



Geo-Environmental

**GROUND INVESTIGATION REPORT
for DEVELOPMENT PHASE V,
LAND TO THE WEST OF WORTHING ROAD,
SOUTHWATER, WEST SUSSEX
on behalf of
BERKELEY HOMES (SOUTHERN) LIMITED**



Report:	GROUND INVESTIGATION REPORT
Site:	DEVELOPMENT PHASE V, LAND TO THE WEST OF WORTHING ROAD, SOUTHWATER, WEST SUSSEX
Client:	BERKELEY HOMES (SOUTHERN) LIMITED
Date:	1 ST MARCH 2019
Reference:	GE17902 – GIRv1JK190301
Version:	FINAL
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**AMENDMENT RECORD**

Revision ref.	Date	Reasons for amendment	Author's initials
1.0	01/03/19	First issue	JK

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FIGURES

FIGURE 1	Site Location Plan
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EXECUTIVE SUMMARY		
Site Details	Site Address	Land to the west of Worthing Road, Southwater, West Sussex
	National Grid Reference	515053, 126105
	Form of Development	It was understood that the proposals for the site comprise the construction of a residential estate including detached and semi-detached houses, apartment blocks, associated private and communal gardens, as well as areas of amenity space, access roads, utilities and other development infrastructure.
	Scope of works	An intrusive investigation to confirm the ground and groundwater conditions and support the development of geotechnical and geo-environmental assessments of the site in relation to the proposed development.
	Ground Conditions	The ground conditions comprised Topsoil overlying cohesive Weald Clay Formation overlying mudstone of the Weald Clay Formation.
	Groundwater	Groundwater was not encountered during the intrusive investigation. Although water was encountered within the standpipes installed on site, it is not considered to be representative of the true groundwater beneath the site and is likely to represent inundation of the wells by surface water.
Geotechnical Considerations	Traditional Foundations	It is considered that remote from trees conventional foundations may be appropriate for low-rise lightly loaded structures on the site. Foundations should be taken below any Made Ground, disturbed, loose or desiccated ground and bear wholly into or onto the firm to stiff and very stiff clays or extremely weak mudstone of the Weald Clay Formation. It is recommended that the Weald Clay Formation is considered as being of high volume change potential as defined by NHBC Standards, Chapter 4.2, over the whole of the site to a depth of 1.00m. With the exception of WS03 and WS10, all Atterberg Limit tests indicated that the soils from a depth of 1.0m were either low or medium volume change potential. Further investigation is recommended around WS03 and WS10 to delineate these areas where high volume change soils were encountered below 1.00m. Within the zone of moisture demand of any current, proposed or recently felled trees foundation depths should be deepened in accordance with the NHBC Standards, Chapter 4.2. Where (based on high volume change soils) calculated foundations exceed 1.0m on account of trees, depths for medium volume change soils may be used for the design thereafter (albeit with further classification within the vicinity of WS03 and WS10). Where calculated foundation depths exceed 1.50m on account of trees, heave precaution measures will be required in accordance with the NHBC Standards. Where calculated foundation depths exceed 2.50m, they will be required to be designed by a structural engineer. Remote from existing trees and bushes, it is recommended that shallow foundations terminate within the medium to high strength clays of the Weald Clay Formation at a minimum depth of 1.00m below existing or final ground level whichever is the lower. Foundations may terminate prematurely within the non-shrinkable cemented mudstones of the Weald Clay Formation encountered at depth. Heave protection measures will be required where calculated foundation depths on account of trees exceed 1.50m.



		Nominal reinforcement of the foundations will be required where they span both the cohesive and mudstone horizons of the Weald Clay Formation. Given the presence of shrinkable soils, floor slabs should be fully suspended.
	Piled Foundations	The actual working load for proposed piles will depend on the particular type of pile and method of installation adopted. Piles should be taken at least five times the pile diameter into the founding strata. The SPT blow counts within the mudstone of the Weald Clay Formation were generally $N \geq 50$. As such, piles should be designed to socket into the Weald Clay Formation. The borehole logs should be presented to the proposed piling contractor in order to provide the parameters for the appropriate site specific design. Heave protection measures for pile caps and ground beams should be designed in accordance with the NHBC Standards, Chapter 4.2. Piles should also be designed to resist heave forces. The piling contractor should be aware that the boreholes were cased to a maximum depth of 3.00m bgl to prevent collapse as drilling progressed.
	Excavations	Shallow excavations in the natural soils should remain stable in the short term. Longer deeper excavations are likely to become unstable, particularly if they are left open for long periods and will therefore require either battering to a safe angle or some form of temporary support. In addition, the clays of the shallower Weald Clay Formation will soften rapidly when exposed to water and any foundation trenches should be concreted or blinded immediately. A ripper or breaker may be required where excavations are required through any cemented mudstones of the deeper Weald Clay Formation. The need for entry of personnel into excavations should where possible be designed out. However, where this cannot be achieved it should only be permitted in accordance with an approved risk assessment, method statement and safe system of work.
	Buried Concrete	It is recommended that buried concrete should be designed to Class DS-2 (AC-1s).
Environmental Considerations	Human Health	The results of the laboratory analysis were all either below the laboratory detection limits or the relevant thresholds for a residential end use (with plant uptake). No remedial measures are considered necessary with regards to the near surface soils and proposed end users.
	Surface Water	Significant concentrations of potentially harmful mobile contaminants were not identified as part of the laboratory analyses. Therefore, no further specific remedial action is considered necessary to protect surface water from soils on site.
	Ground Gas	The gassing regime determined from the on site monitoring is representative of NHBC Traffic Light Green for which remedial measures are not required.
	Radon Gas	No radon protection measures are required.



	Built Environment	The results of the chemical analysis were all either below the laboratory detection limits or the relevant thresholds. As such, potable water supply pipes are unlikely to require protection. However, confirmation of this assessment should be sought from the utility company. As a matter of good practice, it is recommended that clean, granular backfill is used in service runs and that marker tapes are used for all buried services.
	Waste Disposal	The results for the tested determinands did not exceed the relevant CatWasteSoil Hazard Class thresholds. Natural uncontaminated soil arisings of the Weald Clay Formation are likely to be classified as 'inert' waste. Confirmation of this assessment should be sought from the receiving landfill facility.
	Discovery Strategy	A discovery strategy should be employed, so that any evidence of possible unidentified contamination can be dealt with appropriately.
Further Actions		• Commission additional investigation on the north-east and eastern-most portions of the site to appropriately assess the volume change potential of soils >1.00m bgl. • Submit Ground Investigation Report to the Local Authority. • Submit chemical testing results to appropriate waste facility to confirm waste classification.
<i>This Executive Summary is intended to provide a brief summary of the main findings and conclusions of the investigation. For further information, reference should be made to the main report ref. GE17902 – GIRv1JK190301.</i>		



1.0 INTRODUCTION

1.1 General

Geo-Environmental was instructed by Berkeley Homes (Southern) Limited to investigate the geotechnical and geo-environmental factors pertaining to the proposed development phase V at land to the west of Worthing Road, Southwater, West Sussex (National Grid Reference at centre: 515053, 126105), (see Figure 1).

1.2 Form of Development

It was understood that the proposals for the site comprise the construction of a residential estate including detached and semi-detached houses, apartment blocks, associated private and communal gardens, as well as areas of amenity space, access roads, utilities and other development infrastructure.

1.3 Objectives

The investigation was to comprise a desk study of geotechnical and environmental factors pertaining to the site, including a site walkover survey, a review of available historical maps and an examination of other sources of geo-environmental and geotechnical information. Subject to the findings of the desk study, an intrusive investigation was to be undertaken into the geotechnical and geo-environmental conditions pertaining to the site.

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

In terms of the environmental investigation, 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 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 the development options, immediate liabilities under the Environment Act 1990, and risks posed to Controlled Waters under the Water Resources Act.

1.4 Site Description

At the time of the walkover, the site comprised an open agricultural field with crops growing in the southern half of the site. A portion of the site, close to the western boundary of the field, was fenced-off with a number of trees observed in this area.

The site was bounded by agricultural land in all directions with some residential land uses to the south and south-west of the site. The site boundary was formed of semi-mature and mature trees and hedges in all directions with a ditch running along the south eastern boundary of the site. The site was accessed through a gate off Shaw's Lane located in the north-west corner of the field.

A number of channels had been dug into the ground in the north-western portion of the site, presumably to drain the area. Surface water from these channels was flowing to the northern portion of the site where the ground surface was noted to be softer than elsewhere. The soil excavated to form these channels was stockpiled alongside them. An access point between the site and the field adjacent to the east was located in the centre of the eastern site boundary. The area around this access point was also noted to be wet and soft.



The site was being used as part of a walking trail by locals and dog walkers.

1.5 Standards

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

- British Standards Institute - Code of Practice for Site Investigations (BS5930:2015).
- British Standards Institute - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (BS8485:2015+A1:2019).
- British Standards Institute - Eurocode 7 – Geotechnical Design - Parts 1 & 2 (BS EN1997-1:2004 & BS EN1997-2:2007).
- British Standards Institute - Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs) (BS8576:2013).
- British Standards Institute - Investigation of Potentially Contaminated Sites - Code of Practice (BS10175:2011).
- British Standards Institute - Soils for Civil Engineering Purposes (BS1377:1990).
- British Standards Institute - Specification for Topsoil and Requirements for Use (BS3882:2015).
- Building Research Establishment - The Performance of Building Materials in Contaminated Land (BRE255) (1994).
- Construction Industry Research and Information Association - Assessing risks posed by hazardous ground gases to buildings (C665) (2007).
- Department for Communities and Local Government - National Planning Policy Framework (2012).
- Department for Environment Food and Rural Affairs and CL:AIRE - Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination (SP1010) (2014).
- Department for Environment Food and Rural Affairs and Environment Agency - Model Procedures for the Management of Contaminated Land (CLR11) (2004).
- Department of Environment - Industry Profiles (1995 - 1996).
- Environment Agency - Guidance for waste destined for disposal in landfills (2006).
- Environment Agency - Guidance on Requirements for Land Contamination Reports (2005).
- National House Building Council, Environment Agency & Chartered Institute of Environmental Health - Guidance for the Safe Development of Housing on Land Affected by Contamination (R&D Publication 66) (2008).
- National House Building Council - Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present (10627-R01[04]) (2007).
- National House Building Council – Standards, Chapter 4.1 Land Quality - Managing Ground Conditions (2018).

1.6 Conditions

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



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

Information contained in this report is intended for the use of the Client, and Geo-Environmental can take no responsibility for the use of this information by any party for uses other than that described in this report. Geo-Environmental makes no warranty or representation whatsoever 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, and exposure to contaminants and levels of adverse effects may therefore vary. Whilst every care and expertise has been employed in the development of such criteria, no liability is accepted in this respect. Other criteria or guidance on the development of assessment criteria may be published in the future, and no liability is accepted in this respect.



2.0 DESK STUDY SUMMARY

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

2.1 Historical Mapping

Historic map extracts dating back to 1875 were obtained as part of the desk study. A summary of the apparent key features noted on the map extracts both on the site and within the local area is presented in Table 2.1.

Date	On Site	Adjacent Area
1875	The site was shown to occupy part of an undeveloped field network comprising two fields which were bisected broadly east to west by a path. The western boundary was demarcated by Shaw's Lane. Two ponds and associated drainage were shown on the south eastern boundary of the site.	The surrounding area was generally undeveloped field networks and woodland with College Barn labelled approximately 75m to the east and Shaw's Farm to the immediate west. Holy Innocents' Church and associated Grave Yard and Vicarage were labelled approximately 150m to the north of the site. Shaw's Farm was labelled to the immediate west of the site.
1879	No changes noted.	No significant changes noted.
1897	The east to west bisecting path was labelled as a foot path.	A residential property and associated ancillary buildings (Woodlands) were labelled to the immediate south.
1898	No changes noted.	No significant changes noted. Shaw's Farm to the immediate west of the site was relabelled as The Chase.
1911-1912	No changes noted.	No significant changes noted.
1947	(Aerial Photograph) No changes noted.	(Aerial Photograph) No significant changes noted.
1961	No changes noted.	Residential development was shown approximately 150m to the north-east.
1975	No changes noted.	Further residential development was shown approximately 150m to the east.
1977	No changes noted.	No significant changes noted.
1980	No changes noted.	No significant changes noted.
1982-1983	No changes noted.	No significant changes noted. The Chase to the immediate west of the site was relabelled as Chase Farm.
1985	No changes noted (partial mapping).	No significant changes noted (partial mapping).
1988	No changes noted (partial mapping).	No significant changes noted (partial mapping).
1993-1996	No changes noted.	No significant changes noted.
1999	(Aerial Photograph) No changes noted.	(Aerial Photograph) No significant changes noted.
2000	No changes noted.	No significant changes noted.
2006	No changes noted.	No significant changes noted.
2017	No changes noted.	No significant changes noted.

Table 2.1 Summary of Historical Map Extracts



2.2 Geology

With reference to British Geological Survey (BGS) mapping, the geology of the site was anticipated to comprise the Weald Clay Formation. No superficial deposits were mapped in the area.

The Weald Clay Formation consists of shales and mudstones with occasional thin beds of siltstones, sandstone, shelly limestone (Horsham Stone) and clay ironstone. When fresh, the beds are normally dark grey weathering to mottled yellow and brown near the surface or at outcrop. Bands of red clay occur within the bed, usually in association with the sandstone.

2.3 Hydrogeology

With reference to Envirocheck data, the 'bedrock' stratum (Weald Clay Formation) was classified as an Unproductive Stratum. No superficial deposits were anticipated on site.

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

The site is indicated to be outside of any groundwater Source Protection Zone (SPZ). An SPZ is a protection zone placed around a well or borehole that supplies groundwater of potable quality.

No licensed groundwater abstractions, discharge consents or pollution incidents to groundwater were identified within a 250m radius of the site.

The Envirocheck data indicates the site is not situated in an area which is susceptible to groundwater flooding.

2.4 Hydrology

With reference to the Landmark dataset, the closest surface water features (an inland river/drain and associated ponds) were located on the south eastern boundary of the site.

No licensed surface water abstractions or pollution incidents to surface water were identified within a 250m radius of the site.

The following discharge consents to surface water were identified within a 250m radius of the site.

- Property Type: Domestic Property (multiple including farm houses); Location: Drainage Ditch Opposite Vicarage, Church Lane, Southwater (150m north); Issued Date: March 2008; Revoked: Not Supplied; Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company; Receiving Water: Trib of the River Adur. **Two separate consents recorded at the same location.**
- Property Type: Domestic Property (single including farm house); Location: Woodlands House, Shaws Lane, Southwater (immediate south); Issued Date: February 2008 and re-issued February 2009; Revoked: Not Supplied; Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company; Receiving Water: Trib of the Gill.
- Property Type: Undefined or Other; Location: Farringford, Bonfire Hill, Southwater (150m north-west); Issued Date: September 1986; Revoked: Not Supplied; Discharge Type: Non Water Company (private) Sewage; Receiving Water: Freshwater River.



- Property Type: Undefined or Other; Location: College Wood Estate, Southwater (150m south); Issued Date: May 1972; Revoked: March 1997; Discharge Type: Discharge Of Other Matter-Surface Water; Receiving Water: Freshwater River.
- Property Type: Domestic Property (single including farm house); Location: New House, Adj Woodlands House, Shaws Lane, Southwater (240m south); Issued Date: March 2003; Revoked: Not Supplied; Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company; Receiving Water: Unnamed Trib of the River Adur.

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

However, a small portion on the south-east of the site was indicated to be within an area at low risk of flooding from surface water.

2.5 Geochemistry

A large portion of the UK's urban soils have naturally elevated concentrations of some potentially harmful chemicals. In some cases, these exceed the Land Quality Management/Chartered Institute of Environmental Health (LQM/CIEH) generic assessment criteria (GAC), and/or DEFRA's Category 4 Screening Levels (C4SLs). A summary of the estimated urban soil chemistry for the area is presented in Table 2.2:

Determinand	Concentration (mg/kg)	In Excess of GAC/C4SL*?
Arsenic	15 - 25	No
Cadmium	<1.8	No
Chromium	60 - 90	No
Lead	<100	No
Nickel	15 - 30	No

Table 2.2 Summary of Site Geochemistry

*Comparative threshold concentrations are for a residential end use without plant uptake and a soil organic matter content of 6%

It should be noted that these values are not necessarily representative of the site's soil chemistry. Furthermore, GAC and C4SLs are dependent on pH and soil organic matter content. Therefore, concentrations of specific determinands and the utilised GAC/C4SL cannot be determined without site specific investigation and analysis.

2.6 Sensitive Land Uses

A search was made of environmentally sensitive areas, including areas of green belt, scenic or natural beauty, parks, reserves, nitrate zones, protected conservation and scientific areas.

The site was not indicated to occupy any such land uses or designations.

However, an area of ancient and semi-natural woodland (Well Field) was recorded to the immediate south of the site.



2.7 Environmental Data

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

Two potentially contaminative contemporary trade directory entries were identified as part of the desk study within a 250m radius of the site:

- Name: A & H Auto Repairs; Location: 66, Ash Road, Southwater (190m east); Classification: Car Body Repairs; Status: Inactive.
- Name: Grange Domestic Services; Location: 114, Woodlands Way, Southwater (125m east); Classification: Domestic Appliances - Servicing, Repairs & Parts; Status: Active. ***Six separate entries for this company, only one of which was active.***

No other such designations or land uses were identified as part of the desk study within a 250m radius of the site boundary.

2.8 Geotechnical Data

The site lies within an area considered by the Coal Authority as unlikely to be affected by mining activities.

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 2.3.

Hazard	Designation
Collapsible ground	Very Low
Compressible Ground	No Hazard
Ground dissolution	No Hazard
Landslide	Very Low
Running sand	No Hazard
Swelling clay	Low

Table 2.3 Summary of BGS Geological Hazards

2.9 Ground Gases & Vapours

A search of BGS recorded landfill sites, IPC registered waste sites, licensed waste management facilities, local authority recorded landfill sites, other registered landfill sites, potentially infilled land (water and non-water), 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.

No such facilities or land uses were identified by the desk study within a 250m radius of the site boundary.



2.10 Radon

Reference has been made to the Envirocheck dataset which indicates the site to be in a lower probability radon area (<1% of homes are estimated to be at or above the Action Level). The report indicates that no radon protection measures are necessary in the construction of new dwellings or extensions on site.

2.11 Previous Ground Investigations

Geo-Environmental was not aware of any previous ground investigations undertaken on site.

However, Geo-Environmental have previously undertaken intrusive investigation works on land to the east and north-east of the site (Phases III and IV) for Berkeley Homes (Southern) Limited. For details of these investigation works, reference should be made to the separate report (ref: GE16302/GIR/GE/June17).

2.12 Generic Contamination

2.12.1 Soil Contamination

The site was identified as comprising undeveloped agricultural land. This land uses are not covered by the National House Building Council (NHBC), Environment Agency (EA) and Chartered Institute of Environmental Health (CIEH) publication 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008), which provides a summary of industrial profiles (1995-1996) published by the former Department of the Environment (DoE) (now part of the Department for Environment, Food and Rural Affairs (DEFRA)).

However, the near surface soils may have been impacted by heavy metals and organic pollutants such as poly-aromatic hydrocarbons (PAHs) through direct placement and/or through aerial deposition, and organochlorine (OCL) pesticides based on the site's agricultural use.

2.12.2 Ground Gases & Vapours

The desk study did not identify any potential sources of ground gases which might affect the site.



3.0 PRELIMINARY RISK ASSESSMENTS

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

3.1 Preliminary Geotechnical Risk Assessment

Hazards identified as being potentially present on site could have implications for foundation design and construction. A summary of commonly occurring geotechnical hazards is given in Table 3.1.

Geotechnical Hazard	Probability	Justification/Engineering Implications
Lateral changes in ground conditions	Low	The probability of significantly variable ground conditions within the Weald Clay Formation across the site are unlikely.
Shrinkable soils	High	The underlying Weald Clay Formation is highly likely to be shrinkable which may affect foundation design and construction.
Significant depths of Made Ground	Low	The site has not previously been developed. As such, the risk of localised significant depths of Made Ground are considered to be low.
Aggressive chemical ground conditions (sulphates)	Likely	The presence of aggressive chemical ground conditions within the underlying geology (Weald Clay Formation) may affect foundation design and construction
Shallow Groundwater	Unlikely	The site is situated over an Unproductive Stratum. As such, shallow groundwater within the Weald Clay Formation is considered to be unlikely
Impermeable Ground Conditions	Likely	The presence of impermeable ground conditions (clays) may affect drainage strategy

Table 3.1 Possible Geotechnical Hazards

3.2 Preliminary Environmental Conceptual Model & Risk Assessment

A Preliminary Risk Assessment (PRA) and Conceptual Site Model (CSM) has 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.

3.2.1 Methodology

A risk may only exist where a plausible SPR linkage is present, and where the quantity or concentration of a contaminant is sufficient so as to pose harm. Under the statutory definition, "Contamination" may only strictly exist where contaminants pose a risk of harm to a receptor. Risk may be defined as a function of the likelihood and severity of any adverse effects arising from contamination. The risk classification has been assessed in accordance with CIRIA C552 (Rudland et al., 2001). A summary of how the risks are derived and their definitions are presented in Tables 3.2 & 3.3.



		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low Likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Table 3.2 Risk Ratings Matrix

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

Table 3.3 Risk Ratings Definition

3.2.2 Summary of Possible Contamination Sources

Possible sources of contamination identified or discounted as part of the desk study are summarised in Table 3.4.

Source	Description	Comments
Made Ground and Shallow Soils	General background chemical quality of the near surface soils in the context of the former use of the site	Possible elevated metals, organic and inorganic contaminants

Table 3.4 Possible Sources of Contamination



3.2.3 Summary of Plausible Pathways

The plausible pathways are summarised in Table 3.5

Pathway	Description
Direct Contact	Inhalation of soil derived dust (including tracked back dust), dermal contact, ingestion of soils
Inhalation	Inhalation of soil dust both inside and outside of buildings
Vertical & Lateral Migration	Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways, e.g. services trenches or fissures/cracks
Chemical Attack	Attack of buried plastics and concrete by aggressive ground conditions
Root Uptake	Root uptake of potentially phytotoxic contaminants

Table 3.5 Summary of Plausible Pathways

3.2.4 Summary of Plausible Receptors

Plausible receptors associated with the site and its development, identified or otherwise discounted, are summarised in Table 3.6.

Receptor	Description	Comments	Plausible
End Users	Occupants of the proposed residential development	The residential development will have private and communal gardens	Yes
Adjacent Land Users	Sensitive land uses identified within the immediate vicinity	Adjacent land users are generally commensurate with the proposed residential development	Yes
Soft Landscaping	Areas of planting including lawns, shrubs, trees, etc.	Soft landscaping is proposed as part of the development	Yes
Water Supply Pipes	Plastics for potable water supply pipes may be laid in contact with contaminated soils	Localised areas of deeper Made Ground are not anticipated. However, impacted soils could be present	Yes
Buildings & Infrastructure	Buried concrete for foundations, etc. may be laid in contact with contaminated/aggressive soils	Localised areas of deeper Made Ground are not anticipated. However, impacted soils could be present. Foundations are likely to be constructed through Made Ground/near surface soils and into natural strata. Aggressive conditions may be present	Yes
Surface Water	Controlled waters within lakes, rivers, ponds, etc., or coastal waters	The nearest surface water features (ponds and drains) were situated on the site's south eastern boundary	Yes
Groundwater	Controlled waters within the aquifer(s) beneath the site	The site overlies an Unproductive Stratum and is situated outside of any Source Protection Zone (SPZ)	No
Ecological Receptors	Sensitive areas of ecological significance	An Ancient Woodland was recorded to the immediate south of the site	Yes

Table 3.6 Plausible Receptors of Contamination



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

An Ancient Woodland was recorded to the immediate south of the site. It is recommended that an ecological assessment be undertaken for the site to determine the impact of the proposed development on potential ecological receptors. As such, no further assessment of these ecological receptors has been undertaken in this report.

3.3 Preliminary Environmental Risk Assessment

Whilst the above sources and receptors have been identified, Table 3.7 summarises the identified plausible pollution linkages and a qualitative assessment of the risks based on the desk study research:

Potential Source/media	Potential Receptors	Potential Pathways	Probability	Consequence	Risk and Justification
Made Ground & near surface soils	End users	Direct contact; inhalation	Likely	Mild	Moderate to Low Future residents are likely to come into contact with soils via direct contact in the private garden or tracked back in to the home. The consequence is likely to be mild.
	Adjacent land users	Direct contact; inhalation	Low	Mild	Low There is a low likelihood of adjacent site users coming into contact with affected soils. The consequence is likely to be mild.
	Soft Landscaping	Root uptake	Likely	Minor	Low Root uptake is likely for plants but any consequence is likely to be minor.
	Water supply pipes	Chemical attack	Low	Mild	Low Water supply pipes are likely to come into contact with soils though significant contamination is not anticipated. The consequence is likely to be mild.
	Buildings and infrastructure	Chemical attack	Low	Minor	Very Low Foundations and utilities will be placed within soils. However, the consequence is anticipated to be minor.
	Surface water	Vertical & lateral migration	Low	Minor	Very Low There is a low likelihood of surface water being affected by on site soils. The consequence is likely to be mild.

Table 3.7 Plausible Pollutant Linkages & Qualitative Risk Assessment



3.4 Preliminary Environmental Risk Assessment Summary

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

The potential pollutant linkages established within this desk study are not considered to prevent development on the subject site but could require investigation and assessment to support further characterisation, calibration of the CSM and where/if necessary determine a remedial strategy to reduce, remove or otherwise control any risk within the site to key receptors.

In order to progress this assessment in line with the National Planning Policy Framework, to provide further characterisation of the site and refinement of the PRA and CSM, it is recommended that intrusive investigation and associated testing is undertaken to confirm the findings of the desk study and to provide a robust risk assessment for the site and proposed redevelopment.

3.5 Preliminary Geotechnical Risk Assessment Summary

The majority of the site is anticipated to be underlain by the Weald Clay Formation which is highly likely to be cohesive and account will need to be taken of the potential for shrinkable soils to be present and the influence of shrubs and trees (existing, recently felled or proposed) on shrinkable soils and consequently on foundations. In addition, the impermeable nature of the underlying natural Weald Clay Formation is likely to preclude the use of soakaways on site.

3.6 Scope of Works

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

- The construction of two cable percussive boreholes (ref: BH01 and BH02) to a depth of 20.0m below ground level (bgl) with regular sampling and in situ testing as appropriate to the conditions encountered.
- The construction of seventeen window sample boreholes (ref: WS01 to WS17) to depths of up to 4.00m (bgl) situated across the site with regular sampling and in situ testing as appropriate to the conditions encountered. It should be noted that several of the windows samples terminated prematurely on the dense siltstone of the Weald Clay Formation at depths of between 2.70m bgl and 3.80m bgl.
- The installation of dual purpose ground gas and groundwater monitoring standpipes to a depth of 4.00m bgl within five window sample positions (WS01, WS03, WS09, WS11 and WS15). It should be noted that the standpipe within WS03 was installed to the maximum depth of the borehole (3.90m bgl).
- Dynamic cone penetrometer (DCP) tests (equivalent to CBR) undertaken along the route of the proposed access road (ref: DCP01 to DCP22).
- Groundwater depth and ground gas monitoring (spot monitoring) of all well installations on six occasions over a six week period.
- Laboratory based testing of soils for environmental and geotechnical parameters.

3.7 Investigation Strategy

Tables 3.8 and 3.9 summarise the strategy of the environmental and geotechnical investigations.



Environmental Area of Concern	Investigation	Positions
General background chemical quality of the near surface soils in the context of the former uses of the site and those in the surrounding area	Window sample boreholes and trial pits located across the site, coupled with sampling and laboratory analysis	All

Table 3.8 Summary of Environmental Investigation Strategy

Geotechnical Area of Concern	Investigation	Positions
Lateral changes in ground conditions	Window sample and cable percussive boreholes located across the site, coupled with sampling and laboratory analysis	All
Shrinkable soils	Window sample and cable percussive boreholes located across the site, coupled with sampling and laboratory analysis	All
Significant depths of Made Ground	Window sample and cable percussive boreholes located across the site	All
Aggressive chemical ground conditions (sulphates)	Laboratory analysis of samples obtained from window sample and cable percussive boreholes from across the site	All
Shallow Groundwater	Window sample and cable percussive boreholes located across the site, with standpipes installed in window sample boreholes with return monitoring	All (Standpipes in WS01, WS03, WS09, WS11 & WS15)

Table 3.9 Summary of Geotechnical Investigation Strategy

Based on the agreed scope of works, it was possible to make an appraisal for each area of geotechnical and environmental concern identified as part of the investigation.



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 encountered ground conditions, reference should be made to the engineer's logs presented in Appendix B, the groundwater/gas monitoring assessment presented in Appendix C, the geotechnical testing results in Appendix D, and the chemical testing results in Appendix E.

The physical ground investigation works were undertaken during January 2019. Both geotechnical and contamination testing was undertaken by UKAS accredited laboratories.

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

4.1 Ground Conditions

The investigation encountered the anticipated geological sequence of the Weald Clay Formation beneath a variable thickness of Topsoil in all intrusive positions. A generalised summary of the encountered conditions is presented in Table 4.1.

Top (m bgl)	Base (m bgl)	Geology
0.00	0.10 - 0.30	Topsoil: Brown sandy silty clay with frequent rootlets and ferruginous siltstone inclusions.
0.10 - 0.30	0.48 - 3.20	Weald Clay Formation (Cohesive): Firm and stiff to very stiff orangish brown and greenish grey mottled sandy silty CLAY, silty CLAY and silty shaley CLAY with occasional ferruginous staining and siltstone inclusions.
0.48 - 3.20	20.00	Weald Clay Formation (Mudstone): Stiff to very stiff, high strength reddish/orangish brown becoming pale yellow and grey weakly cemented/extremely weak MUDSTONE with partings of very stiff clay.

Table 4.1 Summary of Encountered Ground Conditions

Roots and rootlets were encountered within several positions across the site. The maximum observed depths of these roots and rootlets are summarised in Table 4.2.

Position	Maximum Observed Depth (m bgl)	Comment
WS02	1.00	Occasional rootlets
WS03	0.75	Rare decaying rootlets
WS04	0.75	Occasional rootlets
WS06	1.00	Rare rootlets
WS10	0.50	Rare rootlets
WS12	0.48	Rare rootlets
WS13	2.00	Rare rootlets
WS15	1.00	Occasional rootlets

Table 4.2 Summary of Encountered Roots/Rootlets

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



4.2 Groundwater

Groundwater was not encountered during the intrusive investigation. Water was encountered within WS05 at a depth of 1.90m bgl (rising to 1.50m bgl after 20 minutes) during the investigation. However, this is not considered to be representative of the true groundwater beneath the site.

Groundwater depth monitoring standpipes were installed on site (referenced WS01, WS03, WS09, WS11 and WS15) to depths of between 3.90m bgl and 4.00m bgl. These were monitored for the presence of groundwater on six occasions between January and March 2019. A summary of the encountered water depths within the standpipes is presented in Table 4.3.

Position	Date					
	23/01/2019	04/02/2019	07/02/19	13/02/19	20/02/19	01/03/19
WS01	0.54	0.00	1.29	1.28	1.26	1.26
WS03	2.97	0.00	2.05	3.49	3.72	3.72
WS09	1.56	1.17	0.66	0.80	1.12	1.13
WS11	1.30	0.00	0.26	0.83	0.93	1.02
WS15	2.05	2.15	2.14	2.17	2.18	0.80

Table 4.3 Summary of Water Depths (within standpipes)

Given the 'Unproductive Strata' classification of the underlying geology and the encountered ground conditions, the encountered water within the standpipes is not considered to be representative of the true groundwater beneath the site and is likely to represent inundation of the wells by surface water and or shallow seepages of perched water.

This aside, 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 levels within a standpipe or piezometer.

4.3 Ground Gases & Vapours

Groundwater monitoring standpipes were installed on site (referenced WS01, W03, WS09, WS11 and WS15). Although no potential source of ground gases was identified by the desk study, confirmatory ground gas monitoring was also undertaken. These positions were monitored for methane, carbon dioxide, oxygen, volatile organic compounds (VOC) and borehole gas flow on six occasions between January and March 2019.

During the monitoring visits to date, methane was recorded at a negligible concentration of 0.1% within the standpipes. Carbon dioxide and oxygen were present in the range 0.0% – 7.8% v/v and 5.6% – 21.2% v/v respectively. A maximum positive borehole flow of 4.8l/h was recorded. Negligible VOCs were recorded at 0.1ppm. The atmospheric pressure was recorded as ranging between 1001mb and 1030mb.

Several of the wells were inundated with surface water at the time of some of the return monitoring visits.



Where possible, wells were bailed of water and gas monitoring undertaken approximately 60 minutes later. In some wells, the standpipes recharged with surface water immediately – ground gas monitoring could not be undertaken within sandpipes where this occurred.

4.4 Obstructions

Artificial impenetrable obstructions were not encountered during the intrusive investigation. This aside, the presence of artificial obstructions elsewhere on site cannot be discounted.

Natural obstructions (only in terms of penetration for the window sampling rig) comprising dense mudstones of the Weald Clay Formation were encountered within several positions across the site at depths of between 2.70m bgl and 3.80m bgl. In addition, the cable percussive boreholes were progressed by chiselling at depths summarised in Table 4.4.

Position	Top Depth (m bgl)	Base Depth (m bgl)	Chiselling Time (mins)
BH01	3.00	4.50	60
	18.50	20.50	90
BH02	3.50	4.50	60
	17.00	20.50	120

Table 4.4 Summary of Chiselling Depth (Cable Percussive Boreholes)

4.5 Geochemical 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 the joint National House Building Council (NHBC), Environment Agency (EA) and Chartered Institute of Environmental Health (CIEH) publication, *'Guidance for the Safe Development of Housing on Land Affected by Contamination'* (2008).

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

Fifteen soil samples were submitted for analysis for a comprehensive suite of common zootoxic and phytotoxic elements based upon determinands listed within the above guidance including speciated petroleum hydrocarbon analysis and asbestos screens.

In addition, two samples of the near surface soils were also submitted for a suite of organochlorine pesticides.

Furthermore, three samples of Topsoil were submitted for a suite of analysis set out in British Standard BS3882:2015 entitled *'Specification for topsoil and requirements for use'*.

For further details reference should be made to the laboratory results in Appendix D.



4.6 Geotechnical Testing Results

The results of geotechnical testing undertaken as part of the ground investigation are summarised in Table 4.5, with test results presented in Appendix D.

Parameter		No. of Samples/Tests	Weald Clay Formation
Moisture Content (%)		103	11-37
Liquid Limit (%)		40	36-98
Plastic Limit (%)		40	17-36
Plasticity Index (%)		40	16-63
Modified Plasticity Index (%)		40	16-63
Particle Size Distribution	Very Coarse (%)	20	0.0
	Gravel (%)	20	0.0-19.0
	Sand (%)	20	2.5-23.8
	Silt (%)	20	40.2-69.4
	Clay (%)	20	18.9-51.5
California Bearing Ratio (soaked) (%)		8	<1.0-1.5
Dynamic Cone Penetrometer (equivalent CBR) (%)		22	2-17
Undrained Triaxial Strength (kPa)		2	80-92
Standard Penetration Test (SPT) (N)		25	28->50
pH		21	6.1-7.7
Water soluble sulphate (g/l)		21	0.13-0.79

NOTE: Modified plasticity index is defined in NHBC Standards Chapter 4.2

Table 4.5 Summary of Geotechnical Test Results



5.0 ENGINEERING CONSIDERATIONS

Subsequent to intrusive investigation of the site and receipt of the laboratory test results, the following geotechnical assessments have been made.

5.1 Traditional Foundations

Based on the ground and groundwater conditions encountered during the intrusive works, it is considered that remote from trees conventional foundations may be appropriate for low-rise lightly loaded structures on the site. Foundations should be taken below any Made Ground, disturbed, loose or desiccated ground and bear wholly into or onto the firm to stiff and very stiff clays or extremely weak mudstone of the Weald Clay Formation. For proposed dwellings within the zone of moisture demand of trees, piles may need to be considered depending on the tree species, height and distance from the proposed dwelling.

The results of the laboratory analysis indicated the more shallow (GL to 1.0m bgl) cohesive horizons of the Weald Clay Formation to range between medium and high volume change potential as defined by NHBC Standards, Chapter 4.2. A total of 13 samples out of 20 tested (within 1.00m of ground level) indicated high volume change potential soils. The locations and depths of the samples exhibiting high volume change potential soils were scattered across the site laterally and with depth in such a way that it is not possible to zone or delineate areas. The locations where high volume change potential soils were encountered within the range of GL to 1.0m bgl is indicated on Figure 3.

It is therefore recommended that the Weald Clay is considered as being of high volume change over the whole of the site to a depth of 1.0m.

With the exception of WS03 and WS10, all Atterberg Limit tests indicated that the soils from a depth of 1.0m were either low or medium volume change potential. Further investigation is recommended around WS03 and WS10 to delineate these areas where high volume change soils were encountered below 1.00m.

Within the zone of moisture demand of any current, proposed or recently felled trees foundation depths should be deepened in accordance with the NHBC Standards, Chapter 4.2. Where (based on high volume change soils) calculated foundations exceed 1.0m on account of trees, depths for medium volume change soils may be used for the design thereafter (albeit with further classification within the vicinity of WS03 and WS10). Where calculated foundation depths exceed 1.50m on account of trees, heave precaution measures will be required in accordance with the NHBC Standards. Where calculated foundation depths exceed 2.50m, they will be required to be designed by a structural engineer.

It should be noted that roots and rootlets were encountered within several intrusive locations across the site to a maximum observed depth of 2.00m bgl. However, the results of the moisture content versus depth plots undertaken across the site did not show any significant evidence of desiccation. Desiccation is a transient condition and the investigation was undertaken at a time when soils were least likely to exhibit signs of desiccation.

Remote from existing trees and bushes, it is recommended that shallow foundations terminate within the medium to high strength clays of the Weald Clay Formation at a minimum depth of 1.00m below existing or final ground level whichever is the lower. Foundations should pass through any Made Ground, disturbed ground, soft or very loose soils, desiccated clay soils and terminate wholly within the Weald Clay Formation.



Foundations may terminate prematurely within the non-shrinkable cemented mudstones of the Weald Clay Formation should they be encountered at shallower depth.

Heave protection measures in accordance with the NHBC Standards will be required where calculated foundation depths on account of trees exceed 1.50m.

Nominal reinforcement of the foundations will be required where they span both the cohesive and mudstone horizons of the Weald Clay Formation.

A net allowable bearing pressure of 150kPa is considered suitable for traditional trench foundations taken down through any Made Ground, disturbed, desiccated or loose materials to bear wholly into or onto the firm to stiff and very stiff clays or extremely weak mudstone of the Weald Clay Formation. Foundations should be no less than 450mm in width. For any larger proposed structures with higher column loads or where calculated foundation depths become economically unviable, a piled foundation solution may be more appropriate.

Given the presence of shrinkable soils, floor slabs should be fully suspended.

5.2 Piled Foundations

The construction of a piled foundation is a specialist job and the advice of a reputable contractor familiar with the type of ground and groundwater conditions encountered on this site should be sought prior to finalising the design. The actual working load for proposed piles will depend on the particular type of pile and method of installation adopted. Piles should be taken at least five times the pile diameter into the founding strata.

With reference to the cable percussive boreholes undertaken on the site, the SPT blow counts within the mudstone of the Weald Clay Formation were generally $N \geq 50$. As such, piles should be designed to socket into the Weald Clay Formation.

The borehole logs should be presented to the proposed piling contractor in order to provide the parameters for the appropriate site specific design.

Heave protection measures for pile caps and ground beams should be designed in accordance with the NHBC Standards, Chapter 4.2. Piles should also be designed to resist heave forces.

The piling contractor should be aware that the boreholes were cased to a maximum depth of 3.00m bgl to prevent collapse as drilling progressed.

Floor slabs should be suspended due to the presence of shrinkable soils.

5.3 Excavations

Shallow excavations in the natural soils should remain stable in the short term. Longer deeper excavations are likely to become unstable, particularly if they are left open for long periods and will therefore require either battering to a safe angle or some form of temporary support.

In addition, the clays of the shallower Weald Clay Formation will soften rapidly when exposed to water and any foundation trenches should be concreted or blinded immediately.



A ripper or breaker may be required where excavations are required through any cemented mudstones of the deeper Weald Clay Formation.

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

5.4 Sulphates

The results of the sulphate and pH analysis undertaken on samples of the Weald Clay Formation found the soil samples tested to have a water soluble sulphate concentrations ranging between design sulphate (DS) classes DS-1 and DS-2 of BRE special digest 1. It is recommended that the worst case design sulphate class of DS-2 be utilised on site.

An aggressive environment for concrete (ACEC) classification of AC-1s is deemed appropriate for foundations within the Weald Clay Formation.

The advice of the above publication should be taken for the design and specification of all sub-surface concrete.

5.5 Pavements

A total of 22 dynamic cone penetrometer (DCP) tests were undertaken along the route of the proposed estate road for the site. The depth and CBR ranges for each position are summarised in Table 5.1.

Location	Depth Range (mm bgl)	CBR Range (%)
DCP01	400-765	2-3
DCP02	0-800	3
DCP03	560-735	4-6
DCP04	0-770	2-4
DCP05	0-800	4
DCP06	330-700	3-14
DCP07	215-750	4
DCP08	430-735	3-4
DCP09	495-735	4
DCP10	420-735	3-4
DCP11	225-730	5-6
DCP12	495-710	4-6
DCP13	275-815	5-7
DCP14	205-755	4-14
DCP15	0-870	4
DCP16	0-770	3
DCP17	530-800	4-8
DCP18	590-745	6-7
DCP19	445-775	7-15
DCP20	495-665	5-6
DCP21	480-630	5-9
DCP22	530-710	7-17

Table 5.1 Summary of DCP CBR Results



In addition to the in situ DCP tests, a total of eight soaked laboratory CBR tests were undertaken along the route of the proposed estate road for the site. The depth and CBR values for each position are summarised in Table 5.2.

Location	Depth (m bgl)	Average CBR (%)
DCP01/HP01	0.50	<1.0
DCP02/HP02	0.50	1.3
DCP03/HP03	0.50	<1.0
DCP04/HP04	0.50	1.4
DCP05/HP05	0.50	1.5
DCP06/HP06	0.50	<1.0
DCP07/HP07	0.50	<1.0
DCP08/HP08	0.50	<1.0

Table 5.2 Summary of Laboratory CBR Results

The results of the tests are presented in Appendix D and the locations of the tests are presented in Figure 4.

With reference to TRRL LR1132, CBR values of between 2% and 3% is recommended for pavements constructed upon clays with a plasticity index between 40 and 60 such as those of the shallower cohesive clays of the Weald Clay Formation based on a low water table (<600mm bgl) and average construction conditions.

As can be seen from comparison of the CBR values from Tables 5.1 and 5.2, the in-situ testing has indicated higher CBR values than the absolute worst (soaked CBR) values. A CBR value of between 2% is recommended for pavements constructed upon the clays of the Weald Clay Formation across the site.

Based on the results of the Atterberg Limit Tests, the Weald Clay Formation at shallow depth across the site should be considered as being non-frost susceptible for pavement design purposes.

Furthermore, the sub-grade should be carefully proof rolled and any soft or loose zones replaced with compacted granular engineering fill.



6.0 ENVIRONMENTAL CONSIDERATIONS

A Generic Quantitative Risk Assessment (GQRA) incorporating the results of the desk study and ground investigation was undertaken in accordance with CLR11, the findings of which are presented in the following sections.

6.1 Outline Risk Assessment

A number of plausible pollutant linkages were identified as part of the desk study, as summarised in Section 3.

6.2 Soil Contamination vs. End Users

Given the sensitivity of the proposed development, soil samples were submitted to a UKAS accredited laboratory for general chemical screening including common zootoxic and phytotoxic elements and asbestos screening.

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 accordance with CLR11, 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.

A quantitative risk assessment has been undertaken by comparing the results of the laboratory chemical testing of shallow soils against Soil Screening Values (SSV) generated using the Contaminated Land Exposure Assessment (CLEA) model v1.07 published by Atkins, or against the Category 4 Screening Levels (C4SLs) published by DEFRA. Although the C4SLs were released for Part 2A use, the associated policy companion document for the C4SLs indicated that they may also be used for planning. Although the C4SLs represent a marginally higher risk level than the SSACs (low risk rather than minimal risk) it is considered that the risk levels remain very low. Therefore, the final C4SLs are considered to be suitable to assess soils under the planning regime.

In the first instance, the laboratory results were compared individually against thresholds for a residential end use with plant uptake. The results were all either below the laboratory detection limits or the relevant thresholds.

All samples submitted for asbestos screens were returned with no asbestos fibres identified. In addition, all samples submitted for a suite of organochlorine (OCL) pesticides were returned with all results below the laboratory detection limits.

As such, no remedial measures are considered necessary with regards to the near surface soils and proposed end users.

6.3 Soil Contamination vs. Adjacent Land Users

Surrounding land uses were identified to generally comprise residential and agricultural land. Significant concentrations of potentially harmful mobile contaminants were not identified as part of the laboratory analyses. Therefore, no remedial action is considered necessary to protect adjacent land users from soils on site.



This aside, 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.

6.4 Soil Contamination vs. Soft Landscaping

British Standard BS3882:2015 *Specification for topsoil and requirements for use* provides assessment criteria for a number of potentially phytotoxic contaminants in terms of new planting.

The results of the chemical analysis for determinants known to pose a potential phytotoxic risk to plant growth are summarised in Table 6.1, together with the respective adopted Generic Assessment Criteria (GAC) for plant growth. The compliance criteria set out in BS3882:2015 are pH dependent and thus the GAC used relate to the pH range measured on samples recovered from the site.

Determinand	Phytotoxicity GAC (mg/kg)			GAC Exceedances
	pH <6.0	pH 6.0-7.0	pH >7.0	
Zinc	200	200	300	No
Copper	100	135	200	No
Nickel	60	75	110	No

Table 6.2 Summary of Plant Phytotoxicity Assessment

The phytotoxicity assessment did not identify any exceedances of the relevant thresholds. Therefore, remedial measures to protect proposed soft landscaping from soils on the site are not considered necessary.

In addition to the above assessment, the tested soils also generally conformed to 'Multipurpose Topsoil' as defined by BS3882:2015. The soils grading generally conformed to the thresholds within BS3882:2015 and was assessed to be clay loam, silty clay loam and silty loam.

6.5 Soil Contamination vs. Building Materials

Recommendations with respect to sulphate and buried concrete are made in Section 5.4.

The current guidance on selection of materials for water supply pipes to be laid in contaminated land is contained in UK Water Industry Research's (UKWIR) report reference 10/WM/03/21 (re-issued 2010). However, the guidance is not mandatory and there have been concerns raised by various industry technical associations regarding the document and the methodologies proposed.

Although there are concerns regarding the document, in lieu of any further guidance in the first instance the results of this investigation have been compared with the proposed thresholds published in UKWIR Table 3.1. The results of the chemical analysis were all either below the laboratory detection limits or the relevant thresholds. As such, potable water supply pipes are unlikely to require protection. However, confirmation of this assessment should be sought from the utility company.

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



6.6 Soil Contamination vs. Surface Water

The nearest surface water feature identified by the Landmark data was a drainage ditch and ponds situated on the site's eastern boundary.

However, significant concentrations of potentially mobile contamination were not encountered within the soils beneath the site. As such it is considered unlikely that any specific remedial measures will be required to protect surface water features from soil contamination on site.

6.7 Ground Gases & Vapours

Groundwater monitoring standpipes were installed on site (referenced WS01, W03, WS09, WS11 and WS15). Although no potential source of ground gases was identified by the desk study, confirmatory ground gas monitoring was also undertaken. The standpipes were 'spot' monitored for methane, carbon dioxide, oxygen, volatile organic compounds (VOC) and borehole gas flow on six occasions between January and March 2019.

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 NHBC report 10627-R01(04) entitled 'Guidance on evaluation of development proposals where methane and carbon dioxide are present' (2007).

During the monitoring visits to date, methane was recorded at a negligible concentration of 0.1% within the standpipes. Carbon dioxide and oxygen were present in the range 0.0% – 7.8% v/v and 5.6% – 21.2% v/v respectively. A maximum positive borehole flow of 4.8l/h was recorded. Negligible VOCs were recorded at 0.1ppm. The atmospheric pressure was recorded as ranging between 1001mb and 1030mb.

The Hazardous Gas Flows (HGF) for carbon dioxide and methane based on the data from the monitoring visits to date were 0.37l/hr and 0.00l/hr. The HGF for both carbon dioxide and methane is representative of NHBC Traffic Light Green.

It should be noted that concentrations of carbon dioxide were recorded above the 'Green' limiting concentration (5% v/v) within the standpipe installed in WS03 on several occasions. However, NHBC Guidance [10627-R01(04)] states that the limiting concentration can be exceeded provided the Conceptual Site Model (CSM) indicates it is safe to do so.

It should be noted that the desk study did not identify ground gases and vapours as a potential hazard for this site. In addition, no significant thicknesses of Made Ground containing potentially putrescible materials were encountered during the intrusive investigation.

Therefore, based on the lack of a potential source of ground gases for the site, and the results of all the ground gas monitoring undertaken on the site, the ground gas regime for the site is considered to be representative of NHBC Traffic Light Green, for which ground gas protection measures are not considered necessary.

In addition, based on the information contained within the Envirocheck dataset (part of the Desk Study), radon protection measures are not considered necessary in the construction of new dwellings or extensions on site.

6.8 Waste Disposal



6.8.1 Reuse of Material

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

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

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

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

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

6.8.2 Reuse of Waste

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

6.8.3 Disposal to Landfill

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

6.8.4 Waste Classification

The following information is provided for preliminary guidance purposes, as different facilities or operators may have differing acceptance criteria and Waste Acceptance Criteria (WAC) analysis may be required to confirm the exact classification.

In the first instance the laboratory results were uploaded to Atkins’ waste soils characterisation assessment tool, ‘CatWasteSoil’ which determines whether a generated waste has any hazardous chemical properties based on standard laboratory analysis. The results for the tested determinands did not exceed the relevant CatWasteSoil Hazard Class thresholds.

Natural uncontaminated soil arisings of the Weald Clay Formation are likely to be classified as ‘inert’ waste.

However, confirmation of the above assessment should be sought from the receiving landfill facility.



6.9 Discovery Strategy

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

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

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

Depending on the type, nature and extent of any such 'discovery', it may be necessary to halt works in that location until such time as the assessment has been completed. This should be reviewed on a 'discovery' specific basis and in conjunction with regulatory consultation.

As a general guide, where such unexpected conditions are encountered the following approach is recommended:

- All discoveries are to be reported to the Site Manager immediately and works at that location are to halt until further notice;
- The Site Manager is to report any such discoveries to the Client and the Environmental Consultant;
- Following notification from the Site Manager, the Environmental Consultant shall discuss the discovery with the Local Authority and if considered necessary, arrange to meet an Officer on site to view the discovery;
- The Environmental Consultant shall attend the site to record the location, extent and nature of the discovery and implement an appropriate sampling and analysis regime, taking due account of the type and nature of the discovery, known and probable land uses in that area of the site;
- Where remedial action is required, regulatory consultation and approval will be sought;
- A record will be produced by the Environmental Consultant and held on site (with copies held by the Environmental Consultant, Client and Local Authority), detailing the discovery, assessment works undertaken, findings thereof, confirmation either of no action required or detailing the remedial action taken and validation thereof.

The process is shown overleaf.

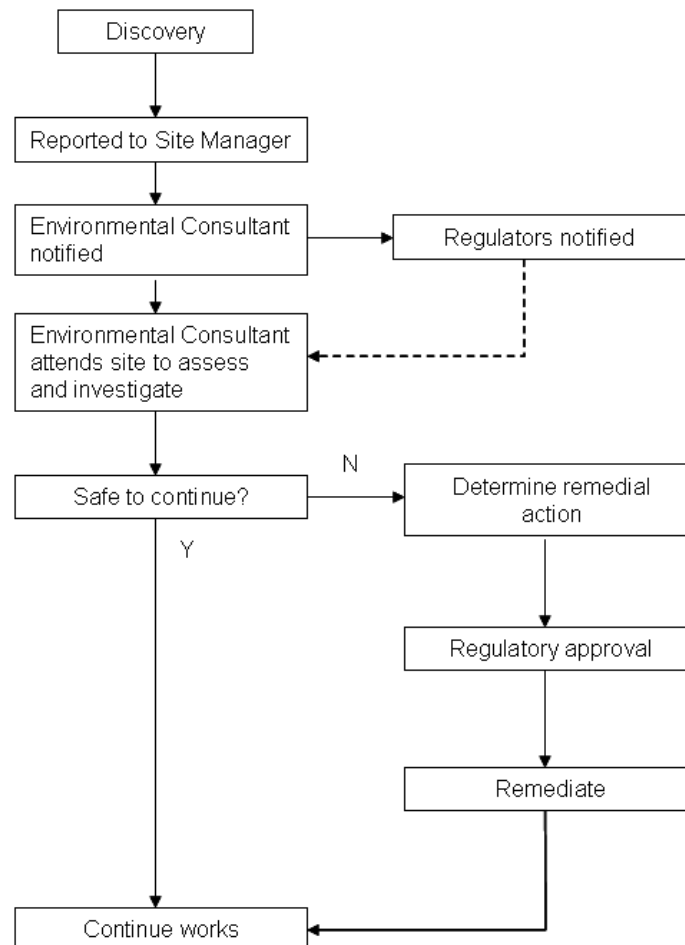
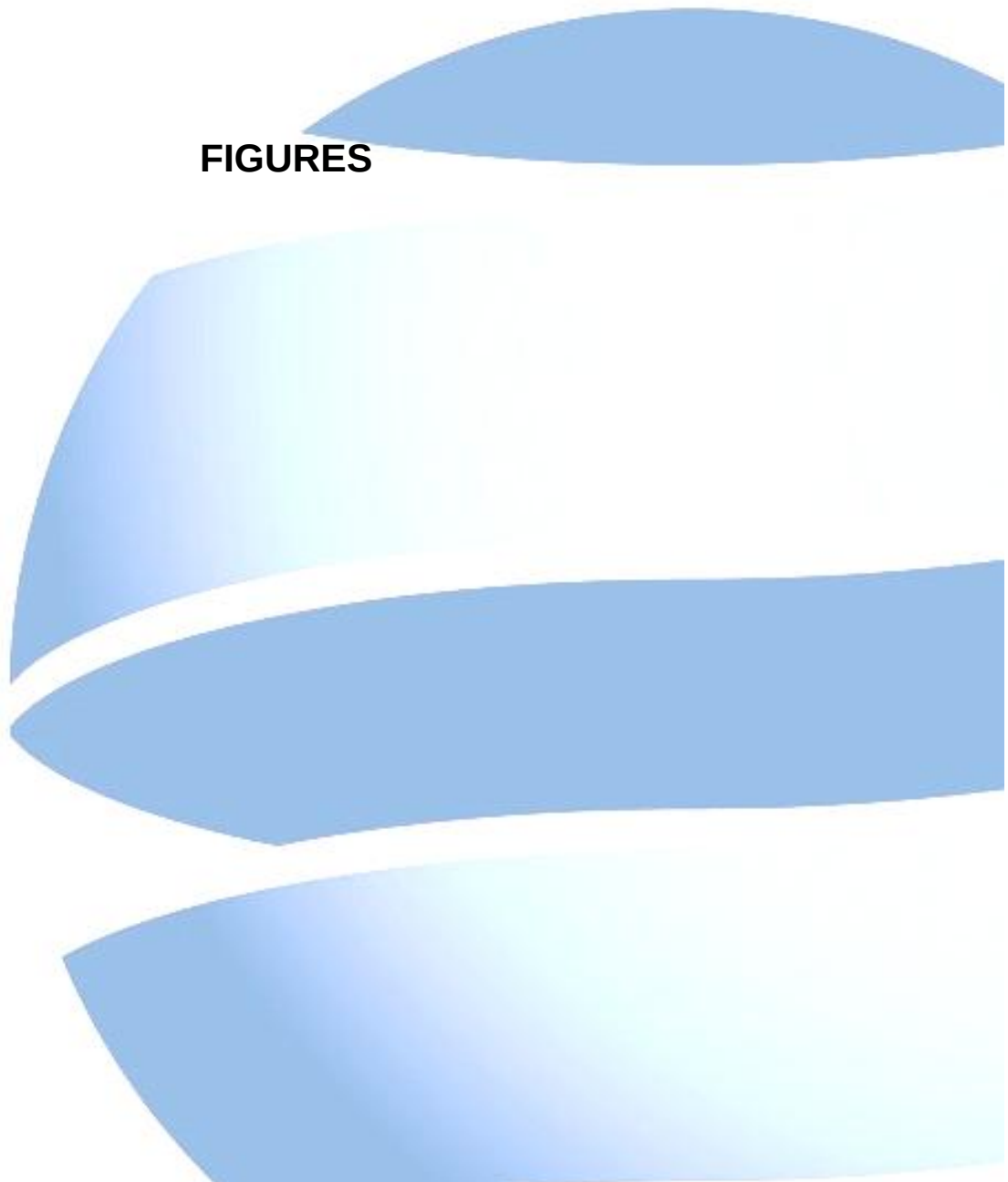


Chart 1 Discovery Strategy Process

FIGURES



Project Title: Southwater Phase V
Location : Southwater
Project No. : GE17902
Client : Berkeley Homes Southern Limited

Title : Figure 1 - Site Location Plan
Scale: 1:3000
Engineer: GE



Legend Key
Project Bounds - Project Bounds



Project Title: Southwater Phase V
Location : Southwater
Project No. : GE17902
Client : Berkeley Homes Southern Limited

Title : Figure 2 - Exploratory Hole Location Plan
Scale: 1:3000
Engineer: GE



Geo-Environmental

Legend Key

- Locations By Type - CP
- Locations By Type - DP
- Locations By Type - WLS



Project Title: Southwater Phase V
Location : Southwater
Project No. : GE17902
Client : Berkeley Homes Southern Limited

Title : Figure 3 - Site Zones Plan
Scale: 1:2500
Engineer: GE

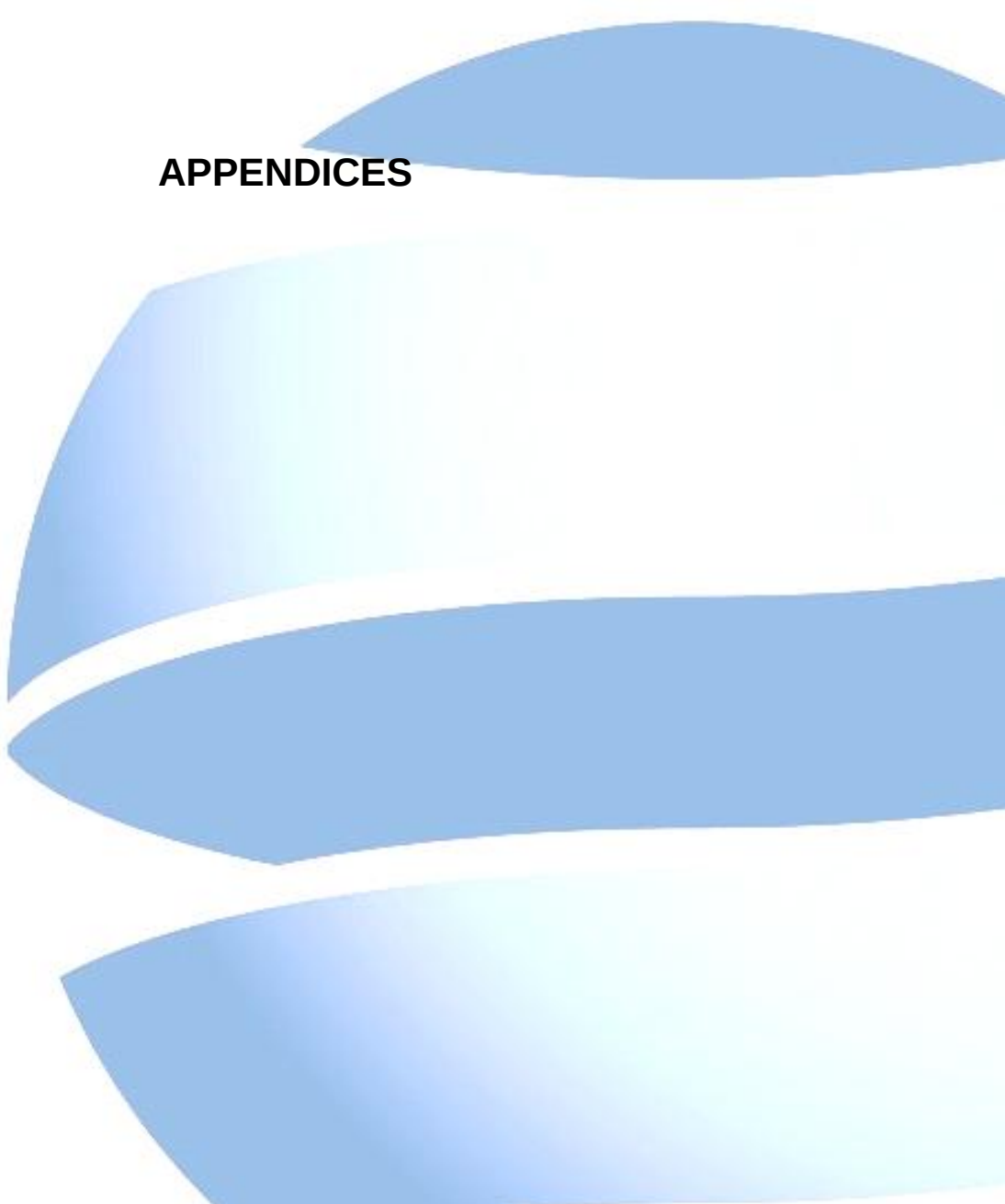


- Legend Key
- Locations By Type - CP
 - Locations By Type - DP
 - Locations By Type - WLS
 - High VCP less than 1m - High VCP less than 1m

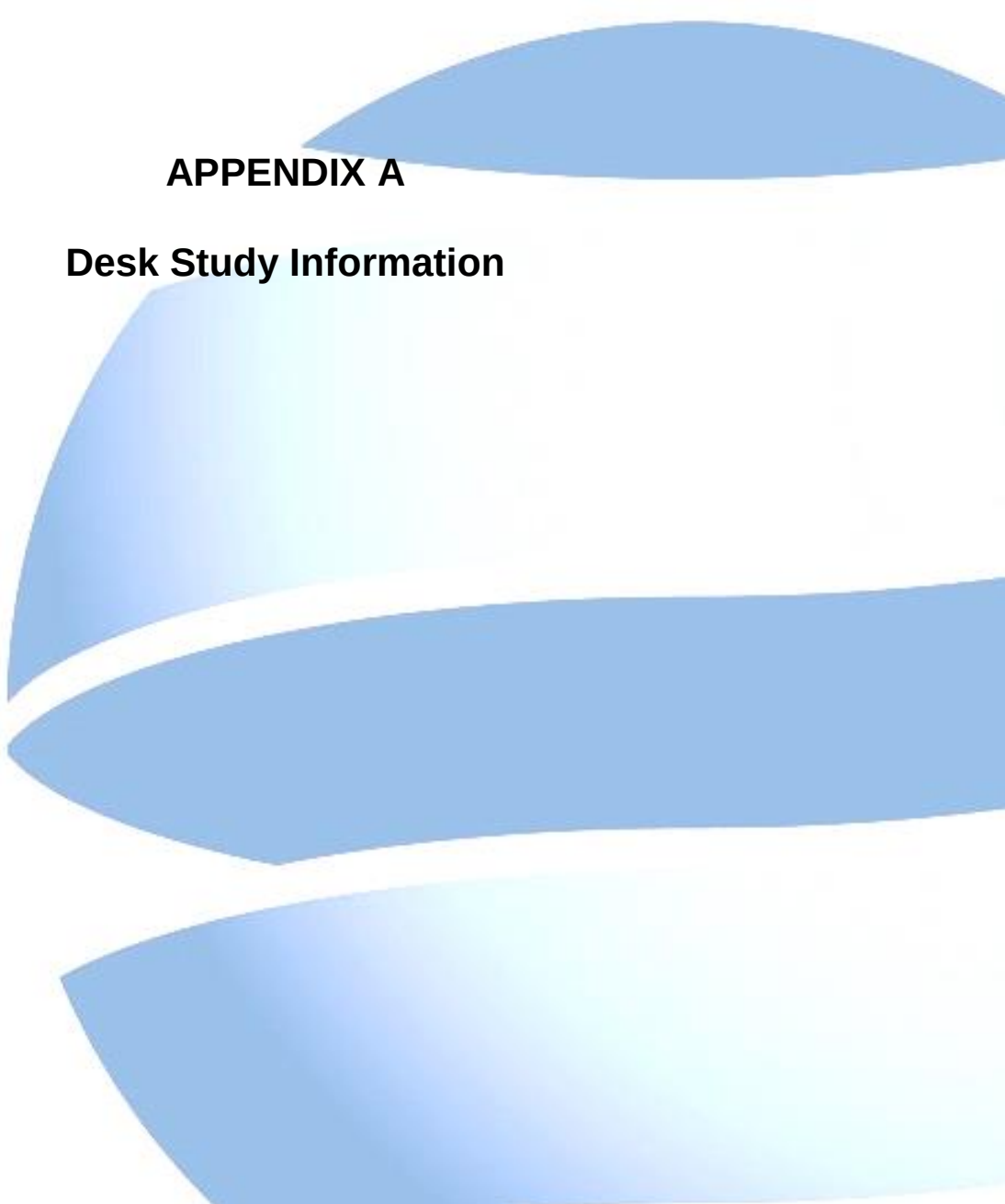




Project:	Southwater Phase V			Title:	CBR Location Plan	
Address:	Southwater Phase V			Date:	Jan-19	Revision: v1
				Drawn:	JK	 Geo-Environmental
Grid Ref:		Scale:	Not to Scale	Ref:	GE17902	
Client:	Berkeley Homes (Southern) Limited			Figure:	4	

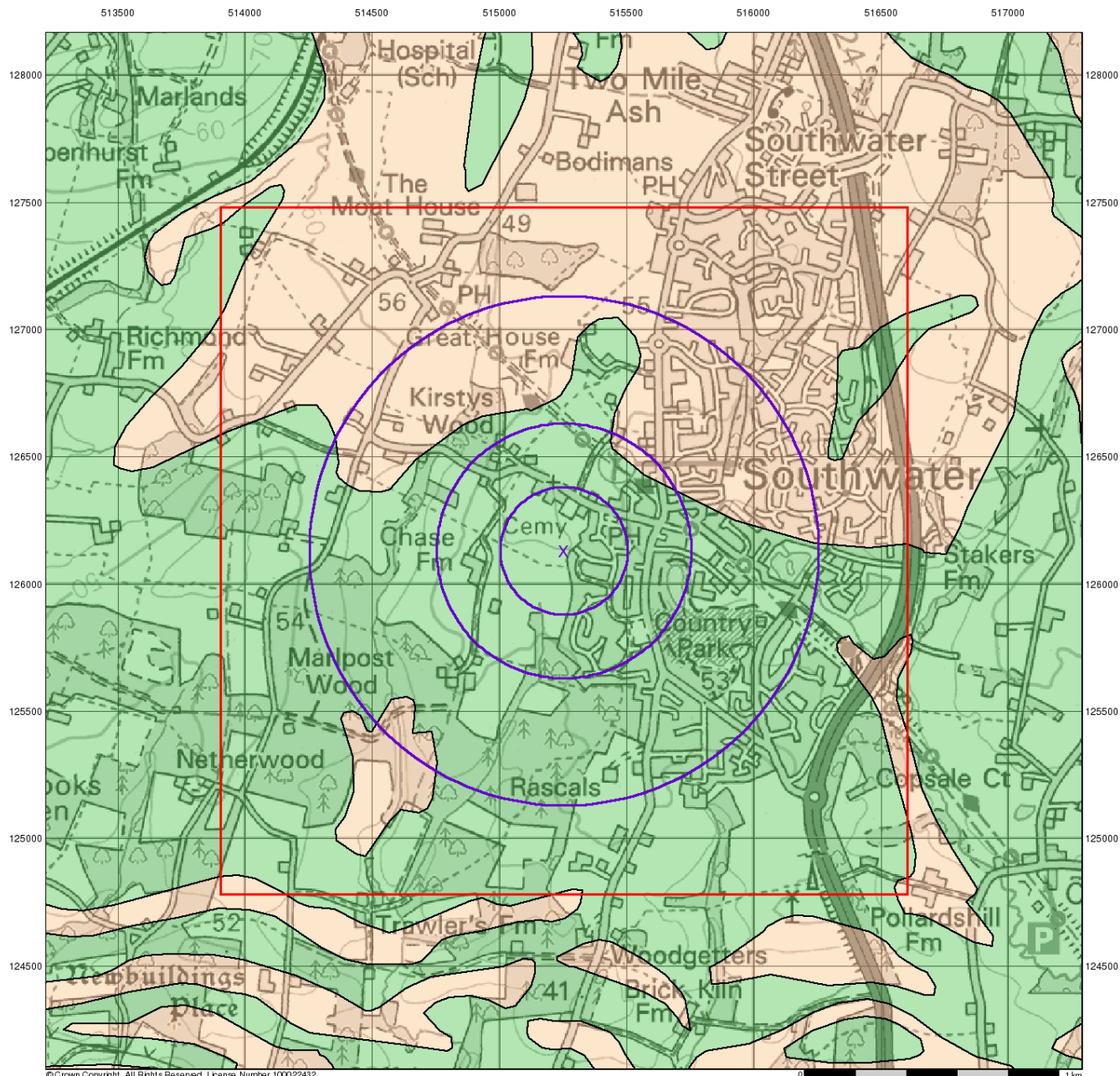


APPENDICES

A large, stylized blue wavy shape that curves from the bottom left towards the top right, serving as a background element.

APPENDIX A

Desk Study Information



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Geo-Environmental Groundwater Vulnerability

General

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

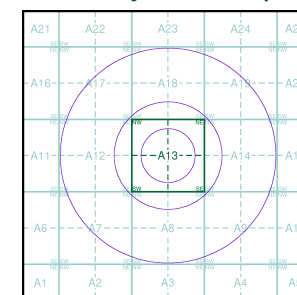
Agency and Hydrological

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

Soil Classes

Site Sensitivity Context Map - Slice A



Order Details

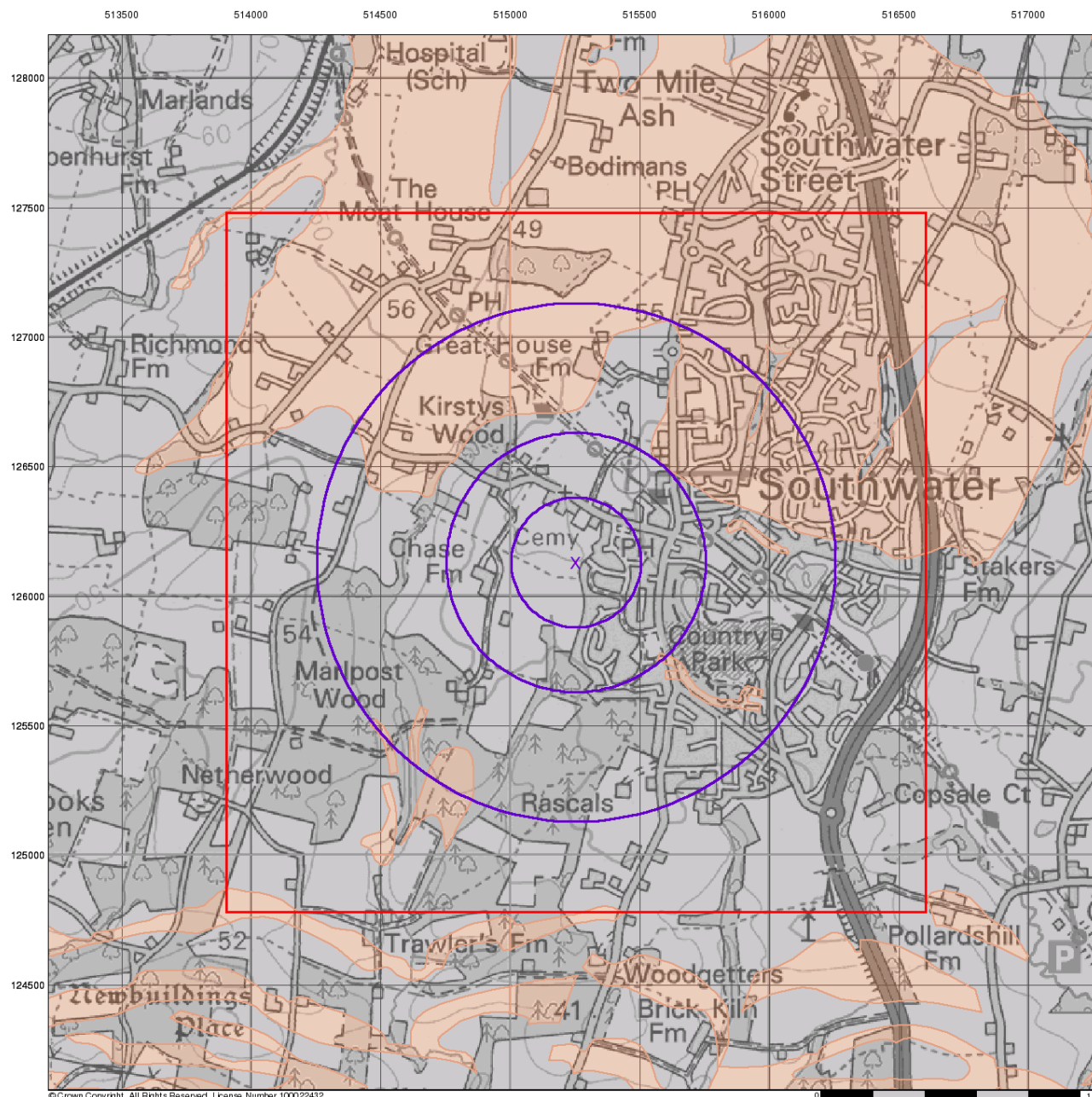
Order Number: 128254283_1_1
 Customer Ref: GE16302
 National Grid Reference: 515250, 126130
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Southwater Sports Club, Church Lane, Southwater, HORSHAM, RH13 9BT

Landmark
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 Fax: 0844 844 9951
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Geo-Environmental Bedrock Aquifer Designation

General

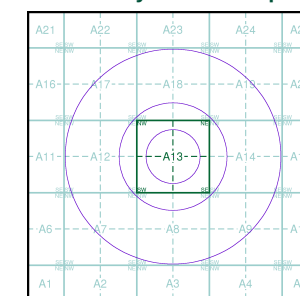
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

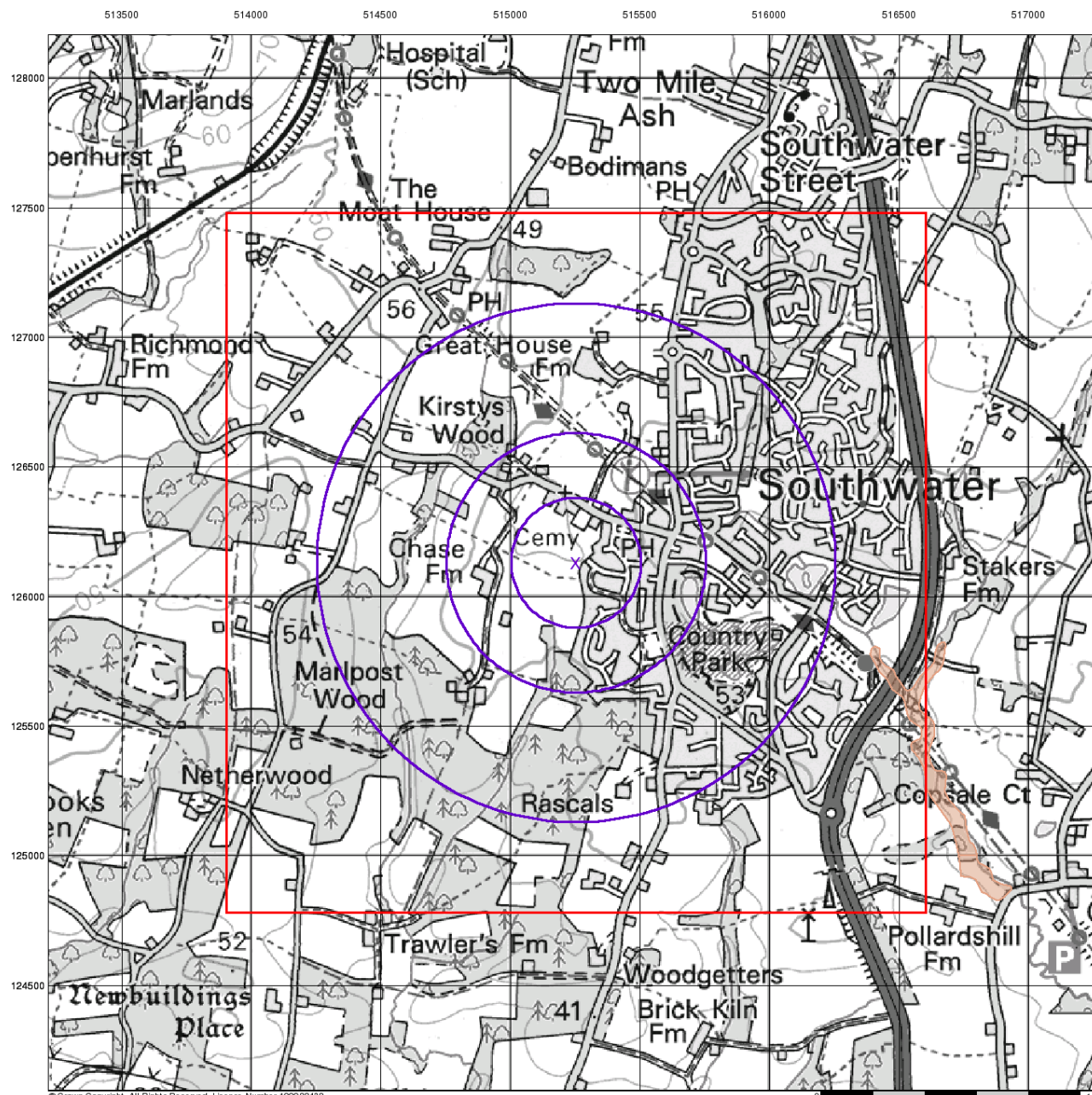
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 Search Buffer (m): 1000

Site Details

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Geo-Environmental Superficial Aquifer Designation

General

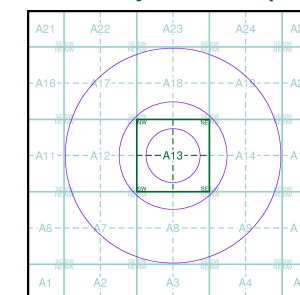
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

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

Site Sensitivity Context Map - Slice A



Order Details

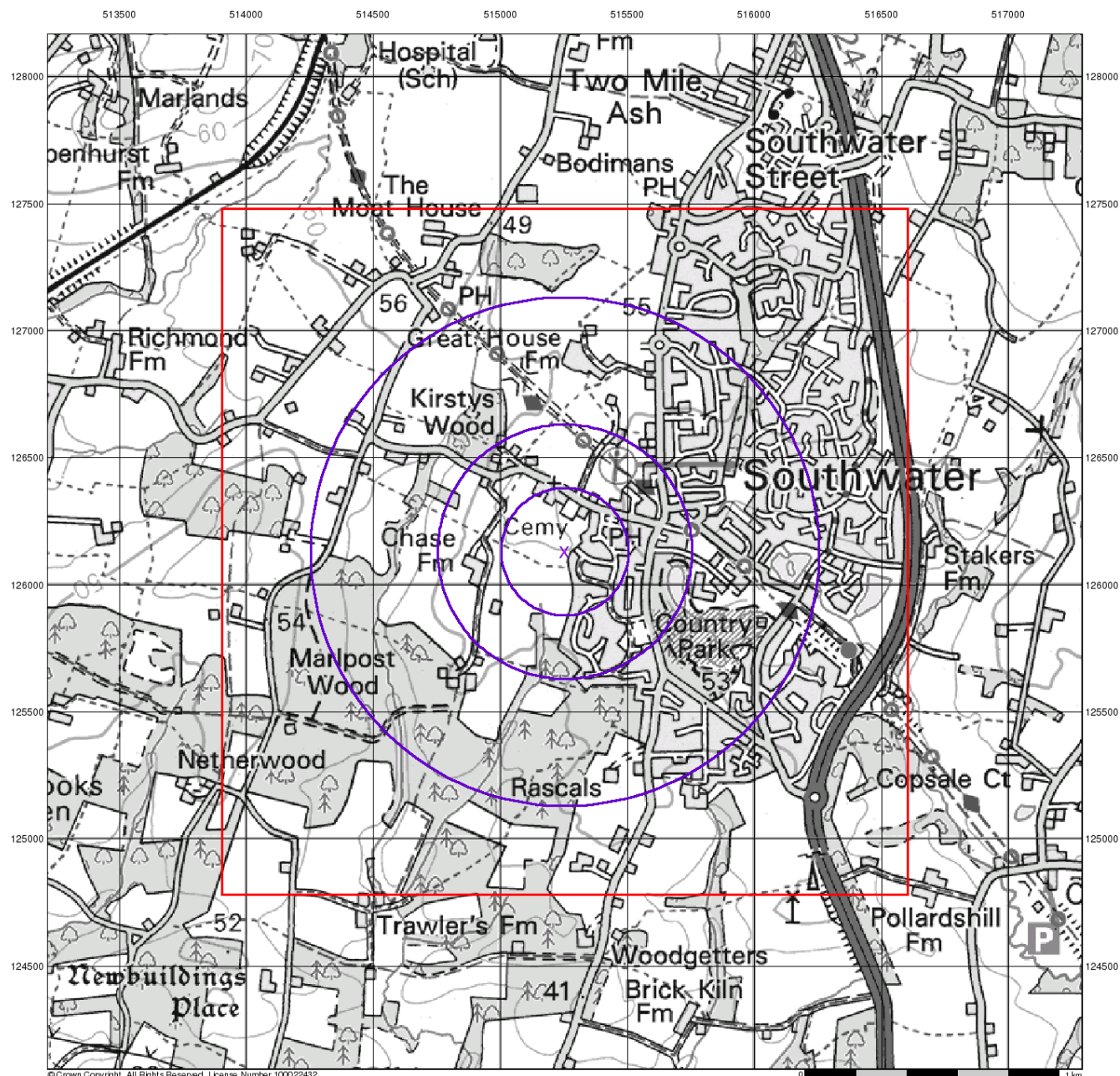
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 Customer Ref: GE16302
 National Grid Reference: 515250, 126130
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

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Geo-Environmental Source Protection Zones

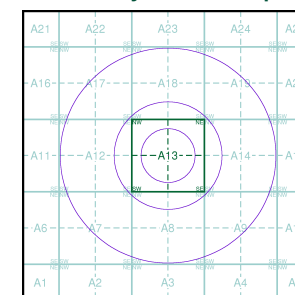
General

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

Agency and Hydrological

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

Site Sensitivity Context Map - Slice A



Order Details

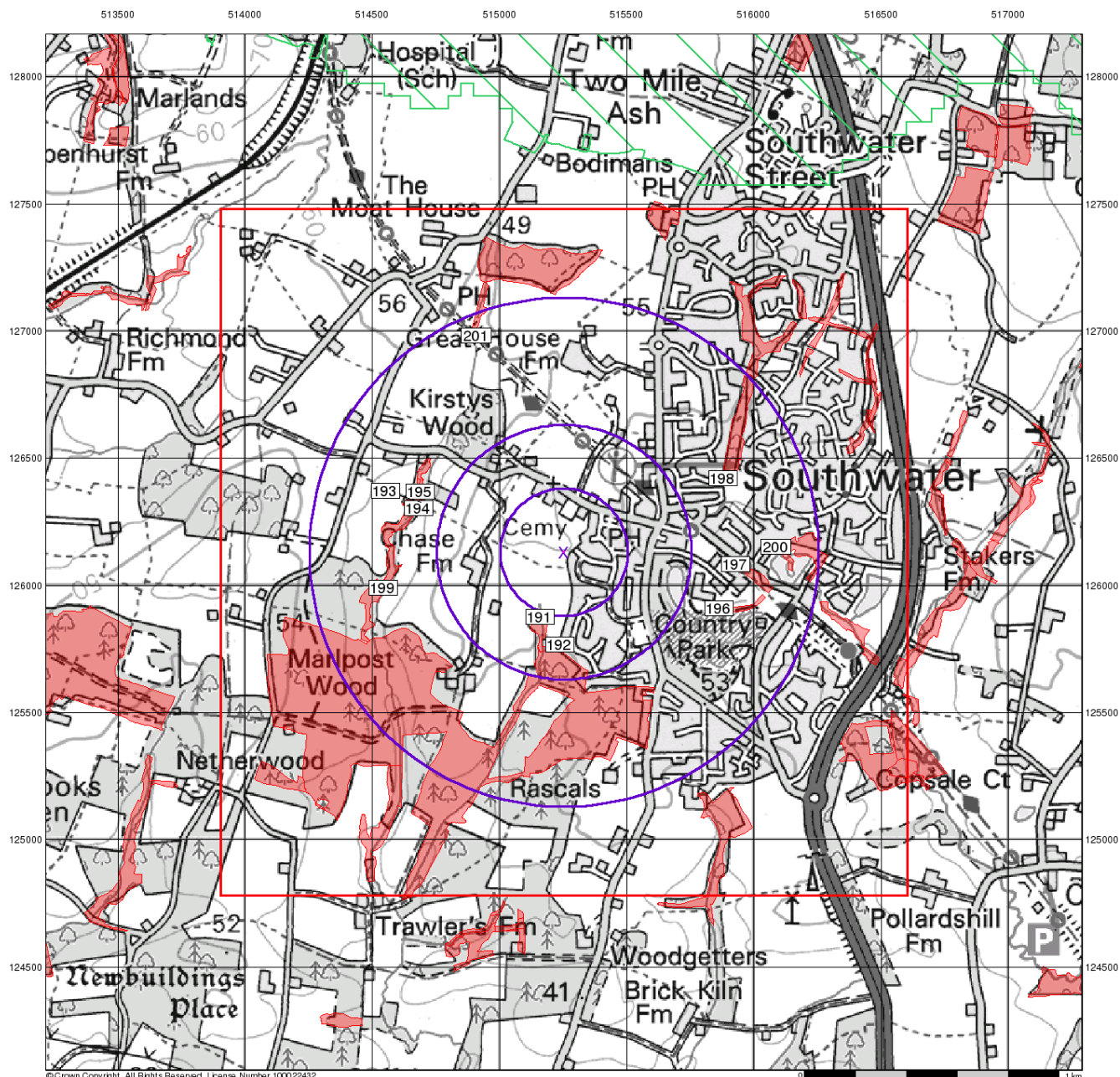
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 Customer Ref: GE16302
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 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

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Geo-Environmental Sensitive Land Uses

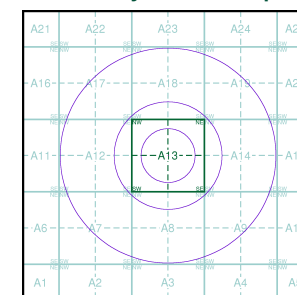
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

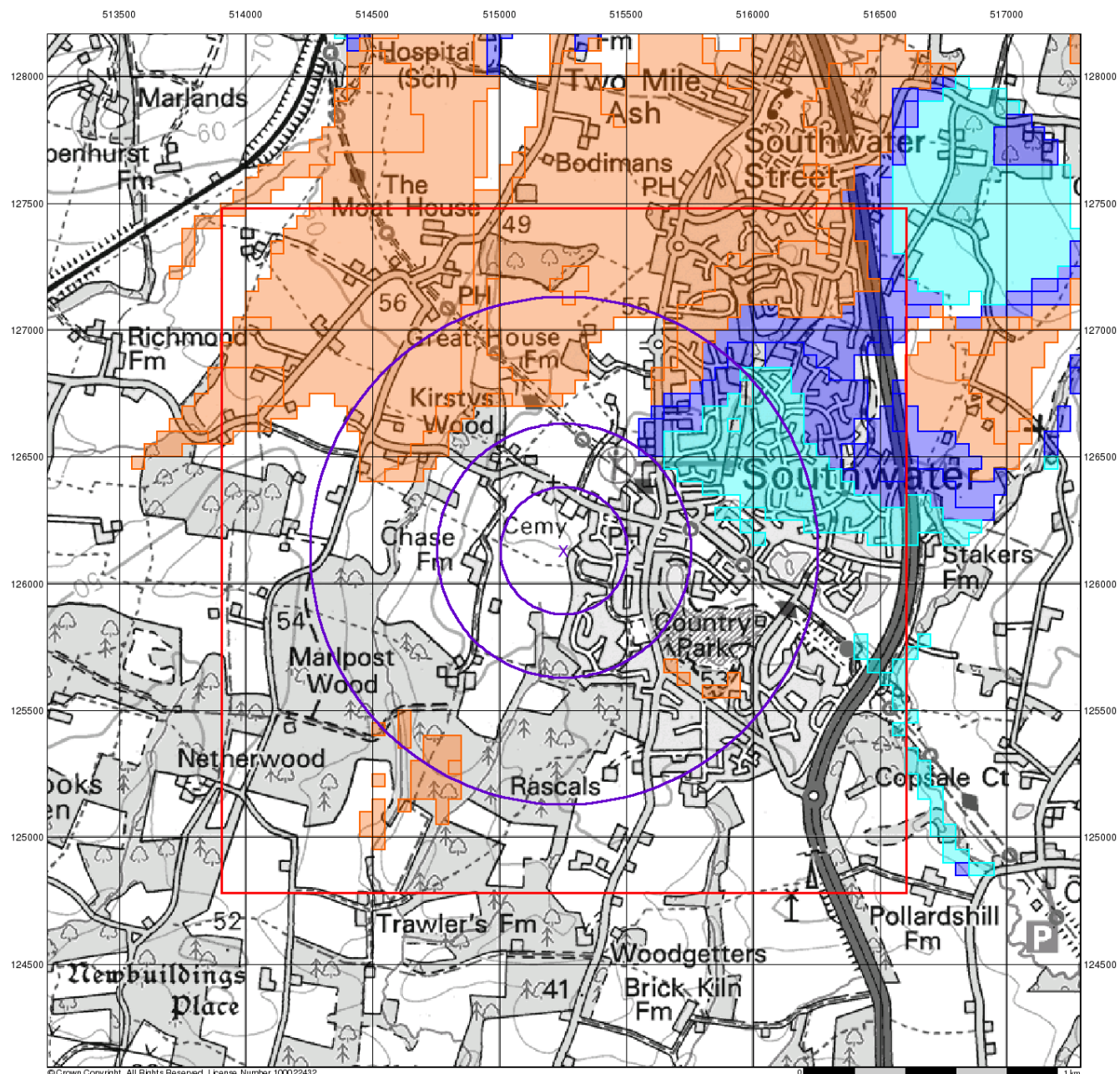
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 Customer Ref: GE16302
 National Grid Reference: 515250, 126130
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

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Geo-Environmental

BGS Flood GFS Data

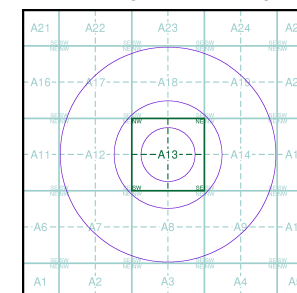
General

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

Agency and Hydrological (Flood)

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 128254283_1_1
 Customer Ref: GE16302
 National Grid Reference: 515250, 126130
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

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Geo-Environmental

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

128254283_1_1

Customer Reference:

GE16302

National Grid Reference:

515250, 126130

Slice:

A

Site Area (Ha):

0.01

Search Buffer (m):

1000

Site Details:

Southwater Sports Club, Church Lane
Southwater
HORSHAM
RH13 9BT

Client Details:

MR J Tingley
Geo Environmental Services Ltd
Unit 7 Danworth Farm
Cuckfield Road
Hurstpierpoint
West Sussex
BN6 9GL



Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	21
Hazardous Substances	-
Geological	23
Industrial Land Use	27
Sensitive Land Use	34
Data Currency	35
Data Suppliers	40
Useful Contacts	41

Introduction

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

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

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Report Version v53.0



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1			Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			6	16
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 6				3
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 6		Yes		
Pollution Incidents to Controlled Waters	pg 7			1	7
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 8				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 8				(*1)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 8	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			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
OS Water Network Lines	pg 9		6	11	88



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 21			1	
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 21	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 21			2	
Potentially Infilled Land (Non-Water)	pg 21			1	1
Potentially Infilled Land (Water)	pg 21				1
Registered Landfill Sites	pg 22			2	
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 23	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 23	Yes		Yes	Yes
BGS Recorded Mineral Sites	pg 23			1	10
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 25	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 25	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 25	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards				n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 26	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 27		8	6	33
Fuel Station Entries	pg 31				1
Points of Interest - Commercial Services	pg 31				5
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 31			6	2
Points of Interest - Public Infrastructure	pg 32		2		4
Points of Interest - Recreational and Environmental	pg 32		2		7
Gas Pipelines					
Underground Electrical Cables					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 34			2	9
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					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	474	1	515550 126500
1	Discharge Consents Operator: Mr Peter Sheppard Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: Drainage Ditch Opposite Vicarage, Church Lane, Southwater, Sussex, Rh13 9bt Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: Npswqd000946 Permit Version: 1 Effective Date: 3rd March 2008 Issued Date: 3rd March 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of The River Adur Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13NW (N)	282	2	515209 126408
1	Discharge Consents Operator: Mrs Gillian Foster Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: Drainage Ditch Opposite Vicarage, Church Lane, Southwater, Sussex, Rh13 9bt Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: Npswqd000946 Permit Version: 1 Effective Date: 3rd March 2008 Issued Date: 3rd March 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of The River Adur Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13NW (N)	282	2	515209 126408
2	Discharge Consents Operator: Mr John Forest Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Woodlands House, Shaws Lane, Southwater, Sussex, Rh13 9bx Authority: Environment Agency, Southern Region Catchment Area: Adur Reference: Npswqd006408 Permit Version: 1 Effective Date: 9th February 2009 Issued Date: 9th February 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of The Gill Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	316	2	515026 125912
2	Discharge Consents Operator: Mr John Forest Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Woodlands House Shaws Lane, Southwater, Sussex, Sussex, Rh13 9bx Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: Npswqd000837 Permit Version: 1 Effective Date: 26th February 2008 Issued Date: 26th February 2008 Revocation Date: 9th February 2009 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Land/Soakaway Environment: Receiving Water: Ground Waters Via Soakaway Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	316	2	515026 125912



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: R Lewewden Property Type: Undefined Or Other Location: Farringford, Bonfire Hill, Southwater West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P00545 Permit Version: 1 Effective Date: 1st September 1986 Issued Date: 1st September 1986 Revocation Date: Not Supplied Discharge Type: Non Water Company (Private) Sewage 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	A13NW (NW)	420	2	514950 126420
4	Discharge Consents Operator: The Occupier Property Type: Undefined Or Other Location: College Wood Estate, Southwater, Horsham, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02085 Permit Version: 1 Effective Date: 1st May 1972 Issued Date: 1st May 1972 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	A8NW (S)	426	2	515140 125720
5	Discharge Consents Operator: John Aubrey Fletcher'S Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: College Farm, Southwater, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P06513 Permit Version: 1 Effective Date: 28th January 1997 Issued Date: 28th January 1997 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	513	2	515480 126590
6	Discharge Consents Operator: Mr And Mrs E Jegla Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Adj Woodlands House, Southwater New House, Adj Woodlands House, Shaws Lane, Southwater, West Sussex, Rh13 9bx Authority: Environment Agency, Southern Region Catchment Area: Adur Reference: P11167 Permit Version: 1 Effective Date: 25th March 2003 Issued Date: 25th March 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Onto Land/Into Watercourse Environment: Receiving Water: Unnamed Trib Of River Adur Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A8NW (SW)	535	2	514950 125690



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Discharge Consents Operator: Southern Water Services Ltd (S) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Little Bridges Close, Station Road, Southwater West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: W00472 Permit Version: 1 Effective Date: 19th May 1976 Issued Date: 19th May 1976 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow 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	A14NW (E)	577	2	515810 126280
7	Discharge Consents Operator: Southern Water Services Ltd Property Type: Not Given Location: H Baker And Sons Yard, Station Road, Southwater, HORSHAM , West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: 62/1/1040 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 16th March 1972 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Storm Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Not Supplied Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NW (E)	594	2	515830 126270
7	Discharge Consents Operator: Fao Mr C T Barnes Property Type: CONSTRUCTION OF BUILDINGS Location: Station Road, Southwater, Horsham, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01399 Permit Version: 1 Effective Date: 14th January 1974 Issued Date: 14th January 1974 Revocation Date: 1st April 1997 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 100m	A14NW (E)	613	2	515850 126270
8	Discharge Consents Operator: Mr R P N Izon Property Type: Not Given Location: Etaps, Bonfire Hill, Southwater, HORSHAM, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P.5782/S/CH/95 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 21st April 1995 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Treated Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Not Supplied Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	588	2	514900 126600



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	Discharge Consents Operator: Mr N P & Mrs P C Goward Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 1 Brookside Cottage, Bonfire Hill, Southwater, Horsham, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P05512 Permit Version: 1 Effective Date: 16th September 1994 Issued Date: 16th September 1994 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company 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	A17SE (NW)	625	2	514750 126500
10	Discharge Consents Operator: Mr M J Day Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Birchwood Cottages, Shaws Lane, Southwater, Horsham Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P05560 Permit Version: 1 Effective Date: 31st October 1994 Issued Date: 31st October 1994 Revocation Date: 31st March 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company 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	A7NE (SW)	626	2	514800 125700
11	Discharge Consents Operator: Sir John Aubrey Fletcher, Esq. Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: New Farm Cottage,, Greathouse Farm,, Southwater,, Sussex. Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N03156 Permit Version: 1 Effective Date: 20th April 1979 Issued Date: 20th April 1979 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Into Land Environment: Receiving Water: Into Land Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A18NE (N)	692	2	515380 126810
12	Discharge Consents Operator: Croudace Ltd. Property Type: Undefined Or Other Location: Land Adjacent To Worthing Road, & Station Road, Southwater , Nr Horsham West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: S02060 Permit Version: 1 Effective Date: 25th January 1972 Issued Date: 25th January 1972 Revocation Date: 1st July 1991 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	A14NW (E)	705	2	515920 126360



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	Discharge Consents Operator: Mr&Mrs Sarjant & Mr&Mrs Holding Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Oakwood & Birchwood House, Shaws Lane, Southwater, Shoreham Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P06826 Permit Version: 1 Effective Date: 16th June 1997 Issued Date: 16th June 1997 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	753	2	514720 125600
13	Discharge Consents Operator: The Occupier Property Type: KENNEL/DRY CLEANING/HAIRDRESSER/OTHER PERSONAL SERVICES Location: Carpenters Kennels, Shaws Lane, Southwater West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P00310 Permit Version: 1 Effective Date: 23rd January 1986 Issued Date: 23rd January 1986 Revocation Date: 28th February 1997 Discharge Type: Non Water Company (Private) Sewage 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	A7NE (SW)	753	2	514720 125600
14	Discharge Consents Operator: Mr M A Ellis Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Marlpot Meadows, Southwater Marlpot Meadows, Bonfire Hill, Southwater, West Sussex, Rh13 7bu Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N02833 Permit Version: 1 Effective Date: 26th April 1979 Issued Date: 26th April 1979 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Into Land Environment: Receiving Water: Into Land Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	840	2	514510 126520
15	Discharge Consents Operator: Southern Water Services Ltd (S) Property Type: CONSTRUCTION OF BUILDINGS Location: Residential Development, Castle Wood, Southwater West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: A00600 Permit Version: 1 Effective Date: 28th April 1986 Issued Date: 28th April 1986 Revocation Date: 30th May 1997 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 100m	A14SE (E)	908	2	516160 126090



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	Discharge Consents Operator: Mrs Ellis Property Type: FARMS (NOT HOUSE)/CROP + ANIMAL REARING/PLANT NURSERY Location: Linden Farm, Marlpost Road, Southover, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Adur Reference: P10083 Permit Version: 2 Effective Date: 16th October 2002 Issued Date: 30th January 2002 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Into Land Environment: Receiving Water: Into Land Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A12NW (W)	933	2	514350 126360
17	Discharge Consents Operator: Mr J Gee, Leisure Services Manager Property Type: Undefined Or Other Location: Castlewood Claypit, Off Reeds Lane & Station Road, Southwater, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: S01565 Permit Version: 1 Effective Date: 30th March 1967 Issued Date: 30th March 1967 Revocation Date: 11th May 1995 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	A14SE (E)	945	2	516190 126010
18	Local Authority Pollution Prevention and Controls Name: Revival Location: 5 Lintot Square, Southwater, Horsham, Rh13 9la Authority: Horsham District Council, Environmental Health Department Permit Reference: EPR41 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Manually positioned to the address or location	A14NW (NE)	541	3	515747 126352
19	Local Authority Pollution Prevention and Controls Name: Godfrey'S Of Horsham Location: Worthing Road, Southwater, HORSHAM, West Sussex, RH13 7HA Authority: Horsham District Council, Environmental Health Department Permit Reference: WOB2 Dated: 15th June 1992 Process Type: Local Authority Air Pollution Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input Status: Permitted Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	707	3	515664 126706
19	Local Authority Pollution Prevention and Controls Name: Godfey's Of Horsham Location: Worthing Road, Southwater, HORSHAM, West Sussex, RH13 7HA Authority: Horsham District Council, Environmental Health Department Permit Reference: PSS/19 Dated: 22nd February 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Automatically positioned to the address	A19SW (NE)	723	3	515683 126712
	Nearest Surface Water Feature	A13SW (SW)	136	-	515151 126041



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Tributary Of River Adur, Worthing Road, SOUTHWATER Authority: Environment Agency, Southern Region Pollutant: Storm Sewage Note: Sewage Surcharging At Manhole; Water Company Sewage: Foul Sewer Incident Date: 26th January 1995 Incident Reference: 1187 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	A13NE (NE)	300	2	515500 126300
21	Pollution Incidents to Controlled Waters Property Type: Private Sewage (Non-PLC): Other Location: Tributary Of River Adur, Little Bridges Authority: Environment Agency, Southern Region Pollutant: Crude Sewage Note: Bed Of Stream Gone A Funny Colour; Private Sewage (Non-Plc): Other Incident Date: 23rd November 1994 Incident Reference: 1129 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	A14NW (E)	651	2	515900 126200
22	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Tributary To Castle Pond, Souhwater Authority: Environment Agency, Southern Region Pollutant: Chemicals - Detergents/Surfactant Note: Detegent In Stream/Froth On Water; Miscellaneous Premises: Unknown Incident Date: 22nd April 1995 Incident Reference: 1312 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Industrial Chemicals Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	669	2	515900 126300
23	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Rising Main Location: Stakers Farm, SOUTHWATER Authority: Environment Agency, Southern Region Pollutant: Surcharged Sewage Note: Burst Rising Main Incident Date: 7th February 1998 Incident Reference: 2426 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	A14SE (E)	758	2	516000 126000
24	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Pevensey Road, SOUTHWATER Authority: Environment Agency, Southern Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Stream Running White; Construction Incident Date: 12th June 1995 Incident Reference: 1335 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	A19SE (NE)	789	2	515950 126500
25	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Castle Lake, Southwater Country Park Authority: Environment Agency, Southern Region Pollutant: Oils - Other Oil Note: Oil In Lake; Domestic/Residential Incident Date: 24th March 1995 Incident Reference: 1260 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	A14SE (E)	847	2	516100 126100



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Castlewood Lake, SOUTHWATER Authority: Environment Agency, Southern Region Pollutant: Crude Sewage Note: Sewage Getting Into Lake; Water Company Sewage: Surface Water Outfall Incident Date: 25th November 1994 Incident Reference: 1133 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	A14SE (E)	947	2	516200 126100
27	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Woodland Ditch, SOUTHWATER Authority: Environment Agency, Southern Region Pollutant: Sewage - Treated Effluent Note: Discharge Of Effluent To Ditch Incident Date: 26th March 1992 Incident Reference: 335 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Sewage - Other Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	981	2	515790 125310
	River Quality Name: Blakes Gill GQA Grade: River Quality B Reach: Adur West Conf - Southwater Estimated Distance (km): 7.6 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A14NW (E)	601	2	515824 126319
	Water Abstractions Operator: M Ford, Esq Licence Number: 332503 Permit Version: Not Supplied Location: Butlers Gill, Tributary Of The Adur, SOUTHWATER Authority: Environment Agency, Southern Region Abstraction: Impounding Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Tributary Blakes Gill Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15NE (E)	1472	2	516700 126400
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 45 West Sussex and Surrey Scale: 1:100,000	A13NE (NE)	0	2	515254 126130
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13NE (NE)	0	1	515254 126130
	Superficial Aquifer Designations No Data Available				
	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				



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Defences None				
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 84.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	136	4	515151 126041
29	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 40.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	209	4	515131 125962
30	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 6.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	221	4	515160 125930
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	224	4	515153 125931
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	230	4	515153 125924
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 184.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	234	4	515152 125920
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 64.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (N)	297	4	515357 126408
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	325	4	515421 126409
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 108.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	331	4	515430 126409



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 17.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	391	4	515150 125754
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 46.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SE (W)	400	4	514854 126128
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	406	4	515152 125738
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	420	4	515159 125722
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 134.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	422	4	515159 125720
42	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 13.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	443	4	514812 126146
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 156.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	456	4	514798 126146
44	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 136.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (E)	458	4	515703 126043
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 274.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (E)	509	4	515754 126042



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 7.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (SE)	513	4	515718 125912
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 235.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 2	A14SW (SE)	513	4	515718 125912
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 243.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SE (SW)	514	4	514821 125852
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 96.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (SE)	518	4	515720 125905
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	533	4	515151 125608
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 140.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	536	4	515147 125606
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SE (SW)	559	4	514754 125881
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 22.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SE (SW)	563	4	514749 125882
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 100.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SE (SW)	580	4	514727 125888



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 185.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SE (SW)	580	4	514727 125888
56	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 82.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (SE)	601	4	515773 125829
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 629.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Marlpost Gill Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	605	4	514682 126326
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	612	4	514642 126144
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 210.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	613	4	514778 126517
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	632	4	515870 126266
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	634	4	514747 126510
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	643	4	515063 125516
63	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 337.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	646	4	515064 125513



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	667	4	514805 126623
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	667	4	514808 126626
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	669	4	514812 126632
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 176.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	669	4	514813 126633
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 39.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	670	4	515901 126303
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 68.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (NW)	675	4	514991 126752
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 75.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Marlpost Gill Catchment Name: Adur and Teville Primacy: 1	A12SE (W)	675	4	514582 126060
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	681	4	515035 126775
72	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 34.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 2	A9NW (SE)	682	4	515796 125718



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 95.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (SE)	682	4	515849 125799
74	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 97.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (SE)	682	4	515849 125799
75	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 46.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	682	4	515037 126777
76	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 19.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (NW)	687	4	514977 126758
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 84.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (NW)	690	4	514958 126753
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 140.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	690	4	515924 126290
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 228.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	691	4	515927 126283
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 100.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NW (N)	701	4	515072 126807
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 35.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	705	4	515788 126589



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 27.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SW (W)	705	4	514561 126001
83	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 19.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A9NW (SE)	714	4	515827 125706
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 407.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pondfarm Gill Catchment Name: Adur and Teville Primacy: 1	A14NW (NE)	715	4	515903 126427
85	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 20.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	720	4	514876 126743
86	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 95.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A9NW (SE)	723	4	515823 125687
87	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 114.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Gill Catchment Name: Adur and Teville Primacy: 1	A12SW (W)	725	4	514539 126010
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 72.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NW (N)	729	4	515161 126853
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SW (W)	735	4	514549 125925
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	735	4	514872 126758



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	736	4	515802 126621
92	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 136.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	738	4	514870 126761
93	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 33.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SW (W)	740	4	514542 125928
94	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 83.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	746	4	515807 126630
95	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 177.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Gill Catchment Name: Adur and Teville Primacy: 1	A12SW (W)	765	4	514513 125943
96	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NW (N)	775	4	515211 126904
97	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NW (N)	778	4	515222 126907
98	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 35.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NW (N)	785	4	515232 126915
99	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	811	4	515255 126941



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 71.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	817	4	515261 126947
101	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17NE (NW)	831	4	514913 126888
102	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 69.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17NE (NW)	833	4	514914 126890
103	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 31.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NE (E)	834	4	516087 126149
104	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 470.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	841	4	514487 125786
105	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 154.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	846	4	516099 126122
106	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 391.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SW (W)	850	4	514468 125807
107	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	862	4	515317 126989
108	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	869	4	515333 126996



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 12.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	875	4	515340 127001
110	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 166.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	886	4	515094 125259
111	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 37.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17NE (NW)	886	4	514908 126946
112	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 36.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	893	4	516146 126128
113	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 17.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	917	4	516170 126102
114	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 18.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	917	4	516170 126102
115	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 132.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17NE (N)	922	4	514905 126983
116	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 106.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SW (NW)	925	4	514530 126706
117	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 71.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	928	4	516180 126082



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
118	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 63.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	928	4	516180 126086
119	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 89.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	931	4	516184 126113
120	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 26.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	931	4	516177 126015
121	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 576.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NE (SW)	941	4	514595 125459
122	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NE (SW)	948	4	514585 125459
123	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 166.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pondfarm Gill Catchment Name: Adur and Teville Primacy: 1	A19SE (NE)	955	4	515974 126757
124	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	955	4	516200 126009
125	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 490.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	955	4	514940 125229
126	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SE (NE)	955	4	515974 126757



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
127	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	958	4	516203 126007
128	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 75.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	961	4	516193 125929
129	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 367.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NE (E)	968	4	516220 126189
130	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	968	4	516213 126001
131	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 79.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	980	4	516223 125993
132	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19NW (NE)	997	4	515665 127038



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
133	Historical Landfill Sites Licence Holder: George Lee Location: College Farm, Southwater, Sussex Name: Disused Railway Cutting Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD20367 First Input Date: 31st December 1974 Last Input Date: 20th May 1986 Specified Waste: Deposited Waste included Inert and Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 3800/8045 BGS Ref: Not Supplied Other Ref: 3/BK/84, 3/AB/77, WD13/8, WD27/201	A18SE (N)	413	2	515391 126519
	Local Authority Landfill Coverage Name: Horsham District Council - Has supplied landfill data		0	3	515254 126130
	Local Authority Landfill Coverage Name: West Sussex County Council - Has supplied landfill data		0	5	515254 126130
134	Local Authority Recorded Landfill Sites Location: Disused Railway Cutting, Southwater Reference: 27/201 Authority: Horsham District Council, Environmental Health Department Last Reported Status: Not Supplied Types of Waste: Industrial Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A13NE (NE)	387	3	515500 126429
135	Local Authority Recorded Landfill Sites Location: College Farm, Southwater Reference: HR/46/78 Authority: West Sussex County Council, Environment & Development Last Reported Status: Not Supplied Types of Waste: Commercial Industrial And Non-Putrescible Household Waste Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A18SE (N)	413	5	515391 126519
136	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14SW (E)	360	-	515599 126033
137	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14SW (E)	668	-	515921 126113
138	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1912	A17NW (NW)	999	-	514518 126805



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	Registered Landfill Sites Licence Holder: G Lee Licence Reference: 3/BK/84 Site Location: Disused Railway Cutting, Southwater, Horsham, West Sussex Licence Easting: 515320 Licence Northing: 126600 Operator Location: 72 Highland Road, Horsham, West Sussex Authority: Environment Agency - Southern Region, Sussex Area Site Category: Landfill - Railway cutting Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 21st May 1984 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Excavated Natural Materials \$ Hardcore And Rubble Inert Waste Prohibited Waste: Biodegradable/Putrescible Waste Garden/Horticultural Waste Paper/Cardboard Waste Poisonous, Noxious, Polluting Wastes Wood Waste/Timber	A18SE (N)	475	2	515320 126600
139	Registered Landfill Sites Licence Holder: Dales Of Crawley Ltd Licence Reference: 3/AB/77 Site Location: Disused Railway Cutting, Southwater, Horsham, West Sussex Licence Easting: 515320 Licence Northing: 126600 Operator Location: Spindle Way, Crawley, West Sussex Authority: Environment Agency - Southern Region, Sussex Area Site Category: Landfill - Railway cutting Max Input Rate: Undefined Waste Source: Only waste produced on site Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 13th June 1977 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Constr'N/Demol. Inert/Non-Haz/Non-Tox Excavated Natural Materials \$ Road Making Materials	A18SE (N)	475	2	515320 126600



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Wealden Group	A13NE (NE)	0	1	515254 126130
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13NE (NE)	0	1	515254 126130
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A8NE (SE)	478	1	515577 125779
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A7NE (SW)	809	1	514683 125558
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A7SE (SW)	839	1	514836 125403
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A7NW (SW)	977	1	514511 125496
140	BGS Recorded Mineral Sites Site Name: Southwater Brick & Tile Works Location: , Southwater, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126758 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Weald Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14SW (E)	484	1	515724 126017



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
141	BGS Recorded Mineral Sites Site Name: Oakwood House Pit Location: Oakwood House, Southwater, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126749 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Weald Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	585	1	515019 126666
142	BGS Recorded Mineral Sites Site Name: Southwater Brickworks Location: , Southwater, Horsham, West Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 4617 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Weald Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	627	1	515795 125815
143	BGS Recorded Mineral Sites Site Name: Ford'S Brickyard Location: , Southwater, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126757 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Weald Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	633	1	514847 126615
144	BGS Recorded Mineral Sites Site Name: Swains Cottages Pits Location: Swains, Two Mile Ash, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126744 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Horsham Stone Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	734	1	514771 126683
145	BGS Recorded Mineral Sites Site Name: Greathouse Farm Location: Great House Farm, Southwater, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126750 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Horsham Stone Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NE (N)	818	1	515270 126948
146	BGS Recorded Mineral Sites Site Name: Swains Cottages Pits Location: Swains, Two Mile Ash, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126748 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Horsham Stone Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	855	1	514557 126626



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
147	BGS Recorded Mineral Sites Site Name: Marlpost Farm Pit Location: Marlpost Farm, Two Mile Ash, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126747 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Horsham Stone Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	862	1	514492 126533
148	BGS Recorded Mineral Sites Site Name: Southwater Brickworks Location: , Southwater, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126759 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Weald Clay Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14SE (E)	897	1	516149 126090
149	BGS Recorded Mineral Sites Site Name: Lawson'S Farm Stone Pit Location: Lawson'S Farmtwo Mile Ash Road, Two Mile Ash, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126742 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Horsham Stone Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A17NW (NW)	986	1	514561 126832
149	BGS Recorded Mineral Sites Site Name: Marlhurst Stone Pits Location: , Two Mile Ash, Horsham, Sussex Source: British Geological Survey, National Geoscience Information Service Reference: 126741 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Cretaceous Geology: Horsham Stone Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	991	1	514525 126802
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	515254 126130
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	515254 126130
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	515254 126130
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	515254 126130
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	515254 126130



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	515254 126130
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	515254 126130
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	515254 126130
	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	1	515254 126130



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
150	Contemporary Trade Directory Entries Name: G P Oven Cleaners Location: 44, Ash Road, Southwater, Horsham, West Sussex, RH13 9EJ Classification: Oven cleaning Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	91	-	515318 126066
151	Contemporary Trade Directory Entries Name: A & H Auto Repairs Location: 66, Ash Road, Southwater, Horsham, West Sussex, RH13 9DD Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	180	-	515358 125984
152	Contemporary Trade Directory Entries Name: Grange Domestic Services Location: 114, Woodlands Way, Southwater, Horsham, West Sussex, RH13 7DR Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (S)	197	-	515309 125942
152	Contemporary Trade Directory Entries Name: Grange Domestic Services Location: 114, Woodlands Way, Southwater, Horsham, West Sussex, RH13 9DR Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (S)	197	-	515309 125942
152	Contemporary Trade Directory Entries Name: Grange Domestic Services Location: 114, Woodlands Way, Southwater, Horsham, West Sussex, RH13 9DR Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (S)	197	-	515309 125942
152	Contemporary Trade Directory Entries Name: Grange Domestic Services Location: 114, Woodlands Way, Southwater, Horsham, West Sussex, RH13 9DR Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (S)	197	-	515309 125942
152	Contemporary Trade Directory Entries Name: Grange Location: 114, Woodlands Way, Southwater, Horsham, West Sussex, RH13 9DR Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (S)	197	-	515309 125942
152	Contemporary Trade Directory Entries Name: Grange Domestic Services Location: 114, Woodlands Way, Southwater, Horsham, West Sussex, RH13 9DR Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (S)	197	-	515309 125942
153	Contemporary Trade Directory Entries Name: Jac Air Conditioning Location: 67, College Road, Southwater, Horsham, West Sussex, RH13 9TQ Classification: Air Conditioning & Refrigeration Contractors Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	262	-	515465 125976
153	Contemporary Trade Directory Entries Name: Jac Air Conditioning Location: 67, College Road, Southwater, Horsham, West Sussex, RH13 9TQ Classification: Air Conditioning & Refrigeration Contractors Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (SE)	262	-	515465 125976
153	Contemporary Trade Directory Entries Name: The Tyre Booth Location: 119, College Road, Southwater, Horsham, West Sussex, RH13 9TJ Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	296	-	515467 125927
154	Contemporary Trade Directory Entries Name: Aqs Manufacturing Ltd Location: Sunny View, Worthing Road, Southwater, Horsham, West Sussex, RH13 9HG Classification: Medical Equipment Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	339	-	515547 125962



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
155	Contemporary Trade Directory Entries Name: Smith Carpet Cleaners Location: 161, Woodlands Way, Southwater, Horsham, West Sussex, RH13 9DS Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (SE)	340	-	515385 125818
156	Contemporary Trade Directory Entries Name: Emperors Blade Location: 67, Woodlands Way, Southwater, Horsham, West Sussex, RH13 9TF Classification: Tool Sharpening, Repairing & Servicing Status: Active Positional Accuracy: Automatically positioned to the address	A13SE (SE)	380	-	515433 125796
157	Contemporary Trade Directory Entries Name: Guildford Tyre Co Ltd Location: Unit 27 Southwater Indust Est, Station Rd, Southwater, Horsham, West Sussex, RH13 7HQ Classification: Tyre Dealers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A14NW (E)	516	-	515746 126284
157	Contemporary Trade Directory Entries Name: Crosdil Leisure Location: Unit 27, Station Road Industrial Estate, Southwater, Horsham, West Sussex, RH13 9UD Classification: Swimming Pool Contractors, Repairers & Service Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	517	-	515747 126285
157	Contemporary Trade Directory Entries Name: A D Troy Location: Unit 28, Station Road Industrial Estate, Southwater, Horsham, West Sussex, RH13 7TN Classification: Jewellery Manufacturers & Repairers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	521	-	515757 126262
158	Contemporary Trade Directory Entries Name: The Period Home Co Ltd Location: Unit 3, Station Rd Ind Est, Southwater, Horsham, West Sussex, RH13 9UD Classification: Window Frames - Sales & Service Status: Inactive Positional Accuracy: Manually positioned to the address or location	A14NW (NE)	535	-	515738 126356
158	Contemporary Trade Directory Entries Name: Revival Dry Cleaners Location: 5, Lintot Square, Fairbank Road, Southwater, Horsham, West Sussex, RH13 9LA Classification: Dry Cleaners Status: Active Positional Accuracy: Automatically positioned to the address	A14NW (NE)	543	-	515747 126355
158	Contemporary Trade Directory Entries Name: Mainline Flooring Ltd Location: Unit 9, Station Road Industrial Estate, Southwater, Horsham, West Sussex, RH13 9UD Classification: Floorcoverings - Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (NE)	583	-	515791 126355
159	Contemporary Trade Directory Entries Name: Pyzer Cleaning Services Location: 20, Station Road, Southwater, Horsham, West Sussex, RH13 9HQ Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address	A14NW (E)	549	-	515795 126219
160	Contemporary Trade Directory Entries Name: Idexx Laboratories Location: Unit 9/11, Station Road Industrial Estate, Southwater, Horsham, West Sussex, RH13 9TZ Classification: Laboratories Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	590	-	515799 126355
161	Contemporary Trade Directory Entries Name: C & C Pumps Location: 5, Anvil Close, Southwater, Horsham, West Sussex, RH13 9HD Classification: Pumps - Sales, Servicing & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (NE)	597	-	515760 126446



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
161	Contemporary Trade Directory Entries Name: Thrust Boring Services Location: 8, Anvil Close, Southwater, Horsham, West Sussex, RH13 9HD Classification: Drilling & Boring Equipment & Supplies Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	621	-	515774 126468
162	Contemporary Trade Directory Entries Name: Z-Guard Zinc Anodes Ltd Location: Southwater Business Park, Worthing Rd, Southwater, Horsham, West Sussex, RH13 7HE Classification: Marine Equipment & Supplies Status: Inactive Positional Accuracy: Manually positioned to the address or location	A14SW (E)	597	-	515848 126082
162	Contemporary Trade Directory Entries Name: Plysolene Ltd Location: Southwater Business Park, Worthing Rd, Southwater, Horsham, West Sussex, RH13 7HE Classification: Rubber & Plastic Products - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (E)	604	-	515854 126074
163	Contemporary Trade Directory Entries Name: Carpetcare South East Location: 36, Beechwood, Southwater, Horsham, West Sussex, RH13 9JU Classification: Carpet, Curtain & Upholstery Cleaners Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	603	-	515622 125654
164	Contemporary Trade Directory Entries Name: Builders Centre Location: Station Road, Southwater, Horsham, West Sussex, RH13 9TL Classification: Builders' Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	605	-	515843 126265
164	Contemporary Trade Directory Entries Name: Fluid Interface Location: 29f Station Road Indust Est, Southwater, Horsham, West Sussex, RH13 7UD Classification: Hydraulic Equipment & Accessories - Sales & Service Status: Inactive Positional Accuracy: Manually positioned to the address or location	A14NW (E)	611	-	515840 126300
165	Contemporary Trade Directory Entries Name: Bw Marine Location: 1, Birchwood Cottages, Shaws Lane, Southwater, Horsham, West Sussex, RH13 9BX Classification: Boatbuilders & Repairers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	626	-	514845 125656
166	Contemporary Trade Directory Entries Name: Ukp Ltd Location: Unit 32, Station Road Industrial Estate, Southwater, Horsham, West Sussex, RH13 9UD Classification: Insulation Materials Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	633	-	515845 126355
166	Contemporary Trade Directory Entries Name: U K P Location: Unit 32, Station Road Industrial Estate, Southwater, Horsham, West Sussex, RH13 9UD Classification: Insulation Materials Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	633	-	515845 126355
166	Contemporary Trade Directory Entries Name: Kar Aid Location: Unit 34, Station Road Industrial Estate, Southwater, Horsham, West Sussex, RH13 9UD Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	648	-	515861 126355
166	Contemporary Trade Directory Entries Name: Derek Lee Location: Unit 34, Station Road Industrial Estate, Southwater, Horsham, West Sussex, RH13 7UD Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	648	-	515861 126355



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
167	Contemporary Trade Directory Entries Name: Sony D A D C Location: Southwater Business Park, Worthing Road, Southwater, Horsham, RH13 9YT Classification: Record, Tape & CD Manufacturers & Wholesalers Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	713	-	515953 125993
168	Contemporary Trade Directory Entries Name: Texaco Location: Worthing Road, Southwater, Horsham, West Sussex, RH13 9HA Classification: Petrol Filling Stations Status: Active Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	721	-	515682 126710
168	Contemporary Trade Directory Entries Name: Godfreys Of Horsham Location: Worthing Road, Southwater, Horsham, West Sussex, RH13 9HA Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	724	-	515684 126713
168	Contemporary Trade Directory Entries Name: Godfreys Mazda Location: Worthing Road, Southwater, Horsham, West Sussex, RH13 9HA Classification: Car Dealers Status: Active Positional Accuracy: Automatically positioned to the address	A19SW (NE)	724	-	515684 126713
169	Contemporary Trade Directory Entries Name: Euromec Ltd Location: Fordell, Shipley Road, Southwater, Horsham, West Sussex, RH13 7BG Classification: Floor Cleaning & Polishing Equipment - Manufacturers & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	765	-	515644 125473
170	Contemporary Trade Directory Entries Name: Tops Location: 5, Lakeside Drive, Southwater, Horsham, West Sussex, RH13 9TR Classification: Printers Textile Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NE (E)	799	-	516052 126153
170	Contemporary Trade Directory Entries Name: Tops Location: 5, Lakeside Drive, Southwater, Horsham, West Sussex, RH13 9TR Classification: T-Shirts Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NE (E)	799	-	516052 126153
171	Contemporary Trade Directory Entries Name: Auto Mobile-Paints Location: 14, Foxes Close, Southwater, Horsham, West Sussex, RH13 9GD Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	847	-	515726 125429
172	Contemporary Trade Directory Entries Name: Amytech (Uk) Ltd Location: 10, York Close, Southwater, Horsham, West Sussex, RH13 9XJ Classification: Engineering Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NE (E)	864	-	516115 126195
173	Contemporary Trade Directory Entries Name: Moleroda Finishing Systems Ltd Location: 11, Andrews Road, Southwater, Horsham, West Sussex, RH13 7EU Classification: Abrasive Products - Manufacturers & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	909	-	515833 125431
174	Contemporary Trade Directory Entries Name: Chem-Dry Breeze Location: Wealdon Close, Southwater, Horsham, West Sussex, RH13 9HP Classification: Carpet, Curtain & Upholstery Cleaners Status: Active Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	968	-	515981 125493
174	Contemporary Trade Directory Entries Name: Alliance Communications Solutions Ltd Location: 27, Wealdon Close, Southwater, Horsham, West Sussex, RH13 9HP Classification: Telecommunications Equipment & Systems Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NE (SE)	972	-	515994 125501



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
175	Contemporary Trade Directory Entries Name: Druck Location: 44, Cedar Drive, Southwater, Horsham, West Sussex, RH13 9UW Classification: Industrial Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SE (NE)	998	-	516080 126688
176	Fuel Station Entries Name: Godfrey'S Of Horsham Location: Worthing Road, Southwater, Horsham, West Sussex, RH13 9HA Brand: Texaco Premises Type: Petrol Station Status: Open Positional Accuracy: Automatically positioned to the address	A19SW (NE)	723	-	515683 126712
177	Points of Interest - Commercial Services Name: Crystal Clear Location: 12 Smithsfield House, Station Road, Southwater, Horsham, RH13 9LP Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A14NW (NE)	501	6	515671 126407
178	Points of Interest - Commercial Services Name: Diamond Valeting & Detailing Location: 12 Cedar Drive, Southwater, Horsham, RH13 9UW Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A19NW (NE)	897	6	515712 126901
178	Points of Interest - Commercial Services Name: Diamond Valeting & Detailing Location: 12 Cedar Drive, Southwater, Horsham, RH13 9UW Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A19NW (NE)	897	6	515712 126901
179	Points of Interest - Commercial Services Name: Pass Consulting Location: 28 Wealdon Close, Southwater, Horsham, RH13 9HP Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A9NE (SE)	970	6	515999 125511
179	Points of Interest - Commercial Services Name: Pass Consulting Location: 28 Wealdon Close, Southwater, Horsham, RH13 9HP Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A9NE (SE)	970	6	515999 125510
180	Points of Interest - Manufacturing and Production Name: Tank Location: RH13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12SE (SW)	404	6	514884 125969
180	Points of Interest - Manufacturing and Production Name: Tanks Location: RH13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	406	6	514886 125960
180	Points of Interest - Manufacturing and Production Name: Tank Location: RH13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12SE (SW)	409	6	514880 125965
180	Points of Interest - Manufacturing and Production Name: Tank Location: RH13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12SE (SW)	412	6	514876 125966
180	Points of Interest - Manufacturing and Production Name: Tank Location: RH13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12SE (W)	415	6	514870 125974



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
180	Points of Interest - Manufacturing and Production Name: Tank Location: RH13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12SE (SW)	415	6	514872 125969
181	Points of Interest - Manufacturing and Production Name: The Southwqter Industrial Estate Location: RH13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	554	6	515771 126327
182	Points of Interest - Manufacturing and Production Name: Southwater Business Park Location: RH13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	653	6	515882 125953
183	Points of Interest - Public Infrastructure Name: Graveyard Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A13NE (N)	165	6	515293 126290
183	Points of Interest - Public Infrastructure Name: Graveyard Location: RH13 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A13NE (N)	167	6	515299 126291
184	Points of Interest - Public Infrastructure Name: Southwater Community Police Office Location: Beeson House, Lintot Square, Fairbank Road, Southwater, Horsham, RH13 Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A14NW (E)	620	6	515842 126325
185	Points of Interest - Public Infrastructure Name: Texaco Location: Worthing Road, Southwater, Horsham, RH13 9HA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19SW (NE)	721	6	515682 126710
185	Points of Interest - Public Infrastructure Name: Godfrey's of Horsham Location: Worthing Road, Southwater, Horsham, RH13 9HA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19SW (NE)	723	6	515683 126712
185	Points of Interest - Public Infrastructure Name: Godfrey's of Horsham Location: Worthing Road, Southwater, Horsham, RH13 9HA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19SW (NE)	724	6	515684 126713
186	Points of Interest - Recreational and Environmental Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NE (N)	222	6	515337 126336
186	Points of Interest - Recreational and Environmental Name: Play Area Location: Church Lane, RH13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NE (NE)	225	6	515344 126336
187	Points of Interest - Recreational and Environmental Name: Playground Location: Worthing Road, RH13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A9NW (SE)	620	6	515760 125773



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
188	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	840	6	515908 126657
188	Points of Interest - Recreational and Environmental Name: Playground Location: Woodhatch, RH13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A19SW (NE)	845	6	515911 126660
189	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	954	6	515824 126895
189	Points of Interest - Recreational and Environmental Name: Playground Location: Grange Way, RH13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A19NW (NE)	958	6	515828 126896
190	Points of Interest - Recreational and Environmental Name: Playground Location: Cedar Drive, RH13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A19NW (NE)	962	6	515917 126826
190	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19NE (NE)	968	6	515930 126822



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
191	Ancient Woodland Name: Well Field Reference: 1478065 Area(m ²): 5049.97 Type: Ancient and Semi-Natural Woodland	A13SW (S)	273	7	515159 125875
192	Ancient Woodland Name: Not Supplied Reference: 1478992 Area(m ²): 571433.72 Type: Plantation on Ancient Woodland	A8NW (S)	365	7	515236 125766
193	Ancient Woodland Name: Not Supplied Reference: 1478429 Area(m ²): 4238.84 Type: Plantation on Ancient Woodland	A12NE (W)	598	7	514690 126328
194	Ancient Woodland Name: Not Supplied Reference: 1478427 Area(m ²): 10889.9 Type: Ancient and Semi-Natural Woodland	A12NE (W)	599	7	514681 126302
195	Ancient Woodland Name: Not Supplied Reference: 1478428 Area(m ²): 2394.04 Type: Ancient and Semi-Natural Woodland	A12NE (NW)	613	7	514688 126366
196	Ancient Woodland Name: Not Supplied Reference: 1478058 Area(m ²): 3354.33 Type: Ancient and Semi-Natural Woodland	A14SW (E)	647	7	515862 125910
197	Ancient Woodland Name: Not Supplied Reference: 1478057 Area(m ²): 4958.13 Type: Ancient and Semi-Natural Woodland	A14SW (E)	675	7	515926 126083
198	Ancient Woodland Name: Not Supplied Reference: 1478528 Area(m ²): 19481.92 Type: Ancient and Semi-Natural Woodland	A14NW (NE)	690	7	515879 126420
199	Ancient Woodland Name: Not Supplied Reference: 1478066 Area(m ²): 8466.84 Type: Ancient and Semi-Natural Woodland	A12SW (W)	727	7	514541 125989
200	Ancient Woodland Name: Not Supplied Reference: 1478056 Area(m ²): 14976.87 Type: Ancient and Semi-Natural Woodland	A14NE (E)	834	7	516087 126149
201	Ancient Woodland Name: Two Mile Ash Gill Reference: 1478426 Area(m ²): 4841.36 Type: Ancient and Semi-Natural Woodland	A17NE (N)	918	7	514910 126981



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Horsham District Council - Environmental Health Department	February 2015	Annual Rolling Update
Discharge Consents Environment Agency - Southern Region	April 2017	Quarterly
Enforcement and Prohibition Notices Environment Agency - Southern Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - Southern Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region	April 2017 April 2017	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Horsham District Council - Environmental Health Department	June 2015	Annual Rolling Update
Local Authority Pollution Prevention and Controls Horsham District Council - Environmental Health Department	June 2015	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Horsham District Council - Environmental Health Department	June 2015	Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	March 2017	
Pollution Incidents to Controlled Waters Environment Agency - Southern Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Southern Region	March 2013	As notified
Prosecutions Relating to Controlled Waters Environment Agency - Southern Region	March 2013	As notified
Registered Radioactive Substances Environment Agency - Southern Region	January 2015	
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	April 2017 April 2017 April 2017	Quarterly Quarterly Quarterly
Water Abstractions Environment Agency - Southern Region	October 2016	Quarterly
Water Industry Act Referrals Environment Agency - Southern Region	April 2017	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	April 2017	Quarterly



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



Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	May 2017	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Southern Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	May 2017 May 2017 May 2017	Quarterly Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	May 2017 May 2017 May 2017	Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Horsham District Council - Environmental Health Department West Sussex County Council - Environment & Development	May 2000 May 2000	Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Horsham District Council - Environmental Health Department West Sussex County Council - Environment & Development	May 2000 May 2000	Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	March 2017	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Horsham District Council - Planning Department West Sussex County Council - Environment & Development	August 2015 October 2006	Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Horsham District Council - Planning Department West Sussex County Council - Environment & Development	August 2015 October 2006	Annual Rolling Update Annual Rolling Update



Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2017	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	March 2017	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2017	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	December 2016	Quarterly
Points of Interest - Education and Health PointX	December 2016	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2016	Quarterly
Points of Interest - Public Infrastructure PointX	December 2016	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2016	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually



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



A selection of organisations who provide data within this report

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



Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Horsham District Council - Environmental Health Department Park House, North Street, Horsham, Sussex, RH12 1RL	Telephone: 01403 215100 Fax: 01403 732790 Website: www.horsham.gov.uk
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 023 8079 2000 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	West Sussex County Council - Environment & Development County Hall, Tower hall, Chichester, West Sussex, PO19 1RH	Telephone: 01243 777100 Website: www.westsussex.gov.uk
6	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
7	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
8	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
9	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WGR	Worked Ground (Undivided)	Void	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Flandrian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WC	Weald Clay Formation	Mudstone	Barremian - Hauterivian
	WC	Weald Clay Formation	Limestone	Barremian - Hauterivian
	HST	Horsham Stone Member	Sandstone	Hauterivian - Hauterivian
	WC	Weald Clay Formation	Sandstone	Barremian - Hauterivian
		Faults		



Geo-Environmental

Geology 1:50,000 Maps

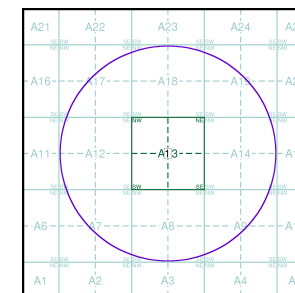
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published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

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

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	302
Map Name:	Horsham
Map Date:	1972
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A



Order Details:

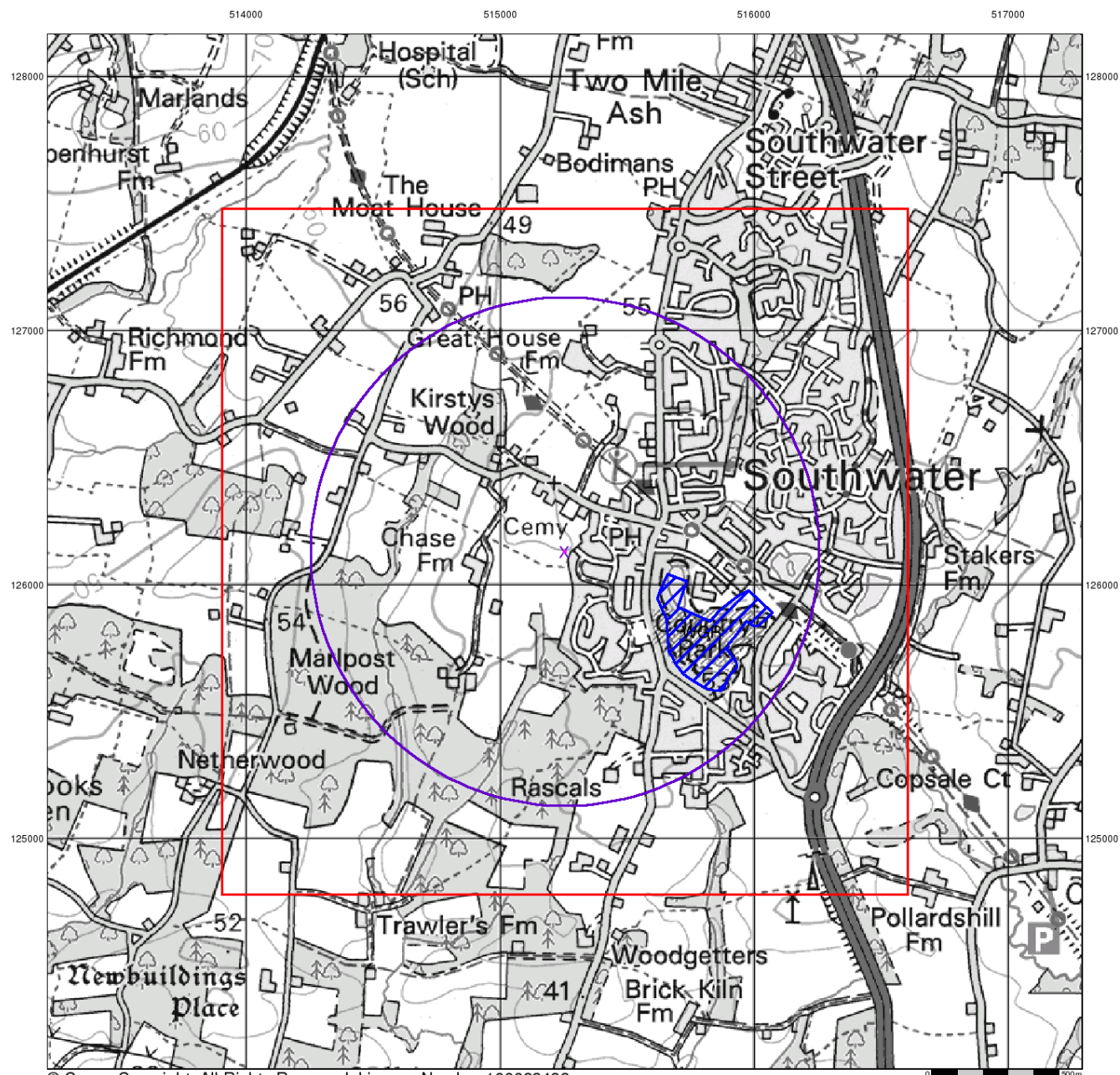
Order Number:	128254283_1_1
Customer Reference:	GE16302
National Grid Reference:	515250, 126130
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details:

Southwater Sports Club, Church Lane, Southwater, HORSHAM, RH13 9BT

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INFORMATION GROUP

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



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Geo-Environmental

Artificial Ground and Landslip

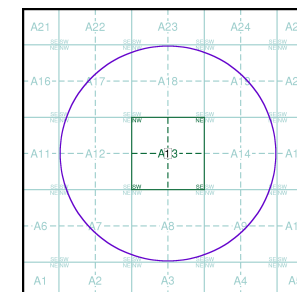
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

Artificial ground includes:

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

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

Artificial Ground and Landslip Map - Slice A



Order Details:

Order Number: 128254283_1_1
 Customer Reference: GE16302
 National Grid Reference: 515250, 126130
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details:

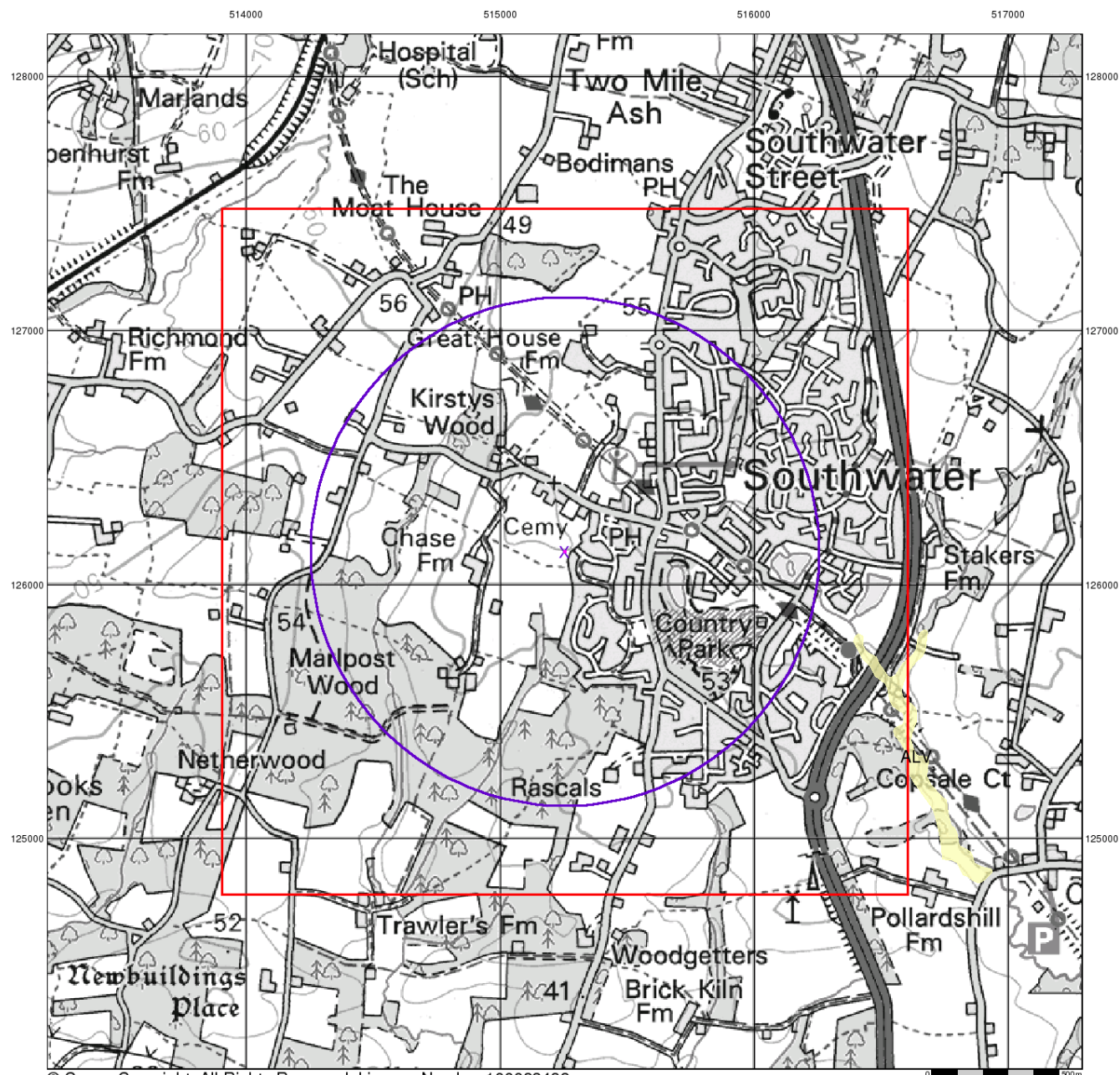
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Geo-Environmental

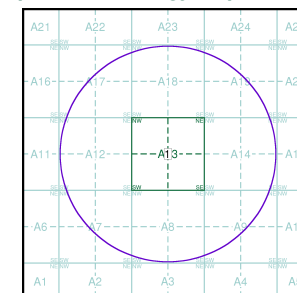
Superficial Geology

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

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

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

Superficial Geology Map - Slice A



Order Details:

Order Number: 128254283_1_1
 Customer Reference: GE16302
 National Grid Reference: 515250, 126130
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details:

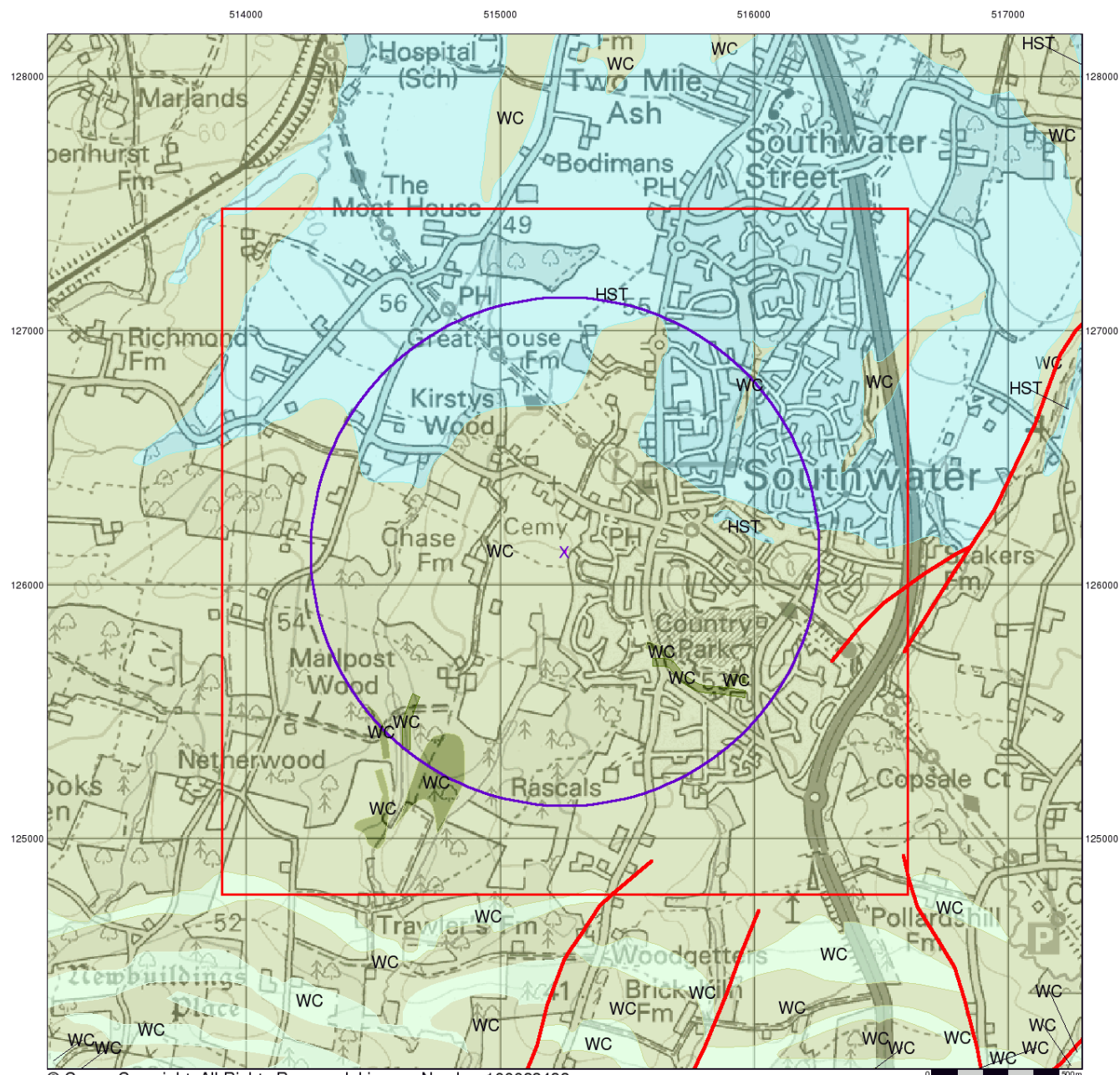
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Geo-Environmental

Bedrock and Faults

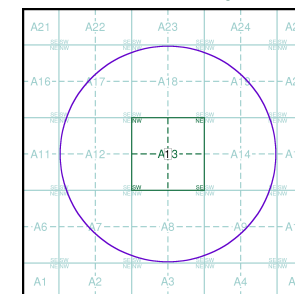
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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

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

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

Bedrock and Faults Map - Slice A



Order Details:

Order Number: 128254283_1_1
 Customer Reference: GE16302
 National Grid Reference: 515250, 126130
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details:

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