd Location: Unit 1, Churchill Yard Ind Est, Jubilee Rd, Waterlooville, Hampshire, PO7 7RF Classification: Catering Equipment Status: Active Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	530	-	468012 110043
61	Contemporary Trade Directory Entries Name: A C Redman Metal Spinnings Ltd Location: Unit 10, Churchill Yard Industrial Estate, Jubilee Road, Waterlooville, Hampshire, PO7 7RF Classification: Metal Spinners Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	537	-	468005 110045
62	Contemporary Trade Directory Entries Name: Peter Jay Services Ltd Location: 5-6, Highfield Parade, Waterlooville, Hampshire, PO7 7QH Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Active Positional Accuracy: Automatically positioned to the address	A19SW (NE)	486	-	469043 110041
62	Contemporary Trade Directory Entries Name: Paul Costen Location: 3, Highfield Parade, Waterlooville, Hampshire, PO7 7QH Classification: Photo & Digital Imaging Bureaus Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	506	-	469047 110063
62	Contemporary Trade Directory Entries Name: Personal Touch Ltd Location: 1, Highfield Parade, WATERLOOVILLE, Hampshire, PO7 7QH Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	519	-	469053 110074
63	Contemporary Trade Directory Entries Name: Tabelek Control Systems Ltd Location: Jubilee Rd, Waterlooville, Hampshire, PO7 7RE Classification: Electronic Engineers Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	487	-	468090 110071
63	Contemporary Trade Directory Entries Name: Speedcut Location: 88, Jubilee Road, Waterlooville, Hampshire, PO7 7RE Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	505	-	468086 110093

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	Contemporary Trade Directory Entries Name: Ultra Press Ltd Location: Unit 15, Churchill Yard Ind Est, Jubilee Rd, Waterlooville, Hampshire, PO7 7RF Classification: Printers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	541	-	468040 110096
64	Contemporary Trade Directory Entries Name: Kwik-Fit Location: 6, Stakes Hill Road, Waterlooville, Hampshire, PO7 7HY Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	502	-	468205 109245
64	Contemporary Trade Directory Entries Name: Kwik-Fit Location: 6, Stakes Hill Road, Waterlooville, Hampshire, PO7 7HY Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	502	-	468205 109245
64	Contemporary Trade Directory Entries Name: Kraftwork Location: 2a, Stakes Hill Road, Waterlooville, Hampshire, PO7 7HY Classification: Furniture Manufacturers - Home & Office Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	514	-	468190 109248
64	Contemporary Trade Directory Entries Name: The Artistic Framing Co Location: 2a, Stakes Hill Road, Waterlooville, Hampshire, PO7 7HY Classification: Picture & Picture Frame Renovating & Restoring Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	514	-	468190 109248
65	Contemporary Trade Directory Entries Name: Brookdown Joinery Location: 25, St. Georges Walk, Waterlooville, Hampshire, PO7 7TU Classification: Joinery Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (W)	509	-	468043 109411
66	Contemporary Trade Directory Entries Name: Sprintprint Location: Regent House, Aston Road, Waterlooville, Hampshire, PO7 7UD Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	525	-	467920 109788
66	Contemporary Trade Directory Entries Name: Sprintprint Location: Regent House, Aston Road, Waterlooville, Hampshire, PO7 7UD Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	525	-	467920 109788
67	Contemporary Trade Directory Entries Name: Amba Dockside Technology Ltd Location: 20, Aston Road, Waterlooville, Hampshire, PO7 7XE Classification: Gear Cutters Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	533	-	467926 109862
67	Contemporary Trade Directory Entries Name: Kathglade Ltd Location: 20, Aston Road, Waterlooville, Hampshire, PO7 7XE Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	533	-	467926 109862
68	Contemporary Trade Directory Entries Name: Car Cosmetics Location: 10a, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	543	-	467984 110024
68	Contemporary Trade Directory Entries Name: Alma Garage Location: 10a, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	543	-	467984 110024

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	Contemporary Trade Directory Entries Name: T J Spraytech Location: Unit 10, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	545	-	467988 110034
68	Contemporary Trade Directory Entries Name: Dfe Ltd Location: 10, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	545	-	467988 110034
68	Contemporary Trade Directory Entries Name: Aston Car Co Ltd Location: 10, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Mot Testing Centres Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	545	-	467988 110034
68	Contemporary Trade Directory Entries Name: Meb Fabrications Ltd Location: Churchill Yard Industrial Estate, Jubilee Road, Waterlooville, Hampshire, PO7 7RF Classification: Metal Products - Fabricated Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	547	-	468001 110057
68	Contemporary Trade Directory Entries Name: Goble Engineering Ltd Location: Churchill Yard Industrial Estate, Jubilee Road, Waterlooville, Hampshire, PO7 7RF Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	560	-	468003 110080
69	Contemporary Trade Directory Entries Name: Waterlooville Motor Co Mechanical Location: 41, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	553	-	467957 109996
69	Contemporary Trade Directory Entries Name: L W & T (Engineering Co) Ltd Location: 42, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	567	-	467945 110004
69	Contemporary Trade Directory Entries Name: Fastright Engineering Location: 42, Aston Road, Waterlooville, Hampshire, PO7 7XG Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	567	-	467945 110004
69	Contemporary Trade Directory Entries Name: Commercial Linen Location: 46, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Disability Equipment - Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	593	-	467907 109986
69	Contemporary Trade Directory Entries Name: Hughes Bros Location: 39, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Glass Fibre Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	598	-	467921 110026
69	Contemporary Trade Directory Entries Name: Waterlooville Crash Repair Centre Location: 39, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	598	-	467921 110026

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	Contemporary Trade Directory Entries Name: A W Motor Co Ltd Location: 38, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	613	-	467912 110041
69	Contemporary Trade Directory Entries Name: Steve Jackson Pump Services Ltd Location: 38a, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Pumps - Sales, Servicing & Repairs Status: Active Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	613	-	467912 110041
69	Contemporary Trade Directory Entries Name: Wingspan Solutions Ltd Location: 45, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Blinds, Awnings & Canopies Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	613	-	467900 110018
69	Contemporary Trade Directory Entries Name: Acme Printing Co Ltd Location: 37, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	627	-	467904 110053
69	Contemporary Trade Directory Entries Name: Adp Ltd Location: 37, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	627	-	467904 110053
69	Contemporary Trade Directory Entries Name: Dot Inprint Location: 37, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	627	-	467904 110053
69	Contemporary Trade Directory Entries Name: A L Motors Location: 35, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	642	-	467895 110067
70	Contemporary Trade Directory Entries Name: Handyman Stan Location: 51, Stakes Hill Road, Waterlooville, Hampshire, PO7 7LD Classification: Fascias and Soffits Status: Active Positional Accuracy: Automatically positioned to the address	A8NW (S)	554	-	468493 108977
71	Contemporary Trade Directory Entries Name: Spirit Circuits Ltd Location: 22-24, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Printed Circuit Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	562	-	467907 109903
71	Contemporary Trade Directory Entries Name: Southern Co-Operative Dairies Ltd Location: Aston Rd, Waterlooville, Hampshire, PO7 7RH Classification: Dairies Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12NW (NW)	567	-	467914 109938
71	Contemporary Trade Directory Entries Name: Motor Vehicle Maintenance Location: 25, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	591	-	467888 109936

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	Contemporary Trade Directory Entries Name: Southern Sealed Units & Glass Ltd Location: Unit 24/25, The Parkwood Centre, Aston Road, Waterlooville, Hampshire, PO7 7HT Classification: Window Frame Manufacturers' Equipment Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	591	-	467888 109936
71	Contemporary Trade Directory Entries Name: Cobra Precision Engineering Location: 26 Aston Rd, Waterlooville, Hampshire, PO7 7XJ Classification: Precision Engineers Status: Active Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	628	-	467864 109977
72	Contemporary Trade Directory Entries Name: Photo Imaging Centre The Location: Portland Road, Waterlooville, Hampshire, PO7 7XR Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	572	-	468034 109328
73	Contemporary Trade Directory Entries Name: Jobs U Hate Doing Location: 48, Spruce Avenue, Waterlooville, Hampshire, PO7 8HE Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	576	-	469099 109062
74	Contemporary Trade Directory Entries Name: Emberz Fireplaces Location: 248, London Road, Waterlooville, Hampshire, PO7 7HG Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	589	-	468124 109207
74	Contemporary Trade Directory Entries Name: Emberz Location: 248, London Road, Waterlooville, Hampshire, PO7 7HG Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	589	-	468124 109207
75	Contemporary Trade Directory Entries Name: 24 7 Autos Location: Unit 4,1A Victoria Rd, Waterlooville, Hampshire, PO7 7ET Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A7NE (SW)	612	-	468116 109180
75	Contemporary Trade Directory Entries Name: M T'S M O T'S Location: Unit 1, Victoria Road, Waterlooville, Hampshire, PO7 7ET Classification: Mot Testing Centres Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	628	-	468118 109149
75	Contemporary Trade Directory Entries Name: Tony'S Tyres Location: Unit 3, Victoria Road, Waterlooville, Hampshire, PO7 7ET Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	628	-	468118 109149
75	Contemporary Trade Directory Entries Name: Autosales (Waterlooville) Location: 1a, Victoria Road, Waterlooville, Hampshire, PO7 7ET Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	628	-	468118 109149
75	Contemporary Trade Directory Entries Name: Waterlooville Car Centre Location: 1a, Victoria Road, Waterlooville, Hampshire, PO7 7ET Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	628	-	468118 109149

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
75	Contemporary Trade Directory Entries Name: Rosewood Car Centre Location: 1a, Victoria Road, Waterlooville, Hampshire, PO7 7ET Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	628	-	468118 109149
75	Contemporary Trade Directory Entries Name: 24 7 Tyres Location: Unit 4,1A Victoria Rd, Waterlooville, Hampshire, PO7 7ET Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	628	-	468118 109148
75	Contemporary Trade Directory Entries Name: B & N Metals Location: Unit 3, Victoria Road, Waterlooville, Hampshire, PO7 7ET Classification: Scrap Metal Merchants Status: Inactive Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	628	-	468118 109149
75	Contemporary Trade Directory Entries Name: Caragez Location: 1A Victoria Rd, Waterlooville, Hampshire, PO7 7ET Classification: Car Dealers - Used Status: Active Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	629	-	468117 109148
76	Contemporary Trade Directory Entries Name: Gen Plus Ltd Location: 2, Relay Road, WATERLOOVILLE, Hampshire, PO7 7XA Classification: Pharmaceutical Manufacturers & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	633	-	467808 109709
76	Contemporary Trade Directory Entries Name: Solent Mould Tools Ltd Location: 1, Relay Road, Waterlooville, Hampshire, PO7 7XA Classification: Tool Design, Manufacturers & Makers Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	633	-	467808 109709
77	Contemporary Trade Directory Entries Name: Waterlooville Motor Co Location: 36, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	637	-	467905 110074
77	Contemporary Trade Directory Entries Name: Croft Grp Location: 36, Aston Road, Waterlooville, Hampshire, PO7 7XF Classification: Glass Fibre Moulding, Materials & Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	637	-	467905 110074
77	Contemporary Trade Directory Entries Name: Southbourne Rubber Co Ltd Location: 47, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Rubber & Plastic Products - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	652	-	467875 110054
78	Contemporary Trade Directory Entries Name: Westerly Group Ltd Location: 1-2, Aston Road, Waterlooville, Hampshire, PO7 7UX Classification: Boatbuilders & Repairers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SE (NW)	651	-	467950 110160
78	Contemporary Trade Directory Entries Name: W P L Ltd Location: 1-2, Aston Road, Waterlooville, Hampshire, PO7 7UX Classification: Sewage Disposal - Equipment & Service Status: Active Positional Accuracy: Automatically positioned to the address	A17SE (NW)	651	-	467950 110160
79	Contemporary Trade Directory Entries Name: Aa Service Centre Location: Hambledon Rd, Waterlooville, Hampshire, PO7 7UL Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	653	-	467812 109904

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	Contemporary Trade Directory Entries Name: Cemco Services Ltd Location: 1-2, Silverthorne Way, Waterlooville, Hampshire, PO7 7XB Classification: Printed Circuit Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	669	-	467773 109770
81	Contemporary Trade Directory Entries Name: Circuit Supply Ltd Location: 28, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	671	-	467832 110009
81	Contemporary Trade Directory Entries Name: The West Group Ltd Location: 29, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Pneumatic Systems & Equipment Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	684	-	467824 110024
81	Contemporary Trade Directory Entries Name: The West Group Location: 29, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Pneumatic Systems & Equipment Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	684	-	467824 110024
81	Contemporary Trade Directory Entries Name: Miniature Location: 29, Aston Road, Waterlooville, Hampshire, PO7 7XJ Classification: Pneumatic Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	684	-	467824 110024
81	Contemporary Trade Directory Entries Name: C B A Domestics Location: 9, Fennell Close, Waterlooville, Hampshire, PO7 7XH Classification: Vacuum Cleaners - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	708	-	467812 110053
82	Contemporary Trade Directory Entries Name: Waterlooville Exhaust Centre Location: 34f, Aston Road, Waterlooville, Hampshire, PO7 7XQ Classification: Exhaust System Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	688	-	467876 110124
82	Contemporary Trade Directory Entries Name: Boxhall Location: 34f, Aston Road, Waterlooville, Hampshire, PO7 7XQ Classification: Exhaust & Shock Absorber Centres Status: Active Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	688	-	467876 110124
82	Contemporary Trade Directory Entries Name: Venture-Flex Ltd Location: 34e, Aston Road, Waterlooville, Hampshire, PO7 7XQ Classification: Hose, Tubing & Fittings Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	689	-	467871 110119
82	Contemporary Trade Directory Entries Name: Screen Print Promotions Ltd Location: 34b, Aston Road, Waterlooville, Hampshire, PO7 7XQ Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	694	-	467857 110106
82	Contemporary Trade Directory Entries Name: Davage Welding Location: 33, Aston Road, Waterlooville, Hampshire, PO7 7XQ Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address	A17SW (NW)	694	-	467847 110089
82	Contemporary Trade Directory Entries Name: Flowseal Ltd Location: 34g-34h, Aston Road, Waterlooville, Hampshire, PO7 7XQ Classification: Seal & Joint Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	700	-	467868 110133

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	Contemporary Trade Directory Entries Name: Timbervision Location: 34, Aston Road, Waterlooville, Hampshire, PO7 7XQ Classification: Cabinet Makers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	704	-	467842 110101
83	Contemporary Trade Directory Entries Name: Stop & Steer Location: 222a, London Road, Waterlooville, Hampshire, PO7 7AA Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	723	-	468040 109094
83	Contemporary Trade Directory Entries Name: Shell (Uk) Ltd Location: 222, London Road, Waterlooville, Hampshire, PO7 7AA Classification: Petrol Filling Stations Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	723	-	468040 109094
83	Contemporary Trade Directory Entries Name: Credit Cars Location: A, 222, London Road, Waterlooville, Hampshire, PO7 7AA Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	723	-	468040 109094
84	Contemporary Trade Directory Entries Name: Care & Repair Location: 5, Emerald Close, Waterlooville, Hampshire, PO7 8NZ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	725	-	469471 109392
85	Contemporary Trade Directory Entries Name: G7 Computer Services Ltd Location: Unit B, Wellington Gate, Silverthorne Way, Waterlooville, Hampshire, PO7 7XY Classification: Cash Registers & Check-Out Equipment Status: Active Positional Accuracy: Automatically positioned to the address	A12NW (W)	752	-	467690 109767
86	Contemporary Trade Directory Entries Name: Laundry Fairy Location: 158 Norton Cl, Waterlooville, Hampshire, PO7 7AG Classification: Cleaning Services - Domestic Status: Active Positional Accuracy: Manually positioned within the geographical locality	A7NW (SW)	801	-	467919 109111
87	Contemporary Trade Directory Entries Name: L Rowland Location: 2, Lavender Road, Waterlooville, Hampshire, PO7 8NS Classification: Pharmaceutical Manufacturers & Distributors Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	802	-	469146 108824
88	Contemporary Trade Directory Entries Name: J Golding Location: 30, Chaucer Close, Waterlooville, Hampshire, PO7 6AQ Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A17NE (NW)	821	-	468162 110509
89	Contemporary Trade Directory Entries Name: Rusdene Services Location: Waterlooville Service Station, Elettra Av, Waterlooville, Hampshire, PO7 7XW Classification: Petrol Filling Stations Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A17SW (W)	852	-	467636 110006
90	Contemporary Trade Directory Entries Name: Hi-Tech Mouldings Location: Tyak House, 4, Silverthorne Way, Waterlooville, Hampshire, PO7 7XY Classification: Plastics - Injection Moulding Status: Inactive Positional Accuracy: Automatically positioned to the address	A11NE (W)	877	-	467565 109714

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	Contemporary Trade Directory Entries Name: Hi Tech Mouldings Ltd Location: Tyak House, 4, Silverthorne Way, Waterlooville, Hampshire, PO7 7XY Classification: Plastics - Injection Moulding Status: Active Positional Accuracy: Automatically positioned to the address	A11NE (W)	877	-	467565 109714
91	Contemporary Trade Directory Entries Name: W K B Toyota Location: 1, Elettra Avenue, Waterlooville, Hampshire, PO7 7XW Classification: Car Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	891	-	467613 110058
91	Contemporary Trade Directory Entries Name: Waterlooville Auto Centre Location: 1, Elettra Avenue, Waterlooville, Hampshire, PO7 7XW Classification: Car Dealers - Used Status: Active Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	891	-	467613 110058
91	Contemporary Trade Directory Entries Name: W K B Havant Ltd Location: 1, Elettra Avenue, Waterlooville, Hampshire, PO7 7XW Classification: Car Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A17SW (NW)	891	-	467613 110058
91	Contemporary Trade Directory Entries Name: Lomas Ltd Location: Elettra Avenue, Waterlooville, Hampshire, PO7 7XW Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address	A17SW (NW)	916	-	467598 110087
92	Contemporary Trade Directory Entries Name: Ashmech Location: 62, Forest End, Waterlooville, Hampshire, PO7 7AD Classification: Generators - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NW (SW)	955	-	467701 109125
93	Contemporary Trade Directory Entries Name: Connector & Terminal Supplies Ltd Location: 2, Stratfield Park, Elettra Avenue, Waterlooville, Hampshire, PO7 7XN Classification: Electronic Component Manufacturers & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A11NE (W)	983	-	467459 109758
93	Contemporary Trade Directory Entries Name: Telecall Ltd Location: 1, Stratfield Park, Elettra Avenue, Waterlooville, Hampshire, PO7 7XN Classification: Telecommunications Equipment & Systems Status: Active Positional Accuracy: Automatically positioned to the address	A11NE (W)	987	-	467454 109766
94	Fuel Station Entries Name: Shell Waterlooville Location: 222, London Road, Waterlooville, Hampshire, PO7 7AA Brand: SHELL Premises Type: Petrol Station Status: Open Positional Accuracy: Automatically positioned to the address	A7NE (SW)	723	-	468040 109094
95	Fuel Station Entries Name: Waterlooville Service Station Location: Elettra Avenue, Waterlooville, Hampshire, PO7 7XW Brand: Total Premises Type: Petrol Station Status: Open Positional Accuracy: Manually positioned to the address or location	A16SE (NW)	953	-	467569 110113

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	Nitrate Vulnerable Zones Name: Not Supplied Description: NVZ Area Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A13NE (NE)	0	6	468614 109637

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Havant Borough Council - Environmental Health Department Winchester City Council - Environmental Health Department Chichester District Council - Environmental Health Department East Hampshire District Council - Environmental Health Department Portsmouth City Council - Health and Trading Standards	April 2011 February 2011 July 2011 June 2011 March 2011	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Southern Region	July 2011	Quarterly
Enforcement and Prohibition Notices Environment Agency - Southern Region	November 2011	Quarterly
Integrated Pollution Controls Environment Agency - Southern Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - Southern Region	October 2011	Quarterly
Local Authority Integrated Pollution Prevention And Control Winchester City Council - Environmental Health Department Chichester District Council - Environmental Health Department East Hampshire District Council - Environmental Health Department Havant Borough Council - Environmental Health Department Portsmouth City Council - Environmental Health Department	April 2011 August 2011 February 2011 February 2011 September 2011	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Controls Winchester City Council - Environmental Health Department Chichester District Council - Environmental Health Department East Hampshire District Council - Environmental Health Department Havant Borough Council - Environmental Health Department Portsmouth City Council - Environmental Health Department	April 2011 August 2011 February 2011 February 2011 September 2011	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Winchester City Council - Environmental Health Department Chichester District Council - Environmental Health Department East Hampshire District Council - Environmental Health Department Havant Borough Council - Environmental Health Department Portsmouth City Council - Environmental Health Department	April 2011 August 2011 February 2011 February 2011 September 2011	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	September 2011	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - Southern Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Southern Region	September 2011	Monthly
Prosecutions Relating to Controlled Waters Environment Agency - Southern Region	September 2011	Monthly
Registered Radioactive Substances Scottish Environment Protection Agency - Head Office Environment Agency - Southern Region	January 1998 October 2011	Variable Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	January 2011	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	January 2011	Annually
Substantiated Pollution Incident Register Environment Agency - Southern Region - Hampshire and Isle of Wight Area Office Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	October 2011 October 2011 October 2011	Quarterly Quarterly Quarterly

Agency & Hydrological	Version	Update Cycle
Water Abstractions Environment Agency - Southern Region	July 2011	Quarterly
Water Industry Act Referrals Environment Agency - Southern Region	October 2011	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	January 2011	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	September 2011	Annually
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	September 2011	Annually
Source Protection Zones Environment Agency - Head Office	July 2011	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2011	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2011	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2011	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2011	Quarterly
Flood Defences Environment Agency - Head Office	November 2011	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 - Hampshire and Isle of Wight Area Office Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	October 2011 October 2011 October 2011	Quarterly Quarterly 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 - Hampshire and Isle of Wight Area Office Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	October 2011 October 2011 October 2011	Quarterly Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region - Hampshire and Isle of Wight Area Office Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	July 2011 July 2011 July 2011 July 2011	Quarterly Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Chichester District Council - Environmental Health Department East Hampshire District Council Hampshire County Council - Minerals and Waste Planning Havant Borough Council - Environmental Health Department Portsmouth City Council - Environmental Health Department West Sussex County Council - Environment & Development Winchester City Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Chichester District Council - Environmental Health Department East Hampshire District Council Hampshire County Council - Minerals and Waste Planning Havant Borough Council - Environmental Health Department Portsmouth City Council - Environmental Health Department West Sussex County Council - Environment & Development Winchester City Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Registered Landfill Sites Environment Agency - Southern Region - Hampshire Area Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - Southern Region - Hampshire Area Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Southern Region - Hampshire Area Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	July 2011	Bi-Annually
Explosive Sites Health and Safety Executive	January 2011	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Portsmouth City Council - Planning Office Chichester District Council - Planning Department Havant Borough Council - Commercial Team West Sussex County Council - Environment & Development East Hampshire District Council Hampshire County Council - Minerals and Waste Planning Winchester City Council - Planning Department	August 2011 February 2011 May 2011 October 2006 September 2011 September 2011 September 2011	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Portsmouth City Council - Planning Office Chichester District Council - Planning Department Havant Borough Council - Commercial Team West Sussex County Council - Environment & Development East Hampshire District Council Hampshire County Council - Minerals and Waste Planning Winchester City Council - Planning Department	August 2011 February 2011 May 2011 October 2006 September 2011 September 2011 September 2011	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Geological	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2011	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	August 2011	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 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	February 2011	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	August 2011	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2011	Quarterly
Sensitive Land Use	Version	Update Cycle
Areas of Outstanding Natural Beauty Natural England	September 2011	Bi-Annually
Environmentally Sensitive Areas Natural England	September 2011	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	September 2011	Bi-Annually
Marine Nature Reserves Natural England	September 2011	Bi-Annually
National Nature Reserves Natural England	September 2011	Bi-Annually
National Parks Natural England	September 2011	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	March 2003	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2011	Annually
Ramsar Sites Natural England	September 2011	Bi-Annually
Sites of Special Scientific Interest Natural England	September 2011	Bi-Annually
Special Areas of Conservation Natural England	September 2011	Bi-Annually
Special Protection Areas Natural England	September 2011	Bi-Annually

A selection of organisations who provide data within this report

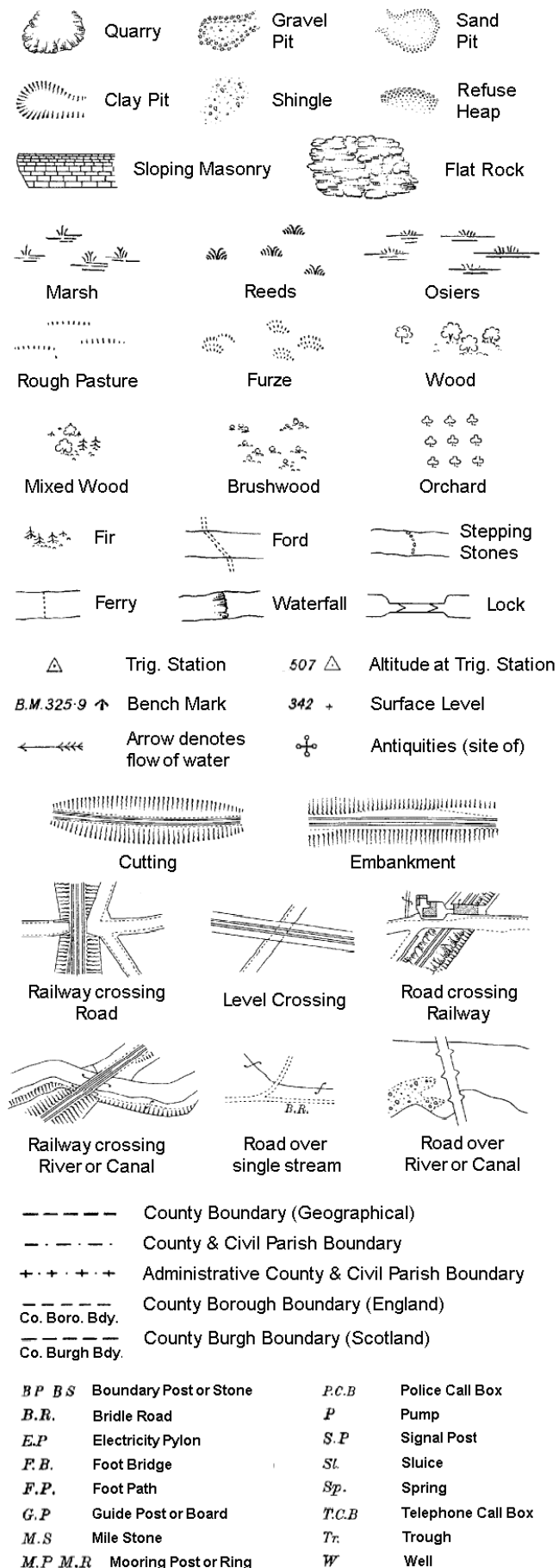
Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Countryside Council for Wales	 CYNGOR CEFN GWLAD CYMRU 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	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	Havant Borough Council - Environmental Health Department Civic Offices, Civic Centre Road, Havant, Hampshire, PO9 2AX	Telephone: 023 92474174 Fax: 01705 446659 Email: env.services@havant.gov.uk Website: www.havant.gov.uk
3	Scottish Environment Protection Agency - Head Office Erskine Court, The Castle Business Park, Stirling, Stirlingshire, FK9 4TR	Telephone: 01786 457700 Fax: 01786 446885
4	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
5	Natural England Northminster House, Northminster Road, Peterborough, Cambridgeshire, PE1 1UA	Telephone: 0845 600 3078 Fax: 01733 455103 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
6	Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	Telephone: 0113 2613333 Fax: 0113 230 0879
7	Hampshire County Council - Minerals and Waste Planning Room 130, Ashburton Court West, The Castle, Winchester, Hampshire, SO23 8UD	Telephone: 01962 841841 Fax: 01962 847055 Website: www.hants.gov.uk
8	Winchester City Council - Environmental Health Department City Offices, Colebrook Street, Winchester, Hampshire, SO23 9LJ	Telephone: 01962 848519 Fax: 01962 849101 Website: www.winchester.gov.uk
-	Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@hpa.org.uk Website: www.hpa.org.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

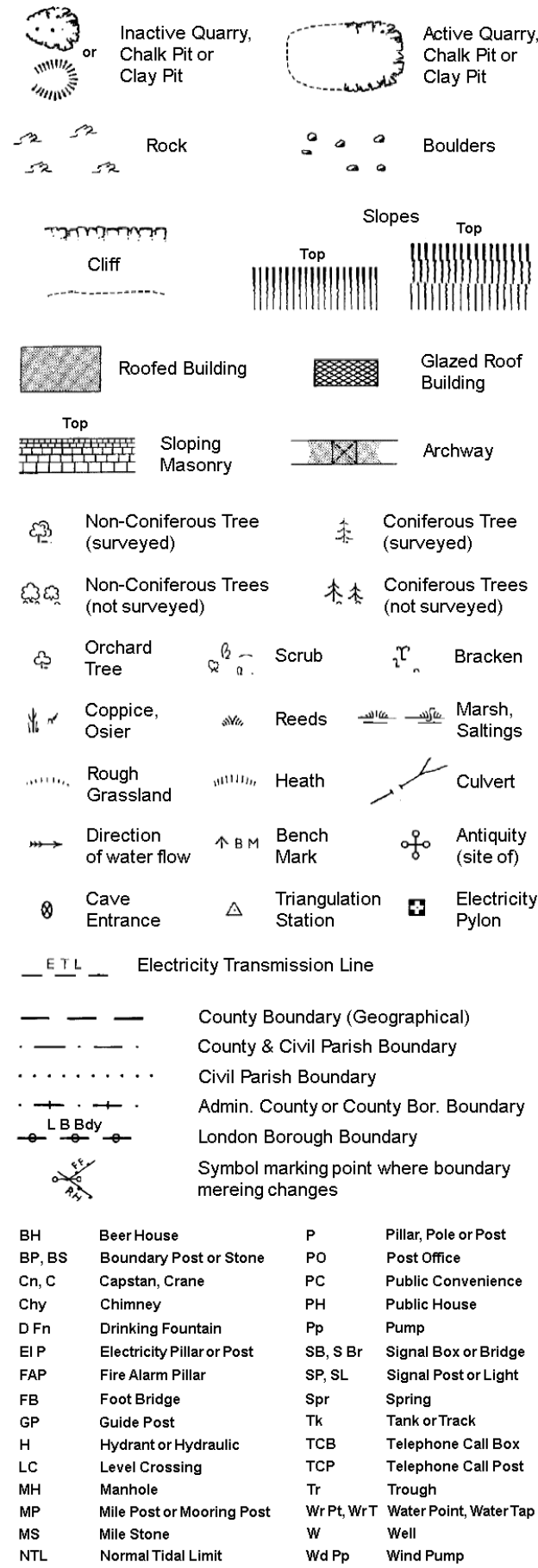
Please note that the Environment Agency / SEPA have a charging policy in place for enquiries.

Historical Mapping Legends

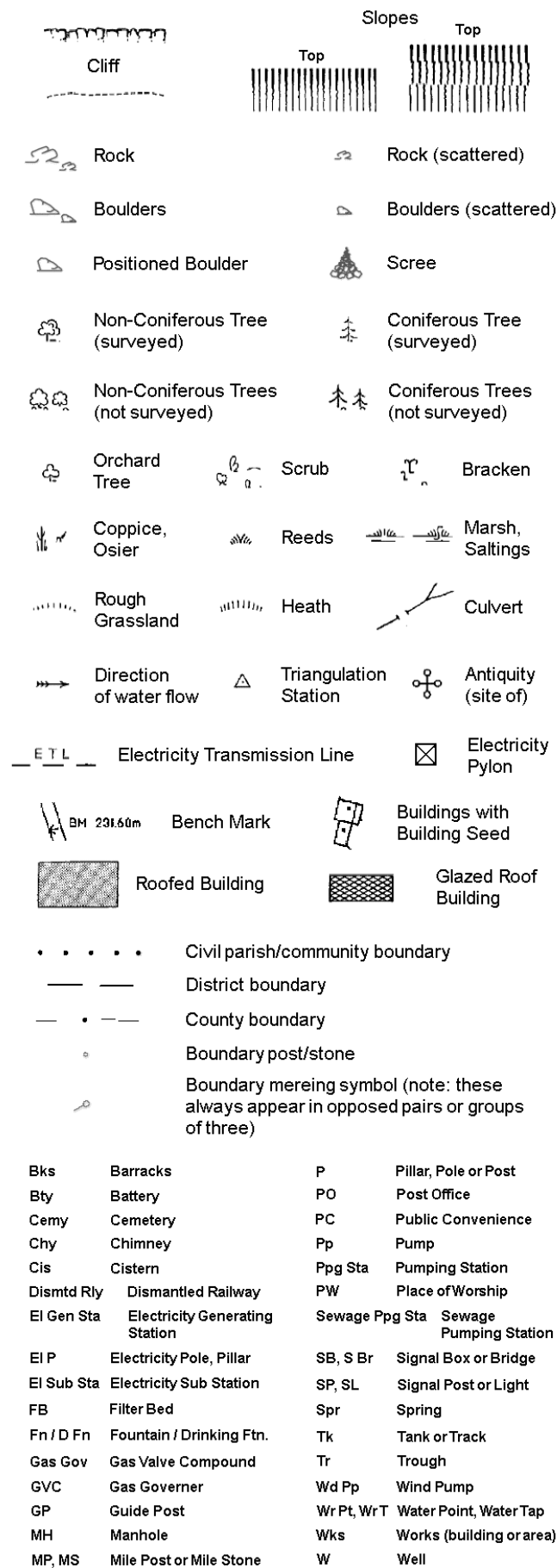
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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



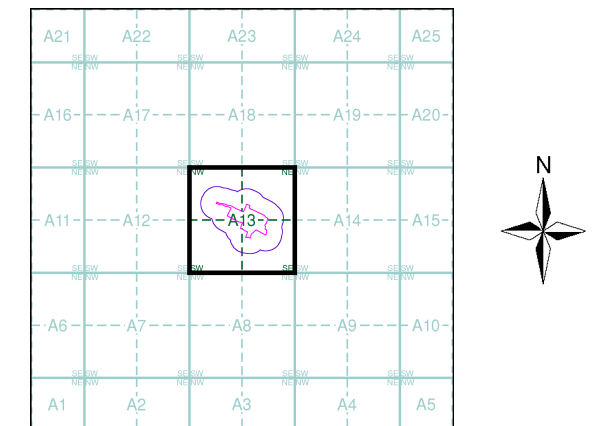
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Hampshire & Isle Of Wight	1:2,500	1878 - 1881	2
Hampshire & Isle Of Wight	1:2,500	1897	3
Hampshire & Isle Of Wight	1:2,500	1909	4
Hampshire & Isle Of Wight	1:2,500	1932	5
Ordnance Survey Plan	1:2,500	1953	6
Ordnance Survey Plan	1:2,500	1961	7
Ordnance Survey Plan	1:2,500	1966	8
Additional SIMs	1:2,500	1972	9
Ordnance Survey Plan	1:1,250	1973 - 1974	10
Additional SIMs	1:1,250	1977 - 1988	11
Ordnance Survey Plan	1:1,250	1987	12
Additional SIMs	1:1,250	1989 - 1990	13
Large-Scale National Grid Data	1:1,250	1993	14

Historical Map - Segment A13



Order Details

Order Number: 36865037_1_1
Customer Ref: GE8472
National Grid Reference: 468610, 109640
Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 100

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ

Hampshire & Isle Of Wight

Published 1878 - 1881

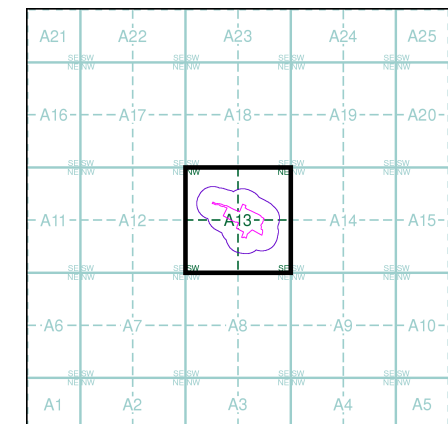
Source map scale - 1:2,500

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)

068_13 1881 1:2,500	068_14 1878 1:2,500
076_01 1879 1:2,500	076_02 1878 1:2,500

Historical Map - Segment A13

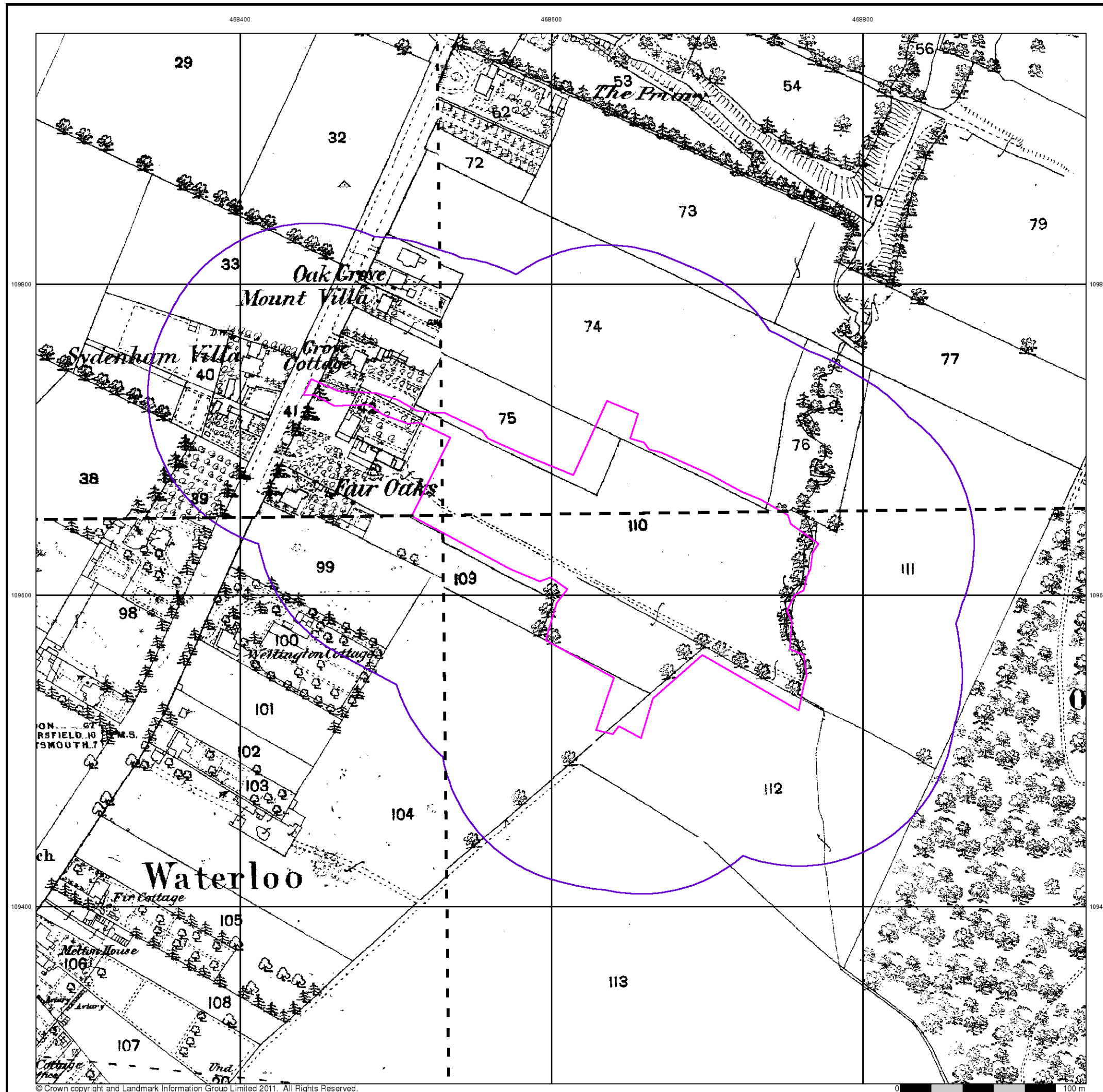


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Customer Ref: GE8472
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Site Area (Ha): 2.94
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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



Hampshire & Isle Of Wight

Published 1897

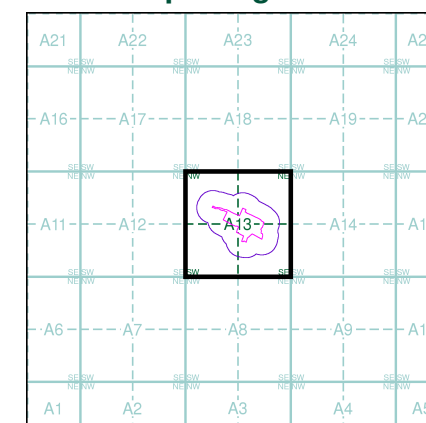
Source map scale - 1:2,500

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

Map Name(s) and Date(s)

068_13 1897 1:2,500	068_14 1897 1:2,500
076_01 1897 1:2,500	076_02 1897 1:2,500

Historical Map - Segment A13

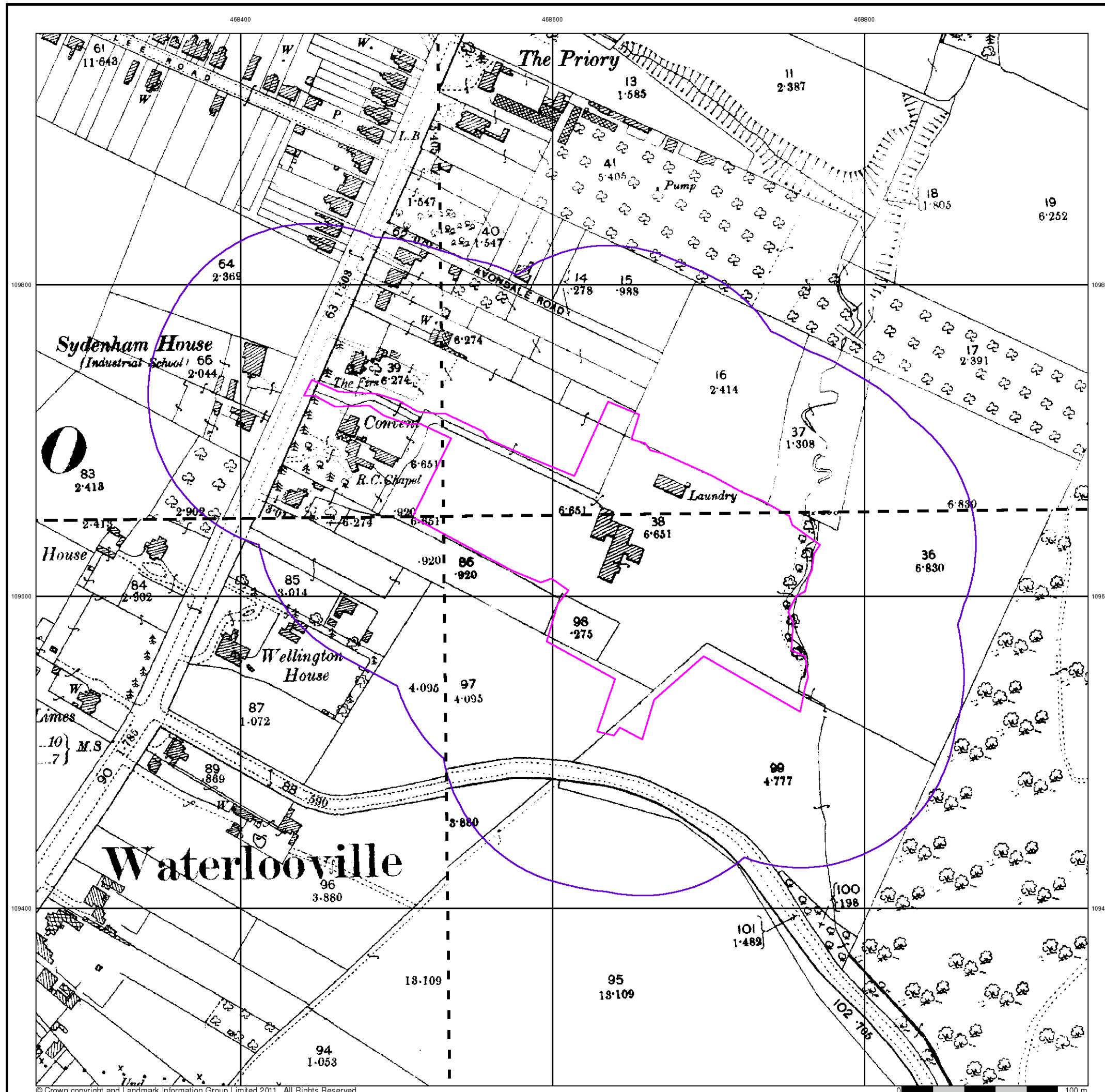


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 100

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



Hampshire & Isle Of Wight

Published 1909

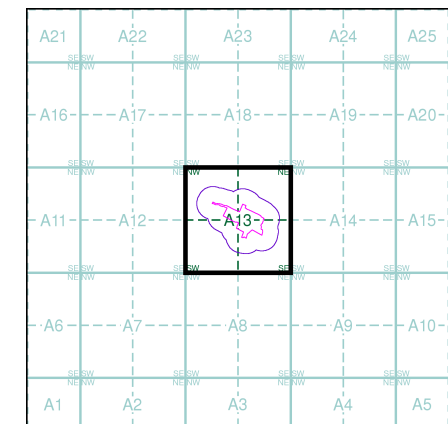
Source map scale - 1:2,500

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)

068_13 1909 1:2,500	068_14 1909 1:2,500
076_01 1909 1:2,500	076_02 1909 1:2,500

Historical Map - Segment A13

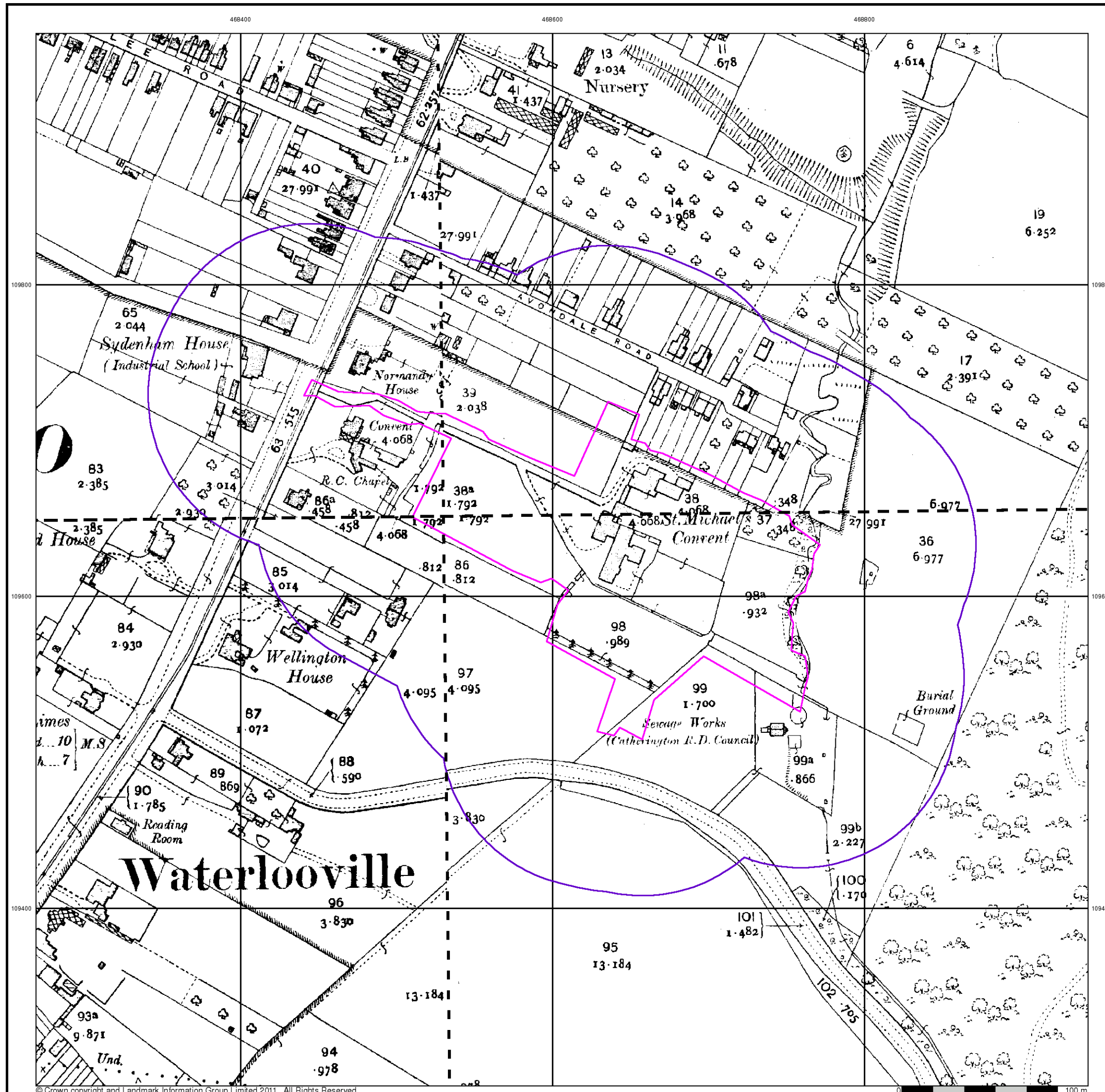


Order Details

Order Number: 36865037_1_1
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 National Grid Reference: 468610, 109640
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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



Hampshire & Isle Of Wight

Published 1932

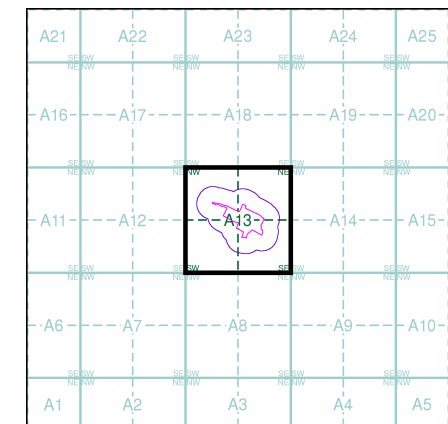
Source map scale - 1:2,500

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)

068_13 1932 1:2,500	068_14 1932 1:2,500
076_01 1932 1:2,500	076_02 1932 1:2,500

Historical Map - Segment A13

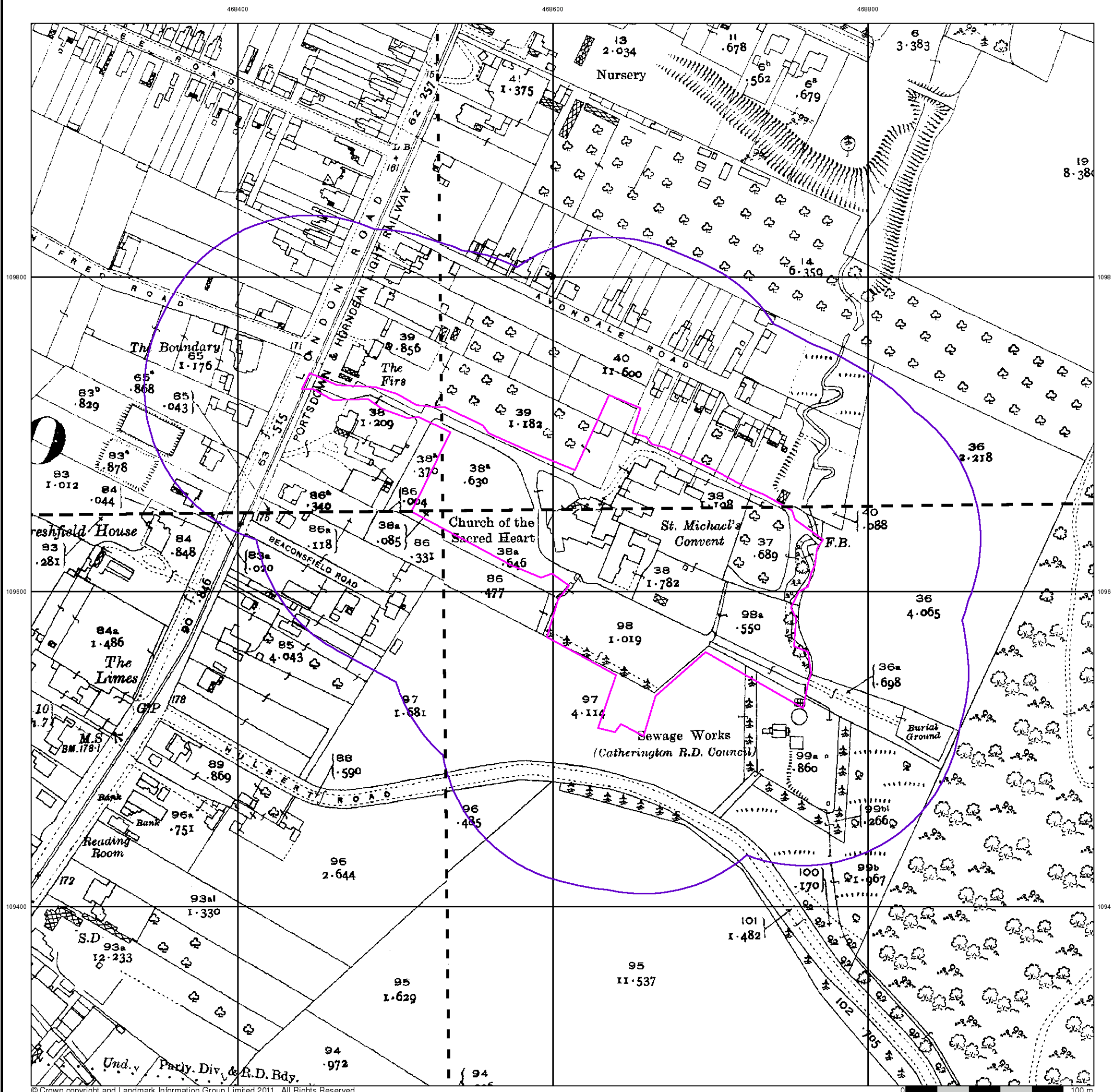


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
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 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 100

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



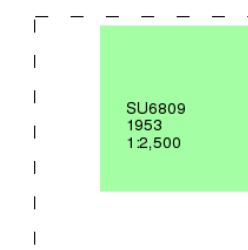
Ordnance Survey Plan

Published 1953

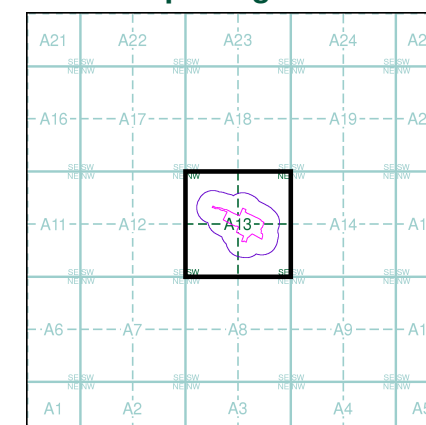
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered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

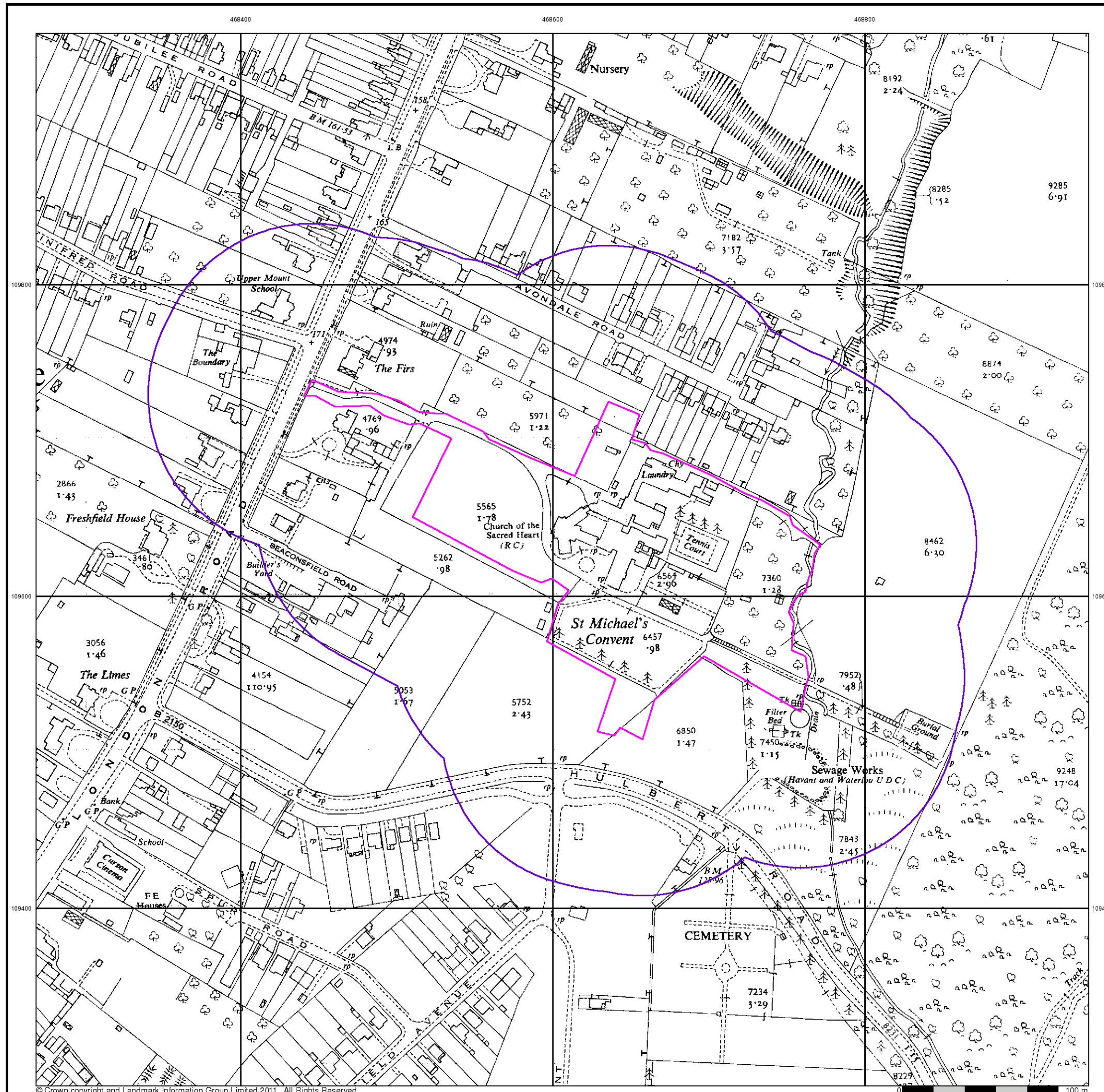


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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



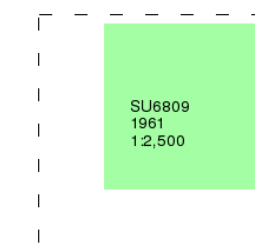
Ordnance Survey Plan

Published 1961

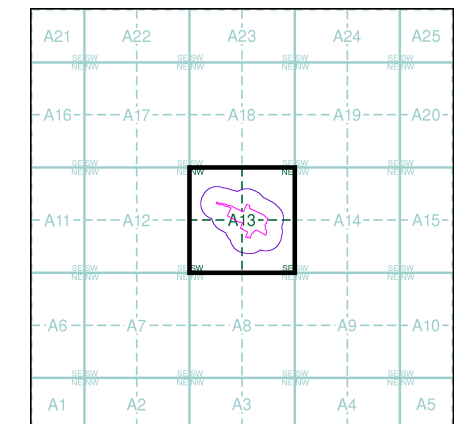
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

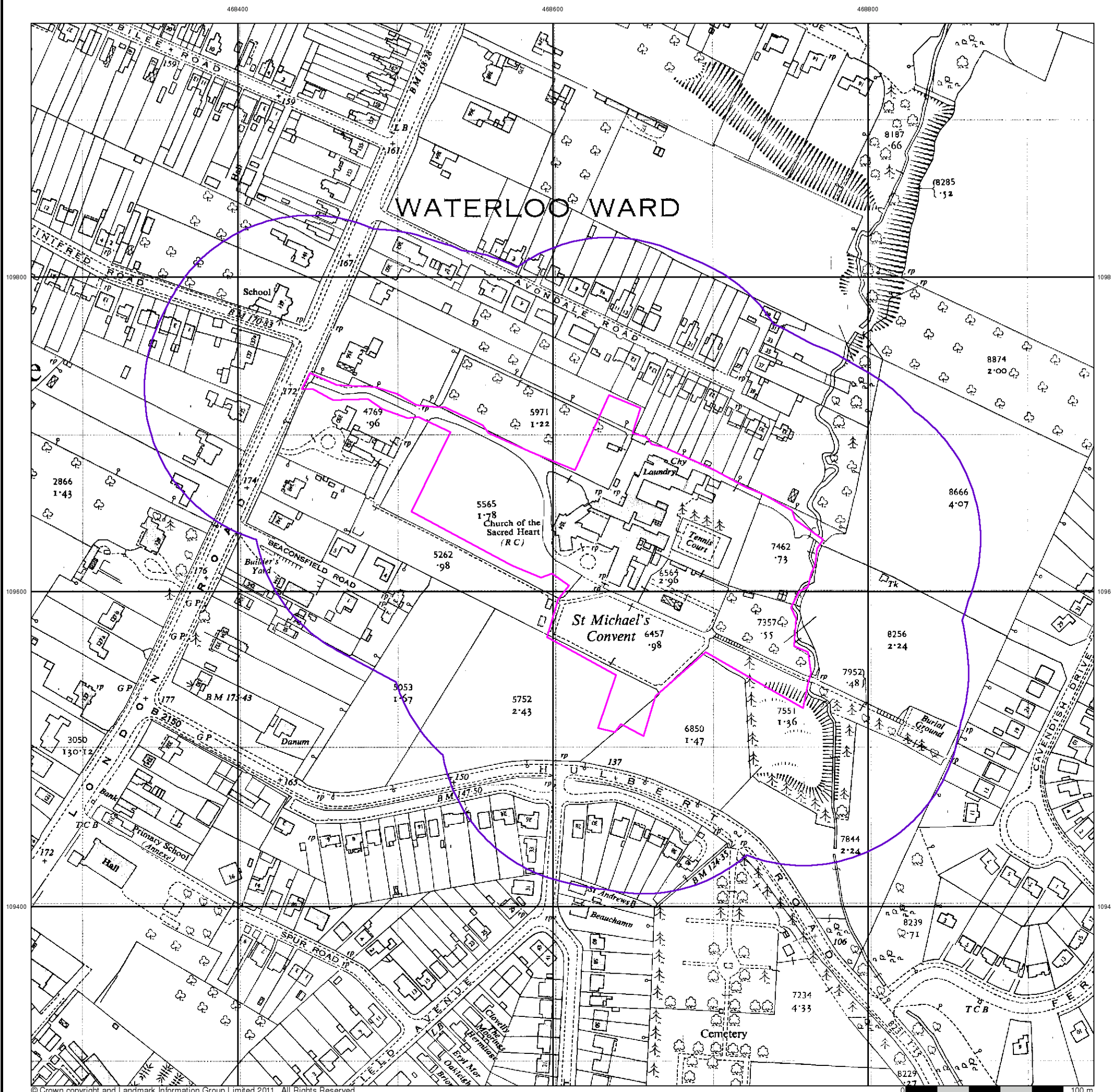


Order Details

Order Number: 36865037_1_1
Customer Ref: GE8472
National Grid Reference: 468610, 109640
Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 100

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



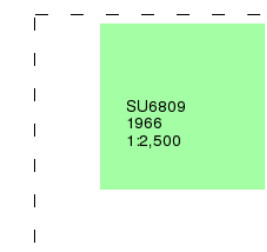
Ordnance Survey Plan

Published 1966

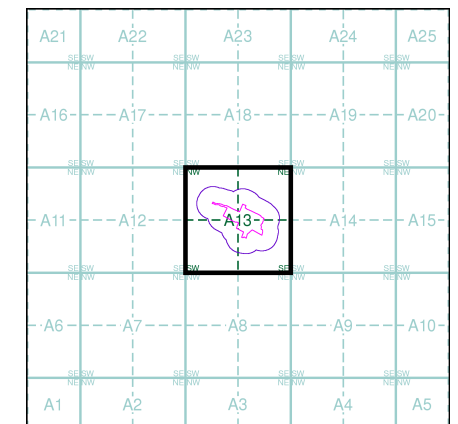
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13

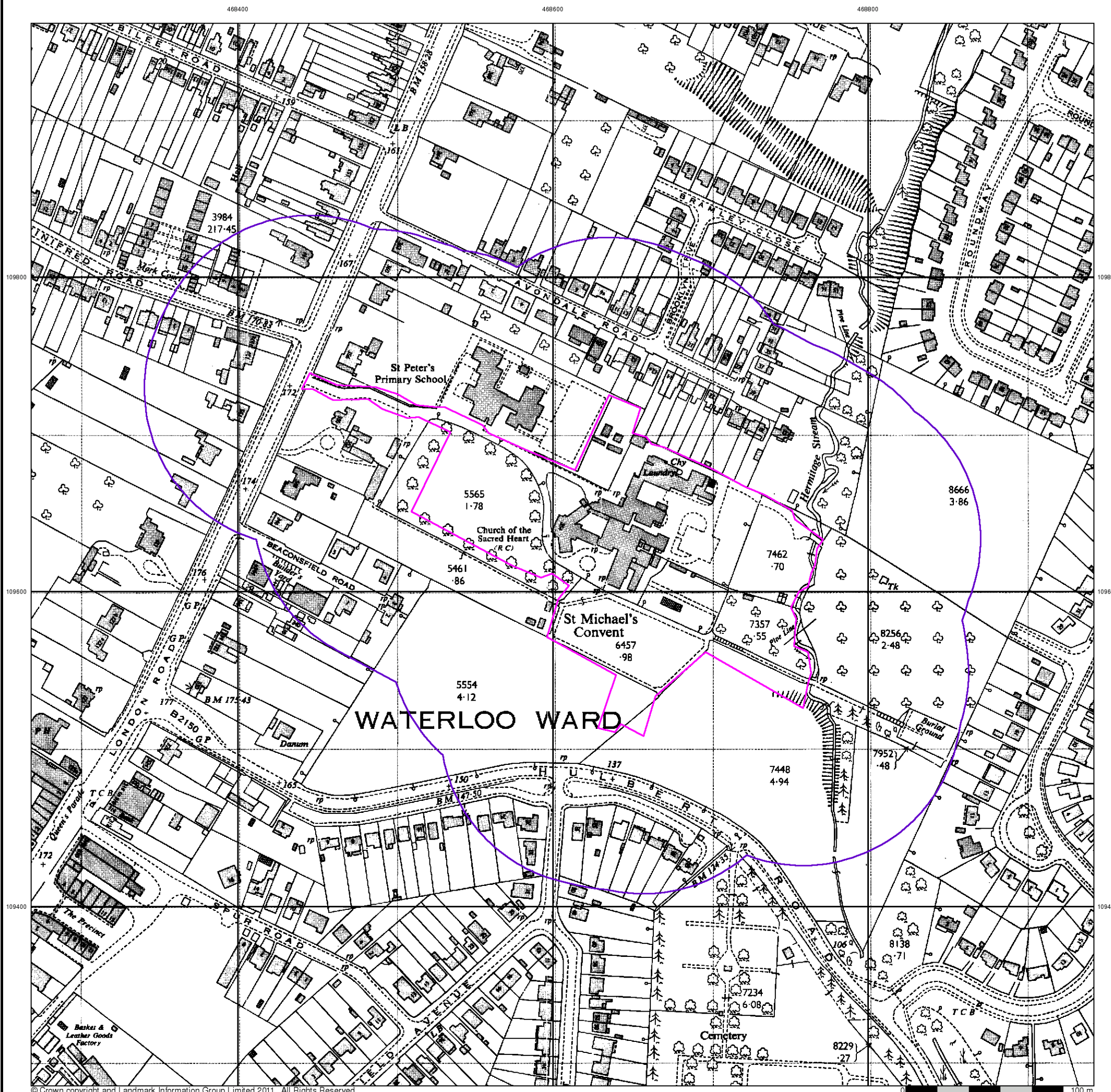


Order Details

Order Number: 36865037_1_1
Customer Ref: GE8472
National Grid Reference: 468610, 109640
Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 100

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



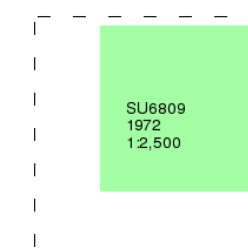
Additional SIMs

Published 1972

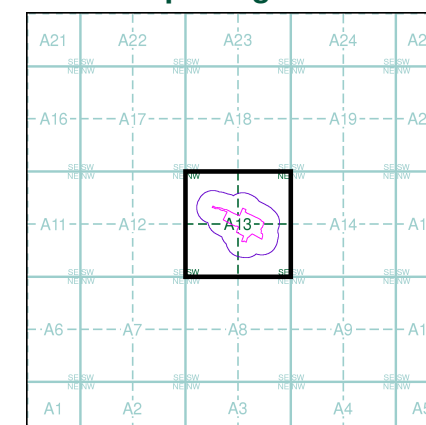
Source map scale - 1:2,500

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

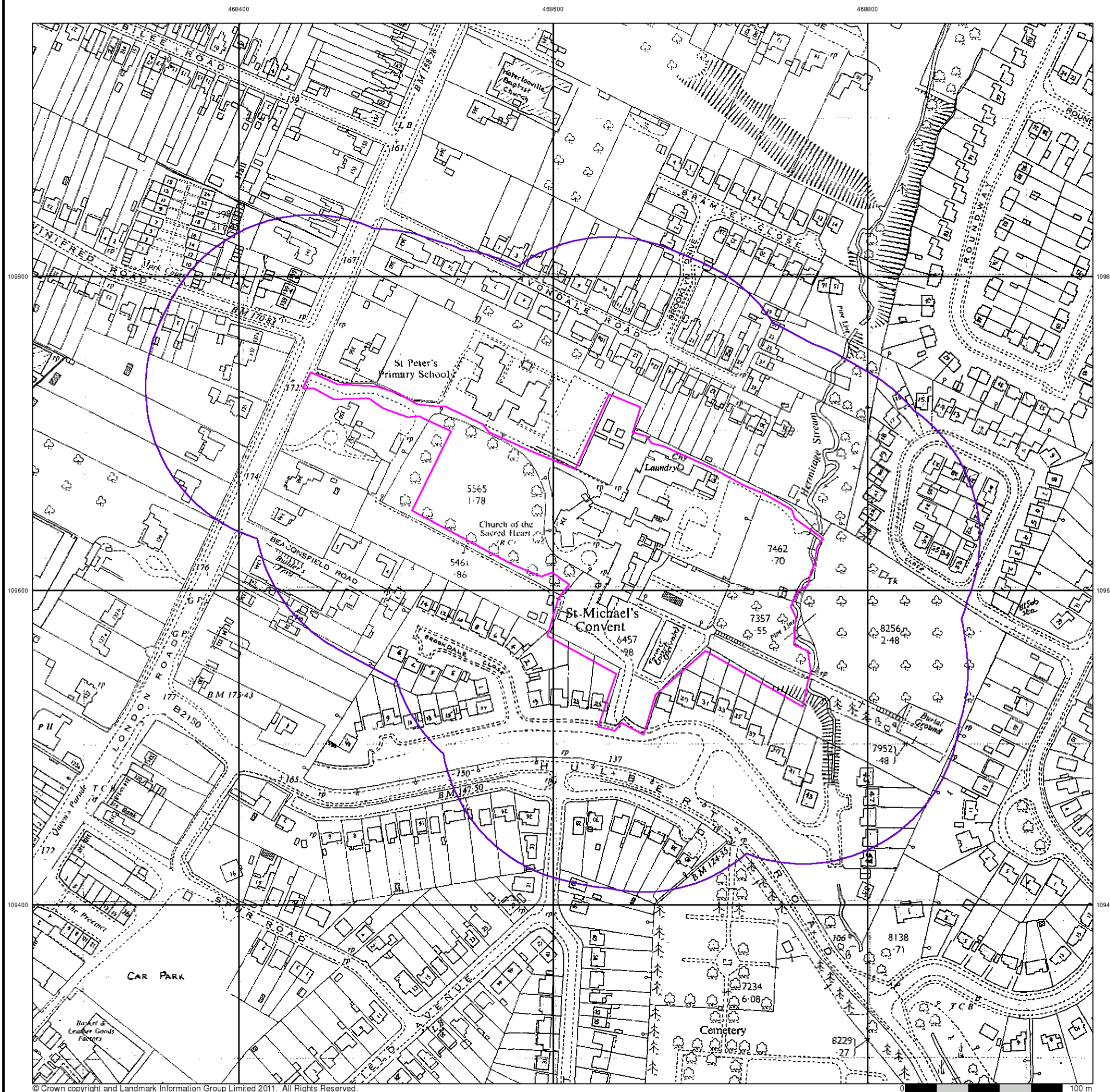


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 100

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



Ordnance Survey Plan

Published 1973 - 1974

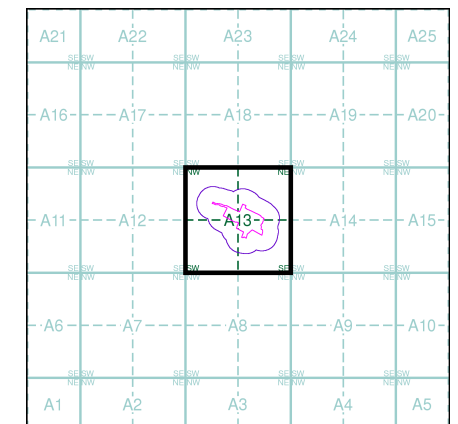
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered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

SU6809NW 1973 1:1,250	SU6809NE 1973 1:1,250
SU6809SW 1974 1:1,250	SU6809SE 1973 1:1,250

Historical Map - Segment A13



Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 100

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



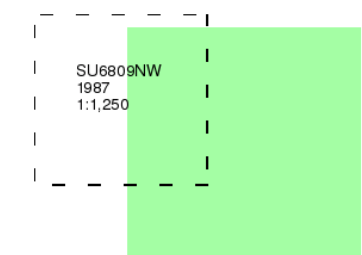
Ordnance Survey Plan

Published 1987

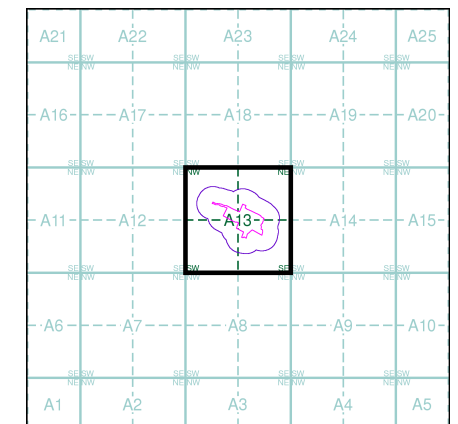
Source map scale - 1:1,250

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

Map Name(s) and Date(s)



Historical Map - Segment A13

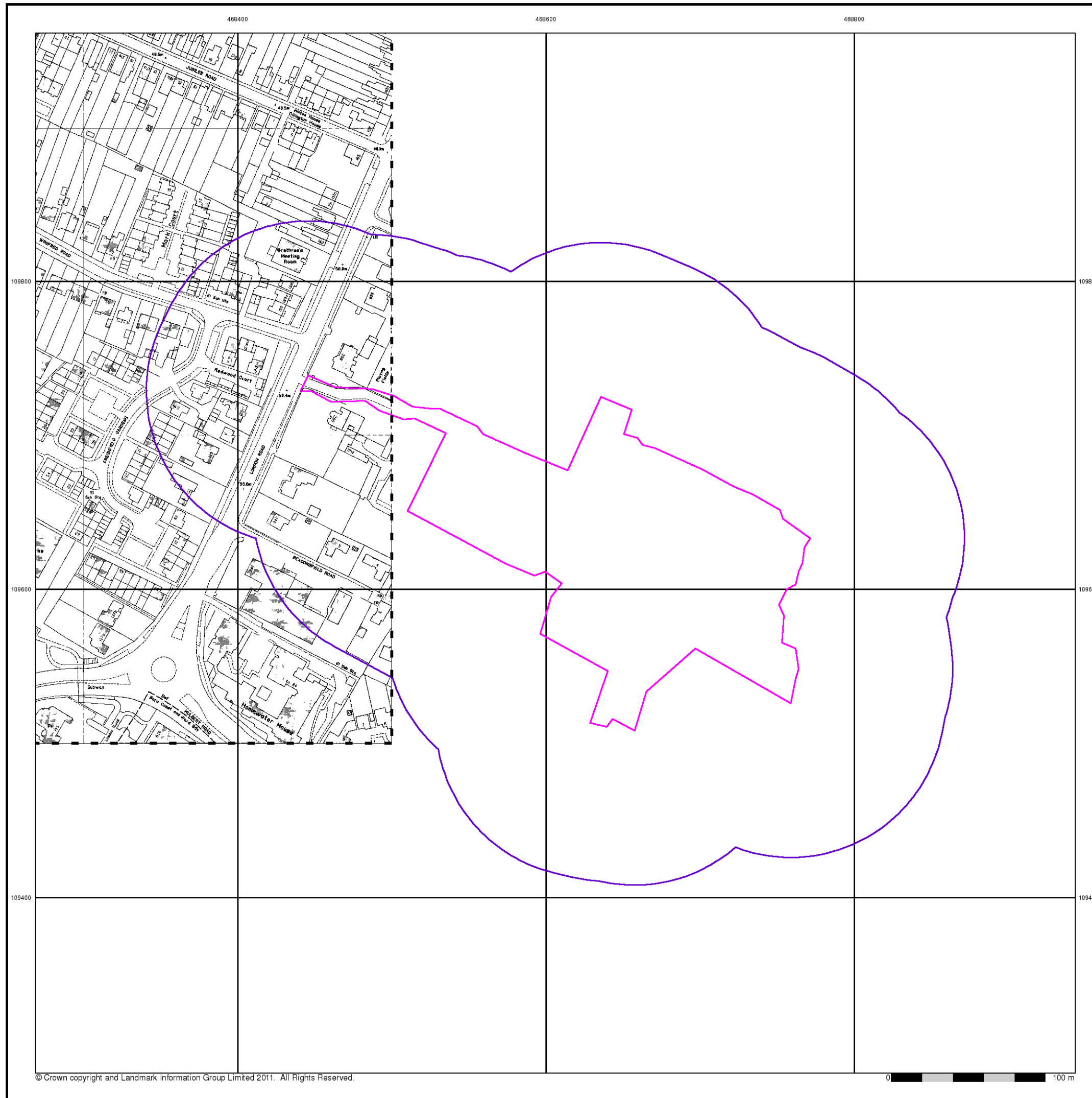


Order Details

Order Number: 36865037_1_1
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 Site Area (Ha): 2.94
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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



Large-Scale National Grid Data

Published 1993

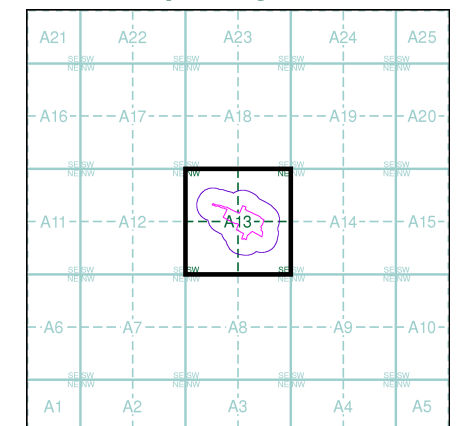
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

SU6809NW 1993 1:1,250	SU6809NE 1993 1:1,250
SU6809SW 1993 1:1,250	SU6809SE 1993 1:1,250

Historical Map - Segment A13



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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



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		
	Surface Level				
	Sketched Contour		Instrumental Contour		
	Main Roads		Minor Roads		
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

Ordnance Survey Plan 1:10,000

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

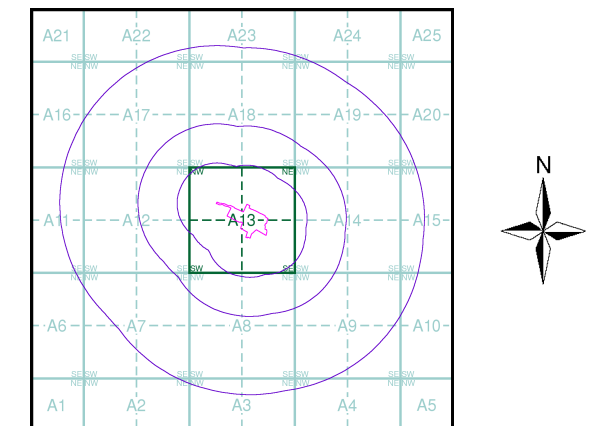
1:10,000 Raster Mapping

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

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Hampshire & Isle Of Wight	1:10,560	1870	3
Hampshire & Isle Of Wight	1:10,560	1897 - 1898	4
Hampshire & Isle Of Wight	1:10,560	1909 - 1910	5
Hampshire & Isle Of Wight	1:10,560	1933	6
Hampshire & Isle Of Wight	1:10,560	1933	7
Hampshire & Isle Of Wight	1:10,560	1938 - 1942	8
Historical Aerial Photography	1:10,560	1947 - 1949	9
Ordnance Survey Plan	1:10,000	1962 - 1963	10
Ordnance Survey Plan	1:10,000	1980 - 1982	11
Havant	1:25,000	1983	12
Portsmouth	1:10,000	1988	13
Ordnance Survey Plan	1:10,000	1991 - 1992	14
10K Raster Mapping	1:10,000	2000	15
10K Raster Mapping	1:10,000	2006	16
10K Raster Mapping	1:10,000	2011	17

Historical Map - Slice A



Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

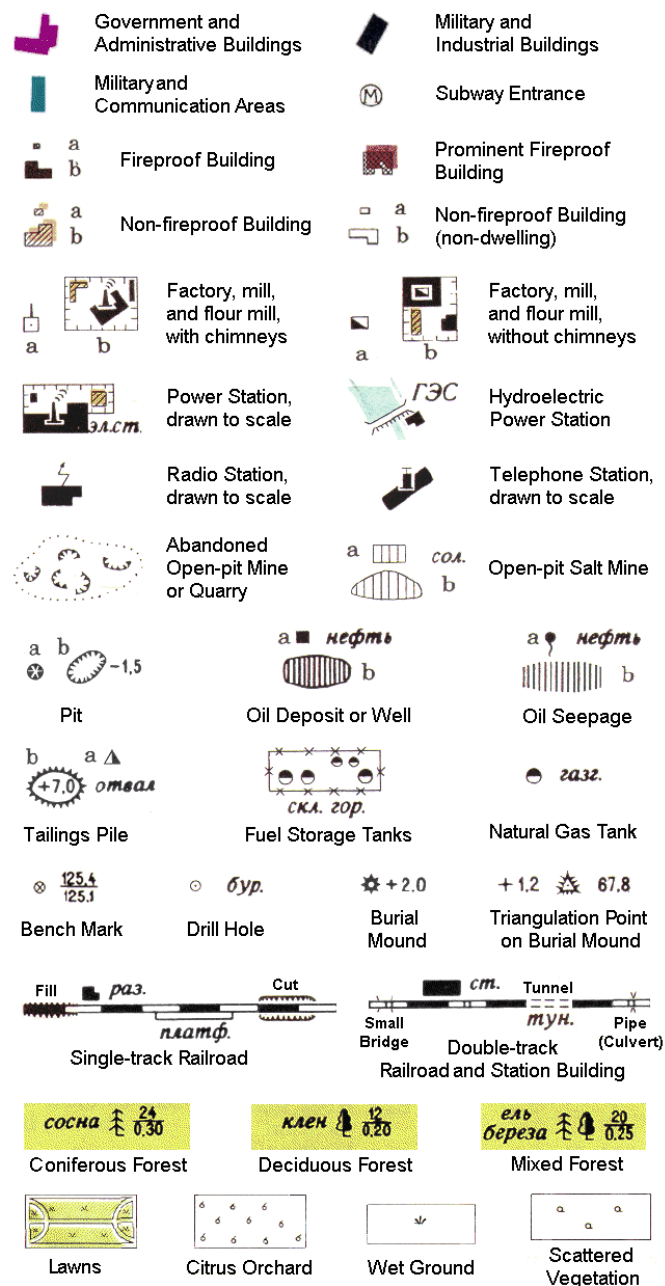
Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ

Russian Military Mapping Legends

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

a. Not drawn to scale b. Drawn to scale



243.8 Values for prominent elevations

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

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

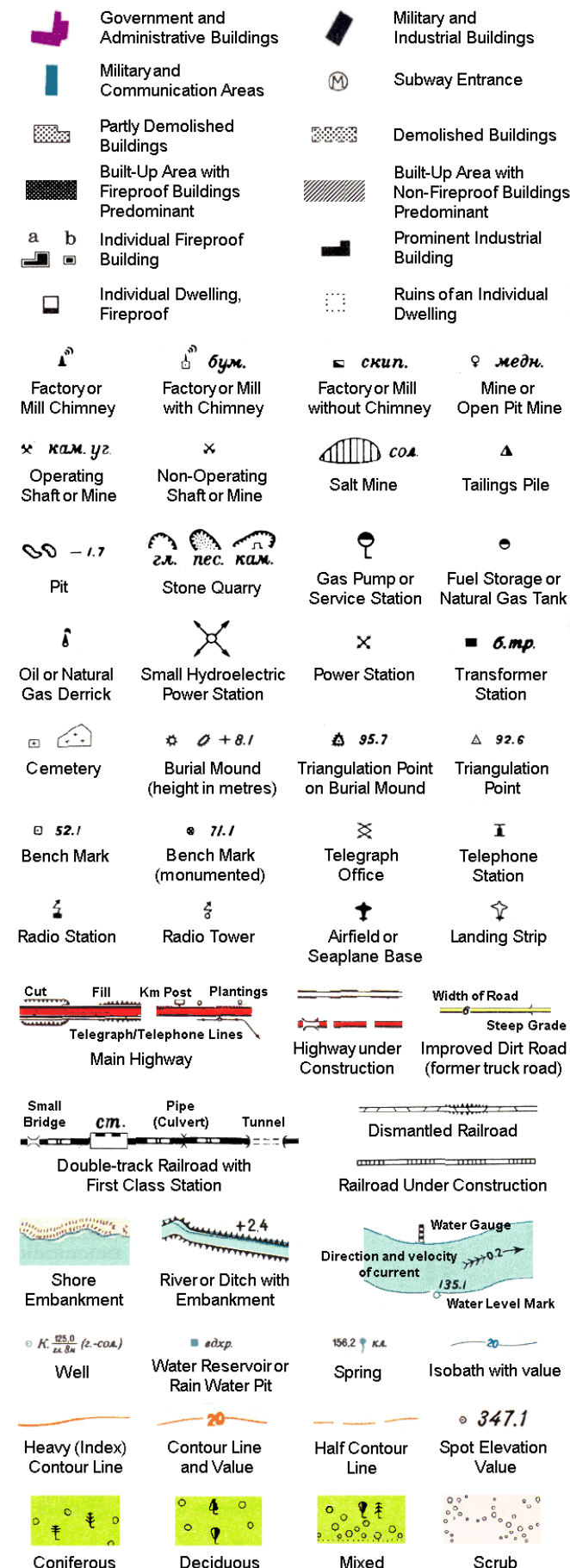
180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

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

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

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale



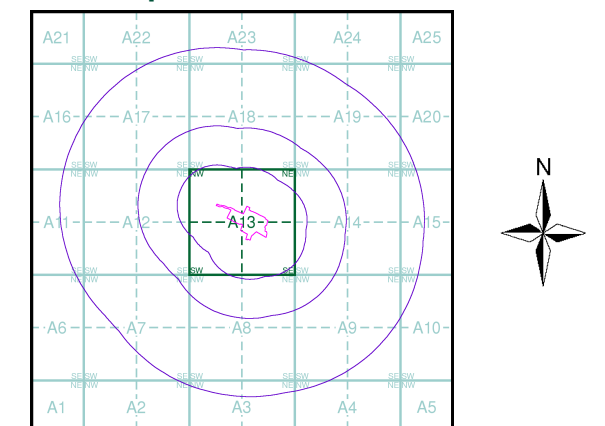
Key to Numbers on Mapping



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Hampshire & Isle Of Wight	1:10,560	1870	3
Hampshire & Isle Of Wight	1:10,560	1897 - 1898	4
Hampshire & Isle Of Wight	1:10,560	1909 - 1910	5
Hampshire & Isle Of Wight	1:10,560	1933	6
Hampshire & Isle Of Wight	1:10,560	1933	7
Hampshire & Isle Of Wight	1:10,560	1938 - 1942	8
Historical Aerial Photography	1:10,560	1947 - 1949	9
Ordnance Survey Plan	1:10,000	1962 - 1963	10
Ordnance Survey Plan	1:10,000	1980 - 1982	11
Havant	1:25,000	1983	12
Portsmouth	1:10,000	1988	13
Ordnance Survey Plan	1:10,000	1991 - 1992	14
10K Raster Mapping	1:10,000	2000	15
10K Raster Mapping	1:10,000	2006	16
10K Raster Mapping	1:10,000	2011	17

Russian Map - Slice A



Order Details

Order Number: 36865037_1_1
Customer Ref: GE8472
National Grid Reference: 468610, 109640
Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



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

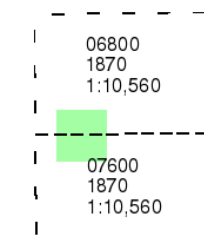
Hampshire & Isle Of Wight

Published 1870

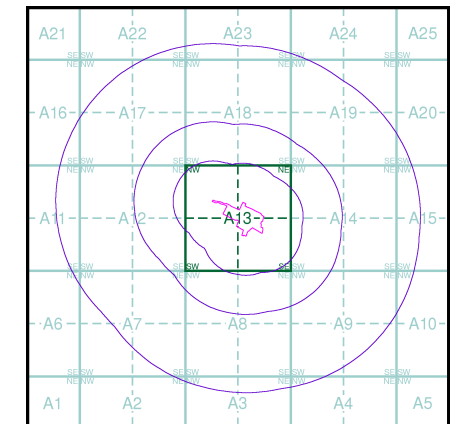
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A

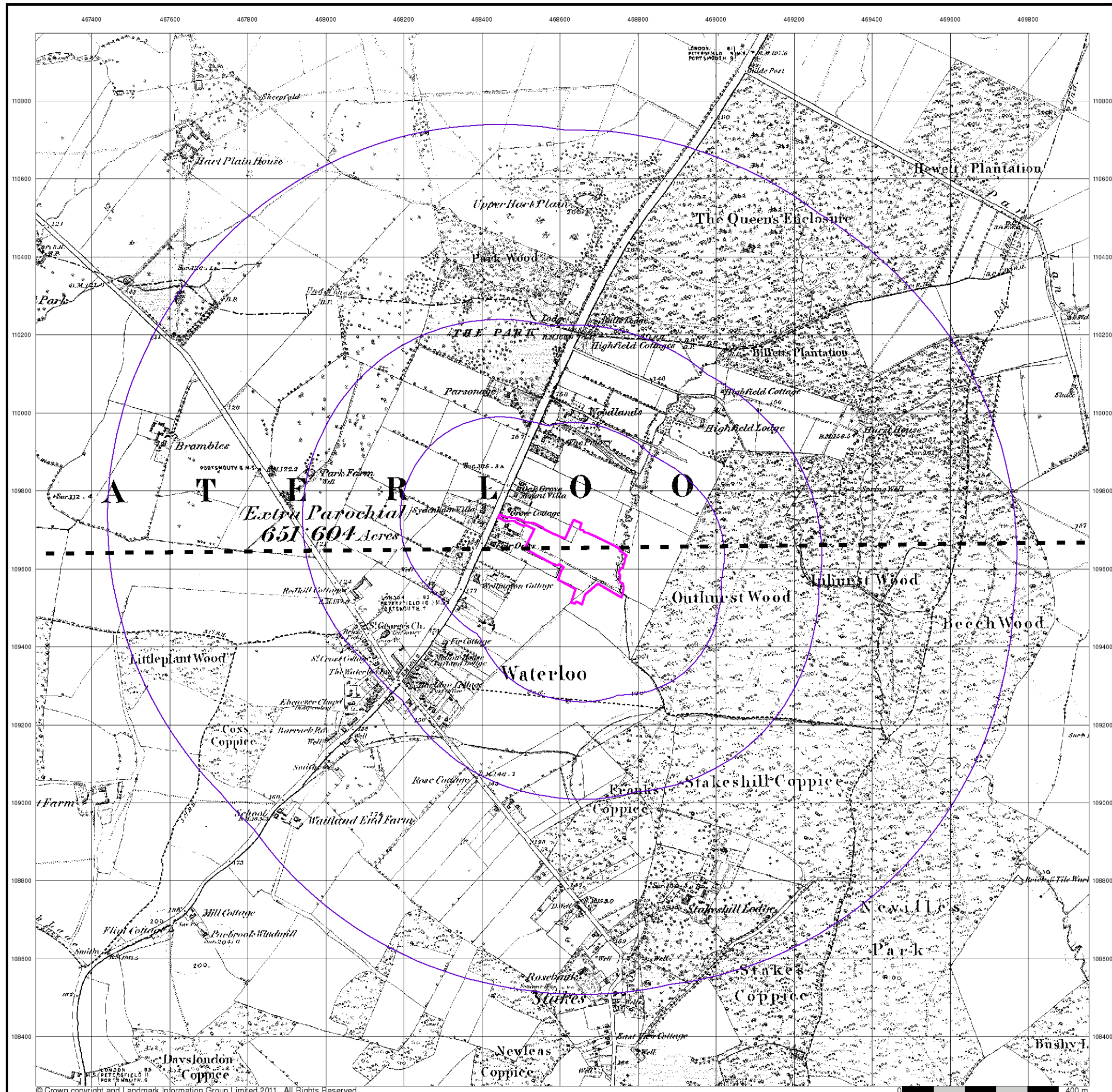


Order Details

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 Search Buffer (m): 1000

Site Details

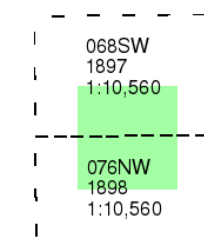
St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



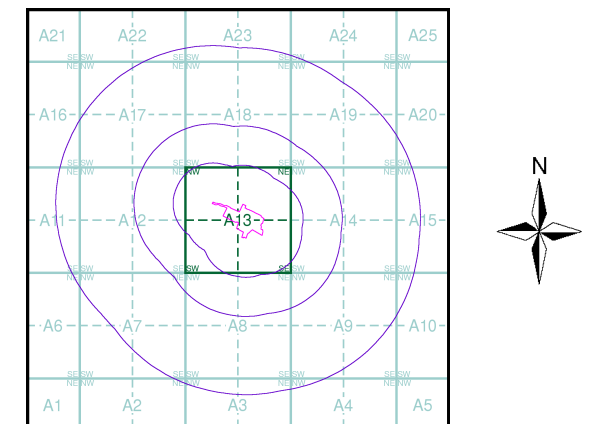


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

Map Name(s) and Date(s)



Historical Map - Slice A

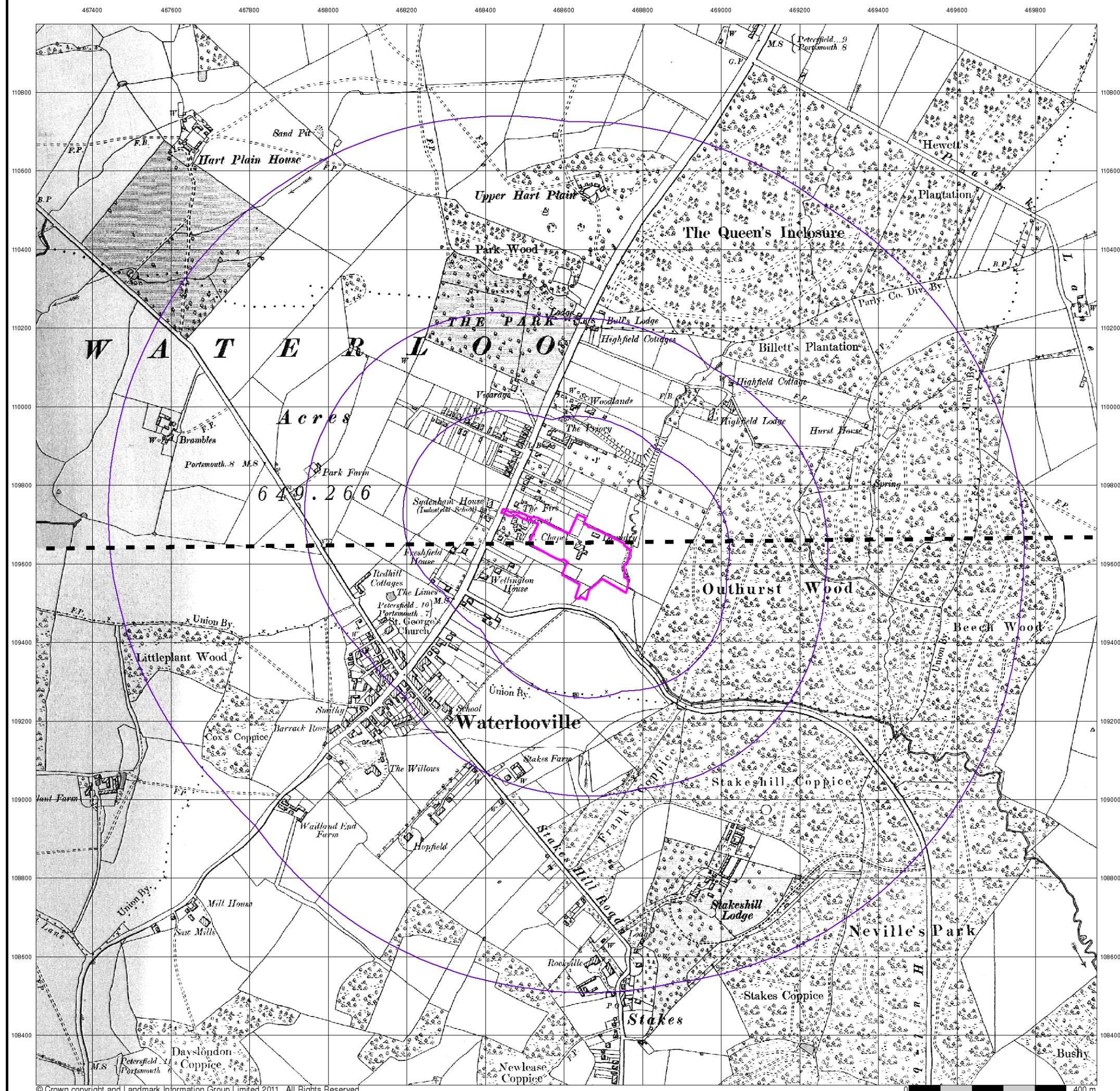


Order Details

Order Number: 36865037_1_1
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Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterloo, PO7 7RZ



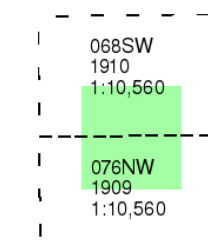
Hampshire & Isle Of Wight

Published 1909 - 1910

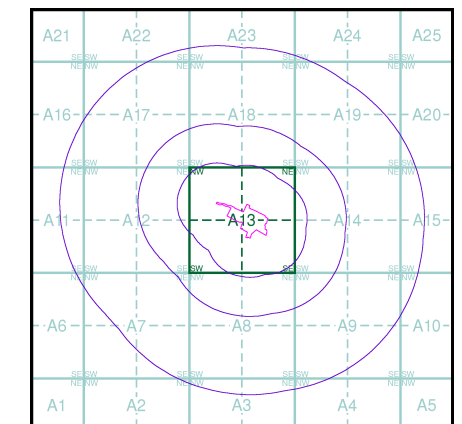
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A

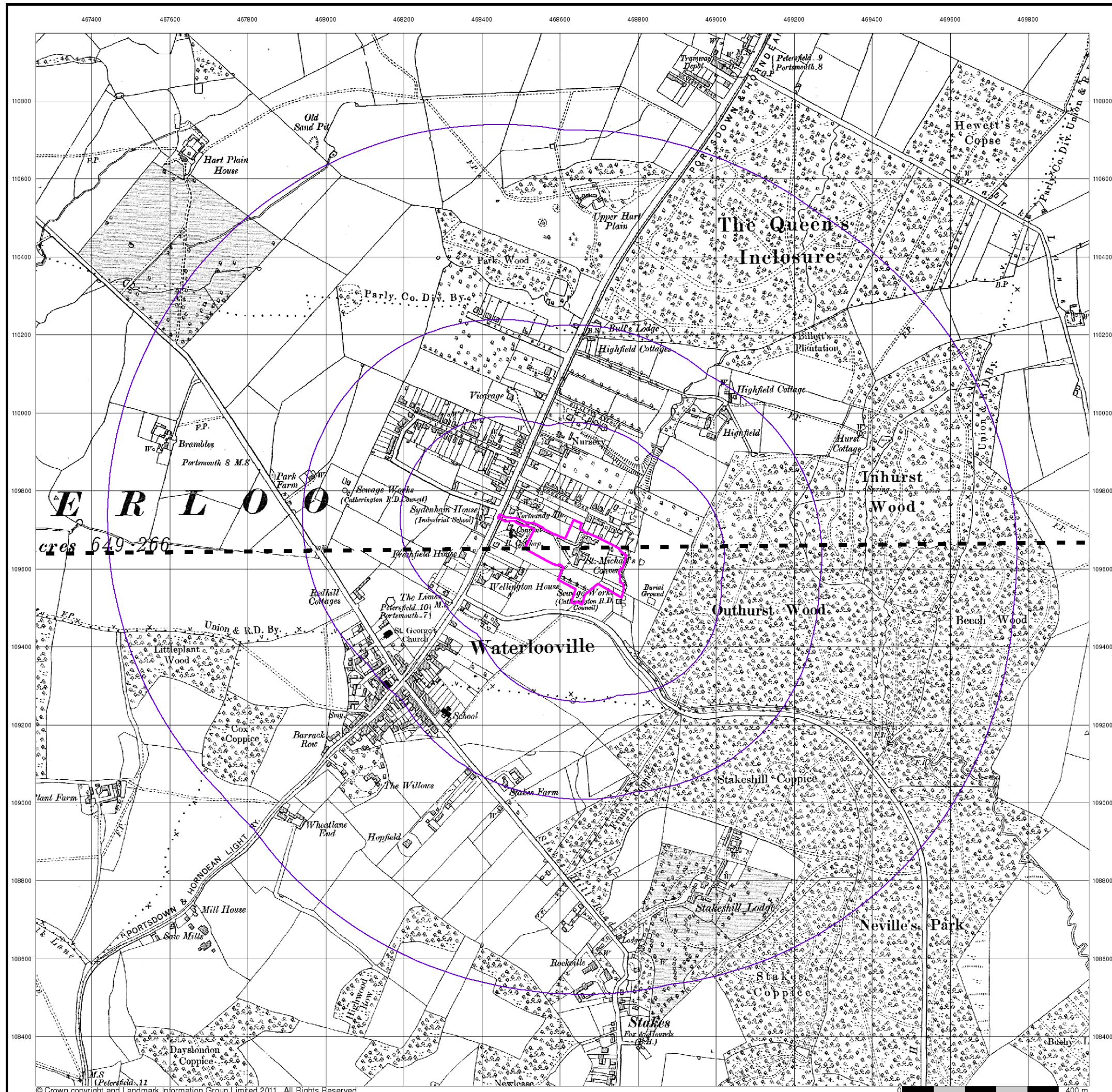


Order Details

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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



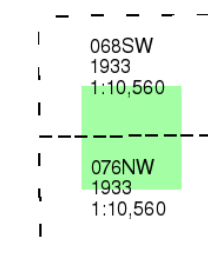
Hampshire & Isle Of Wight

Published 1933

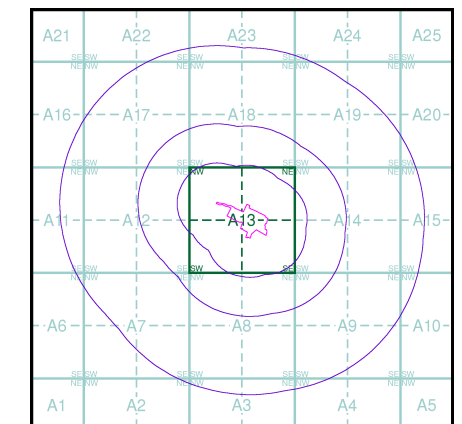
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps.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

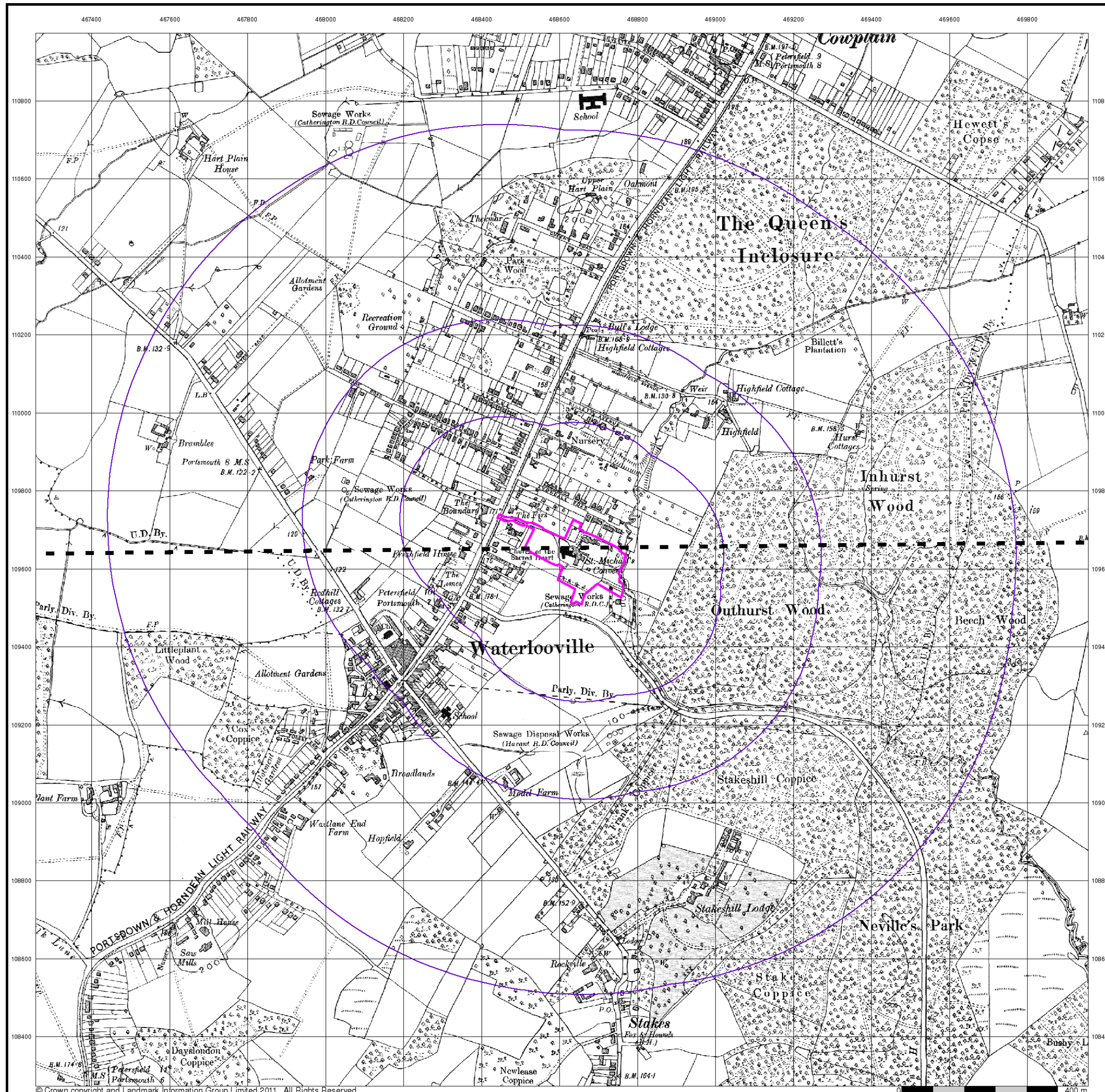


Order Details

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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



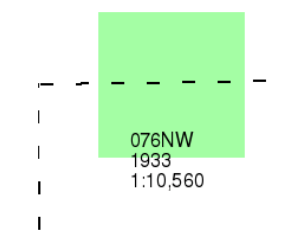
Hampshire & Isle Of Wight

Published 1933

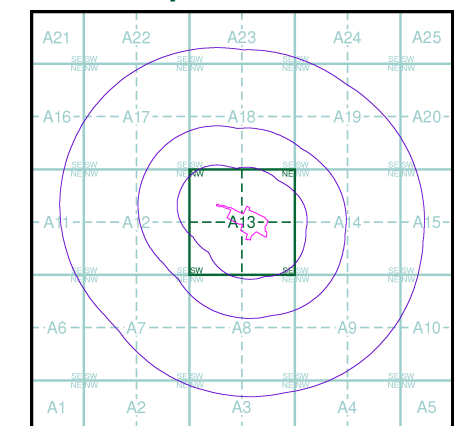
Source map scale - 1:10,560

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

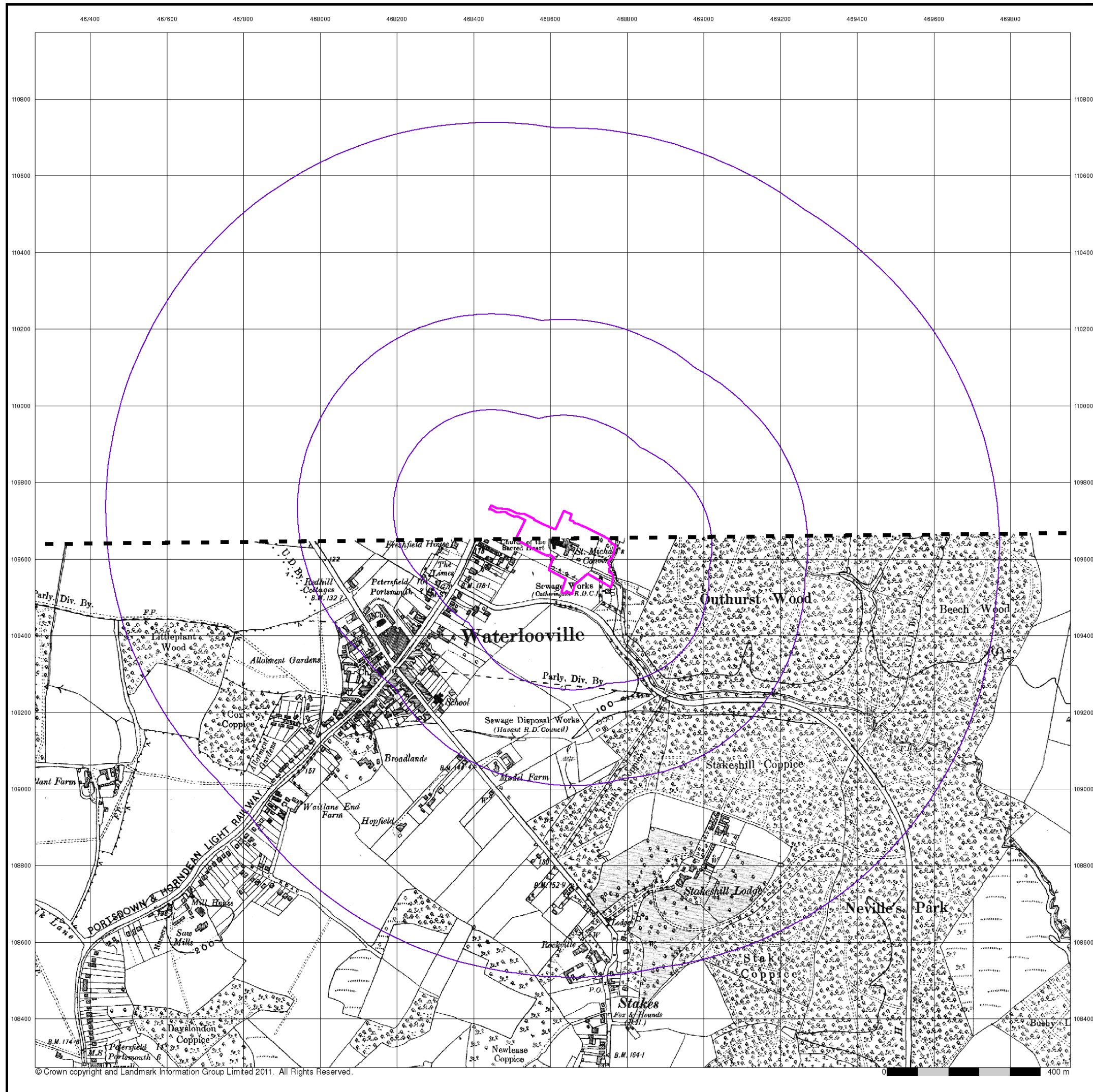


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Slice: A
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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



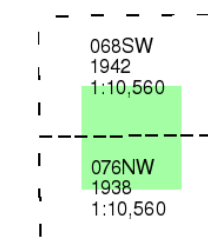
Hampshire & Isle Of Wight

Published 1938 - 1942

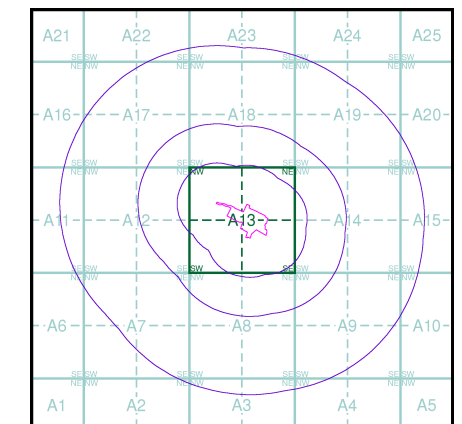
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A

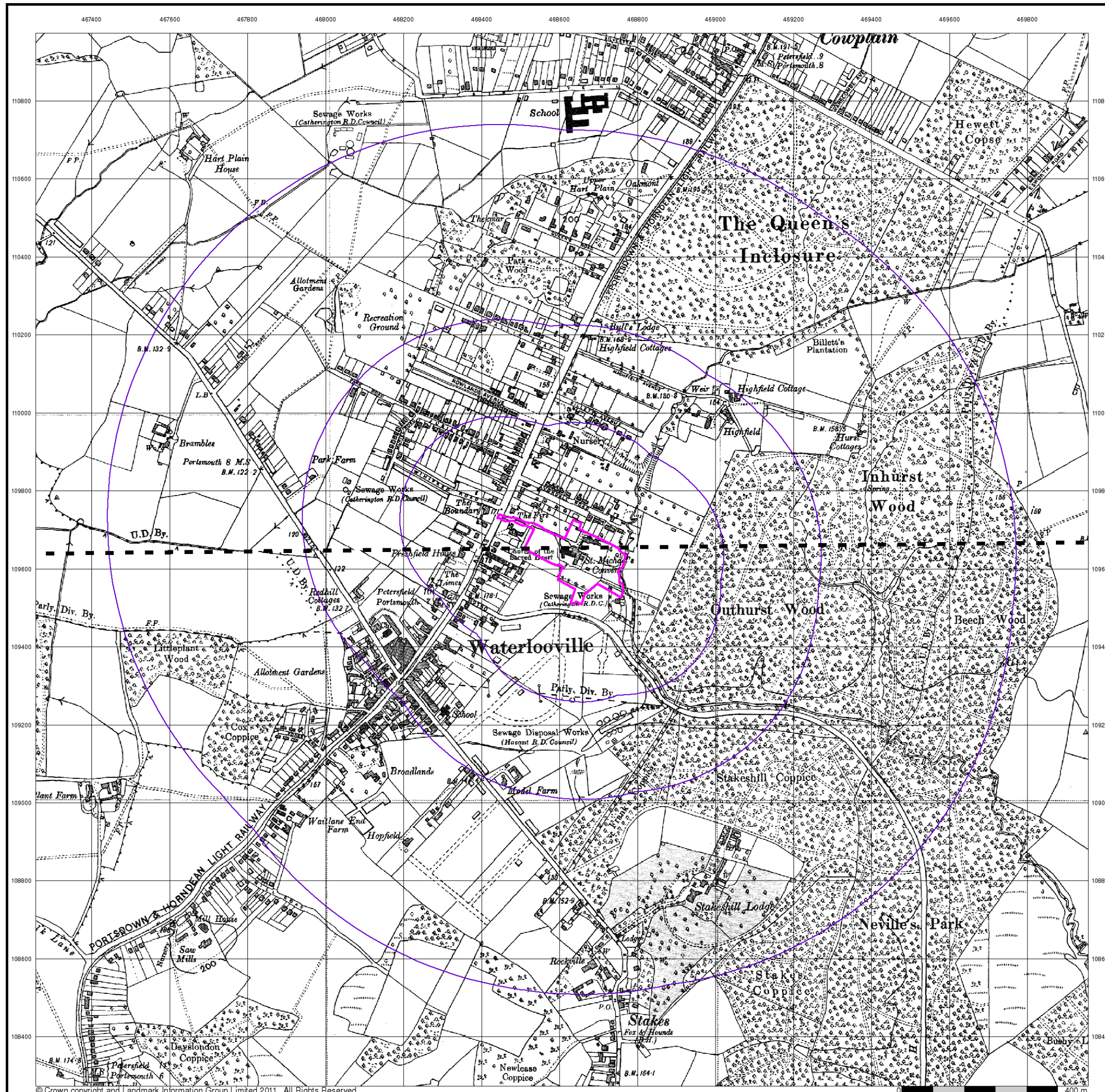


Order Details

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Customer Ref: GE8472
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Slice: A
Site Area (Ha): 2.94
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Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



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.

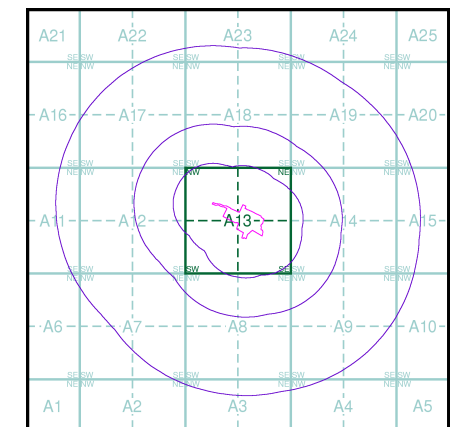
© Landmark Information Group and/or Data Suppliers 2010.

Map Name(s) and Date(s)

SU 61 SE
1947
1:10,560

SU 60 NE
1949
1:10,560

Historical Aerial Photography - Slice A



LIBRARY
HSILIRB

Order Details

Order Number: 36865037_1_1
Customer Ref: GE8472
National Grid Reference: 468610, 109640
Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ

Ordnance Survey Plan

Published 1962 - 1963

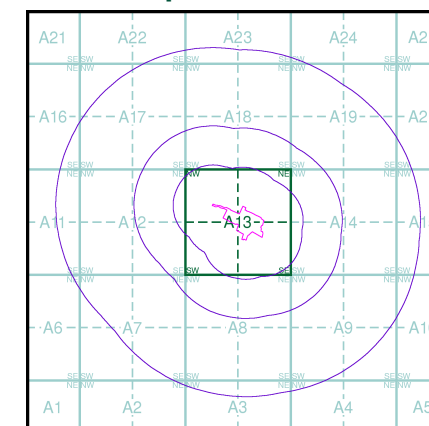
Source map scale - 1:10,000

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)

SU61SE	1962	1:10,560
SU60NE	1963	1:10,560

Historical Map - Slice A

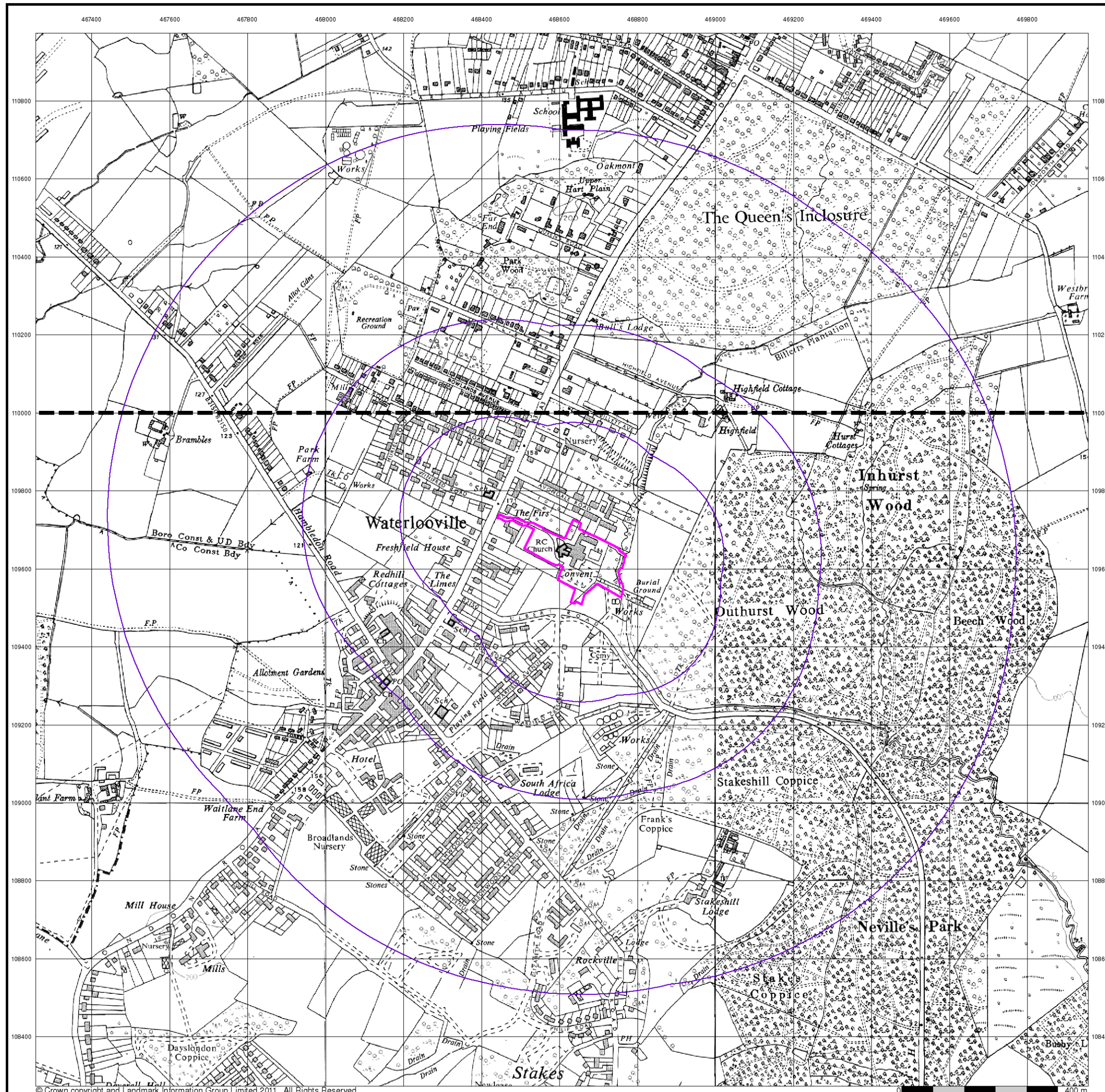


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterloooville, PO7 7RZ



Ordnance Survey Plan

Published 1980 - 1982

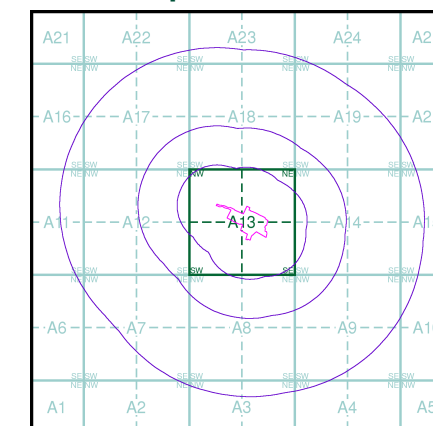
Source map scale - 1:10,000

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)

SU61SE	1980	1:10,000
SU60NE	1982	1:10,000

Historical Map - Slice A

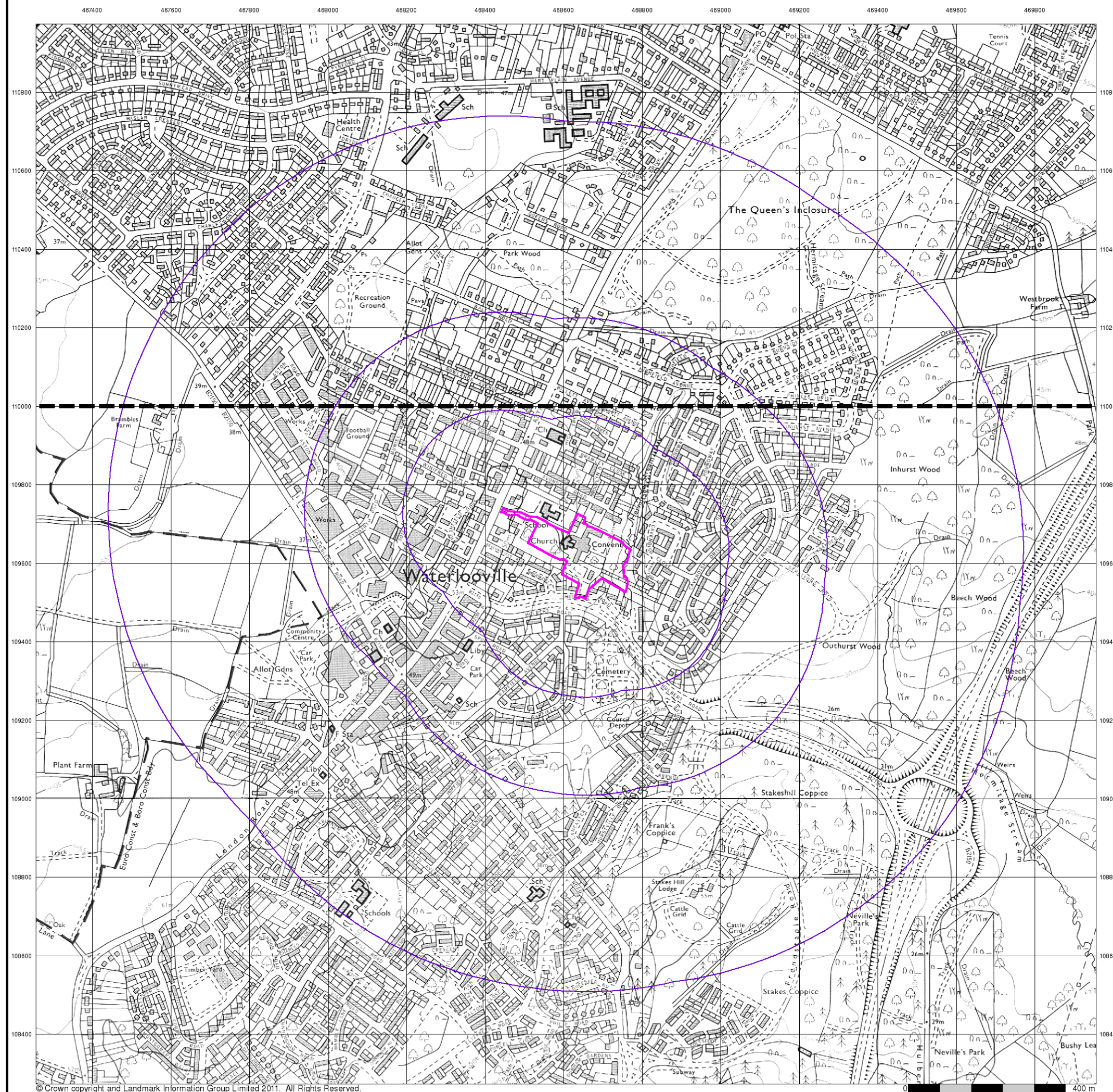


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



Havant

Published 1983

Source map scale - 1:25,000

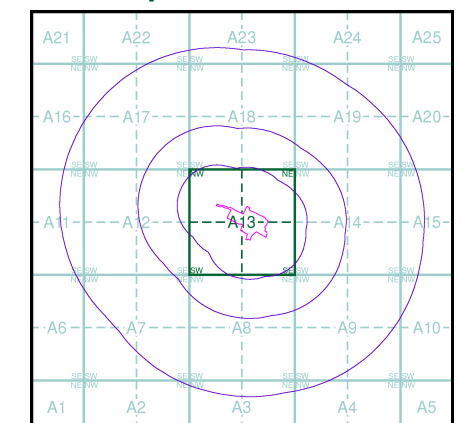
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

SU61	1983	1:25,000
SU60	1983	1:25,000

Russian Map - Slice A

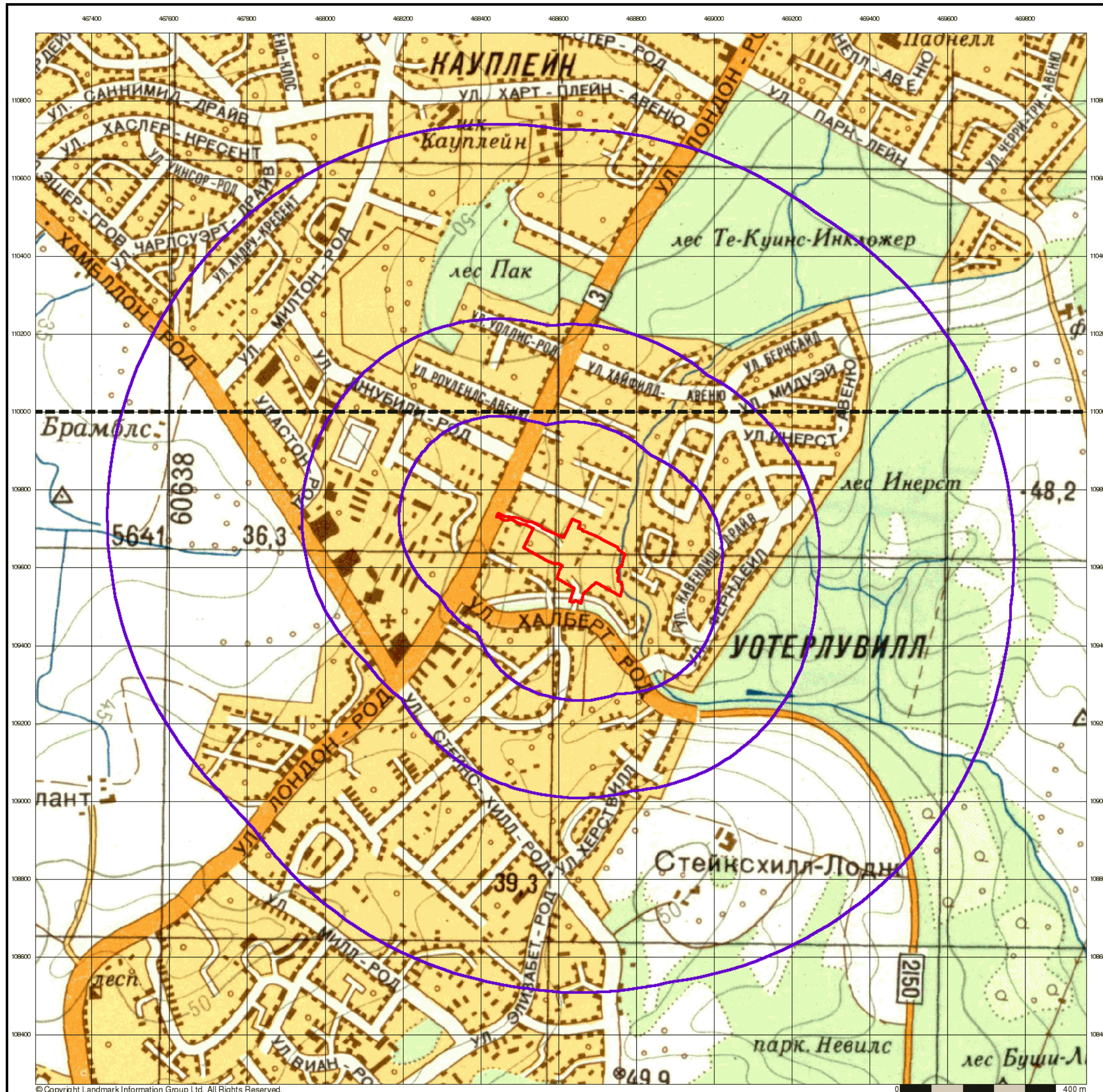


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



Portsmouth

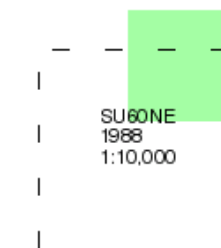
Published 1988

Source map scale - 1:10,000

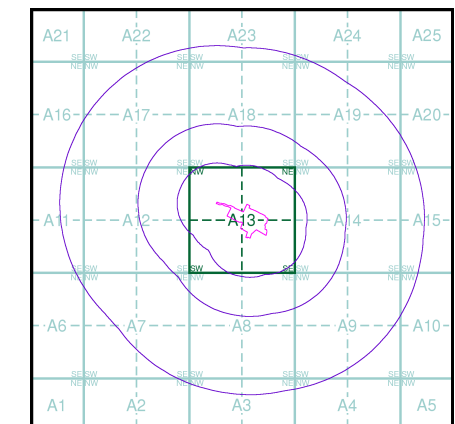
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A

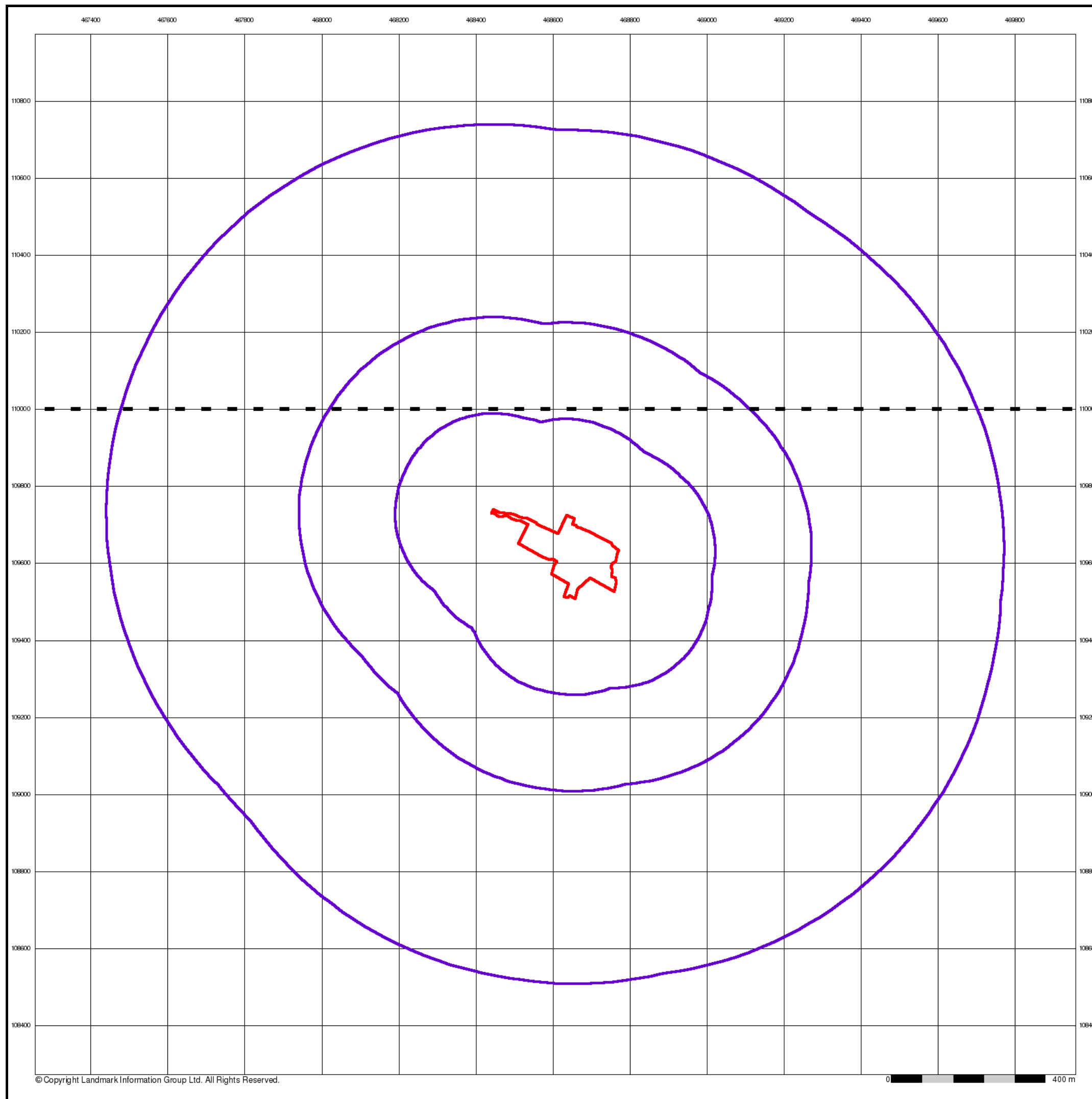


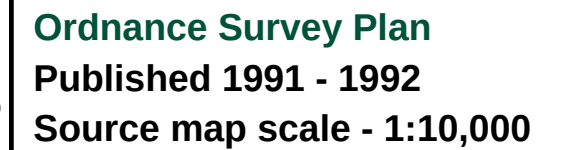
Order Details

Order Number: 36865037_1_1
Customer Ref: GE8472
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Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 1000

Site Details

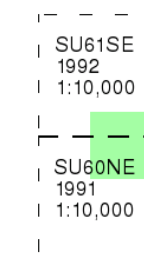
St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



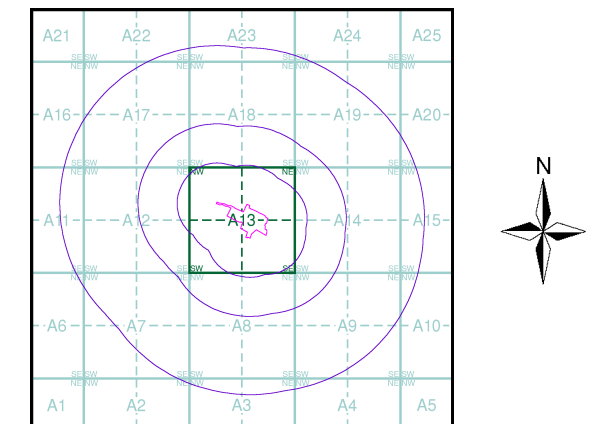


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 36865037_1_1
Customer Ref: GE8472
National Grid Reference: 468610, 109640
Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterloooville, PO7 7RZ



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

10k Raster Mapping

Published 2000

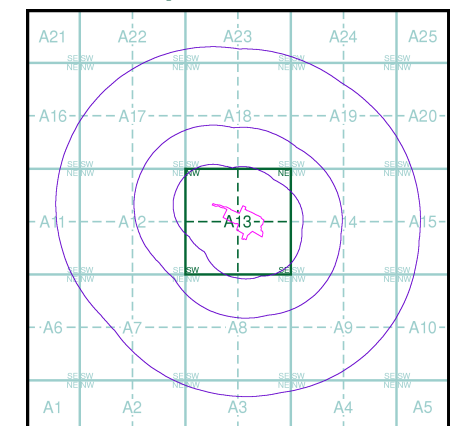
Source map scale - 1:10,000

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)

SU61SE	2000	1:10,000
SU60NE	2000	1:10,000

Historical Map - Slice A

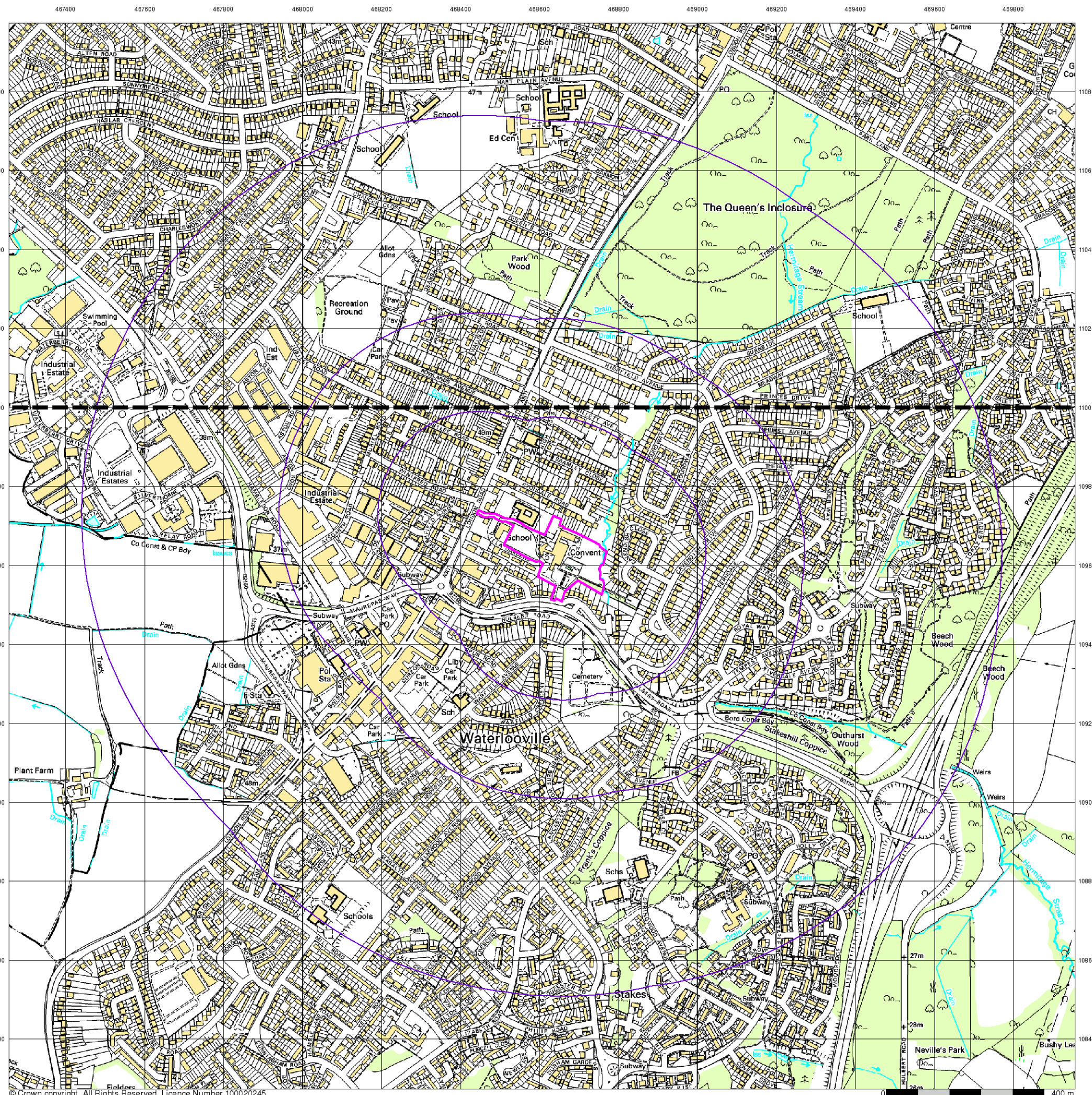


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterlooville, PO7 7RZ



10k Raster Mapping

Published 2006

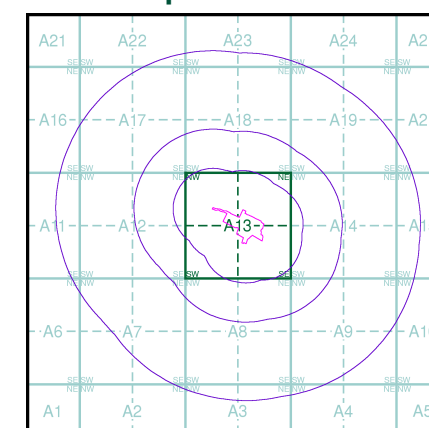
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SU61SE
2006
1:10,000
SU60NE
2006
1:10,000

Historical Map - Slice A

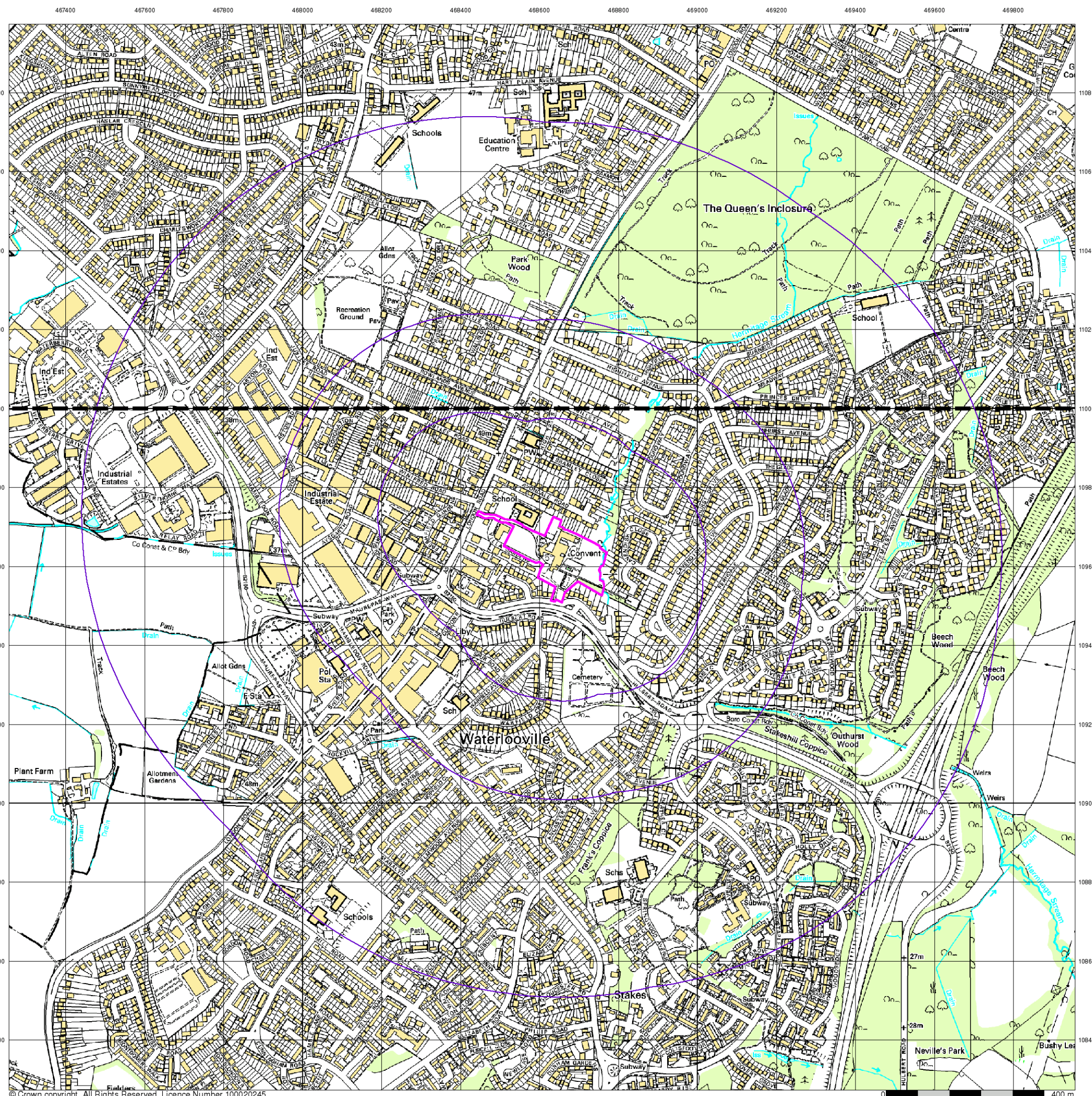


Order Details

Order Number: 36865037_1_1
 Customer Ref: GE8472
 National Grid Reference: 468610, 109640
 Slice: A
 Site Area (Ha): 2.94
 Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterloo, PO7 7RZ



10k Raster Mapping

Published 2011

Source map scale - 1:10,000

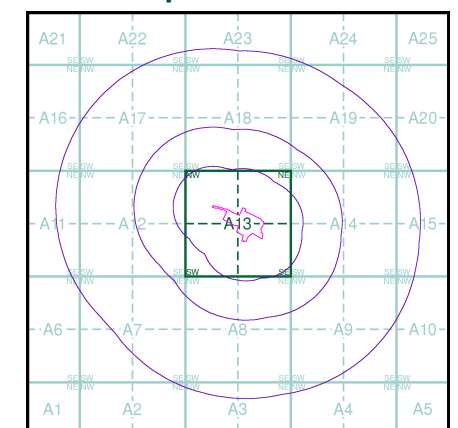
The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks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

SU61SE
2011
1:10,000

SU60NE
2011
1:10,000

Historical Map - Slice A

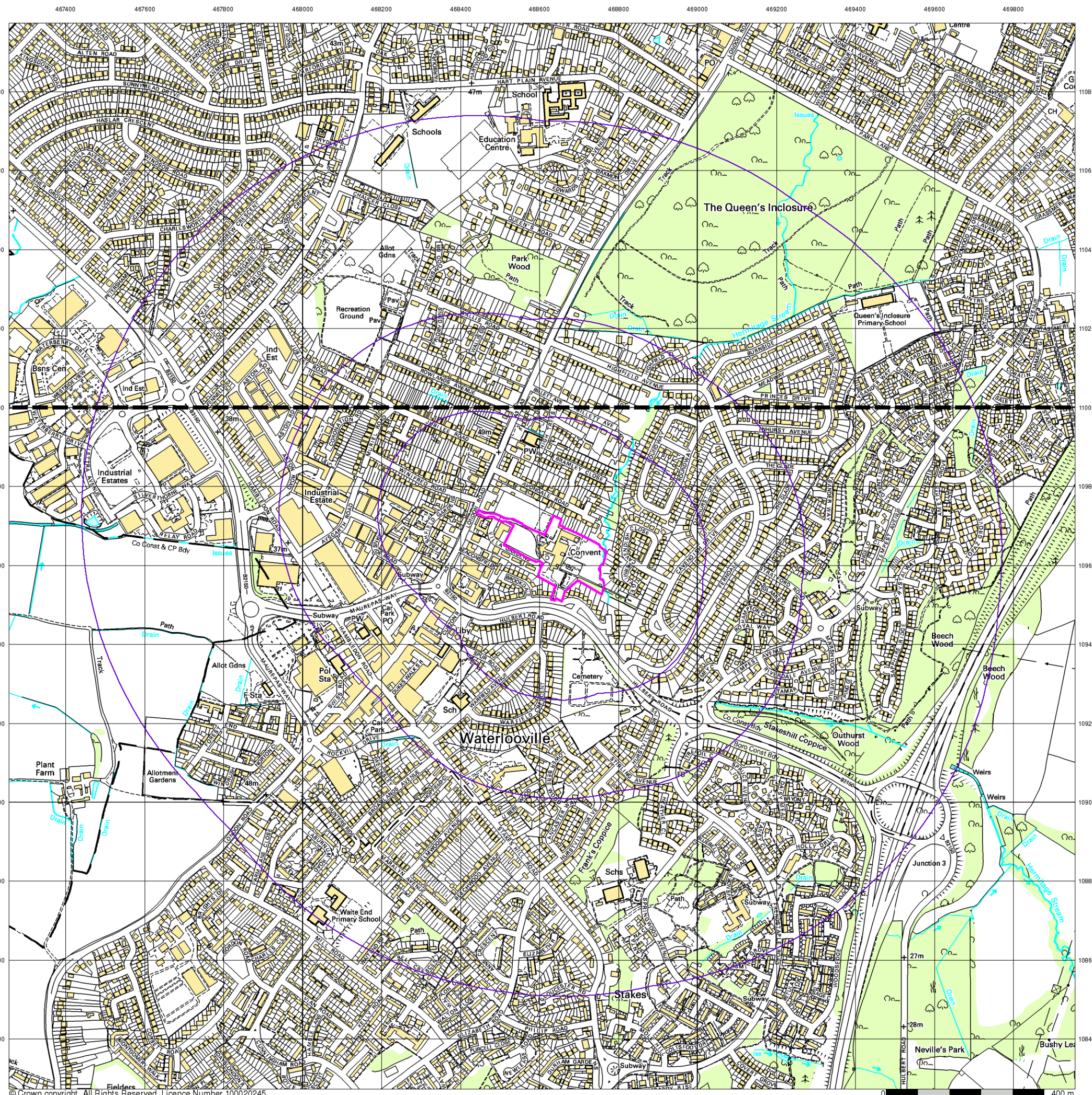


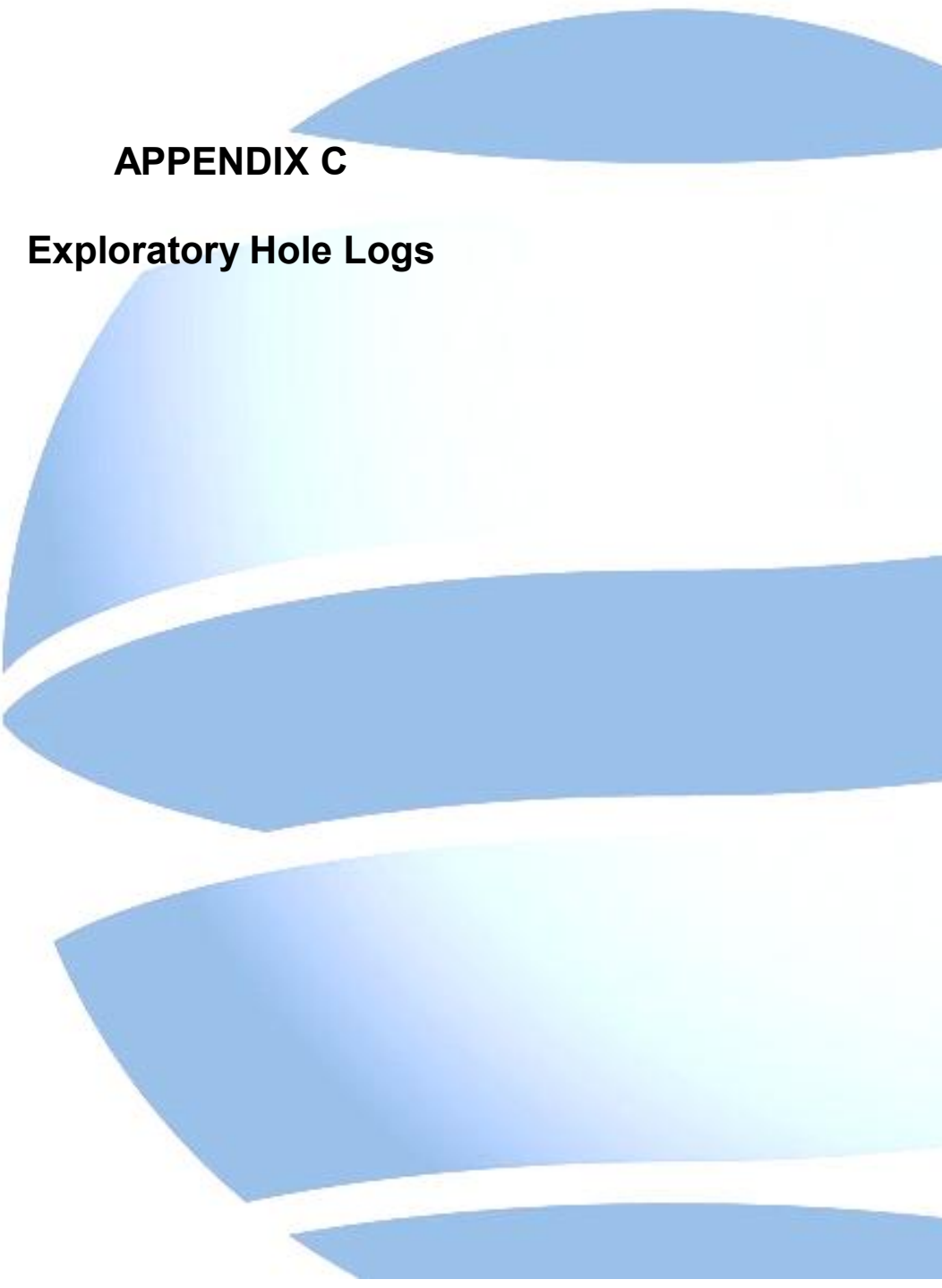
Order Details

Order Number: 36865037_1_1
Customer Ref: GE8472
National Grid Reference: 468610, 109640
Slice: A
Site Area (Ha): 2.94
Search Buffer (m): 1000

Site Details

St Michael's Convent, Villa Gardens, Waterloo, PO7 7RZ





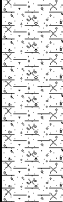
APPENDIX C

Exploratory Hole Logs

SAMPLING & TESTING		STRATA DESCRIPTION		STRATA				
				Legend	mOD	mBGL	Water	S/Pipe
0.00 - 0.20	D(1)	Grass over dark brown to black silty sand with tile and concrete fragments up to coarse gravel size and rare plastic (MADE GROUND)				(0.20) 0.20		
0.50	B(2)	Brown clay with occasional fine to coarse gravel size brick fragments and occasional black clinker (MADE GROUND)				(0.90)		
1.00	D(3)	Firm yellowish brown and grey mottled slightly sandy CLAY with occasional fine to coarse flint gravel (HEAD DEPOSITS)				1.10 (1.20)		
1.50	D(4)	Stiff brown CLAY with very weak siltstone at 3.7-3.8m bgl (LONDON CLAY)				2.30 (1.70)		
2.00	D(5)	End of Borehole at 4.00 m				4.00		
2.50	D(6)							
3.00	D(7)							
3.50	D(8)							
4.00	D(9)							

SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽ =strike ▼ =rest OTHERS: (2.00)=strata

Stability:	Type: Hydraulic Window Sampler Geoprobe	Ref: GE8472	Position: WS1
Groundwater: No Groundwater Encountered	Method:	Start: 08/12/2011	Scale: 1:30
		Finish: 08/12/2011	Size:
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 08/12/2011	Depth: 4.00mBGL
		Eng: GR	Level: -
Remarks: Monitoring well installed in borehole	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1

SAMPLING & TESTING		STRATA DESCRIPTION	STRATA				
			Legend	mOD	mBGL	Water	S/Pipe
0.20	D(1)	Grass over dark brown silty CLAY with occasional flint gravel and rare traces of black carbonaceous matter possibly ash (TOPSOIL/MADE GROUND)			(0.50)		
0.50	D(2)	Firm grey and light brown mottled CLAY with much fine and medium flint gravel (HEAD DEPOSITS)			0.50		
0.60	D(3)				(0.20)		
1.00	D(4)	Stiff orange-brown and grey mottled CLAY with much to abundant fine to coarse flint gravel. Live roots observed to 1.2m bgl. Soils visually assessed to be desiccated from 1.0-2.0m bgl (HEAD DEPOSITS)			0.70		
1.50	D(5)				(1.50)		
2.00	D(6)						
2.50	D(7)				2.20		
3.00	D(8)	Stiff closely fissured brown CLAY with blue gleying on fissure faces and occasional dead roots observed to 3m bgl and rare medium gravel size claystone fragments (LONDON CLAY)			(1.80)		
3.50	D(9)						
4.00	D(10)				4.00		
				End of Borehole at 4.00 m			

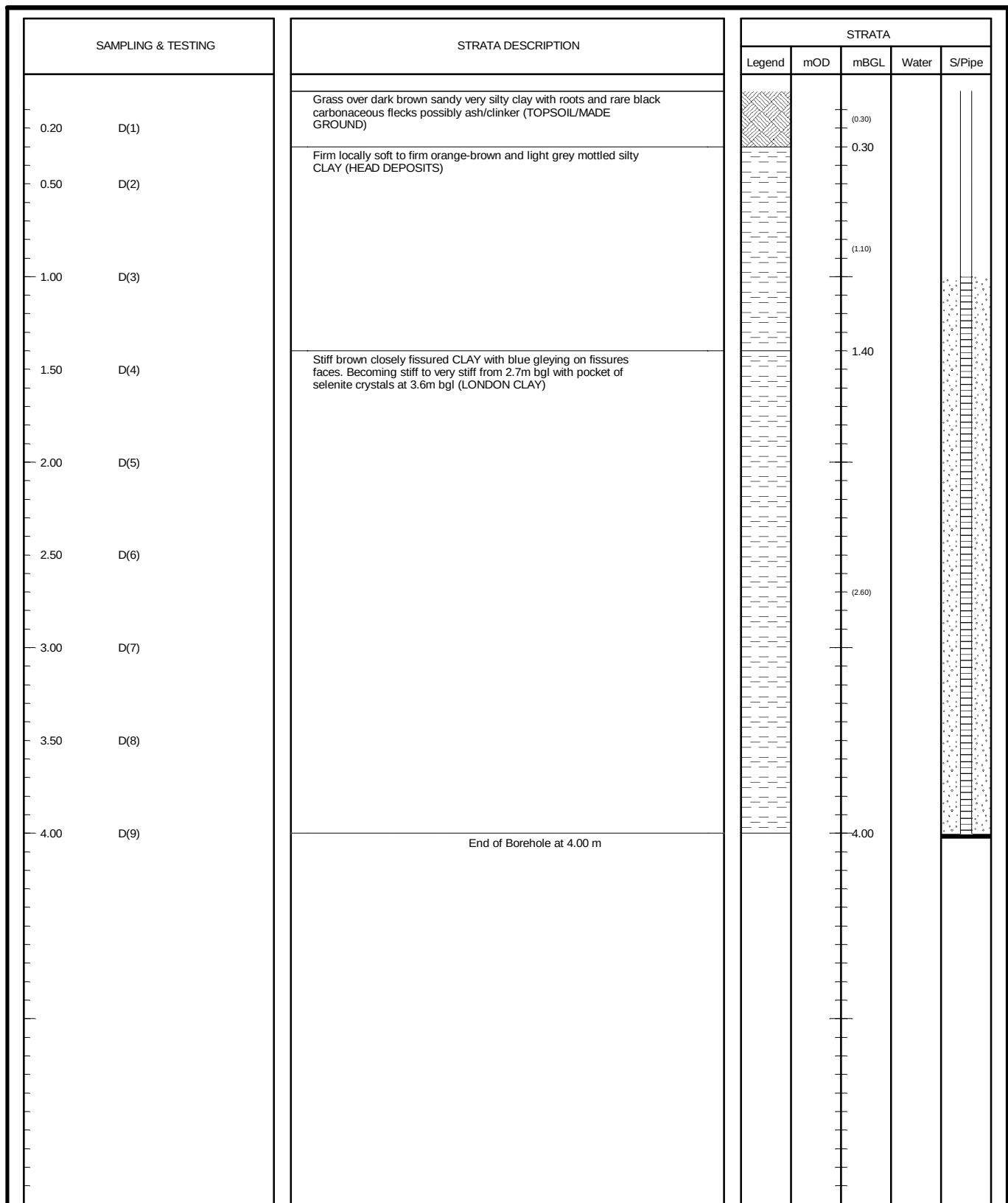
SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability:	Type: Hydraulic Window Sampler Geoprobe	Ref: GE8472	Position: WS2
Groundwater: No Groundwater Encountered	Method:	Start: 08/12/2011	Scale: 1:30
		Finish: 08/12/2011	Size:
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 08/12/2011	Depth: 4.00mBGL
		Eng: GR	Level: -
Remarks:	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1

SAMPLING & TESTING		STRATA DESCRIPTION	STRATA					
			Legend	mOD	mBGL	Water	S/Pipe	
0.00 - 0.20	D(1)	Grass over dark brown slightly fine sandy silty clay with rootlets (TOPSOIL)			(0.20)			
		Firm brown gravelly CLAY (HEAD DEPOSITS)			0.20	(0.20)		
0.50	D(2)	Stiff orange-brown and light grey mottled CLAY with occasional becoming much fine to coarse flint gravel from 0.9m bgl. Visually assessed to be desiccated from 1.0-2.1m bgl. (HEAD DEPOSITS)			0.40			
1.00	D(3)							
1.50	D(4)					(1.70)		
2.00	D(5)							
2.50	D(6)	Stiff to very stiff brown silty CLAY (LONDON CLAY)			2.10			
3.00	D(7)					(1.90)		
3.50	D(8)							
4.00	D(9)					4.00		
		End of Borehole at 4.00 m						

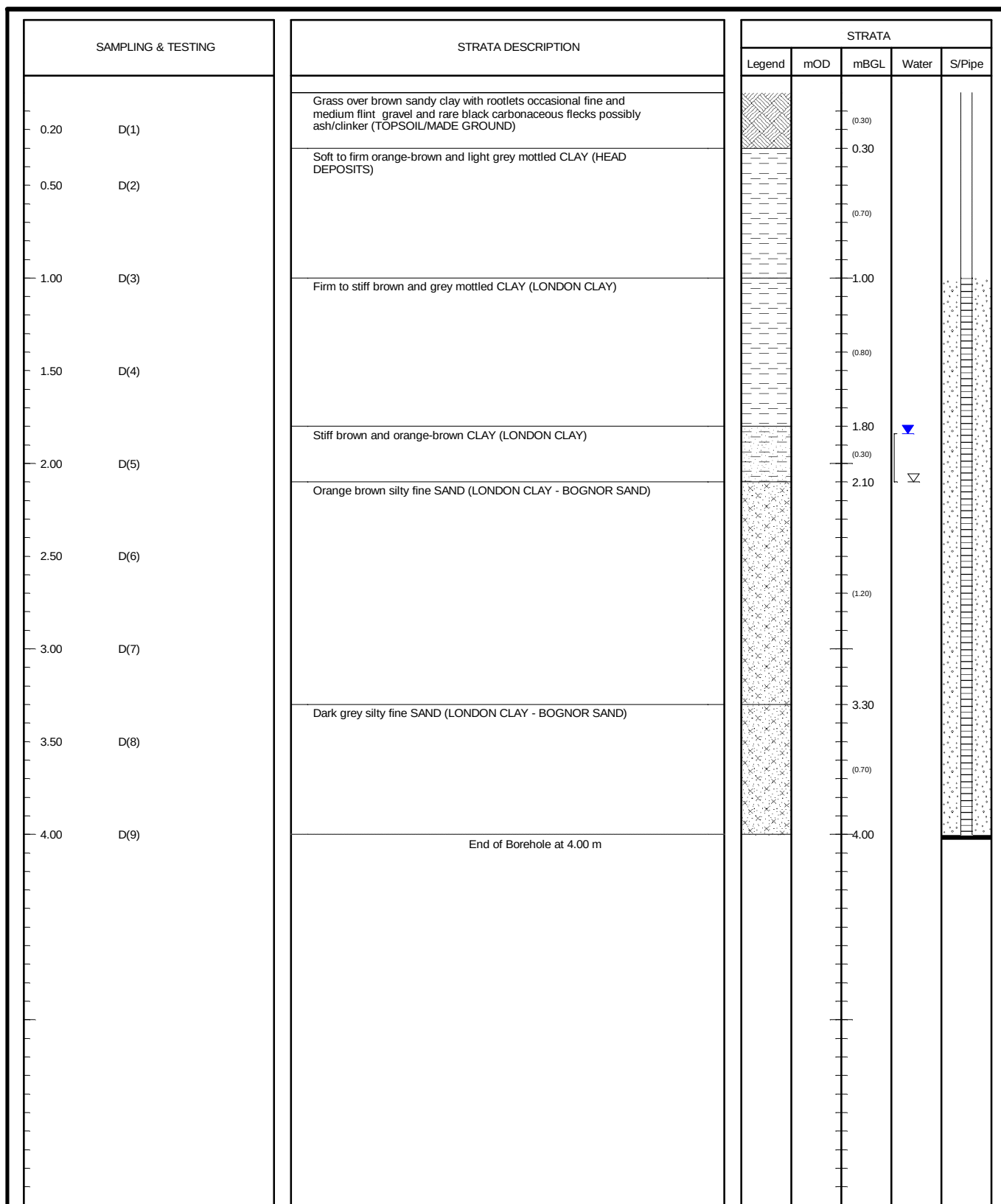
SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability:	Type: Hydraulic Window Sampler Geoprobe	Ref: GE8472	Position: WS3
Groundwater: No Groundwater Encountered	Method:	Start: 08/12/2011	Scale: 1:30
		Finish: 08/12/2011	Size:
Plant:	Project: St Michaels Convent, Waterlooville	Filled: 08/12/2011	Depth: 4.00mBGL
		Eng: GR	Level: -
Remarks:	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1



SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability:	Type: Hydraulic Window Sampler Geoprobe	Ref: GE8472	Position: WS4
Groundwater: No Groundwater Encountered	Method:	Start: 08/12/2011	Scale: 1:30
		Finish: 08/12/2011	Size:
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 08/12/2011	Depth: 4.00mBGL
		Eng: GR	Level: -
Remarks: Monitoring well installed in borehole	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1



SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: =strike =rest OTHERS: (2.00)=strata

Stability:	Type: Hydraulic Window Sampler Geoprobe	Ref: GE8472	Position: WS5
Groundwater: Strike at 2.10m; 1.84 after 30mins	Method:	Start: 08/12/2011	Scale: 1:30
		Finish: 08/12/2011	Size:
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 08/12/2011	Depth: 4.00mBGL
		Eng: GR	Level: -
Remarks: Monitoring well installed in borehole	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1

SAMPLING & TESTING		STRATA DESCRIPTION	STRATA				
			Legend	mOD	mBGL	Water	S/Pipe
0.20	D(1)	Grass over brown sandy clay with rootlets occasional fine medium flint gravel and rare black carbonaceous flecks possibly ash/clinker (TOPSOIL/MADE GROUND)			(0.30)		
0.50	D(2)	Stiff brown and orange-brown mottled CLAY with some fine to coarse flint gravel. Live roots observed throughout. (HEAD DEPOSITS)			0.30		
1.00	D(3)				(1.10)		
1.50	D(4)	Very stiff brown orange-brown and blue-grey mottled CLAY. Live roots observed to 1.8m bgl. Orange-brown siltstone fragments at 1.7m bgl. Pockets of fractured and water bearing siltstone at 3.0-3.2m bgl (LONDON CLAY)			1.40		
2.00	D(5)						
2.50	D(6)				(2.60)		
3.00	D(7)						
3.50	D(8)						
4.00	D(9)	End of Borehole at 4.00 m			4.00		
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							

SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability:	Type: Hydraulic Window Sampler Geoprobe	Ref: GE8472	Position: WS6
Groundwater: No Groundwater Encountered	Method:	Start: 08/12/2011	Scale: 1:30
		Finish: 08/12/2011	Size:
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 08/12/2011	Depth: 4.00mBGL
		Eng: GR	Level: -
Remarks:	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1

SAMPLING & TESTING		STRATA DESCRIPTION		STRATA				
				Legend	mOD	mBGL	Water	S/Pipe
0.00 - 0.10	D(1)		Grass over brown silty CLAY (TOPSOIL)			0.10		
0.50	D(2)		Brown light brown and grey mottled clay with occasional to some fine to coarse flint gravel and layer of black clinker at 0.9m bgl (MADE GROUND)			(0.80)		
0.90 - 1.00	D(3)		Dark brown sandy clay with rare fine and medium gravel of brick and clinker (MADE GROUND)			0.90		
1.50	D(4)		Soft to firm orange-brown and light grey mottled CLAY (HEAD DEPOSITS)			1.00		
2.00	D(5)		Stiff closely fissured brown CLAY with blue gleying on fissure faces and occasional fine gravel size claystone fragments (LONDON CLAY)			(0.90)		
2.50	D(6)					1.90		
3.00	D(7)					(2.10)		
3.50	D(8)							
4.00	D(9)		End of Borehole at 4.00 m			4.00		
								
								
								
								
								
								
								
								
								
								
								
								
								

SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability:	Type: Hydraulic Window Sampler Geoprobe	Ref: GE8472	Position: WS7
Groundwater: No Groundwater Encountered	Method:	Start: 08/12/2011	Scale: 1:30
		Finish: 08/12/2011	Size:
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 08/12/2011	Depth: 4.00mBGL
		Eng: GR	Level: -
Remarks:	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1

SAMPLING & TESTING	STRATA DESCRIPTION	STRATA			
		Legend	mOD	mBGL	Water S/Pipe
	Grass over dark brown silty clay with roots rare metal and fragments of pottery (MADE GROUND)			0.10	
	Firm grey silty CLAY with rare to occasional fine and medium gravel of flint and chalk (HEAD DEPOSITS)			(0.20)	
	Stiff light brown and grey closely fissured CLAY with occasional fine and medium gravel of chalk and flint (HEAD DEPOSITS)			0.30	
				(0.70)	
				1.00	
				(0.50)	
				1.50	
	End of Trial Pit at 1.50 m				

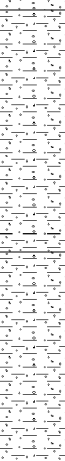
SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability: Stable	Type: Machine Excavated Trial Pit	Ref: GE8472	Position: TP1
Groundwater: Dry	Method:	Start: 19/12/2011	Scale: 1:25
		Finish: 19/12/2011	Size: -
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 19/12/2011	Depth: 1.50mBGL
		Eng: GR	Level: -
Remarks: No evidce of slickensides. Land drain at 0.8m bgl	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1

SAMPLING & TESTING		STRATA DESCRIPTION		STRATA				
				Legend	mOD	mBGL	Water	S/Pipe
0.00 - 0.40 D(1)		Grass over dark brown silty clay with some to much brick metal glass and plastic (MADE GROUND)			(0.40)	0.40	(0.60)	1.00
		Stiff yellow-brown light brown and grey mottled closely fissured CLAY with occasional fine flint gravel (HEAD DEPOSITS)						
		Stiff to very stiff greyish brown and blue-grey closely fissured CLAY with occasional pockets of orange-brown clay and siltstone (LONDON CLAY)						
		End of Trial Pit at 1.70 m						

SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability: Stable	Type: Machine Excavated Trial Pit	Ref: GE8472	Position: TP2
Groundwater: Dry	Method:	Start: 19/12/2011	Scale: 1:25
		Finish: 19/12/2011	Size: -
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 19/12/2011	Depth: 1.70mBGL
		Eng: GR	Level: -
		Drawn: GR	Figure: FIG
Remarks: No evidce of slickensides	Client: Linden Homes Southern Limited	Ckd: GR	Sheet: Sheet 1 of 1

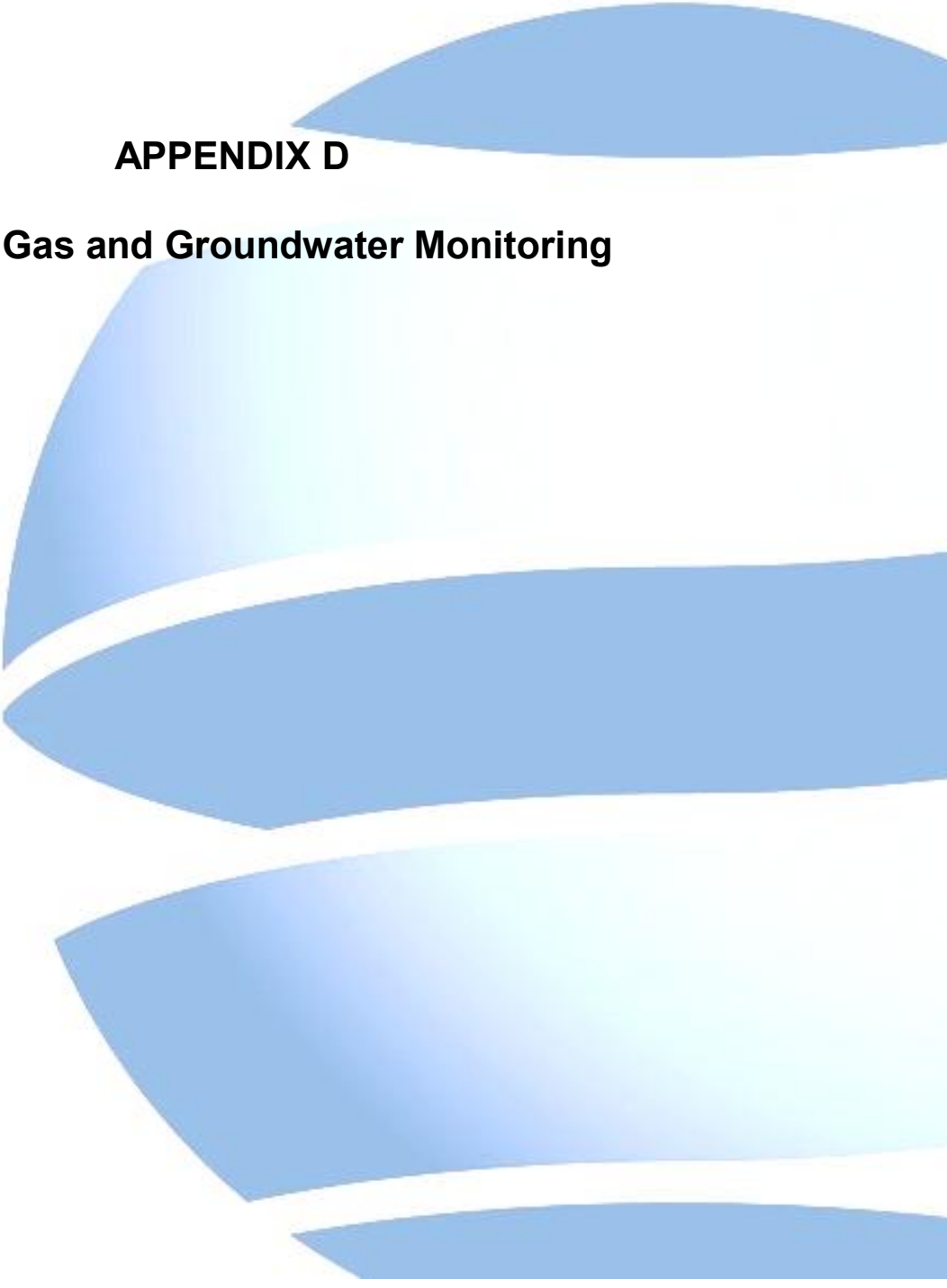
SAMPLING & TESTING	STRATA DESCRIPTION	STRATA			
		Legend	mOD	mBGL	Water S/Pipe
	Grass over dark brown silty clay with roots (TOPSOIL)			0.10	
	Firm grey silty CLAY with occasional fine and medium gravel of flint and chalk (HEAD DEPOSITS)			(0.20)	
	Stiff light brown and grey closely fissured CLAY with occasional fine and medium gravel of chalk and flint (HEAD DEPOSITS)			0.30	
				(0.80)	
	Stiff to very stiff brown-grey orange-brown and blue-grey mottled closely fissured CLAY with pockets of orange-brown clay and very weak fine gravel sized siltstone (LONDON CLAY)			1.10	
				(0.70)	
	End of Trial Pit at 1.80 m			1.80	

SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability: Stable	Type: Machine Excavated Trial Pit	Ref: GE8472	Position: TP3
Groundwater: Dry	Method:	Start: 19/12/2011	Scale: 1:25
		Finish: 19/12/2011	Size: -
Plant:	Project: St Michaels Convent, Waterloooville	Filled: 19/12/2011	Depth: 1.80mBGL
		Eng: GR	Level: -
Remarks: No evidce of slickensides	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1

SAMPLES: D=disturbed B=bulk U=undisturbed TESTS: MAC=macintosh IVAN=vane HPEN=penetrometer SPT=split-spoon CPT=cone WATER: ▽=strike ▼=rest OTHERS: (2.00)=strata

Stability: Stable	Type: Machine Excavated Trial Pit	Ref: GE8472	Position: TP4
Groundwater: Dry	Method:	Start: 19/12/2011	Scale: 1:25
		Finish: 19/12/2011	Size: -
Plant:	Project: St Michaels Convent, Waterlooville	Filled: 19/12/2011	Depth: 1.00mBGL
		Eng: GR	Level: -
Remarks: Clay pipe at 0.9m bgl	Client: Linden Homes Southern Limited	Drawn: GR	Figure: FIG
		Ckd: GR	Sheet: Sheet 1 of 1



APPENDIX D

Ground Gas and Groundwater Monitoring

Project: St Michael's Convent, Waterloooville
Ref: GE8472
Client: Linden Homes Southern Limited



Location	Date	Time (sec)	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	Flow (l/hr)	VOC (ppm)	Pressure (mb)	GWL (m bgl)	GSV/Qhgs		Characteristic Situation		CS1 Limiting Value Check			NHBC			
										CH ₄	CO ₂	BS8485 & C665		Flow	CH ₄	CO ₂	CH ₄		CO ₂	
												CH ₄	CO ₂				GSV	Conc.	GSV	Conc.
WS1	20/12/11	10	0.0	0.5	19.9	0.0	-	1009	0.97	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS1	20/12/11	20	0.0	0.6	19.7	0.0	-	1009	0.97	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS1	20/12/11	30	0.0	0.7	19.6	0.0	-	1009	0.97	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS1	20/12/11	60	0.0	0.7	19.6	0.0	-	1009	0.97	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS1	20/12/11	120	0.0	0.7	19.6	0.0	-	1009	0.97	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS4	20/12/11	10	0.0	0.1	19.8	0.0	-	1009	1.54	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS4	20/12/11	20	0.0	0.3	19.7	0.0	-	1009	1.54	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS4	20/12/11	30	0.0	0.4	19.3	0.0	-	1009	1.54	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS4	20/12/11	60	0.0	0.2	19.1	0.0	-	1009	1.54	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS4	20/12/11	120	0.0	0.2	19.6	0.0	-	1009	1.54	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	20/12/11	10	0.0	0.0	19.8	0.0	-	1009	0.20	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	20/12/11	20	0.0	0.0	19.9	0.0	-	1009	0.20	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	20/12/11	30	0.0	0.0	19.8	0.0	-	1009	0.20	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	20/12/11	60	0.0	0.0	19.8	0.0	-	1009	0.20	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN
WS5	20/12/11	120	0.0	0.0	19.8	0.0	-	1009	0.20	0.000	0.000	CS1	CS1	NO	NO	NO	GREEN	GREEN	GREEN	GREEN



APPENDIX E

Geotechnical Testing Results

Project Name: St Michaels Convent					Samples Received: 15/12/2011		K4 SOILS 		
Client: Geo-Environmental Services Ltd					Project Started: 19/12/2011				
Project No: GE8472					Testing Started: 13/01/2012				
Our job/report no: 12036					Date Reported: 17/01/2012				
Borehole No:	Sample No:	Depth (m)	Description	Moisture content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 0.425 mm (%)	Remarks
WS1	-	1.00	Brown, grey and orange brown mottled slightly gravelly CLAY (gravel is fm and sub-angular)	27	71	26	45	82	
WS1	-	1.50	Grey and brown mottled slightly gravelly CLAY (gravel is fm and sub-angular to sub-rounded)	30					
WS1	-	2.00	Brown CLAY	29					
WS1	-	3.00	Brown CLAY	27					
WS1	-	3.50	Brown CLAY	29					
WS1	-	4.00	Greyish brown CLAY	30					
WS2	-	0.60	Brown mottled blue grey and orange brown slightly gravelly CLAY with occasional rootlets (gravel is fmc and sub-angular)	29	84	33	51	78	
WS2	-	1.00	Orange brown and blue grey mottled gravelly CLAY (gravel is fmc and sub-rounded to angular)	25					
WS2	-	1.50	Brown gravelly CLAY (gravel is fm and sub-angular)	15	54	23	31	28	
WS2	-	2.00	Orange brown and blue grey mottled gravelly CLAY (gravel is fmc and sub-rounded to angular)	11					
WS2	-	2.50	Brown mottled blue grey CLAY with traces of calcareous deposits	27	82	26	56	100	
WS2	-	3.00	Brown CLAY	28					
WS2	-	3.50	Brown slightly mottled blue grey CLAY	29	82	27	55	100	
WS2	-	4.00	Brown slightly mottled blue grey CLAY	29					
WS3	-	0.50	Brown mottled blue grey and orange brown slightly gravelly CLAY (gravel is fm and sub-angular)	22	63	22	41	80	
WS3	-	1.00	Orange brown slightly sandy clayey GRAVEL (gravel is fmc and angular to sub-rounded)	10					
WS3	-	1.50	Brown gravelly CLAY (gravel is fm and sub-angular)	15	57	21	36	25	
WS3	-	2.10	Brown CLAY	24					
WS3	-	2.30	Brown CLAY	25					
 Summary of Test Results BS 1377 : Part 2 : Clause 4.4 : 1990 Determination of the liquid limit by the cone penetrometer method. BS 1377 : Part 2 : Clause 5 : 1990 Determination of the plastic limit and plasticity index. BS 1377 : Part 2 : Clause 3.2 : 1990 Determination of the moisture content by the oven-drying method. Checked and Approved Initials: K.P Date: 17/01/2012									
Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU									
Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)									
All samples connected with this report ,incl any on 'hold' will be stored and disposed off according to Company policy.Acoppy of this policy is available on request.									
MSF-11/6									

Project Name: St Michaels Convent					Samples Received: 15/12/2011			
					Project Started: 19/12/2011			
Client: Geo-Environmental Services Ltd					Testing Started: 13/01/2012			
Project No: GE8472			Our job/report no: 12036		Date Reported: 17/01/2012			

Borehole No:	Sample No:	Depth (m)	Description	Moisture content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 0.425 mm (%)	Remarks
WS3	-	2.50	Brown CLAY	24					
WS3	-	2.70	Brown CLAY	25					
WS3	-	3.00	Brown CLAY	25					
WS3	-	3.50	Brown CLAY	27					
WS3	-	4.00	Brown CLAY	31					
WS1	-	2.50	Brown slightly mottled blue grey CLAY	23	68	21	47	100	
WS4	-	1.00	Brown slightly mottled blue grey CLAY	33	70	27	43	100	
WS4	-	1.50	Brown slightly mottled blue grey CLAY	32	72	30	42	100	
WS4	-	2.50	Brown slightly mottled blue grey CLAY	32	74	31	43	100	
WS5	-	1.50	Brown slightly mottled blue grey CLAY	33	77	28	49	100	
WS6	-	1.50	Brown slightly mottled blue grey CLAY	24	70	24	46	100	
WS6	-	2.50	Brown slightly mottled blue grey CLAY	30	73	28	45	100	
WS7	-	2.00	Brown slightly mottled blue grey CLAY	29	74	27	47	100	

	Summary of Test Results								Checked and Approved Initials: K.P Date: 17/01/2012
	BS 1377 : Part 2 : Clause 4.4 : 1990 Determination of the liquid limit by the cone penetrometer method.								
	BS 1377 : Part 2 : Clause 5 : 1990 Determination of the plastic limit and plasticity index.								
	BS 1377 : Part 2 : Clause 3.2 : 1990 Determination of the moisture content by the oven-drying method.								

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

Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

All samples connected with this report ,incl any on 'hold' will be stored and disposed off according to Company policy.Acoppy of this policy is available on request.

MSF-11/R2

Project Name: St Michaels Convent Client: Geo-Environmental Services Ltd Project no: GE8472 Our job no: 12036					K4 SOILS 
Borehole No:	Sample No:	Depth m	Description	pH	Sulphate content (g/l)
WS1	-	1.50	Grey and brown mottled slightly gravelly CLAY (gravel is fm and sub-angular to sub-rounded)	7.8	0.10
WS2	-	1.50	Brown gravelly CLAY (gravel is fm and sub-angular)	7.9	0.08
WS2	-	3.00	Brown CLAY	7.8	0.16
WS4	-	1.50	Brown slightly mottled blue grey CLAY	7.8	0.17
WS5	-	2.50	Brown clayey SAND	7.7	0.11
WS6	-	1.50	Brown slightly mottled blue grey CLAY	7.2	0.11
Date 17/01/2012 Summary of Test Results BS 1377 : Part 3 :Clause 5 : 1990 Determination of sulphate content of soil and ground water : gravimetric method Checked and Approved Initials : kp					

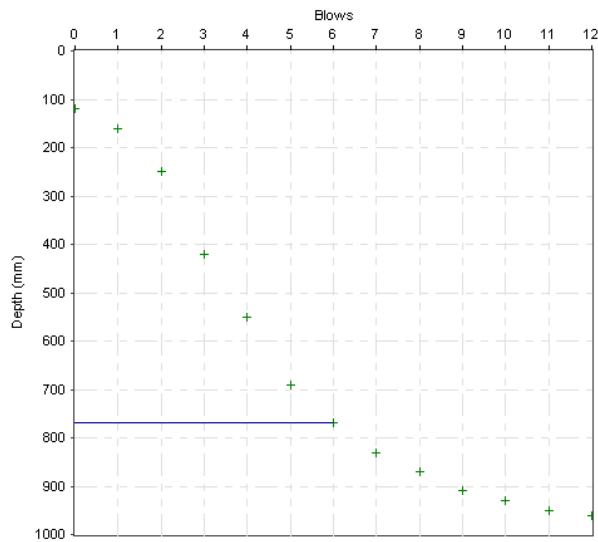
DCP Layer Strength Analysis Report

Project Name: DCP 1

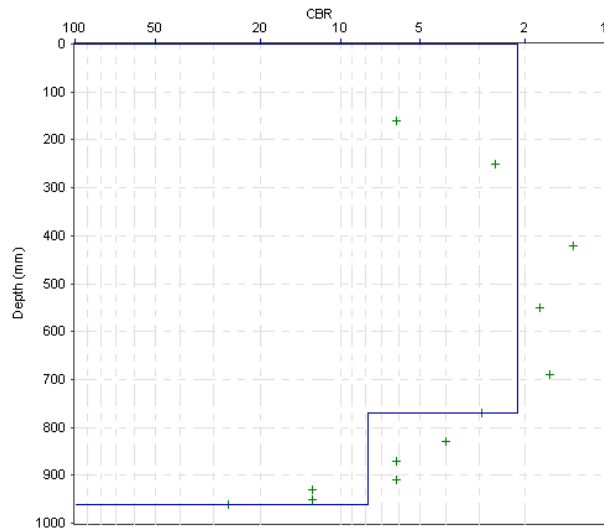
Chainage (km): 0.000
 Direction:
 Location/Offset: Lay-by / other
 Cone Angle: 60 degrees
 Zero Error (mm): 20
 Test Date: 20/12/2011

Surface Type: Unpaved
 Thickness (mm): 0
 Base Type:
 Thickness (mm):
 Surface Moisture: Wet
 Moisture adjustment factor: 1

Layer Boundaries: Chainage 0.000



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	108.33	2	770	770	Subgrade	--	--	--	--
2	31.67	8	190	960	Subgrade	--	--	--	--

Pavement Strength

Layer	Layer Contribution		
	SN	SNC	SNP
Surface	--	--	--
Base	--	--	--
Sub-Base	--	--	--
Subgrade	--	0.00	0.00
Pavement Strength	--	0.00	0.00

CBR Relationship:

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

Report produced by

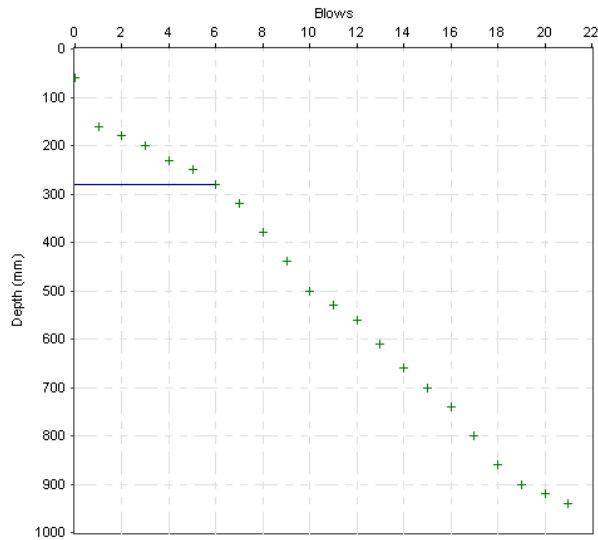
DCP Layer Strength Analysis Report

Project Name: DCP 2

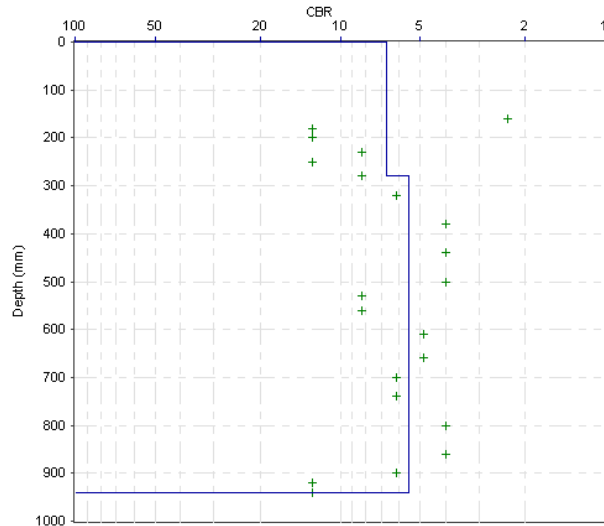
Chainage (km): 0.000
 Direction:
 Location/Offset: Lay-by / other
 Cone Angle: 60 degrees
 Zero Error (mm): 20
 Test Date: 18/01/2012

Surface Type: Unpaved
 Thickness (mm): 0
 Base Type:
 Thickness (mm):
 Surface Moisture: Wet
 Moisture adjustment factor: Not adjusted

Layer Boundaries: Chainage 0.000



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	36.67	7	280	280
2	44.00	6	660	940

CBR Relationship:

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

Report produced by

DCP Layer Strength Analysis Report

Project Name: DCP 3

Chainage (km): 0.000

Direction:

Location/Offset: Lay-by / other

Cone Angle: 60 degrees

Zero Error (mm): 20

Test Date: 20/12/2011

Surface Type:

Unpaved

Thickness (mm):

0

Base Type:

Thickness (mm):

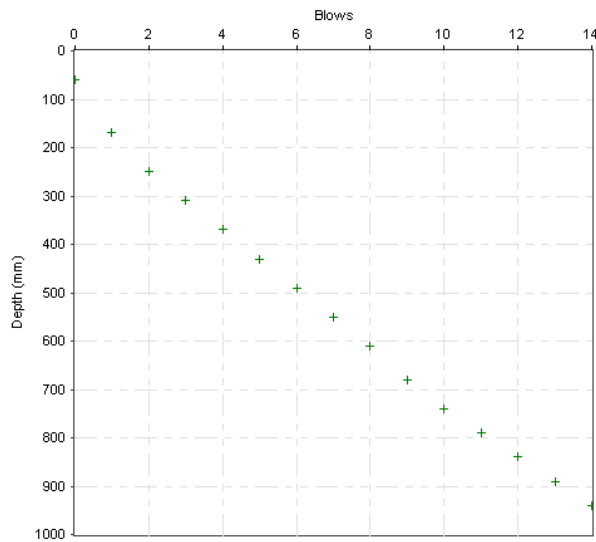
Surface Moisture:

Moderate

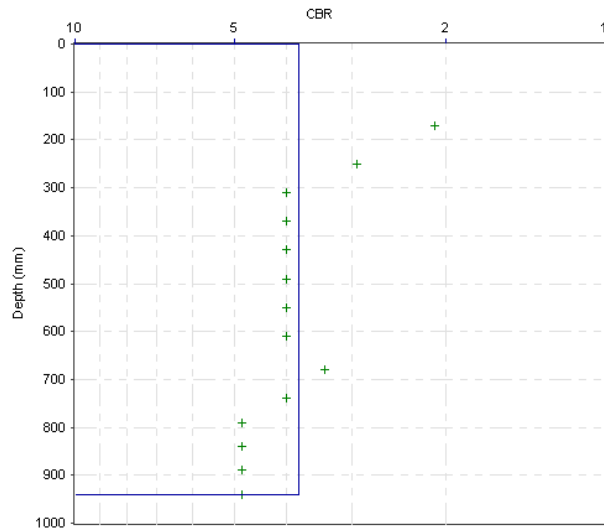
Moisture adjustment factor:

Not adjusted

Layer Boundaries: Chainage 0.000



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	62.86	4	940	940	Subgrade	--	--	--	--

Pavement Strength

Layer	Layer Contribution		
	SN	SNC	SNP
Surface	--	--	--
Base	--	--	--
Sub-Base	--	--	--
Subgrade	--	0.32	0.32
Pavement Strength	--	0.32	0.32

CBR Relationship:

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

Report produced by

DCP Layer Strength Analysis Report

Project Name: DCP 4

Chainage (km): 0.000

Direction:

Location/Offset: Lay-by / other

Cone Angle: 60 degrees

Zero Error (mm): 20

Test Date: 18/01/2012

Surface Type:

Unpaved

Thickness (mm):

0

Base Type:

Thickness (mm):

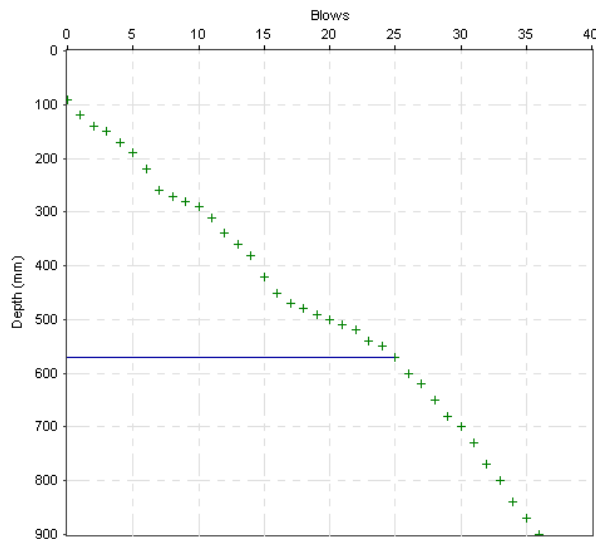
Surface Moisture:

Moderate

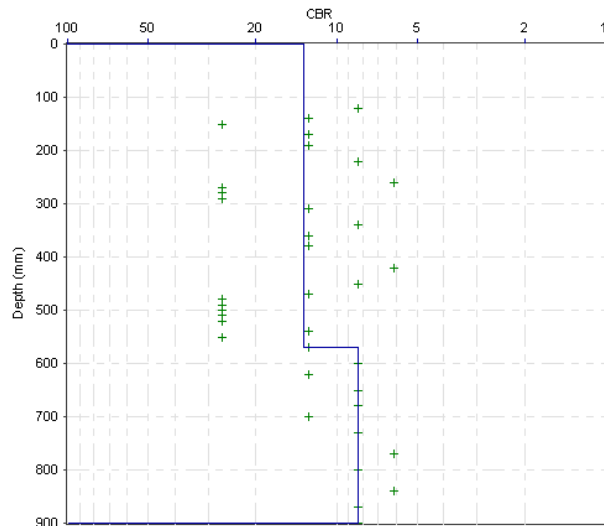
Moisture adjustment factor:

Not adjusted

Layer Boundaries: Chainage 0.000



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)	Position	Strength Coefficient	SN	SNC	SNP
1	19.20	13	570	570	Subgrade	--	--	--	--
2	30.00	8	330	900	Subgrade	--	--	--	--

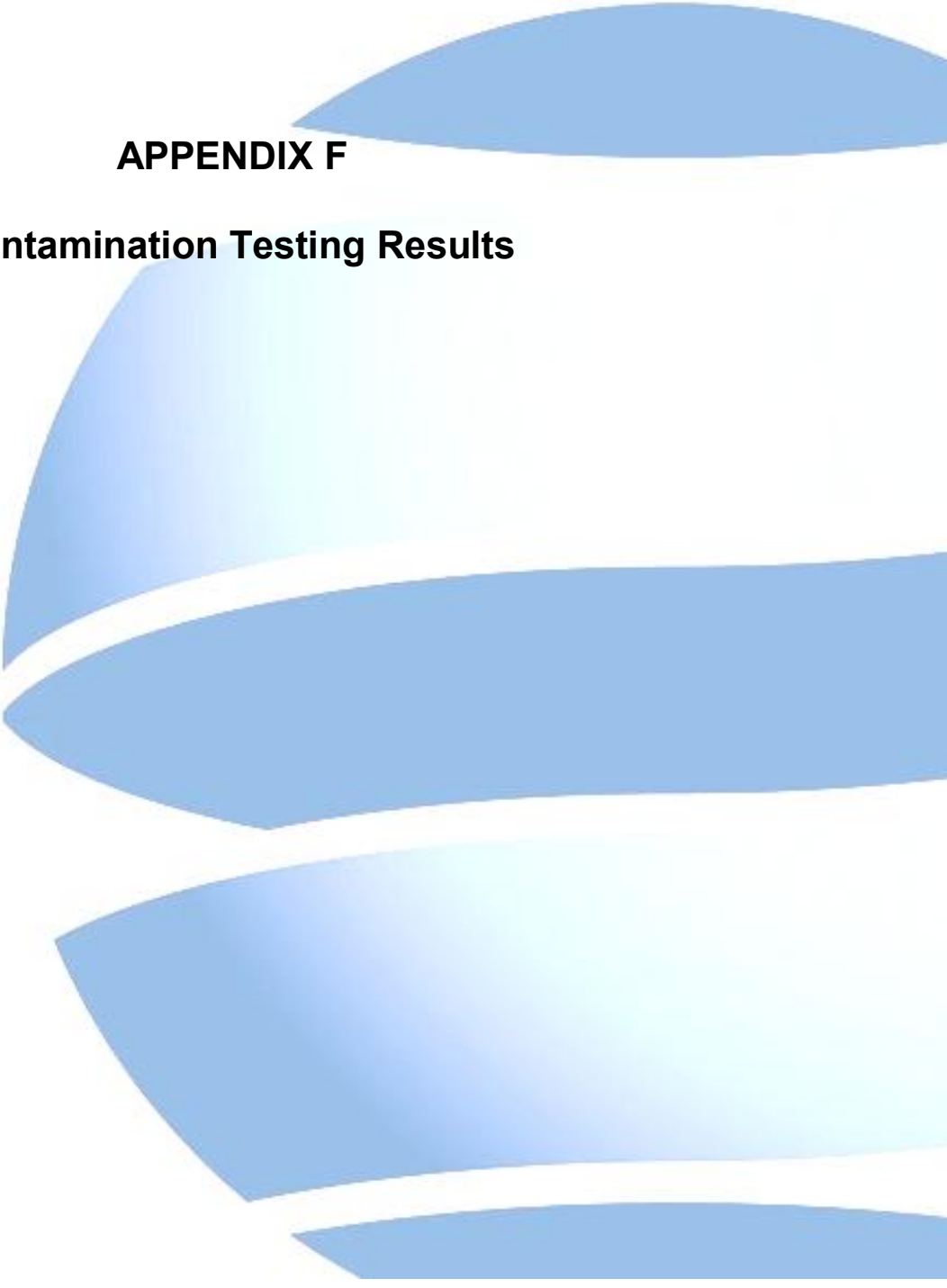
Pavement Strength

Layer	Layer Contribution		
	SN	SNC	SNP
Surface	--	--	--
Base	--	--	--
Sub-Base	--	--	--
Subgrade	--	1.08	1.08
Pavement Strength	--	1.08	1.08

CBR Relationship:

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

Report produced by



APPENDIX F

Contamination Testing Results



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone (01424) 718618
Facsimile (01424) 729911

THE ENVIRONMENTAL LABORATORY LTD

F.A.O. Glyn Evans
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Reporting Date: 23/12/11

ANALYTICAL REPORT No. AR36376

Samples Received By:-	Courier
Samples Received:-	13/12/11
Your Job No:	GE8472
Site Location:	St Michaels Convent
No Samples Received:-	10
Date of Sampling	08/12/11

Report Checked By:-

Steve Knight
Director

Authorised By:-

Mike Varley BSc, CChem, CSci, FRSC
Chief Chemist

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



THE ENVIRONMENTAL LABORATORY LTD

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonard's on Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36376

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 23/12/11

F.A.O. Glyn Evans
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Soils

	Characteristic	Silt loam	Silt loam	Silt loam	Silt loam	Silt loam	Clay	Silt loam	Silt loam	Silt loam	Silt loam
Soils	Date Sampled	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11
	TP/BH	WS1	WS1	WS2	WS3	WS4	WS4	WS5	WS6	WS7	WS7
	Depth (m)	0.00 - 0.20	0.50	0.20	0.00 - 0.20	0.20	0.50	0.20	0.20	0.00 - 0.10	0.90 - 1.00
	Our ref	23003	23004	23005	23006	23007	23008	23009	23010	23011	23012
Stone Content	(%)	23	18	18	23	17	<1	16	24	<1	24
Arsenic**	(mg/kg)	#	6.5	11.0	12.1	6.0	13.4	11.6	14.5	11.5	22.0
Cadmium**	(mg/kg)	#	1.1	0.8	0.5	0.8	0.5	0.9	0.9	<0.5	<0.5
Chromium**	(mg/kg)	#	15	19	18	13	53	22	30	24	26
Lead**	(mg/kg)	#	125	135	70	58	22	110	432	159	53
Mercury**	(mg/kg)	#	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	2.6	<0.5
Nickel**	(mg/kg)	#	9	15	13	8	26	19	22	12	19
Copper**	(mg/kg)	#	42	36	25	15	18	35	108	23	31
Zinc**	(mg/kg)	#	157	110	75	73	72	153	254	92	53
Selenium**	(mg/kg)	#	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
Hexavalent Chromium	(mg/kg)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Water Soluble Boron	(mg/kg)	#	1.7	1.2	1.6	1.4	1.1	1.3	2.0	1.1	0.7
Barium*	(mg/kg)	#	159	125	96	33	52	111	396	70	78
Beryllium*	(mg/kg)	#	<1	1	<1	<1	1	1	1	<1	1
Vanadium**	(mg/kg)	#	18	38	37	24	85	50	40	46	62
pH Value**	(Units)	#	7.6	6.8	7.4	6.6	7.6	6.7	7.8	6.4	6.9
Total Sulphate	(% as SO ₄)	#	0.29	0.18	0.21	0.19	0.49	0.22	0.20	0.28	0.35
Water Soluble Sulphate**	(mg/l as SO ₄)	#	27	29	23	13	26	22	30	26	20
Water Soluble Chloride	(mg/l)	#	38	37	28	29	50	42	34	53	22
Total Cyanide**	(mg/kg)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulphide	(mg/kg)	949.1	<2	<2	<2	<2	<2	<2	#	<2	<2
Elemental Sulphur**	(mg/kg)	#	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Monohydric Phenols**	(mg/kg)	8.5	<1	<1	<1	<1	1.6	<1	<1	1.0	<1
Total Organic Carbon	(%)	#	2.7	5.3	6.1	14.6	0.4	9.1	6.5	12.0	1.3

** - MCERTS accredited test

= Insufficient Sample

* = UKAS accredited test

All results expressed on dry weight basis



THE ENVIRONMENTAL LABORATORY LTD

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonard's on Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36376

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 23/12/11

F.A.O. Glyn Evans
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Soils	Characteristic	Silt loam	Silt loam	Silt loam	Silt loam	Silt loam	Clay	Silt loam	Silt loam	Silt loam	Silt loam
	Date Sampled	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11	08/12/11
	TP/BH	WS1	WS1	WS2	WS3	WS4	WS4	WS5	WS6	WS7	WS7
	Depth (m)	0.00 - 0.20	0.50	0.20	0.00 - 0.20	0.20	0.50	0.20	0.20	0.00 - 0.10	0.90 - 1.00
	Our ref	23003	23004	23005	23006	23007	23008	23009	23010	23011	23012
Naphthalene**	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene**	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene**	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene**	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene**	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6
Anthracene**	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene**	(mg/kg)	1.1	<0.1	0.9	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	0.8
Pyrene**	(mg/kg)	1.0	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6
Benz(a)anthracene**	(mg/kg)	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene**	(mg/kg)	1.0	<0.1	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b)fluoranthene**	(mg/kg)	2.2	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	0.7	<0.1	<0.1
Benzo(k)fluoranthene**	(mg/kg)	1.5	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	<0.1
Benzo(a)pyrene**	(mg/kg)	0.9	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)pyrene**	(mg/kg)	1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(ah)anthracene**	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene**	(mg/kg)	1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total PAH**	(mg/kg)	10.5	<0.1	4.1	<0.1	<0.1	<0.1	<0.1	1.8	<0.1	2.0

All results expressed on dry weight basis

** - MCERTS accredited test

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THE ENVIRONMENTAL LABORATORY LTD

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonard's on Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36376

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 23/12/11

F.A.O. Glyn Evans
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

TPH CWG - Soil

	Characteristic Date Sampled	Silt loam 08/12/11	Silt loam 08/12/11	Silt loam 08/12/11	Silt loam 08/12/11	Silt loam 08/12/11	Clay 08/12/11	Silt loam 08/12/11	Silt loam 08/12/11	Silt loam 08/12/11	Silt loam 08/12/11
	TP/BH	WS1	WS1	WS2	WS3	WS4	WS4	WS5	WS6	WS7	WS7
	Depth (m)	0.00 - 0.20	0.50	0.20	0.00 - 0.20	0.20	0.50	0.20	0.20	0.00 - 0.10	0.90 - 1.00
	Our ref	23003	23004	23005	23006	23007	23008	23009	23010	23011	23012
<u>Aromatic</u>											
>EC ₅ -EC ₇	(mg/kg)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
>EC ₇ -EC ₈	(mg/kg)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
>EC ₈ -EC ₁₀	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC ₁₀ -EC ₁₂	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC ₁₂ -EC ₁₆	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC ₁₆ -EC ₂₁	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC ₂₁ -EC ₃₅	(mg/kg)	36.0	4.4	3.8	0.2	<0.1	0.3	<0.1	0.1	<0.1	<0.1
<u>Aliphatic</u>											
>EC ₅ -EC ₇	(mg/kg)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
>EC ₇ -EC ₈	(mg/kg)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
>EC ₈ -EC ₁₀	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC ₁₀ -EC ₁₂	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC ₁₂ -EC ₁₆	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC ₁₆ -EC ₂₁	(mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC ₂₁ -EC ₃₅	(mg/kg)	13.2	1.1	<0.1	0.7	1.6	1.3	1.4	0.9	1.8	1.3
TPH (C ₅ - C ₃₅)	(mg/kg)	49.1	5.5	3.8	0.9	1.6	1.7	1.4	1.0	1.8	1.3

All results expressed on dry weight basis

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THE ENVIRONMENTAL LABORATORY LTD

Unit A2, Windmill Road, Pinnerwood Industrial Estate, St Leonards-on-Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36376

Location: St Michaels Convent



THE ENVIRONMENTAL LABORATORY LTD

Unit A2, Windmill Road, Pinnerwood Industrial Estate, St Leonards-on-Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36376

Location: St Michaels Convent



F.A.O. Glyn Evans
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Your Job No: GE8472
Reporting Date: 23/12/11

F.A.O. Glyn Evans
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Your Job No: GE8472
Reporting Date: 23/12/11

Asbestos Identification

Sample ref: WS1
Depth (m) 0.00 - 0.20
Our ref: 23003
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS2
Depth (m) 0.20
Our ref: 23005
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS4
Depth (m) 0.20
Our ref: 23007
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS6
Depth (m) 0.20
Our ref: 23010
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS7
Depth (m) 0.90 - 1.00
Our ref: 23012
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS1
Depth (m) 0.50
Our ref: 23004
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS3
Depth (m) 0.00 - 0.20
Our ref: 23006
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS4
Depth (m) 0.50
Our ref: 23008
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS5
Depth (m) 0.20
Our ref: 23009
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

Sample ref: WS7
Depth (m) 0.00 - 0.10
Our ref: 23011
#Description of Sample Matrix: Silt loam
Result: No asbestos identified

** UKAS accredited

Analytical result only applies to the sample as submitted by the client

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

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Waste Acceptance Criteria ANALYTICAL RESULTS							
Report No:	ANALYTICAL REPORT No. AR36376				Page 7 of 10		
					CLIENT:	Geo-Environmental Services Limited	
Project Name:	St Michaels Convent						
Lab Reference	23004				Landfill Waste Acceptance Criteria		
					Limits		
Sampling Date	08/12/11				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS1						
Depth	0.50						
Solid Waste Analysis							
TOC (%)	3.3				3%	5%	6%
Loss on Ignition (%)**	8.1				--	--	10%
BTEX (mg/kg)**	<0.01				6	--	--
Sum of PCBs (mg/kg)**	<0.01				1	--	--
Mineral Oil (mg/kg)**	7				500	--	--
Total PAH (mg/kg)**	<0.5				100	--	--
pH (Units)**	7.6				--	--	--
Acid Neutralisation Capacity (mol/kg)	<0.1				--	To be evaluated	To be evaluated
Eluate Analysis	2:1	8:1		Cumulative 10:1	Limit values for compliance leaching test		
	mg/l	mg/l		mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic*	0.008	0.007		<0.1	0.5	2	25
Barium*	0.034	0.014		<0.1	20	100	300
Cadmium*	<0.001	<0.001		<0.01	0.04	1	5
Chromium*	<0.005	<0.005		<0.1	0.5	10	70
Copper*	0.008	<0.005		<0.1	2	50	100
Mercury*	0.0001	<0.0001		<0.001	0.01	0.2	2
Molybdenum*	0.006	<0.005		<0.1	0.5	10	30
Nickel*	<0.005	<0.005		<0.1	0.4	10	40
Lead*	0.006	0.008		<0.1	0.5	10	50
Antimony	<0.005	<0.005		<0.01	0.06	0.7	5
Selenium	<0.005	<0.005		<0.01	0.1	0.5	7
Zinc*	0.012	0.010		<0.1	4	50	200
Chloride*	13	17		74	800	15000	25000
Fluoride*	<1.0	<1.0		<1	10	150	500
Sulphate*	9	7		35	1000	20000	50000
TDS	64	60		274	4000	60000	100000
Phenol Index	<0.5	<0.5		<0.5	1	-	-
DOC	27.3	20.2		97	500	800	1000
Leach Test Information							
pH *	8.1	7.5					
EC*	283	171					
Sample Mass (kg)	0.216						
Dry Matter (%)	81						
Moisture (%)	25						
Stage 1							
Volume Eluate L2 (litres)	0.306						
Filtered Eluate VE1 (litres)	0.148						
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and ELAB cannot be held responsible for any discrepancies with current legislation							

*= UKAS accredited

** - MCERTS accredited test

THE ENVIRONMENTAL LABORATORY LTD

SAMPLE RECEIPT AND TEST DATES

Our Analytical Report Number AR36376
Your Job No: GE8472
Sample Receipt Date: 13/12/11
Reporting Date: 23/12/11

Registered: 13/12/11
Prepared: 14/12/11
Analysis complete: 23/12/11

TEST METHOD SUMMARY

PARAMETER	Analysis Undertaken on	Date Tested	Method Number	Technique
Arsenic**	Air dried sample	16/12/11	118	ICPMS
Cadmium**	Air dried sample	16/12/11	118	ICPMS
Chromium**	Air dried sample	16/12/11	118	ICPMS
Lead**	Air dried sample	16/12/11	118	ICPMS
Mercury**	Air dried sample	16/12/11	118	ICPMS
Nickel**	Air dried sample	16/12/11	118	ICPMS
Copper**	Air dried sample	16/12/11	118	ICPMS
Zinc**	Air dried sample	16/12/11	118	ICPMS
Selenium**	Air dried sample	16/12/11	118	ICPMS
Hexavalent Chromium	As submitted sample	19/12/11	110	Colorimetry
Water Soluble Boron	Air dried sample	16/12/11	202	Colorimetry
Barium*	Air dried sample	16/12/11	118	ICPMS
Beryllium*	Air dried sample	16/12/11	118	ICPMS
Vanadium**	Air dried sample	16/12/11	118	ICPMS
pH Value**	Air dried sample	16/12/11	113	Probe
Total Sulphate	Air dried sample	16/12/11	208	Colorimetry
Water Soluble Sulphate**	Air dried sample	16/12/11	172	Ion Chromatography
Water Soluble Chloride	Air dried sample	16/12/11	172	Ion Chromatography
Total Cyanide**	As submitted sample	19/12/11	204	Colorimetry
Sulphide	As submitted sample	13/12/11	109	Colorimetry
Elemental Sulphur**	Air dried sample	16/12/11	122	HPLC
Total Monohydric Phenols**	As submitted sample	16/12/11	121	HPLC
Total Organic Carbon	Air dried sample	20/12/11	210	Automated IR Adsorption
Speciated PAH**	As submitted sample	15/12/11	133	Gas Chromatography
Carbon Banding (TPH)	As submitted sample	15/12/11	117	Gas chromatography
Asbestos*	As submitted sample	19/12/11	179	see note

Asbestos analysis qualitative only

Note:- Documented In-house procedure based on HSG 248 2005

* = UKAS Accredited test

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Determinands not marked with * or ** are non accredited

MCERTS accreditation covers samples which are predominantly sand, clay, loam or combinations of these three soil types

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THE ENVIRONMENTAL LABORATORY LTD

SAMPLE RECEIPT AND TEST DATES

Our Analytical Report Number: AR36376
Your Job No: GE8472
Sample Receipt Date: 13/12/11
Reporting Date: 23/12/11

Registered: 13/12/11
Prepared: 14/12/11
Analysis complete: 23/12/11

TEST METHOD SUMMARY

PARAMETER		Date Tested	Method	Technique
	Undertaken on		Number	
pH Value**	Air dried sample	15/12/11	113	Electrometric
Total Organic Carbon	Air dried sample	20/12/11	210	Automated IR Absorption
Loss on Ignition**	Air dried sample	15/12/11	129	Gravimetric
Neutralization Capacity to pH 7	Air dried sample	15/12/11	-	EA
Benzene**	As submitted sample	15/12/11	181	GCMS
Toluene**	As submitted sample	15/12/11	181	GCMS
Ethyl Benzene**	As submitted sample	15/12/11	181	GCMS
Xylenes**	As submitted sample	15/12/11	181	GCMS
Mineral Oil**	As submitted sample	15/12/11	117	GCFID
PCB 28**	Air dried sample	16/12/11	120	GCMS
PCB 52**	Air dried sample	16/12/11	120	GCMS
PCB 101**	Air dried sample	16/12/11	120	GCMS
PCB 118**	Air dried sample	16/12/11	120	GCMS
PCB 138**	Air dried sample	16/12/11	120	GCMS
PCB 153**	Air dried sample	16/12/11	120	GCMS
PCB 180**	Air dried sample	16/12/11	120	GCMS
Speciated PAH**	As submitted sample	15/12/11	133	GCFID

* = UKAS Accredited test

** - MCERTS Accredited test

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THE ENVIRONMENTAL LABORATORY LTD

LEACHATE SAMPLE RECEIPT AND TEST DATES

Our Analytical Report Number AR36376
Your Job No: GE8472
Sample Receipt Date: 13/12/11
Reporting Date: 23/12/11

Registered: 13/12/11
Prepared: 14/12/11
Analysis complete: 23/12/11

LEACHATE TEST METHOD SUMMARY

PARAMETER	Method Number	Technique
Arsenic*	101	ICPMS
Cadmium*	101	ICPMS
Chromium*	101	ICPMS
Lead*	101	ICPMS
Nickel*	101	ICPMS
Copper*	101	ICPMS
Zinc*	101	ICPMS
Mercury*	101	ICPMS
Selenium	101	ICPMS
Antimony	101	ICPMS
Barium*	101	ICPMS
Molybdenum*	101	ICPMS
pH Value*	113	Electrometric
Electrical Conductivity*	136	Probe
Dissolved Organic Carbon	102	TOC analyser
Chloride*	131	Ion Chromatography
Fluoride*	131	Ion Chromatography
Sulphate*	131	Ion Chromatography
Total Dissolved Solids	163	Gravimetric
Phenol Index	121	HPLC

* = UKAS Accredited test

Determinands not marked with * are not accredited

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THE ENVIRONMENTAL LABORATORY LTD

F.A.O. Gavin Roberts
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Reporting Date: 11/01/12

ANALYTICAL REPORT No. AR36531

Samples Received By:-	Laboratory Courier
Samples Received:-	22/12/11
Your Job No:	GE8472
Site Location:	St Michaels Convent
No Samples Received:-	2
Date of Sampling	20/12/11

Report Checked By:-

Steve Knight
Director

Authorised By:-

Mike Varley BSc, CChem, CSci, FRSC
Chief Chemist

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THE ENVIRONMENTAL LABORATORY LTD

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonard's on Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36531

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 11/01/12

F.A.O. Gavin Roberts
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

<u>Soils</u>	Characteristic	Sandy silt loam	Silt Loam
	Date Sampled	20/12/11	20/12/11
	TP/BH	TP2	TP4
	Depth (m)	GL-0.40	0.30
	Our ref	23952	23953
Stone Content	(%)	24	24
Arsenic**	(mg/kg)	19.8	13.4
Cadmium**	(mg/kg)	2.8	<0.5
Chromium**	(mg/kg)	45	23
Lead**	(mg/kg)	739	178
Mercury**	(mg/kg)	<0.5	<0.5
Nickel**	(mg/kg)	53	19
Copper**	(mg/kg)	157	33
Zinc**	(mg/kg)	1511	154
Selenium**	(mg/kg)	<0.5	<0.5
Hexavalent Chromium	(mg/kg)	<2	<2
Water Soluble Boron	(mg/kg)	3.8	1.4
Barium*	(mg/kg)	983	151
Beryllium*	(mg/kg)	<1	1
Vanadium**	(mg/kg)	40	46
pH Value**	(Units)	7.9	7.4
Total Sulphate	(% as SO ₄)	0.16	0.13
Water Soluble Sulphate**	(mg/l as SO ₄)	103	27
Water Soluble Chloride	(mg/l)	25	9
Total Cyanide**	(mg/kg)	<1	<1
Sulphide	(mg/kg)	<2	<2
Elemental Sulphur**	(mg/kg)	<10	16
Total Monohydric Phenols**	(mg/kg)	<1	<1
Total Organic Carbon	(%)	5.7	4.5

All results expressed on dry weight basis

** - MCERTS accredited test

* = UKAS accredited test

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Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonard's on Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36531

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 11/01/12

F.A.O. Gavin Roberts
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Characteristic	Silt Loam
Date Sampled	20/12/11
TP/BH	TP4
Depth (m)	0.30
Our ref	23953

Stone Content	(%)	24
---------------	-----	----

PCB (7 ICES Congeners)

PCB 28**	(µg/kg)	<10
PCB 52**	(µg/kg)	<10
PCB 101**	(µg/kg)	<10
PCB 118**	(µg/kg)	<10
PCB 138**	(µg/kg)	<10
PCB 153**	(µg/kg)	<10
PCB 180**	(µg/kg)	<10

All results expressed on dry weight basis

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ANALYTICAL REPORT No. AR36531

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 11/01/12

F.A.O. Gavin Roberts
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Soils

	Characteristic	Sandy silt loam	Silt Loam
	Date Sampled	20/12/11	20/12/11
	TP/BH	TP2	TP4
	Depth (m)	GL-0.40	0.30
	Our ref	23952	23953
Naphthalene**	(mg/kg)	<0.1	<0.1
Acenaphthylene**	(mg/kg)	<0.1	<0.1
Acenaphthene**	(mg/kg)	<0.1	<0.1
Fluorene**	(mg/kg)	<0.1	<0.1
Phenanthrene**	(mg/kg)	0.3	0.2
Anthracene**	(mg/kg)	0.3	<0.1
Fluoranthene**	(mg/kg)	1.6	0.6
Pyrene**	(mg/kg)	1.4	0.5
Benz(a)anthracene**	(mg/kg)	2.3	0.4
Chrysene**	(mg/kg)	3.3	0.5
Benzo(b)fluoranthene**	(mg/kg)	4.9	0.5
Benzo(k)fluoranthene**	(mg/kg)	3.0	0.4
Benzo(a)pyrene**	(mg/kg)	4.0	0.5
Indeno(123-cd)pyrene**	(mg/kg)	3.6	0.2
Dibenz(ah)anthracene**	(mg/kg)	1.1	<0.1
Benzo(ghi)perylene**	(mg/kg)	3.7	0.2
Total PAH**	(mg/kg)	29.3	4.0

All results expressed on dry weight basis

** - MCERTS accredited test

GM

THE ENVIRONMENTAL LABORATORY Limited

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonard's on Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36531

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 11/01/12

F.A.O. Gavin Roberts
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

TPH CWG - Soil

	Characteristic	Sandy silt loam	Silt Loam
	Date Sampled	20/12/11	20/12/11
	TP/BH	TP2	TP4
	Depth (m)	GL-0.40	0.30
	Our ref	23952	23953
<u>Aromatic</u>			
>EC ₅ -EC ₇	(mg/kg)	<0.01	<0.01
>EC ₇ -EC ₈	(mg/kg)	<0.01	<0.01
>EC ₈ -EC ₁₀	(mg/kg)	<0.1	<0.1
>EC ₁₀ -EC ₁₂	(mg/kg)	<0.1	<0.1
>EC ₁₂ -EC ₁₆	(mg/kg)	<0.1	<0.1
>EC ₁₆ -EC ₂₁	(mg/kg)	0.1	<0.1
>EC ₂₁ -EC ₃₅	(mg/kg)	<0.1	<0.1
<u>Aliphatic</u>			
>EC ₅ -EC ₇	(mg/kg)	<0.01	<0.01
>EC ₇ -EC ₈	(mg/kg)	<0.01	<0.01
>EC ₈ -EC ₁₀	(mg/kg)	0.3	0.1
>EC ₁₀ -EC ₁₂	(mg/kg)	<0.1	<0.1
>EC ₁₂ -EC ₁₆	(mg/kg)	<0.1	<0.1
>EC ₁₆ -EC ₂₁	(mg/kg)	<0.1	<0.1
>EC ₂₁ -EC ₃₅	(mg/kg)	0.3	0.4
TPH (C ₅ - C ₃₅)	(mg/kg)	0.7	0.5

All results expressed on dry weight basis

GM



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ANALYTICAL REPORT No. AR36531

Location: St Michaels Convent



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28 Crescent Road
Brighton, East Sussex
BN2 3RP

Your Job No: GE8472

Reporting Date: 11/01/12

Asbestos Identification

Sample ref:	TP2
Depth (m)	GL-0.40
Our ref:	23952
#Description of Sample Matrix:	Sandy silt loam
Result	No asbestos identified

Sample ref:	TP4
Depth (m)	0.30
Our ref:	23953
#Description of Sample Matrix:	Silt Loam
Result	No asbestos identified

*= UKAS accredited

Analytical result only applies to the sample as submitted by the client

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

GM



2683

F.A.O. Gavin Roberts
Geo-Environmental Services Limited
28 Crescent Road
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THE ENVIRONMENTAL LABORATORY LTD

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards On Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36531

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 11/01/12

Water

Date Sampled 20/12/11

TP/BH WS5

Depth 1.54

Our ref 23951

Arsenic*	(µg/l)	<5
Cadmium*	(µg/l)	<1
Chromium*	(µg/l)	<5
Lead*	(µg/l)	<1
Nickel*	(µg/l)	<1
Copper*	(µg/l)	<5
Zinc*	(µg/l)	18
Mercury*	(µg/l)	<0.1
Selenium*	(µg/l)	<5
Boron	(µg/l)	<5
Barium*	(µg/l)	11
Beryllium*	(µg/l)	<5
Vanadium	(µg/l)	<5
pH Value*	(Units)	7.7
Sulphate*	(mg/l)	36
Chloride*	(mg/l)	25
Total Cyanide	(µg/l)	<5
Sulphide	(mg/l)	<0.1
Total Phenols	(µg/l)	<0.5
Hexavalent Chromium	(µg/l)	<20
TOC*	(mg/l)	11.8
Elemental Sulphur	(mg/l)	<0.1

* = UKAS Accredited test

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Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. AR36531

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 11/01/12

F.A.O. Gavin Roberts
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Water

Date Sampled 20/12/11

TP/BH WS5

Depth 1.54

Our ref 23951

Naphthalene	(µg/l)	7.30
Acenaphthylene	(µg/l)	<0.01
Acenaphthene	(µg/l)	<0.01
Fluorene	(µg/l)	0.14
Phenanthrene	(µg/l)	0.20
Anthracene	(µg/l)	0.04
Fluoranthene	(µg/l)	0.03
Pyrene	(µg/l)	0.05
Benz(a)anthracene	(µg/l)	<0.01
Chrysene	(µg/l)	<0.01
Benzo(b)fluoranthene	(µg/l)	<0.01
Benzo(k)fluoranthene	(µg/l)	<0.01
Benzo(a)pyrene	(µg/l)	<0.01
Indeno(123-cd)pyrene	(µg/l)	<0.01
Dibenz(ah)anthracene	(µg/l)	<0.01
Benzo(ghi)perylene	(µg/l)	<0.01
Total PAH	(µg/l)	7.76

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ANALYTICAL REPORT No. AR36531

Location: St Michaels Convent



Your Job No: GE8472

Reporting Date: 11/01/12

F.A.O. Gavin Roberts
Geo-Environmental Services Limited
28 Crescent Road
Brighton, East Sussex
BN2 3RP

Water

Date Sampled 20/12/11

TP/BH WS5

Depth 1.54

Our ref 23951

Aromatic

>C ₅ -C ₇	(µg/l)	<10
>C ₇ -C ₈	(µg/l)	<10
>C ₈ -C ₁₀	(µg/l)	<10
>C ₁₀ -C ₁₂	(µg/l)	<10
>C ₁₂ -C ₁₆	(µg/l)	<10
>C ₁₆ -C ₂₁	(µg/l)	<10
>C ₂₁ -C ₃₅	(µg/l)	<10

Aliphatic

>C ₅ -C ₆	(µg/l)	<10
>C ₆ -C ₈	(µg/l)	<10
>C ₈ -C ₁₀	(µg/l)	<10
>C ₁₀ -C ₁₂	(µg/l)	<10
>C ₁₂ -C ₁₆	(µg/l)	<10
>C ₁₆ -C ₂₁	(µg/l)	<10
>C ₂₁ -C ₃₅	(µg/l)	<10
TPH (C ₅ - C ₃₅)	(µg/l)	<10

THE ENVIRONMENTAL LABORATORY LTD

SAMPLE RECEIPT AND TEST DATES

Our Analytical Report Number AR36531
Your Job No: GE8472
Sample Receipt Date: 22/12/11
Reporting Date: 11/01/12

Registered: 22/12/11
Prepared: 23/12/11
Analysis complete: 11/01/12

TEST METHOD SUMMARY

PARAMETER	Analysis Undertaken on	Date Tested	Method Number	Technique
Arsenic**	Air dried sample	06/01/12	118	ICPMS
Cadmium**	Air dried sample	06/01/12	118	ICPMS
Chromium**	Air dried sample	06/01/12	118	ICPMS
Lead**	Air dried sample	06/01/12	118	ICPMS
Mercury**	Air dried sample	06/01/12	118	ICPMS
Nickel**	Air dried sample	06/01/12	118	ICPMS
Copper**	Air dried sample	06/01/12	118	ICPMS
Zinc**	Air dried sample	06/01/12	118	ICPMS
Selenium**	Air dried sample	06/01/12	118	ICPMS
Hexavalent Chromium	As submitted sample	03/01/12	110	Colorimetry
Water Soluble Boron	Air dried sample	05/01/12	202	Colorimetry AA3
Barium*	Air dried sample	06/01/12	118	ICPMS
Beryllium*	Air dried sample	06/01/12	118	ICPMS
Vanadium**	Air dried sample	06/01/12	118	ICPMS
pH Value**	Air dried sample	05/01/12	113	Probe
Total Sulphate	Air dried sample	06/01/12	208	Colorimetry
Water Soluble Sulphate**	Air dried sample	06/01/12	172	Ion Chromatography
Water Soluble Chloride	Air dried sample	06/01/12	172	Ion Chromatography
Total Cyanide**	As submitted sample	06/01/12	204	Colorimetry
Sulphide	As submitted sample	06/01/12	109	Colorimetry
Elemental Sulphur**	Air dried sample	06/01/12	122	HPLC
Total Monohydric Phenols**	As submitted sample	05/01/12	121	HPLC
Total Organic Carbon	Air dried sample	06/01/12	210	Automated IR Adsorption
Speciated PAH**	As submitted sample	05/01/12	133	Gas Chromatography
Carbon Banding (TPH)	As submitted sample	05/01/12	117	Gas chromatography
Asbestos*	As submitted sample	09/01/12	179	see note
PCB (7 ICES Congeners)	Air dried sample	06/01/12	178	GCMS

Asbestos analysis qualitative only

Note:- Documented In-house procedure based on HSG 248 2005

* = UKAS Accredited test

** - MCERTS Accredited test

Determinands not marked with * or ** are non accredited

MCERTS accreditation covers samples which are predominantly sand, clay, loam or combinations of these three soil types

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



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THE ENVIRONMENTAL LABORATORY LTD

WATER SAMPLE RECEIPT AND TEST DATES

Our Analytical Report Number AR36531
Your Ref No: GE8472
Sample Receipt Date: 22/12/11
Reporting Date: 11/01/12

Registered: 22/12/11
Prepared: 23/12/11
Analysis complete: 11/01/12

WATER TEST METHOD SUMMARY

PARAMETER	Method Number	Technique
Arsenic*	101	ICPMS
Cadmium*	101	ICPMS
Chromium*	101	ICPMS
Lead*	101	ICPMS
Nickel*	101	ICPMS
Copper*	101	ICPMS
Zinc*	101	ICPMS
Mercury*	101	ICPMS
Selenium*	101	ICPMS
Boron	203	Colorimetry
Barium*	101	ICPMS
Beryllium*	101	ICPMS
Vanadium	101	ICPMS
pH Value*	113	Electrometric
Sulphate*	131	Ion Chromatography
Chloride*	131	Ion Chromatography
Total Cyanide	130	Colorimetry
Sulphide	134	Colorimetry
Total Phenols	121	HPLC
Hexavalent Chromium	110	Colorimetry
TOC (In filtered samples)*	102	TOC Analyser
Elemental Sulphur	122	HPLC
Speciated PAH	135	GCMS
Carbon Banding (TPH)	117	Gas chromatography

* = UKAS Accredited test

Determinands not marked with * are non accredited

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