



Geo-Environmental

GROUND INVESTIGATION REPORT

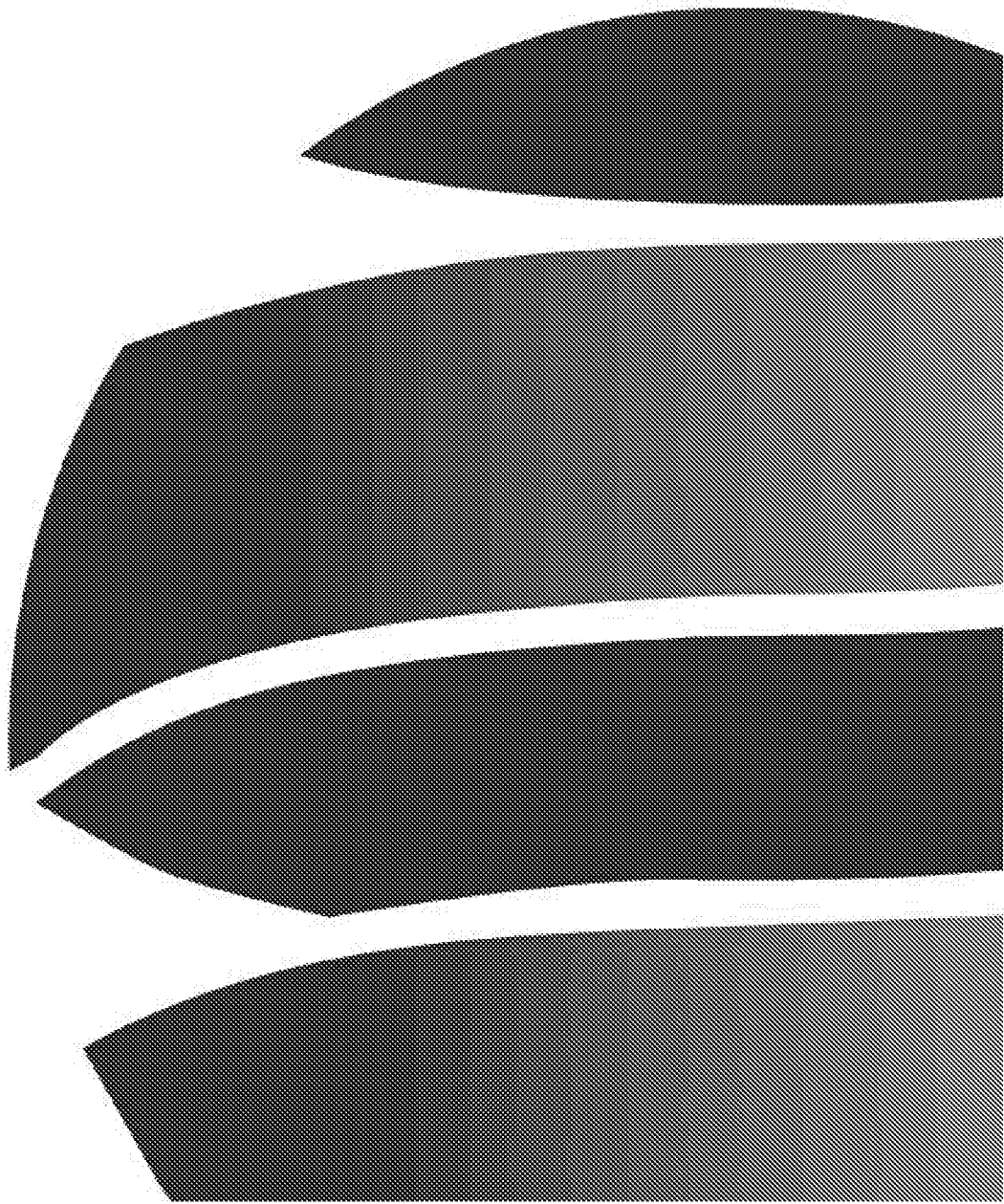
For land to the west of

HOOK LANE, WESTERGATE

WEST SUSSEX, PO20 3TE

on behalf of

METIS HOMES LIMITED





Report:	GROUND INVESTIGATION REPORT
Site:	LAND AT WEST OF HOOK LANE, WESTERGATE, WEST SUSSEX, PO20 3TE
Client:	METIS HOMES LIMITED
Date:	21/11/2018
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EXECUTIVE SUMMARY		
Site Details	Site Address	Land to the west of Hook Lane, Westergate, West Sussex, PO20 3ET
	National Grid Reference	493367, 104662
	Site Area	0.87Ha
	Form of Development	Construction of a residential development with gardens, access roads, and associated development infrastructure.
Encountered Conditions	Scope of works	The assessment incorporated a desk study to determine the site's setting to inform a preliminary risk assessment followed by an intrusive investigation to confirm the ground and groundwater conditions and support the development of a geotechnical and geo-environmental assessment.
	Ground Conditions	The ground conditions comprised a limited thickness of Topsoil and Made Ground overlying cohesive and granular soils of River Terrace Deposits overlying the London Clay Formation.
	Groundwater	During the ground investigation, groundwater seepages were encountered in most of the exploratory holes at depths ranging from 2.0m to 3.0m bgl within the River Terrace Deposits. Winter groundwater monitoring is planned to continue until March 2019
Geotechnical Considerations	Foundations	A net allowable bearing capacity of 90kPa is recommended for the medium strength clay soils of the River Terrace Deposits. Under this loading, total settlements should remain within tolerable limits, i.e. <25mm. A foundation construction strategy may be required to minimise 'constructability' risks, depending on the findings of the winter groundwater monitoring exercise.
	Excavations	Shallow excavations within the encountered Made Ground are likely to remain stable in the short term only. Deeper longer excavations within the encountered Made Ground are unlikely to remain stable and some form of temporary support or battering back to a safe angle is likely to be required. Deeper, longer excavations and any which extend in to the River Terrace Deposits are likely to be prone to instability, particularly where left open for prolonged periods or where groundwater or perched water is encountered. All excavations taken below any groundwater ingress will become highly unstable and some form of temporary support and dewatering will be necessary.
	Buried Concrete	Buried concrete for foundations should be designed to Class DS1 (AC1).
	Pavement and Subgrade	A CBR design value of 1.5% is recommended.
	Soakaways	Three soakage tests were undertaken broadly in accordance with BRE Digest 365. However there was an insufficient fall in head to calculate an infiltration rate for any of the tests undertaken. Given the presence of clay, i.e. characteristically low permeability, soils at shallow depth, testing at shallow depth was not undertaken. Based on the above results and ground conditions encountered on site, it is considered that conventional soakaways would not be suitable for discharging storm water run-off to the ground. Nonetheless, given the variability in ground conditions including clay strata and low permeability as indicated by the latest ground investigation, it is likely that rainfall infiltration in gardens could be problematic and as such, it is recommended that allowance for inclusion of land drainage is made in



		gardens to reduce the likelihood of waterlogging as gardens become established after development. An alternative drainage solution such as on-site storage and attenuation to greenfield run-off rate prior to discharge to existing ditches and watercourses under an extension of riparian rights should be considered.
Environmental Considerations	Human Health	Given that no contaminants of concern above the respective guideline values for a proposed residential land use have been identified within the natural soils, it is considered that remedial measures to protect end users are not required
	Groundwater	No evidence of mobile contamination was encountered within the soils. In the absence of any specific pollutant linkages, no risk mitigation measures are considered to be required.
	Ground Gases	No ground gas protection measures are required.
	Radon Gas	The BGS states that no radon protective measures are necessary in the construction of new dwellings or extensions on this site.
	Built Environment	The use of barrier pipe is not likely to be required for potable water supply pipes, however the water company should be contacted to confirm their requirements. In line with best practice trenches should be backfilled with clean, inert granular fill (shingle).
	Waste Disposal	Waste characterisation on test results using the CatWaste screening tool indicated that the soils would be non-hazardous waste. WAC testing was also carried out on two samples and were identified as 'inert waste'. Confirmation of these assessments should be sought from the receiving landfill facility.
Further Action: A discovery strategy should be maintained during development such that any abnormal conditions (geotechnical or potential contamination) are identified and their potential impact on the proposed development assessed prior to determining any potential mitigation measures.		
<i>This Executive Summary is intended to provide a brief summary of the main findings and conclusions of the investigation. For detailed information, the reader is referred to the main report ref. GE17712-GIR-NOV18.</i>		



1.0 INTRODUCTION

1.1 General

Geo-Environmental Services Limited was instructed by Metis Homes Ltd to undertake an investigation of the geotechnical and geo-environmental factors pertaining to the proposed residential development at land to the west of Hook Lane, Westergate, West Sussex, PO20 3ET. The site's location is presented in Figure 1.

1.2 Form of Development

It was understood that the site is proposed to be developed with houses, private gardens, access roads and associated 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 a preliminary 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 preliminary 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 Environmental Protection Act 1990, and risks posed to Controlled Waters under the Water Resources Act.

1.4 Site Description

The site comprised an irregularly shaped plot of land measuring a maximum of approximately 150m by 80m which at the time of the investigation (October 2018) was predominantly laid to grass. The site formed part of the grounds associated with a detached house situated immediately to the north-east.

Six outbuildings in various states of repair, some of which were constructed using potentially asbestos containing materials (ACMs), were located in the north-western portion of the site. Central to the site was a spoil heap which was densely vegetated with brambles and scrub vegetation. Due to the dense nature of the vegetation it was difficult to determine the exact height and extent of the spoil heap, but it was estimated to be approximately 1.5m in height, 20m in length and 8m in width. Anecdotal evidence suggested that the material was sourced from the excavation of a swimming pool within the grounds of the associated residential property to the north-east. A second, smaller, densely vegetated spoil heap measuring approximately 1m in height and 5m in diameter was located within the south-east corner of the site. With the exception of the spoil heaps, the site was largely flat and level.

A pond measuring approximately 20m by 15m, which was dry at the time of the investigation, was located within the south-west corner of the site. The pond was enclosed by semi-mature trees and dense vegetation. The northern site boundary comprised a mixture of deciduous trees and hedges, brick walls and fencing associated with the adjoining residential property. The eastern site boundary was lined with semi-mature trees, with Hook Lane and residential properties beyond. The eastern portion of the southern site boundary was lined with mature conifer trees measuring approximately 25m in height whilst the western portion adjacent to the pond was lined with semi-



mature to mature deciduous trees. Beyond the southern site boundary was a horticultural nursery which included a reservoir and glasshouses. The western site boundary was lined with deciduous trees with arable fields beyond.

The site access was via the driveway to the associated residential property but a five bar gate was located within the north-east corner of the site off Hook Lane. The site was situated within a semi-rural part of Westergate.

1.5 Standards

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

- British Standards Institute - Code of Practice for Earth Retaining Structures (BS8002:2015).
- British Standards Institute - Code of Practice for Site Investigations (BS5930:2015).
- British Standards Institute - Code of Practice for the Characterisation and Remediation from Ground Gas in Affected Developments (BS8485:2015).
- 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 - Soakaway Design - DG 365 (2016).
- 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

The findings of the Phase I desk study are presented in the following section. A copy of the historic 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 desk study.

2.1 Historic Mapping

A summary of site history dating back to 1876 is presented in Table 2.1 and has been determined through examination of historic maps obtained as part of the desk study.

Date	On Site	Off Site
1876-1880	The site was shown to be occupied by an open field and a pond to the southwest.	The surrounding area was shown to be undeveloped open fields. An unnamed road was labelled along the eastern site boundary. A well was labelled approximately 100m to the northwest. Roc's Barn was labelled approximately 180m to the southeast. A pond was labelled approximately 200m to the southwest. Park Barn was shown approximately 500m to the southwest. A Methodist Chapel was labelled approximately 500m to the northeast. Two wells were labelled approximately 400m to the east of the site. Woodgate and Prince of Wales Inn were labelled approximately 400m to the southeast (Signal Post). A single track railway (London & Brighton) was labelled on a west-east direction approximately 300m to the south. The railway was constructed at ground level which ran over a level crossing between Woodgate and Prince of Wales Inn. A fourth well was shown on the southern side of the railway. A fifth well was labelled to the south of Park Barn.
1897-1899	No notable changes.	The adjacent unnamed road along the eastern boundary of the site was named as Hook Lane. The single track railway was renamed as L.B. & S.C.R. (Portsmouth Line). A pump was located approximately 200m to the northwest.
1912-1914	No notable changes.	Residential development was shown to the southeast and north. An allotment garden was labelled approximately 200m to the northeast. A nursery was mapped c.500m to the east. A school was labelled approximately 600m to the northeast. Windpump was mapped c.500m to the northeast. The single track railway to the south was renamed as L.B.&S.C.R. (West Coast Line).



Date	On Site	Off Site
1937	Three rectangular buildings and three trees were mapped in the northern portions of the site.	Significant residential development was shown within the surrounding area to the east and north. The allotment garden was enlarged since the previous survey to the northeast. Deciduous trees lined the boundaries of the pond to the southwest off the site. A second allotment garden was shown approximately 500m to the southeast.
1938-1951	No notable changes.	Significant residential and commercial development was shown to the northeast and northwest of the site. A Village Hall was labelled to the immediate south of the school. S A Barracks and a new nursery were mapped c.500m and c.600m to the northeast, respectively. Windpump was renamed as nursery (adjacent to the S A Barracks).
1961	Some of the rectangular buildings and deciduous trees were no longer mapped and new rectangular buildings were shown in the northern portions of the site.	The nursery in the immediate north of the S A Barracks was no longer mapped. A new nursery was labelled c.500m east of the site.
1970-1979	Most of the buildings were no longer mapped and a new longitudinal building with smaller structures were shown in the northern and western portions of the site.	Further residential and commercial development was shown within the surrounding area. To the north of the site, allotments gardens were no longer mapped. The Rosary and Banff were labelled immediately to the north of the site. A caravan park was mapped c.180m southeast of the site.
1974	No notable changes.	A house immediately to the northeast of the site was labelled as 'The Rosary'.
1980	No notable changes.	No notable changes.
1982	No notable changes.	A rectangular shaped pond, a square shaped structure (Nursery), several smaller buildings and tanks were mapped on the adjacent land immediately to the south of the site. The boundaries of the rectangular pond were lined with bunds.
1992	The longitudinal building and some of the associated ancillary structures were longer mapped. A new rectangular building (The Grange) was shown in the northern portions of the site.	Further residential and commercial development was shown within the surrounding area. The caravan park was no longer mapped and a new residential development was shown within the boundaries of the former caravan park.
1994	The rectangular building was no longer named as 'The Grange' in the northern	The adjacent rectangular pond was renamed as Reservoir. The Rosary to the immediate



Date	On Site	Off Site
	portion of the site.	northeast of the site was renamed as 'The Grange'.
1995	No notable changes.	No notable changes.
1999	No notable changes.	No notable changes.
2000	No notable changes.	No notable changes.
2006	No notable changes.	No notable changes.
2018	No notable changes.	No notable changes.

Table 2.1 Summary of Site History

The site was shown from the historic mapping to have been occupied by several small buildings, with several changes in size, layout and position of buildings over the mapped period.

The surrounding area comprised mainly farmland and rural or semi-rural setting. The village of Westergate was located approximately 600m to the northeast of site and a historic railway line was present to the south of the site. Development was shown to have occurred to the north, east and south over the mapped period. The majority of development appeared to be general residential layout but also included nursery and large greenhouse type use.

2.2 Geology

With reference to British Geological Survey (BGS) mapping, the geology of the site was anticipated to comprise superficial River Terrace Deposits overlying London Clay Formation. Given the development history of the site, there is the potential for a limited extent of Made Ground could also be present within the northern portion of the site.

BS5930:2015 defines **Made Ground** as anthropogenic ground in which the material has been placed without engineering control and/or manufactured by man in some way, such as through crushing or washing, or arising from an industrial process. Great variations in material type, thickness and degree of compaction invariably occur and there can be deleterious or harmful matter, as well as potentially methanogenic organic material. In addition, on sites which have undergone several phases of historic development it is not uncommon for asbestos to be present within Made Ground soils.

The rivers of the southern of England have been subject to several changes of level since Pleistocene times. One result has been the formation of a complex series of **River Terrace Deposits**. The deposits are generally found at an elevation close to or higher than that of the existing rivers, and generally comprise sand and gravel of roughly bedded flint or chert gravel.

Within the 'Hampshire Basin' area, in which the site is located, the **London Clay Formation** consists predominantly of clay, silty sand sandy clay and silty sand, sporadic claystones occur and thin but persistent bands of rounded flint pebbles occur at the bases of sedimentary cycles. Lenticular bodies of sand such as the Whitecliff Sand and Portsmouth Sand fill channels in the upper parts of the formation.

2.3 Hydrogeology

With reference to the Envirocheck dataset, the underlying superficial geology (River Terrace Deposits) was recorded as a Secondary A Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

The underlying solid geology (London Clay Formation) was designated as an Unproductive Strata. These 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 source protection zone (SPZ). An SPZ is a protection zone placed around a well or borehole that supplies groundwater of potable quality.

The proposed site and the surrounding area is classified as being within a nitrate vulnerable zone.

The desk study identified two discharge consents to groundwater were recorded within a radius of 250m of the site boundary, as summarized in Table 2.2.

Direction	Distance (m)	Issued Date	Revocation Date	Discharge Type	Receiving Water
NE	115	3 rd February 1971	31 st March 1997	Discharge Of Other Matter-Surface Water	Freshwater River
NE	124	3 rd February 1971	31 st March 1997	Discharge Of Other Matter-Surface Water	Freshwater River

Table 2.2 Summary of BGS Geological Hazards

No groundwater abstractions or pollution incidents to controlled waters were identified with a radius of 250m of the site boundary.

2.4 Hydrology

With reference to the Envirocheck dataset, the closest surface water feature comprised a pond which was located in the southwest portion of the site.

One surface water abstraction was identified with a radius of 500m of the site boundary:

- Name: Messrs W H & D Gillbard, Location: Park Farm Reach E-F, Aldingbourne, 355m northwest, General agriculture – spray Irrigation – direct, Licence No. 10/41/541301, Source: Surface

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

The southwest corner of the site was indicated to be close to or within an area at risk of flooding from surface water due to the presence of the pond. The BGS Groundwater Flood Susceptibility (GFS) Data map also indicated that the site has the potential for groundwater flooding of property situated below ground level.

2.5 Sensitive Land Uses

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

The site was noted to be within a Nitrate Vulnerable Zone.

The pond located in the southwest corner of the site was designated as an ecological interest area. No other environmentally sensitive areas were noted within a 250m boundary of the site.

2.6 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.

No records of any of the sites/features listed above were recorded within 500m of the site.

2.7 Geotechnical Data

The site was recorded as being in an area that might not be affected by coal mining.

National databases for a number of geological hazards have been compiled by the BGS, and a summary of the hazard data pertaining to the site is presented in Table 2.3. In accordance with BGS recommendations, the highest rating within 50m of the site boundary (or a 250m radius for shallow mining) has been recorded.

Hazard	Designation
Collapsible ground	Low
Compressible Ground	No hazard
Ground dissolution	No hazard
Landslide	Very low
Running sand	Low
Shrinking or swelling clay	Low
Non-Coal Mining	No hazard

Table 2.3 Summary of BGS Geological Hazards

2.8 Ground Gases

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

None of the above sites have been recorded within 500m of the site.

2.9 Radon

The British Geological Survey (BGS) assessment presented within the Envirocheck Report indicated that the site lies in an intermediate probability radon area where 1-3% of homes are estimated to be above the action level.

However, the BGS assessment states that no radon protective measures are necessary in the construction of new dwellings or extensions on this site.

2.10 Geochemistry

Data obtained as part of the Envirocheck Report provides details on the estimated soil chemistry for natural soils in the vicinity of the site. The estimated quality of natural soils beneath the subject site is presented in Table 2.4.



Determinand	Concentration (mg/kg)	In Excess of S4UL/C4SL*?	In Excess of Atrisk**?
Arsenic	<15	No	No
Cadmium	<1.8	No	No
Chromium	60-90	No	No
Lead	<100	No	No
Nickel	15-30	No	No

NOTE: *Comparative S4UL/C4SL concentrations are for a residential end use with plant uptake.

**Comparative Atrisk concentrations are for a residential end use with plant uptake.

Table 2.4 Summary of Site Geochemistry

It should be noted that these values are not necessarily representative of the site's soil chemistry and do not account for the site's historic use, or potential presence of condition of any Made Ground. Furthermore, screening values are dependent on pH and soil organic matter content. Therefore, concentrations of specific determinants and the utilised screening values cannot be determined without site specific investigation and analysis.

2.11 Generic Contamination and Ground Gases

The site was shown from the historic mapping to have been occupied by a number of small buildings and a pond with residential uses to the north and east, a commercial farmland (greenhouse) and a reservoir (potential receptor) to the south and fields to the west.

No specific industrial or potentially contaminative land uses have been identified at or near the site in relation to the desk study, with the exception of several small tanks were identified within the adjacent farmland to the immediate south of the site. However, it is possible that the quality of the near-surface soils has been adversely affected by activities associated with the historic use of the subject site, particularly the use of Made Ground to construct hardstanding for yard areas and access paths. These activities could provide sources of contamination.

It was understood from anecdotal information received during the intrusive investigation, that the mounds present within the site were generated from historic excavation within the site. This could not be corroborated.

No viable sources of ground gases (carbon dioxide and methane) have been identified within the desk study, as such consideration of ground gas has not been assessed further.



3.0 PRELIMINARY 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.

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 3.1 & 3.2 below.

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

Table 3.1 Risk Ratings Matrix

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

Table 3.2 Risk Ratings Definition



3.1 Possible Contamination Sources

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

Source	Description	Comments
Shallow soils and any Made Ground	General chemical quality of the near surface soils and any Made Ground.	Possible elevated metals, organic and inorganic contaminants and asbestos.
Naturally occurring aggressive ground conditions	Naturally occurring compounds in the ground which could damage buried concrete.	Possible elevated sulphate concentrations.

Table 3.3 Possible Sources of Contamination

3.2 Summary of Plausible Pathways

The plausible pathways are summarised below:

- direct contact (soil, dust ingestion, dermal contact and dust inhalation);
- inhalation (inside and outside of the building);
- vertical and lateral migration including leaching and flooding;
- root uptake; and
- chemical attack of infrastructure (including water supply pipes) and building foundations.

3.3 Summary of Plausible Receptors

Potential receptors associated with the site and its development, identified or otherwise discounted, are summarised in Table 3.4.

Receptor	Description	Comments
End Users	Users of the proposed residential development.	The development will comprise the demolition of current structures and construction of residential properties.
Soft Landscaping	Areas of planting including lawns, shrubs, trees, etc.	Soft landscaping is proposed and any planting may be at risk from phytotoxic chemicals if elevated levels are identified.
Adjacent site users	Adjacent site users may come into contact with contaminants originating on the site.	Adjacent land uses comprise houses, farmland and a commercial nursery/greenhouse.
Water Supply Pipes	Plastics for potable water supply pipes may be laid in contact with contaminated soils.	Limited chemical degradation of the near surface soils may have taken place and Made Ground may be present.
Buildings & Infrastructure	Buried concrete for foundations etc. may be laid in contact with contaminated/aggressive soils.	Limited chemical degradation of the near surface soils may have taken place and Made Ground may be present.
Groundwater	Controlled Waters contained within the aquifer beneath the site.	The site overlies a Secondary A Aquifer.
Surface Water	Controlled Waters within lakes, rivers, ponds, etc., or coastal waters.	The nearest surface water body is a pond located in the southwestern portion of the site.
Ecological receptors	Sensitive land uses identified within the immediate vicinity.	The southwest corner of the site is a designated ecological area.

Table 3.4 Possible Receptors of Contamination



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

Whilst the above sources and receptors have been identified, Table 3.5 summarises the identified plausible pollution linkages and a qualitative assessment of the risks based on the desk study research.



Potential Source/Media	Potential Receptors	Possible Pathways	Probability	Consequence	Risk & Justification
Shallow Soils and potential Made Ground (including naturally occurring aggressive soils)	End Users	Direct & indirect contact	Likely	Mild	Moderate to Low End users could come into contact with soils via direct or indirect contact as the development will include areas of soft landscaping. Made Ground, if present, is likely to be present in distinct and localised areas of the site. However, landscaping would be completed within uncontaminated soils in the near surface root zone.
	Soft Landscaping	Root uptake	Likely	Minor	Low Soft landscaping may be affected by contaminated soils if/where proposed. However, landscaping would be completed within uncontaminated soils in the near surface root zone and no clear evidence of harm to existing vegetation was evident.
	Water Supply Pipes	Direct contact	Likely	Minor	Low Water supply pipes could come into contact with impacted soils depending upon depth of installation and extent of soil impact.
	Buildings and Infrastructure	Direct contact	Likely	Minor	Low Foundations and utilities will be placed within within potentially aggressive soils (e.g. sulphate).
	Groundwater	Vertical Migration	Low	Mild	Low The site overlies Secondary 'A' aquifer, shallow groundwater (<5m bgl) is likely to be present on site beneath the site. However, the shallow soils at the site are considered unlikely to be represent a significant source of mobile contamination in relation to possible groundwater pollution.
	Surface Water	Lateral Migration	Low	Mild	Low The shallow soils at the site are unlikely to represent a significant source of mobile contamination in terms of the potential for surface water pollution.

Table 3.5 Plausible Pollution Linkages



3.4 Preliminary 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. The preliminary risk rating for the pollution linkages have been classified as generally low or moderate to low.

The potential pollutant linkages established within this preliminary risk assessment 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.

3.5 Geotechnical Condition

The following factors that might impact the geotechnical condition of the site were identified as part of the desk study:

- The possible presence of Made Ground (e.g. varying depth and/or composition) on site, which if encountered may be affecting the existing foundations.
- The presence of laterally and vertically variable strata and the impact these could have on existing foundations and any further construction.
- Consideration of the volume change potential change of any cohesive soils and the affect this could have on existing foundations.
- The suitability of shallow soils as bearing stratum for existing foundations.
- The possible presence of aggressive ground conditions (sulphates) which may affect the foundation design and construction.
- The possible presence of perched and/or shallow groundwater beneath the site which may affect existing foundations and any future construction.

3.6 Investigation Strategy

The investigation strategy comprised investigation locations to provide a general coverage of the site to assess ground and groundwater conditions and to support the geotechnical assessment. The investigation included:

- The construction of 8No. machine dug trial pits, 6No. excavated across the site to provisional depths of 3m bgl and 2No. to target the mound(s) within the site.
- Soakage tests in accordance with BRE Digest 365 carried testing carried out within the three trial pit locations.
- The construction of 6No. dynamic windowless sampling with sampling and in-situ testing to depths of up to 5m bgl.
- Super heavy dynamic probing at 3No. locations to inform the geotechnical assessment.
- Installation of groundwater monitoring wells within 3No. window sampler boreholes and completed with lockable covers fitted flush with adjacent ground.
- Groundwater monitoring of the installed wells on six occasions of the 2018-2019 winter period.
- Geotechnical laboratory testing on soil samples recovered from the exploratory holes to support the geotechnical assessment.
- Geochemical testing on selected soil samples to clarify the findings of the preliminary risk assessment and identify possible remediation requirements.
- Provision of a Ground Appraisal Report.



Soil samples were collected and placed into amber jars and cool boxes on site for transit to the office, where they were stored under chilled conditions (<4°C) prior to final transportation in cool boxes to the laboratory by their in-house courier. Both the geotechnical and contamination testing were undertaken by UKAS accredited laboratories. Contamination testing of soil samples was also undertaken in accordance with accredited MCERTs protocols. Samples were stored in temperature controlled conditions from sampling until receipt at the laboratory from which time sample preparation and storage was determined by testing requirements and in line with laboratory's protocols.



4.0 ENCOUNTERED CONDITIONS

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

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

The physical ground investigation works were undertaken on the 25th October 2018.

Whilst intrusive investigation of the mounds was proposed as part of this phase of intrusive investigation, once on site it was apparent that the mounds were vegetated with long grass and potential ecological habitat. Therefore, and following discussion with the Client, intrusive investigation of the mounds was not undertaken and will be completed at a later stage, i.e. once any appropriate ecological assessment and mitigation has been completed.

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

4.1 Ground Conditions

The ground conditions encountered within the exploratory holes were broadly consistent with those anticipated from the desk study, i.e. a mantle of Topsoil and Made Ground overlying the River Terrace Deposits over London Clay Formation.

A summary of the encountered soil conditions is presented in Table 4.1.

Top (m bgl)	Base (m bgl)	Geology
GL	0.15 – 0.30	TOPSOIL: Dark brown to brown silty angular to rounded GRAVEL with abundant rootlets
GL – 0.20	0.20 – 0.30	MADE GROUND: Varied from dark grey brown sandy SILT with whole bricks, glass, flint cobbles, flint and brick gravel, to very soft dark brown sandy SILT with frequent rootlets and rare glass and carbonaceous inclusions.
0.15 – 1.05	0.80 – 2.55	COHESIVE RIVER TERRACE DEPOSITS: Varied from very soft to firm yellowish brown sandy clayey SILT with occasional black flecks and roots to very stiff orange brown slightly fine sandy silty CLAY with scattered medium sub-rounded flint gravel.
0.30 – 4.35	1.05 – 4.6	GRANULAR RIVER TERRACE DEPOSITS: Varied from medium dense to dense orangish brown and grey mottled silty clayey GRAVEL to loose to medium dense orangish brown silty fine to medium SAND. Gravel comprises fine to medium sub-angular to sub-rounded flint.
4.60	4.80+	LONDON CLAY FORMATION: Firm dark grey silty sandy CLAY.

Table 4.1 Summary of Ground Conditions

Made Ground was encountered in locations WS01, TP04 and TP06 in the northeast corner of the site where small outbuildings (e.g. barn, shed) were located.

Other than rare carbonaceous and glass inclusions in the Made Ground, no visual or olfactory evidence of potential contamination was identified within the investigation positions.

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



4.2 Groundwater

Groundwater seepages were encountered within all eight machine dug trial pits, typically towards the base of the trial pits within the sand of the River Terrace Deposits during the intrusive investigation. Details of the groundwater seepage depths encountered are presented in Table 4.2 below.

Location	Groundwater Seepage Depth (m bgl)
TP01	3.00
TP02	3.00
TP03	2.20
TP04	3.00
TP05	3.00
TP06	2.00
TP07	3.00
TP08	3.00

Table 4.2 Summary of Groundwater Seepage Depths

Groundwater ingress was not recorded within the window sampler boreholes. However, with reference to the logs, collapse occurred during drilling of each borehole and this might have masked groundwater ingress at depths similar to those encountered within the trial pits.

Groundwater monitoring wells were installed within selected window sampler boreholes to facilitate groundwater monitoring over the 2018-2019 winter period, which will be reported on in due course.

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

4.3 Obstructions

During the intrusive ground investigation, no obstructions were encountered. The presence of obstructions elsewhere on site should not be discounted.

4.4 Geotechnical Testing Results

Three Super Heavy Dynamic Probe (DPSH) tests were undertaken adjacent to the windowless sampler boreholes, with the results included in Appendix B. Dynamic probing was planned and undertaken to aid in the description of the soil 'strength' and to determine if any hard or soft spots of the ground exist.

The equivalent SPT "N" blow counts were correlated from the dynamic tests. Generally, these test results ranged between equivalent SPT 'N' values of N=1 to N=36 within the Made Ground, Topsoil, River Terrace Deposits and London Clay Formation corresponding with a very low to medium strength with a general increasing blow count trend with depth, albeit with fluctuations noted. The test results indicated that the minimum equivalent SPT 'N' value of 1 was recorded within very loose light brown silty sand in WS02 at a depth of between 0.0m and 0.3m bgl. In contrast, the highest DPSH 'N' values were recorded where sand of the River Terrace Deposits was encountered and indicated these soils to be in a dense state.

In addition, forty-six Pocket Penetrometer (PP) tests were undertaken on the cohesive elements of the River Terrace Deposits and London Clay Formation to assess possible variation in soil strength. The results of the pocket penetrometer tests carried out on the recovered samples from dynamic boreholes, indicated the soils tested to be of very low to medium strength becoming medium strength with depth.



The results of geotechnical laboratory testing undertaken from the recovered samples of the River Terrace Deposits are summarised in Table 4.3.

Parameter	River Terrace Deposits
Moisture Content (%)	17 – 24
Liquid Limit (%)	29 – 44
Plastic Limit (%)	13 – 19
Plasticity Index (%)	15 – 25
Modified Plasticity Index (%)	14 – 25
Volume Change Potential [NHBC and BRE]	Low to Medium
pH	8.00 – 8.70
Water soluble sulphate (mg/l)	<200
Acid soluble sulphate (%)	0.04 – 0.07
Total sulphur (%)	<0.01 – 0.02
SPT (N)	1 – 36

Table 4.3 Summary of Geotechnical Test Results

4.5 Chemical Analysis

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

The testing rationale included sampling and analysis to provide a general coverage of the subject site. Testing was undertaken for a broad range of commonly occurring contaminants including metals, metalloids, inorganic compounds, phenols, speciated TPH, PAH, and asbestos as identified from the desk study.



5.0 ENGINEERING CONSIDERATIONS

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

The ground conditions encountered have been reviewed and assessed further following receipt of laboratory test results. This has resulted in classification of shallow strata as River Terrace Deposits and this has informed the geotechnical assessment.

5.1 Foundations

Based on the ground and groundwater conditions encountered during the intrusive works, it is considered that conventional foundations could be suitable for the proposed residential development across the site, albeit foundations should be taken below any Made Ground, disturbed, or loose ground and bear wholly into or onto the medium strength clay of the River Terrace Deposits or underlying granular River Terrace Deposits. The results of the laboratory analysis indicated the cohesive elements of the River Terrace Deposits to be low to medium volume change potential as defined by NHBC Standards, Chapter 4.2 and BRE BR240. Therefore, a minimum founding depth, within natural soils of suitable bearing capacity, would be 0.90m bgl. Deepening of foundations may be required within the zone of influence of trees and where lower strength soils are present at the proposed founding depth.

A net allowable bearing capacity of 90kPa is recommended for the River Terrace Deposits and is limited to account for the medium strength clay soils but would also be suitable for the more granular River Terrace Deposits where encountered at shallow depth. Under this loading, total settlements should remain within tolerable limits, i.e. <25mm. If shallow foundations in excess of 1.5m wide are proposed, then bearing capacity should be reassessed and may require a change to the proposed foundation solution.

Foundations should be taken down through any Made Ground, disturbed, loose or desiccated materials to bear upon the medium strength clay of the River Terrace Deposits, or granular soils of the River Terrace Deposits.

Where foundations span two different soil types e.g. cohesive and granular River Terrace Deposits, shallow foundations should be reinforced to mitigate potential for differential settlement.

Heave protection measures in accordance with NHBC Standards will be required where foundation depths exceed 1.50m and where foundations pass through desiccated ground. Foundations greater than 2.50m deep would require structure-specific design by a structural engineer. Foundations should be a minimum 450mm in width.

Based on the groundwater depths recorded to date, it is possible that groundwater would be encountered within the construction depth zone of conventional foundations and this could have a detrimental impact on constructability, even with sump pumping or other groundwater control options. Additionally, it is anticipated that winter groundwater levels could be much shallower than those encountered during the intrusive investigation. As such, allowance should be made for groundwater control and possible excavation support during foundation construction on this site.

5.2 Excavations

Instability was recorded within several of the exploratory holes during the course of the intrusive investigation.

Shallow excavations within the Made Ground and granular River Terrace Deposits above any water ingress are likely to remain stable in the short term only, though instability should be expected where water is encountered or loose sandy pockets.

However, deeper longer excavations within any deeper pockets of encountered Made Ground and granular River



Terrace Deposits are unlikely to remain stable and some form of temporary support or battering back to a safe angle and dewatering are likely to be required.

Deeper, longer excavations within the River Terrace Deposits are likely to be prone to instability, particularly where left open for prolonged periods or where groundwater or perched water is encountered. Localised collapse and softening of clay horizons may occur when exposed to water and therefore foundation trenches should be concreted or blinded immediately upon excavation. All excavations taken below any water ingress will become unstable and be prone to running sand where present. Appropriate dewatering and shoring will be required to maintain stability in such circumstances.

Ground works should always be designed in such a manner to avoid entry into excavations by construction or maintenance personnel. However, in the event that such works cannot be avoided or designed out, they should only be undertaken in accordance with a safe system of work, following an appropriate risk assessment and in accordance with any legislative requirements, e.g. Confined Spaces Regulations.

5.3 Sulphates

The results of the laboratory tests correspond to design class DS-1 as defined within the BRE Special Digest 1. The pH analysis indicates that the ACEC Class corresponds to AC-1. It is recommended that the advice of this publication be taken for the design and specification of all sub-surface concrete.

5.4 Pavement and Subgrade

The Transport and Road Research Laboratory Report (LR1132) entitled 'The Structural Design of Bituminous Roads' (1984) cites estimated equilibrium suction indices of between 1.5% and 5% for silty sandy clays with Plasticity Indices ranging between 15% and 25%, such as those of the River Terrace Deposits, under average construction conditions and a high water table. It is recommended that a CBR design value of 1.5% be adopted for pavements constructed upon the River Terrace Deposits.

The engineering characteristics of Made Ground are variable and unpredictable and the CBR value of these materials does not predict the overall settlements that may occur. It would be prudent to assume a worst case CBR value of 1% for the preliminary design of pavements constructed upon the Made Ground and these materials should also be deemed frost susceptible throughout thus a minimum pavement thickness of 450mm would be appropriate.

Any hard or soft spots in the formation level may induce reflective cracking in the pavement and allowance should be made for removing any slabs or other hard spots etc. that may be present. Furthermore, the sub-grade should be carefully proof rolled and any soft or loose zones replaced with compacted granular engineering fill.

5.5 Soakaways

Soakage tests were undertaken at three locations broadly in accordance with BRE Digest 365. With reference to Section 4.1, the River Terrace Deposits comprised a cohesive upper profile (sandy clayey silt and sandy silty clay) over generally more granular lower profile (silty clayey gravel and silty sand). Given that cohesive soils have a lower characteristic permeability than more granular soils, testing was targeted at the soils which, based on observed composition, had a higher potential permeability and thus would be more suitable for infiltration of storm water.

However, despite targeting the more granular soils there was an insufficient fall in head to calculate an infiltration rate for any of the tests undertaken and thus it was not possible to test multiple filling and drainage cycles as set out in BRE Digest 365.

Based on the above results and ground conditions encountered on site, it is considered that conventional soakaways may not be suitable for discharging storm water run-off to the ground. The presence of ditches around the adjacent



and nearby fields would also be considered to indicate poor drainage, to the ground, through shallow soils.

On the basis of the testing undertaken, it is considered that an alternative form of storm water disposal would be required, such as on-site storage and attenuation of peak storm flow with discharge to the drainage ditch network, possibly at greenfield run-off rate, under an extension of riparian rights.

In addition, given the variability on ground conditions including shallow clay strata and low permeability as indicated by the ground investigation, it is likely that rainfall infiltration in gardens could be problematic and as such, it is recommended that allowance for inclusion of land drainage is made in gardens to reduce the likelihood of waterlogging as gardens become established after development.



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 Environmental Risk Assessment

The site was shown from the desk study to have been occupied by a field and garden, with several outbuildings present in the north-western portion of the site. A pond was located in the south-western corner of the site and two mounds of unknown material were present within the main field area. As noted previously, potential ecological constraints prevent intrusive investigation of the mounds and this should be undertaken in due course.

Samples were selected for analysis to provide general coverage of the site. The analysis included metals, metalloids, inorganic compounds, TPH, PAH and asbestos screening.

6.2 Soil Contamination vs. End Users

The presence of a possible contaminant does not necessarily imply that a site or area is contaminated or that there is any unacceptable risk to human health. A Preliminary Quantitative Risk Assessment has been undertaken in 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.

Based on the findings of the desk study and a visual assessment of the soils encountered, in conjunction with the proposed end use, fifteen soil samples were submitted for general chemical contamination analysis.

A quantitative risk assessment has been undertaken by comparing the results of the laboratory chemical testing of shallow soils against the ATRISK^{SOIL} Soil Screening Values (SSVs) derived by Atkins, or against the Suitable For Use Levels (S4ULs) published by LQM (Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3453. All rights Reserved) and 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.

The results of the statistical analysis indicated that the null hypothesis could be rejected for all determinands tested with the exception of Barium. The desk study did not identify any specific potential source of barium as a soil contaminant and given that the majority of the soils sampled were natural soils and Made Ground appeared to include a similar component in its overall composition, it is possible that the concentrations reported are associated with natural, background presence of barium. Reference was made to the UK Soil Observatory website, which determined the natural barium concentration in Topsoil on this site to be 270mg/kg. Given that the, testing reported barium concentrations in the range 61.6-127mg/kg, i.e. approximately a quarter to half the natural background concentration, it is considered that the concentrations detected are not indicative of gross contamination which represent a specific risk of harm to end users, or would warrant remedial intervention. Furthermore, initial modelling using CLEA v1.071 derived an SSAC of c. 1300mg/kg for barium and would thus support the assessment that the concentrations detected are not representative of contamination warranting remedial action.

The results of the speciated total petroleum hydrocarbons (TPH) analysis were all returned as either below the laboratory detection limits or their respective screening values.

In addition, all samples submitted for asbestos screens were returned with no asbestos fibres identified.



Given that no contaminants of concern above the respective guideline values for a proposed residential land use have been identified within the natural soils, it is considered that remedial measures to protect end users are not required. Nonetheless, all gardens and soft landscaped areas should be completed with suitable subsoil and topsoil for their intended purpose.

6.3 Soil Contamination vs. Adjacent land Users

Surrounding land uses were identified as comprising mostly residential buildings, ponds and arable fields. Significant concentrations of potentially mobile contaminants of concern were not identified in relation to human health (end users) as part of the laboratory analysis. As such, no remedial measures are considered necessary to protect adjacent land users from soils on site.

However, it is recommended that dust suppression techniques, e.g. damping down exposed soils, are employed during the 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	Yes
Copper	100	135	200	No
Nickel	60	75	110	No

Table 6.1 Summary of Plant Phytotoxicity Assessment

The phytotoxicity assessment identified two exceedances for zinc at WS01 (0.2m bgl) and WS03 (0.2m bgl) of 203mg/kg and 475mg/kg, respectively. However, these two exceedances are not considered to present a significant risk of harm to soft landscaping on site. There was no evidence of specific harm to any vegetation on the site and the average concentration of zinc within the samples analysed was c. 143mg/kg which is below the respective threshold.

6.5 Soil Contamination vs. Building Materials

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 relevant chemical analyses indicate that the results were below the specific thresholds, as such the use of PE or PVC piping or similar should be suitable for water supply pipes on the site. However, it is recommended that the results of this investigation be presented to the water utility company as soon as reasonably



practicable in order to confirm the pipe material required.

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

6.6 Soil Contamination vs. Groundwater

Given the absence of any significant concentrations of potentially mobile contamination identified as part of the chemical analysis it is considered unlikely that the site poses any significant risk to groundwater chemical quality. Therefore, no remedial works are considered necessary to protect groundwater from on-site soil contamination concentrations identified.

6.7 Groundwater Contamination vs End Users

In the absence of any specific groundwater contamination hazard, it is considered that no specific protection measures are considered likely to be required in this respect.

6.8 Groundwater Contamination vs Soft Landscaping

In the absence of any specific groundwater contamination hazard, it is considered that no specific protection measures are considered likely to be required in this respect.

6.9 Groundwater Contamination vs Built Environment

Recommendations for the built environment as discussed in Section 6.5 are considered appropriate.

6.10 Ground Gases

No potential sources of ground gases were identified as part of the desk study. As such, ground gases were not considered further as part of the assessment of the site.

With reference to the desk study, the BGS state that radon protection measures are not required for residential development on this site.

6.11 Waste

6.11.1 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.

6.11.2 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.

6.11.3 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.

6.11.4 Waste Classification

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. Two Waste Acceptance Criteria (WAC) tests were carried out during investigation works. The WAC results are summarised in Table 6.2.

Location	Depth (m bgl)	Waste Criteria	Criteria limits exceeded
TP03	0.5	Inert Waste	-
TP04	0.2	Inert Waste	-

Table 6.2 WAC Analysis Summary

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.

Natural uncontaminated soil arisings of the River Terrace Deposits are likely to be classified as 'inert' waste.

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



7.0 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 contamination, Made Ground, or soft or otherwise unsuitable ground 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.

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

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 below.

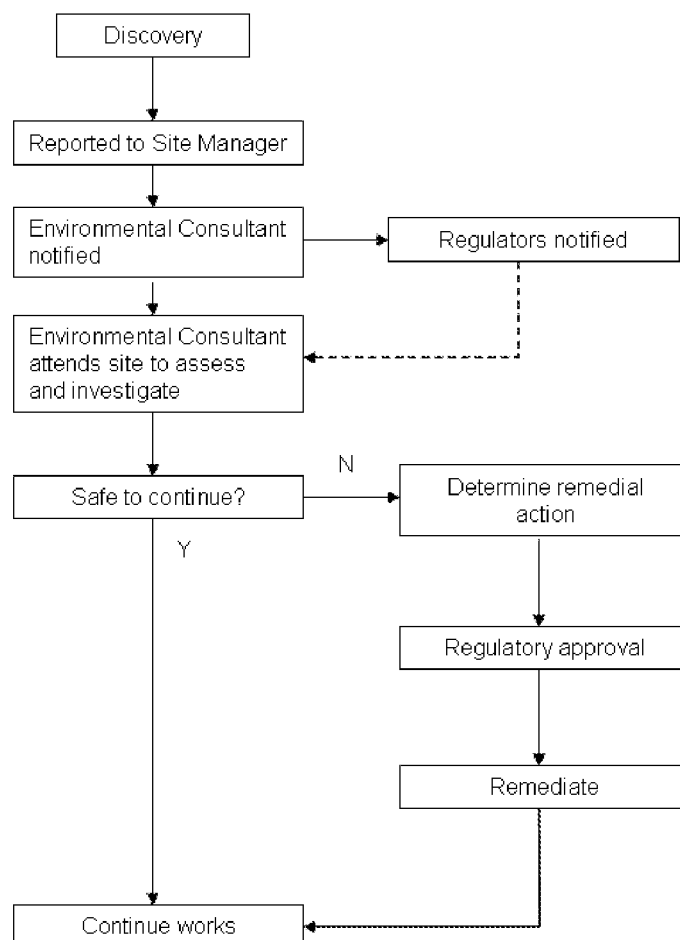
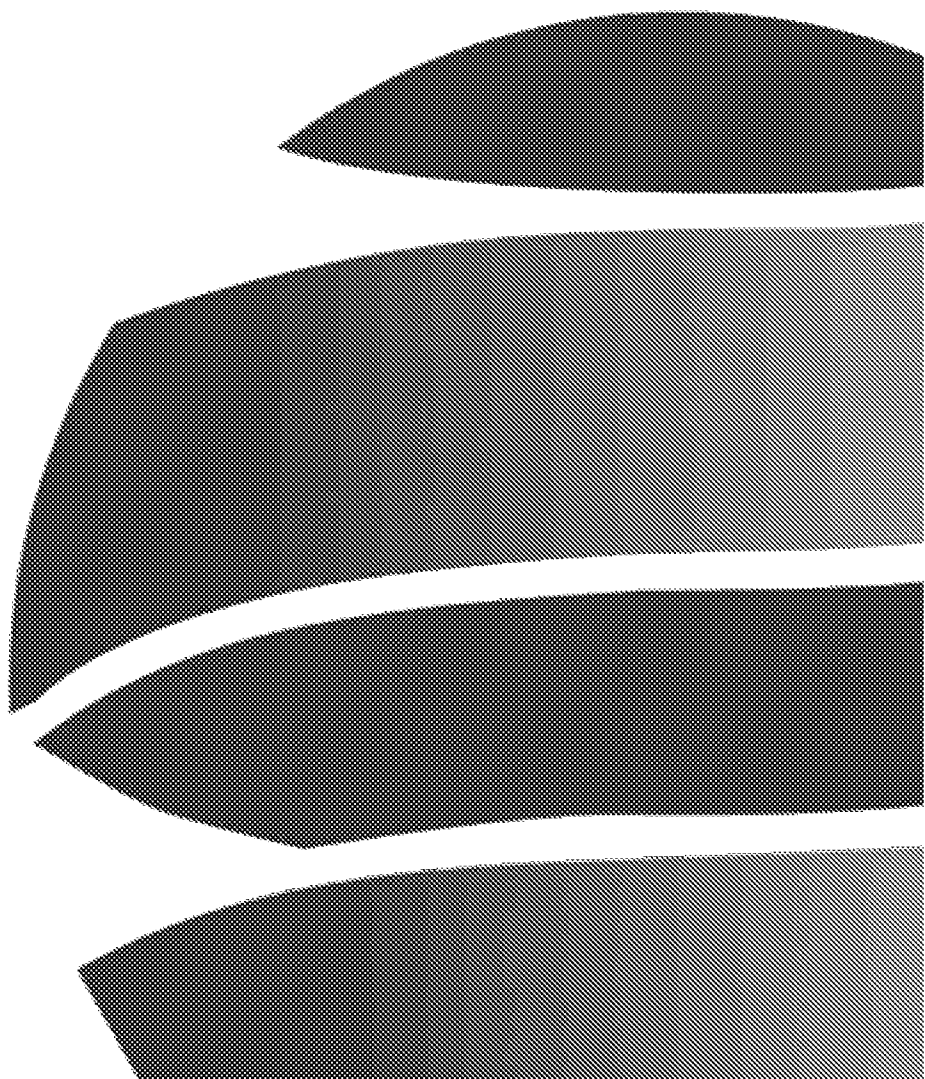
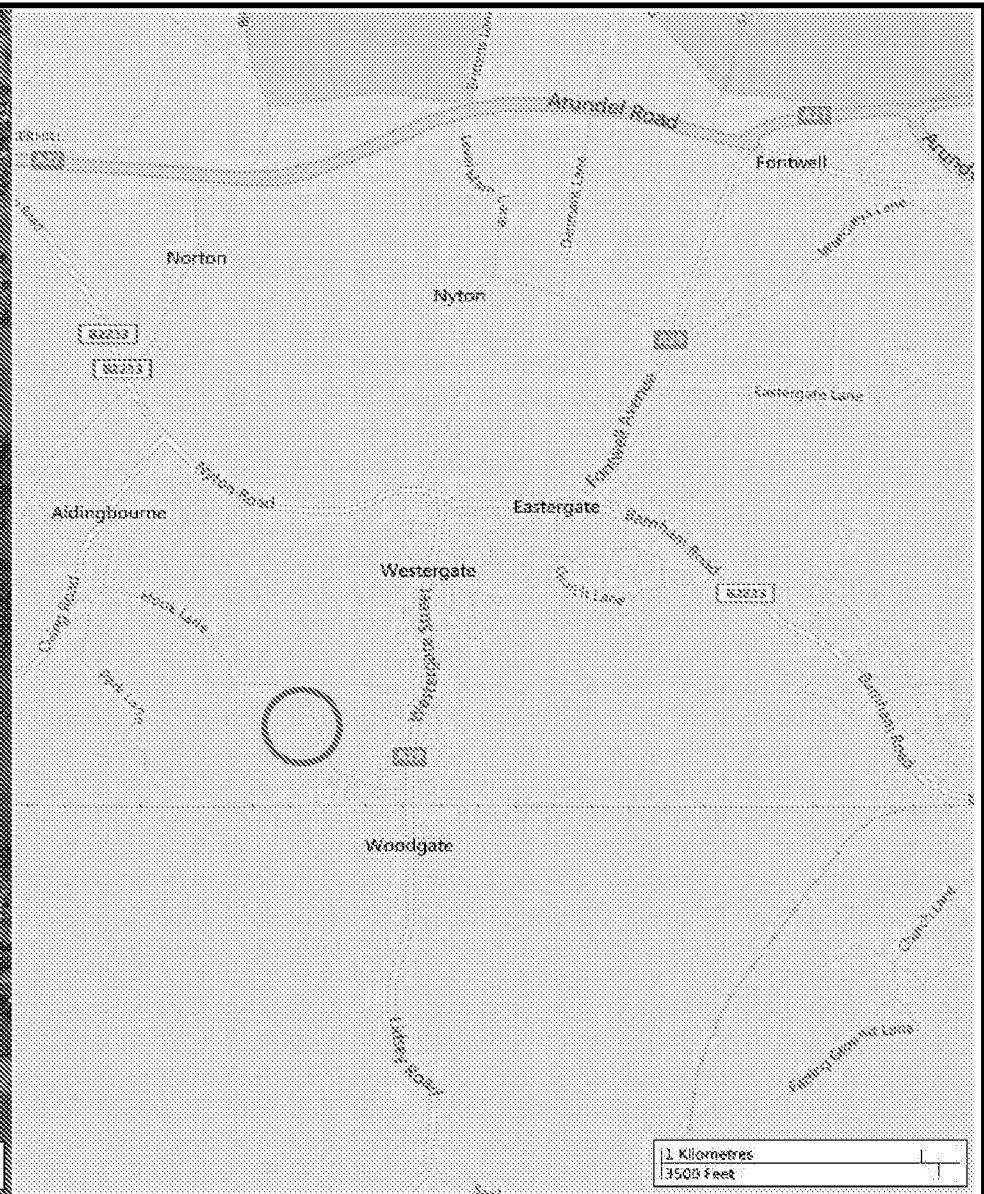


Chart 1: Discovery Strategy Process



Figures





Geo-Environmental

Project:	Hook Lane, Westergate, PO20 3TE		
Client:	Metis Homes		
Ref No:	GE17712	Revision:	1
Drawn:	EGMN	Date:	October 2018
Figure:	1	Scale:	Not To Scale

Title	Site Location Plan
Geo-Environmental Services Ltd	
Unit 7 Danworth Farm, Hurstpierpoint, BN6 9GL	
T: 01273 699 399 F: 01273 699 388	
E: mail@gesl.net W: www.gesl.net	



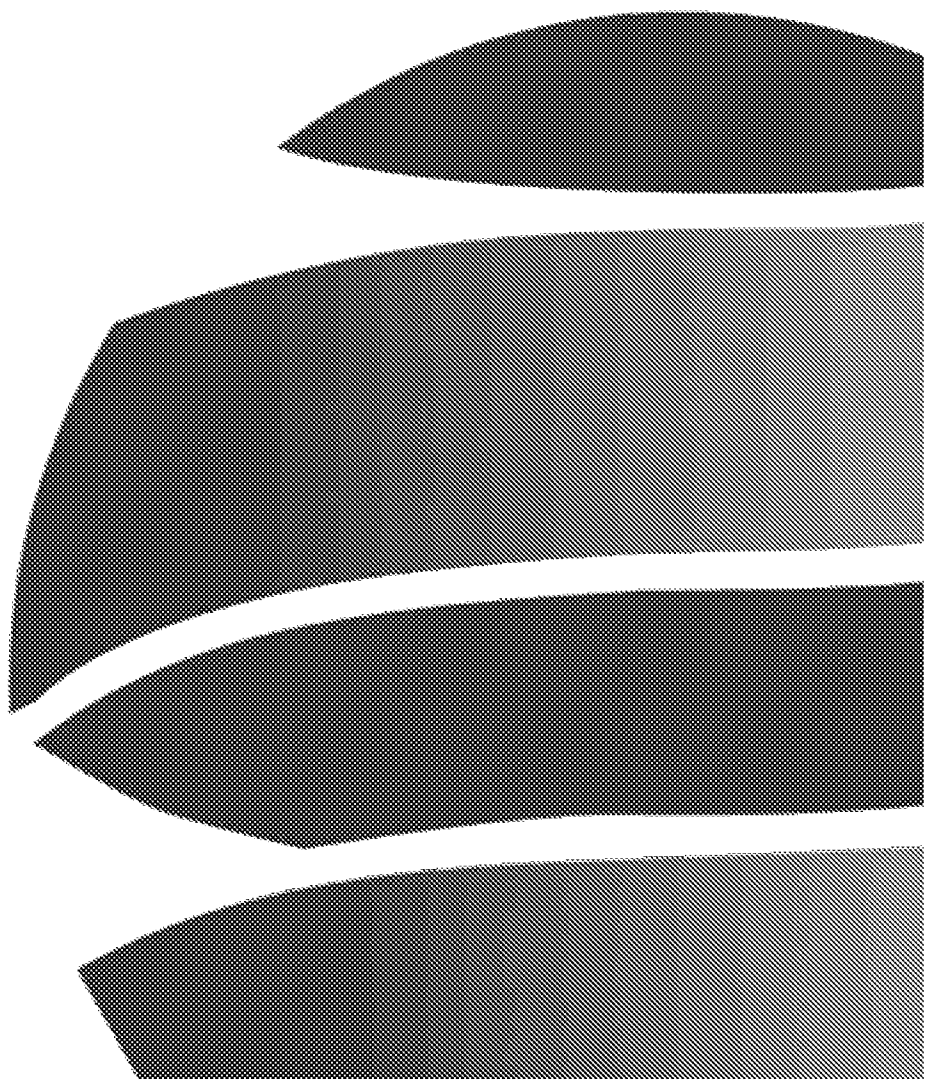
Geo-Environmental

Project:	Hook Lane, Westergate, PO20 3TE			Title	Site Investigation (Over Existing)
Client:	Metis Homes			Geo-Environmental Services Ltd	
Ref No:	GE17712	Revision:	1	Unit 7 Danworth Farm, Hurstpierpoint, BN6 9GL	
Drawn:	EGMN	Date:	October 2018	T: 01273 699 399 F: 01273 699 388	
Figure:	2	Scale:	Not To Scale	E: mail@gesl.net W: www.gesl.net	



APPENDIX A

Desk Study Information





Geo-Environmental

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

182826946_1_1

Customer Reference:

GE17712

National Grid Reference:

493360, 104650

Slice:

A

Site Area (Ha):

1.02

Search Buffer (m):

1000

Site Details:

Banff, Hook Lane

Aldingbourne

CHICHESTER

PO20 3TE

Client Details:

Mr R Gardner

Geo Environmental Services Ltd

Unit 7 Danworth Farm

Cuckfield Road

Hurstpierpoint

West Sussex

BN6 9GL



Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	24
Hazardous Substances	-
Geological	27
Industrial Land Use	29
Sensitive Land Use	33
Data Currency	34
Data Suppliers	39
Useful Contacts	40

Introduction

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

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Report Version v53.0



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		2	4	10
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 5				1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5	Yes			
Pollution Incidents to Controlled Waters	pg 5				2
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 6				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 6			1	7 (*27)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 14	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 15	1	6	11	58



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 24				1
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 24	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 24				1
Potentially Infilled Land (Water)	pg 24	1	4	8	20
Registered Landfill Sites	pg 26				1
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 27	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 27	Yes			
BGS Recorded Mineral Sites	pg 27				1
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				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 27	Yes	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 27	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 27	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 27	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 28	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 29			2	19
Fuel Station Entries					
Points of Interest - Commercial Services	pg 30				3
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 31		6	3	4
Points of Interest - Public Infrastructure	pg 32				3
Points of Interest - Recreational and Environmental	pg 32				2
Gas Pipelines					
Underground Electrical Cables					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 33	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (NE)	0	1	493365 104645
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (S)	16	1	493350 104600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (E)	108	1	493550 104645
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (NW)	231	1	493200 104900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	260	1	493600 104400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	295	1	493365 105000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A18SW (N)	296	1	493300 105000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	330	1	493650 104350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	454	1	493100 105100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (SW)	473	1	492900 104350
1	Discharge Consents Operator: Pollards' Nurseries Ltd. Property Type: Undefined Or Other Location: Greenhouses At Hook Lane, Aldingbourne, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01981 Permit Version: 1 Effective Date: 3rd February 1971 Issued Date: 3rd February 1971 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	A13NE (NE)	115	2	493470 104780
1	Discharge Consents Operator: Pollards' Nurseries Ltd. Property Type: Undefined Or Other Location: Greenhouses At Hook Lane, Aldingbourne, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01981 Permit Version: 1 Effective Date: 3rd February 1971 Issued Date: 3rd February 1971 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 10m	A13NE (NE)	124	2	493470 104790



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consents Operator: G.H. Crockett Esq. A.R.I.B.A. Property Type: CONSTRUCTION OF BUILDINGS Location: Housing Site At Westergate Stree, Westergate, Chichester, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01096 Permit Version: 1 Effective Date: 9th September 1963 Issued Date: 9th September 1963 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Controlled Sea Environment: Receiving Water: Controlled Sea Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A14NW (E)	441	2	493850 104780
3	Discharge Consents Operator: Lindsey Caravan Park Ltd Property Type: HOLIDAY ACCOM/CAMP SITE/CARAVAN SITE/HOTEL/HOSTEL Location: Lidsey Farm Caravan Pk, Lidsey, Bognor Regis, West Sussex, Po22 9pg Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: S00001 Permit Version: 1 Effective Date: 3rd August 1981 Issued Date: 3rd August 1981 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of The Lidsey Rife Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A14NW (NE)	461	2	493840 104860
4	Discharge Consents Operator: Mr & Mrs Beattie Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: The Dene Hook Lane Aldingbourne The Dene, Hook Lane, Aldingbourne, West Sussex, Po20 3tq Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: P13029 Permit Version: 1 Effective Date: 8th March 2007 Issued Date: 8th March 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed To Aldingbourne Rife Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	484	2	493056 105108
5	Discharge Consents Operator: Phillpot Contractors Ltd. Property Type: Undefined Or Other Location: Plots 1/2 Westergate St., Westergate, Chichester, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P00337 Permit Version: 1 Effective Date: 4th February 1986 Issued Date: 4th February 1986 Revocation Date: 1st July 1991 Discharge Type: Trade Effluent Discharge-Site Drainage 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	A19SW (NE)	493	2	493790 105000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Discharge Consents Operator: Westergate Developments Ltd. Property Type: Undefined Or Other Location: Dev. North Of Orchard Gardens, Westergate Street, Westergate , Chichester West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01708 Permit Version: 1 Effective Date: 18th April 1968 Issued Date: 18th April 1968 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	A14NW (E)	560	2	493990 104720
7	Discharge Consents Operator: Mr Peter Briggs Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Rowemount, Hook Lane, Aldingbourne, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P03140 Permit Version: 1 Effective Date: 7th September 1990 Issued Date: 7th September 1990 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Into Land Environment: Receiving Water: Into Land Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	561	2	492970 105140
8	Discharge Consents Operator: Messrs Lisney & Partners Property Type: Undefined Or Other Location: Road Adjoining Heron House, Westergate Street, Chichester, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01670 Permit Version: 1 Effective Date: 3rd January 1968 Issued Date: 3rd January 1968 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	A19SW (NE)	678	2	493810 105230
9	Discharge Consents Operator: Mr And Mrs A. Hay Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: The Barn, Park Lane, Aldingbourne, Chichester, West Sussex, Po20 3tj Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P00617 Permit Version: 1 Effective Date: 5th January 1987 Issued Date: 5th January 1987 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company 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	A12SW (W)	687	2	492600 104620



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	Discharge Consents Operator: Mrs Alison Ball Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Hook Cottage, Aldingbourne Hook Cottage, Hook Lane, Aldingbourne, Chichester, West Sussex, Po20 6tq Authority: Environment Agency, Southern Region Catchment Area: Aldingbourne/Barnham Rife Reference: P12174 Permit Version: 1 Effective Date: 15th October 2004 Issued Date: 15th October 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Ditch To Aldingbourne Rife Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	694	2	492800 105160
11	Discharge Consents Operator: The Occupier Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Mill Cottage, Aldingbourne, Chichester, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P00831 Permit Version: 1 Effective Date: 9th February 1987 Issued Date: 9th February 1987 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	A12NW (W)	851	2	492510 104980
12	Discharge Consents Operator: The Occupier Property Type: Undefined Or Other Location: Black Shed, Eastergate, Chichester, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01102 Permit Version: 1 Effective Date: 17th July 1963 Issued Date: 17th July 1963 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Controlled Sea Environment: Receiving Water: Controlled Sea Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	861	2	492950 103830
13	Discharge Consents Operator: G O Rusbridge & Co Property Type: Mixed Farming Location: Norton Grange Farm, Norton Lane, Chichester, West Sussex, Po20 6nh Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: App/So/79su Permit Version: 1 Effective Date: 1st April 1999 Issued Date: 7th March 2001 Revocation Date: 7th March 2013 Discharge Type: Trade Discharge - Process Water Discharge: Into Land Environment: Receiving Water: Into Land Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18NE (N)	941	2	493430 105640



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	Discharge Consents Operator: Messrs W A & D Gilbard Property Type: Undefined Or Other Location: Park Farm, Aldingbourne, Nr Chichester, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: N01445 Permit Version: 1 Effective Date: 28th September 1986 Issued Date: 28th September 1986 Revocation Date: 1st July 1991 Discharge Type: Unknown 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	A12SW (W)	956	2	492380 104320
15	Discharge Consents Operator: Arun District Council Property Type: Undefined Or Other Location: Westergate Street & Ivy Lane, Left Bank Of The Rife, O.S. Parcel No. 291 At Westergat, Chichester, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02140 Permit Version: 1 Effective Date: 28th December 1972 Issued Date: 28th December 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	A19SE (NE)	959	2	494240 105170
16	Local Authority Pollution Prevention and Controls Name: Lee Fencing Location: Lidsey Road, Woodgate, CHICHESTER, West Sussex, PO20 6SU Authority: Arun District Council, Environmental Health Department Permit Reference: Epa/2/92 Dated: 22nd April 1992 Process Type: Local Authority Air Pollution Control Description: PG6/2 Manufacture of timber and wood-based products Status: Authorisation revoked Positional Accuracy: Manually positioned to the road within the address or location	A9SW (SE)	756	3	493809 103945
	Nearest Surface Water Feature	A13SW (W)	0	-	493298 104621
17	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Adjacent To Lec, ALDINGBOURNE Authority: Environment Agency, Southern Region Pollutant: Oils - Unknown Note: Oil On The Aldingbourne Rife Incident Date: 15th December 1998 Incident Reference: 2842 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Poor Operational Practice Incident Severity: Category 3 - Minor Incident Positional Accuracy: Unknown	A19SW (NE)	656	2	493950 105060
18	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Watercourse/Barnham Rife Authority: Environment Agency, Southern Region Pollutant: Sewage Debris/Litter Note: Surcharging Manhole; Water Company Sewage: Combined Sewer Overflow Incident Date: 18th January 1994 Incident Reference: 845 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)	855	2	494290 104500



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Aldingbourne Rife GQA Grade: River Quality E Reach: Barnham Rife Conf - Aldingbourne Estimated Distance (km): 6 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A12SW (W)	842	2	492459 104470
19	Water Abstractions Operator: Messrs W H & D Gillbard Licence Number: 10/41/541301 Permit Version: 100 Location: Park Farm Reach E-F, Aldingbourne Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used Only On Land Marked Pink On The Plan Accompanying This Licence Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	355	2	493050 104930
20	Water Abstractions Operator: Messrs W H & D Gillbard Licence Number: 10/41/541301 Permit Version: 100 Location: Park Farm Reach C-D, Aldingbourne Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used Only On Land Marked Pink On The Plan Accompanying This Licence Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	632	2	492840 105110
21	Water Abstractions Operator: Ashmarden Ltd Licence Number: 10/41/541309/R01 Permit Version: 1 Location: Points B-C, Lidsey, Berstead Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NW (W)	961	2	492392 104272
21	Water Abstractions Operator: Ashmarden Ltd Licence Number: 10/41/541309 Permit Version: 101 Location: Points B-C, Lidsey, Berstead Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NW (W)	964	2	492390 104270



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	Water Abstractions Operator: Ashmarden Ltd Licence Number: 10/41/541309 Permit Version: 100 Location: Points A-B, Lidsey, Berstead Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): 909 Yearly Rate (m3): 12272.6 Details: Water Abstracted Shall Be Used Only On Land And Buildings Shown In Pink On The Plan Accompanying This Licence Authorised Start: 01 May Authorised End: 31 August Permit Start Date: 22nd May 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NW (W)	964	2	492390 104270
22	Water Abstractions Operator: Ashmarden Ltd Licence Number: 10/41/542102/R01 Permit Version: 1 Location: Between Points A&B At Lidsey, Bersted Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NE (E)	962	2	494358 104312
22	Water Abstractions Operator: Ashmarden Ltd Licence Number: 10/41/542102 Permit Version: 101 Location: Between Points A&B At Lidsey, Bersted Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Plan Accompanying This Licence Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SW (E)	981	2	494380 104320
22	Water Abstractions Operator: Ashmarden Ltd Licence Number: 10/41/542102 Permit Version: 100 Location: Between Points A&B At Lidsey, Bersted Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): 909 Yearly Rate (m3): 24545.2 Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Plan Accompanying This Licence Authorised Start: 01 March Authorised End: 31 August Permit Start Date: 20th May 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SW (E)	981	2	494380 104320



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: The Woodhorn Group Licence Number: 10/41/541310 Permit Version: 103 Location: Points A To B On Aldingbourne Rife At Upper Woodhorn Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2 Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	1041	2	492510 103930
	Water Abstractions Operator: The Woodhorn Group Licence Number: 10/41/541310 Permit Version: 102 Location: Points A To B On Aldingbourne Rife At Upper Woodhorn Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2 Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 16th August 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	1041	2	492510 103930
	Water Abstractions Operator: Mr A J Pitts Licence Number: 10/41/541310 Permit Version: 101 Location: Points A To B On Aldingbourne Rife At Upper Woodhorn Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2 Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 30th May 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	1041	2	492510 103930
	Water Abstractions Operator: The Woodhorn Group Licence Number: 10/41/541310 Permit Version: 103 Location: Point E At Tangmere Airfield Composting Site Authority: Environment Agency, Southern Region Abstraction: Refuse And Recycling: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: At Tangmere Airfield Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NE (NW)	1403	2	492130 105440



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: J R Robinson Licence Number: 10/41/542105 Permit Version: 100 Location: Point A At Eastergate Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted To Be Used On Land Marked Pink On Said Map Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 31st March 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A24SE (NE)	1493	2	494260 105910
	Water Abstractions Operator: A J Pitts Licence Number: 541203 Permit Version: Not Supplied Location: Upper Woodhorn, Oving Chichester Authority: Environment Agency, Southern Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 1241 Yearly Rate (m3): 113635 Details: Oving Rife 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	A2SW (SW)	1508	2	492620 103270
	Water Abstractions Operator: Mr R Eggins Licence Number: 27/208/R01 Permit Version: 1 Location: West Branch Of The Lidsey Rife Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	1524	2	494290 103340
	Water Abstractions Operator: Lidsey Farm Licence Number: 27/208 Permit Version: 1 Location: West Branch Of The Lidsey Rife Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 16th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	1524	2	494290 103340



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Ashmarden Ltd Licence Number: So/041/0024/007 Permit Version: 2 Location: Lidsey Rife (West Branch) At Headhone Farm Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 8th February 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	1528	2	494281 103329
	Water Abstractions Operator: Ashmarden Ltd Licence Number: So/041/0024/007 Permit Version: 1 Location: Lidsey Rife (West Branch) At Headhone Farm Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Headhone Farm, Lidsey Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 31st March 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	1528	2	494281 103329
	Water Abstractions Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 103 Location: Point D At Aldingbourne Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NE (NW)	1533	2	492125 105660
	Water Abstractions Operator: Messrs W H & D Gillbard Licence Number: 10/41/541301 Permit Version: 100 Location: Park Farm Reach A-B, Aldingbourne Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): 655 Yearly Rate (m3): 31822 Details: Water Abstracted Shall Be Used Only On Land Marked Pink On The Plan Accompanying This Licence Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A21SE (NW)	1571	2	492160 105760



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 101 Location: Point D At Aldingbourne Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A21SE (NW)	1578	2	492100 105700
	Water Abstractions Operator: Portsmouth Water Ltd Licence Number: 10/41/542108 Permit Version: 102 Location: Point D At Aldingbourne Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A21SE (NW)	1578	2	492100 105700
	Water Abstractions Operator: Portsmouth Water Co Licence Number: 10/41/542108 Permit Version: 100 Location: Point D At Aldingbourne Pumping Station Authority: Environment Agency, Southern Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: H5 Chalk Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th September 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A21SE (NW)	1578	2	492100 105700
	Water Abstractions Operator: A J Pitts Esq Licence Number: 541310 Permit Version: Not Supplied Location: Aldingbourne Rife, UPPER WOODHORN Authority: Environment Agency, Southern Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 1241 Yearly Rate (m3): 22727 Details: Aldingbourne Rife 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	A11SW (W)	1585	2	491730 104330



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Lidsey Farm Licence Number: 10/41/542010 Permit Version: 101 Location: Lidsey Rife Reach A-B, Lidsey Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used Be Used On Land Coloured Pink On The Said Map Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 31st March 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4SE (SE)	1602	2	494310 103260
	Water Abstractions Operator: Lidsey Farm Licence Number: 10/41/542010 Permit Version: 100 Location: Lidsey Rife Reach A-B, Lidsey Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used Be Used On Land Coloured Pink On The Said Map Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 10th May 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A4SE (SE)	1602	2	494310 103260
	Water Abstractions Operator: Ashmarden Ltd Licence Number: 541309 Permit Version: Not Supplied Location: Lidsey, BERSTED Authority: Environment Agency, Southern Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 909 Yearly Rate (m3): 12272 Details: Aldingbourne Rife 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	A2SW (SW)	1661	2	492600 103110
	Water Abstractions Operator: Lidsey Farm Licence Number: 10/41/542010 Permit Version: 101 Location: Lidsey Rife Reach C-D, Lidsey Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used Be Used On Land Coloured Pink On The Said Map Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 31st March 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A5NE (SE)	1831	2	494930 103540



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Lidsey Farm Licence Number: 10/41/542010 Permit Version: 100 Location: Lidsey Rife Reach C-D, Lidsey Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): 227 Yearly Rate (m3): 14090 Details: Water Abstracted Shall Be Used On Land Coloured Pink On The Said Map Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 10th May 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A5NE (SE)	1831	2	494930 103540
	Water Abstractions Operator: The Woodhorn Group Licence Number: 10/41/541310 Permit Version: 103 Location: Points C To D On Aldingbourne Rife At Upper Woodhorn Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2 Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1940	2	491360 104840
	Water Abstractions Operator: The Woodhorn Group Licence Number: 10/41/541310 Permit Version: 102 Location: Points C To D On Aldingbourne Rife At Upper Woodhorn Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2 Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 16th August 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1940	2	491360 104840
	Water Abstractions Operator: Mr A J Pitts Licence Number: 10/41/541310 Permit Version: 101 Location: Points C To D On Aldingbourne Rife At Upper Woodhorn Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2 Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 30th May 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1940	2	491360 104840



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Hall Hunter Partnership (Farming) Licence Number: 27/185 Permit Version: 102 Location: Right Bank Of The Aldingbourne Rife Looking Downstream. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Outlined In Black On Map Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 1st April 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(SW)	1952	2	492490 102840
	Water Abstractions Operator: Mr A Tukker Licence Number: 27/185 Permit Version: 101 Location: Right Bank Of The Aldingbourne Rife Looking Downstream. Authority: Environment Agency, Southern Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Outlined In Black On Map Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 16th June 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1952	2	492490 102840
	Water Abstractions Operator: The Donald Langmead Partnership Licence Number: 10/41/541002 Permit Version: 100 Location: Point 1 At Shripney Farm & Flansham Farm Authority: Environment Agency, Southern Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 5 Yearly Rate (m3): 1659.1 Details: Water Abstracted Shall Be Used On Land And Buildings In The Occupation Of The Licence Holder At Shripney And Flansham Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 21st March 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(SW)	1992	2	492580 102760
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (H1) - Soils which readily transmit liquid discharges because they are either shallow, or susceptible to rapid by-pass flow directly to rock, gravel or groundwater Map Sheet: Sheet 45 West Sussex and Surrey Scale: 1:100,000	A13SE (NE)	0	2	493365 104645
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13SE (NE)	0	1	493365 104645
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (NE)	0	1	493365 104645
	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				
23	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 14.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13SW (W)	0	4	493304 104633
24	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 252.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13SW (W)	1	4	493298 104620
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 325.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13NE (N)	195	4	493422 104887
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 54.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13SW (SW)	205	4	493254 104420
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13SE (S)	207	4	493389 104404
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13SW (SW)	242	4	493229 104387
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 602.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13SW (SW)	249	4	493228 104380
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 891.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A13NW (NW)	277	4	493168 104933
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 140.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A8NE (S)	329	4	493374 104280



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 118.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14NW (E)	355	4	493760 104772
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 143.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14NW (NE)	393	4	493747 104889
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 189.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A8NE (SE)	446	4	493648 104211
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14NW (E)	446	4	493854 104783
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 99.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14NW (E)	446	4	493855 104781
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (SE)	488	4	493788 104263
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (SE)	495	4	493788 104252
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (SE)	497	4	493787 104248
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 301.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14NW (E)	497	4	493928 104712



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (SE)	511	4	493787 104230
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (SE)	519	4	493786 104218
43	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 100.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A18SE (N)	535	4	493497 105219
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9NW (SE)	558	4	493788 104168
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 62.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 2	A9NW (SE)	558	4	493788 104168
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 58.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 2	A9NW (SE)	611	4	493792 104106
47	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 26.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17SE (NW)	624	4	492873 105136
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 100.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17SE (NW)	624	4	492873 105136
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 236.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NE (NW)	626	4	492754 104968



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NE (NW)	627	4	492766 104993
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 120.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NE (NW)	628	4	492763 104991
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NE (NW)	628	4	492763 104991
53	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 90.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17SE (NW)	628	4	492769 105000
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 63.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17SE (NW)	632	4	492850 105123
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 157.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A18SE (N)	634	4	493510 105318
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	682	4	492629 104803
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 414.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	683	4	492626 104797
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 79.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17SW (NW)	746	4	492648 105027



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 80.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9SW (SE)	746	4	493798 103951
60	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 9.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A18NE (N)	762	4	493529 105445
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 136.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A8SE (S)	762	4	493633 103869
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 23.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A18NE (N)	770	4	493535 105452
63	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 6.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A18NE (N)	771	4	493557 105447
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 333.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A18NE (N)	777	4	493557 105454
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 675.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14NE (E)	783	4	494216 104722
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 242.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14NE (E)	784	4	494222 104683
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 488.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A8SW (S)	822	4	493284 103796



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A8SW (S)	822	4	493296 103795
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A8SW (S)	822	4	493284 103796
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 337.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A8SW (S)	823	4	493302 103794
71	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 160.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	847	4	492498 104939
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 115.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14SE (E)	865	4	494294 104457
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 340.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14SE (E)	865	4	494294 104457
74	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 15.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	872	4	492475 104947
75	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 212.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	872	4	492475 104947
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 125.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	882	4	492461 104940



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 35.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17SW (NW)	895	4	492553 105159
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 93.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	904	4	492417 104870
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 269.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	905	4	492406 104828
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 81.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	908	4	492426 104913
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 365.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17SW (NW)	921	4	492520 105154
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 54.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A12NW (W)	924	4	492434 104988
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 504.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A14SE (E)	927	4	494332 104348
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 225.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aldingbourne Rife Catchment Name: West Streams Primacy: 1	A12SW (W)	944	4	492360 104446
85	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1072.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aldingbourne Rife Catchment Name: West Streams Primacy: 1	A7NW (SW)	945	4	492428 104229



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 65.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9SW (SE)	947	4	493852 103753
87	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A7NW (W)	955	4	492395 104282
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 435.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A7NW (W)	956	4	492394 104282
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aldingbourne Rife Catchment Name: West Streams Primacy: 1	A11SE (W)	957	4	492339 104499
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17NE (NW)	963	4	492699 105438
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 70.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17NE (NW)	963	4	492699 105438
92	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 12.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17NE (NW)	964	4	492696 105436
93	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 249.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17SW (NW)	967	4	492467 105155
94	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 27.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17NE (NW)	982	4	492741 105495



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17NE (NW)	990	4	492757 105516
96	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A17NE (NW)	995	4	492766 105529
97	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 115.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9SW (SE)	996	4	493833 103691
98	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: West Streams Primacy: 1	A9SW (SE)	996	4	494007 103786



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
99	Licensed Waste Management Facilities (Landfill Boundaries) Name: Lidsey Landfill Site Extension Licence Number: 19728 Location: Lidsey Landfill Site Extension, Lidsey Road, Lidsey, Bognor Regis, West Sussex, PO22 9PL Licence Holder: Sita Southern Ltd Authority: Environment Agency - South East Region, Solent & South Downs Area Site Category: Co-disposal Landfill Sites Max Input Rate: Not Supplied Licence Status: Issued Issued: 19th September 1997 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A8SW (S)	741	2	493261 103881
	Local Authority Landfill Coverage Name: Arun District Council - Has no landfill data to supply		0	5	493365 104645
	Local Authority Landfill Coverage Name: West Sussex County Council - Has supplied landfill data		0	6	493365 104645
	Local Authority Landfill Coverage Name: Chichester District Council - Has no landfill data to supply		944	7	492363 104429
100	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9NE (SE)	882	-	494099 104018
101	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A13SW (W)	0	-	493303 104632
102	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A13SE (SE)	57	-	493493 104582
103	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A13SE (SE)	182	-	493533 104449
104	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A13SE (E)	207	-	493647 104573
105	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SW (SW)	213	-	493193 104431
106	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A13SE (SE)	267	-	493624 104411
107	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (SE)	303	-	493521 104314
108	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (S)	376	-	493442 104230
109	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (SE)	395	-	493661 104277
110	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (SE)	422	-	493656 104243
111	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A14NW (E)	464	-	493875 104776
112	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A14NW (E)	494	-	493879 104854
113	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A14NW (E)	500	-	493930 104717



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
114	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (S)	513	-	493439 104094
115	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (SE)	513	-	493651 104138
116	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A9NW (SE)	526	-	493789 104211
117	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A9NW (SE)	528	-	493817 104234
118	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (SE)	593	-	493647 104049
119	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (S)	596	-	493444 104011
120	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A9NW (SE)	627	-	493971 104270
121	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8NE (SE)	635	-	493652 104007
122	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8SE (SE)	672	-	493652 103968
123	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8SE (S)	705	-	493454 103902
124	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A14NE (E)	731	-	494104 104929
125	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A9SW (SE)	749	-	493821 103960
126	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A9NW (SE)	752	-	493951 104053
127	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A19SE (NE)	804	-	494094 105112
128	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A8SE (S)	810	-	493630 103819
129	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A19SE (NE)	850	-	494094 105192
130	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1914	A9SW (SE)	913	-	494003 103887
131	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A14NE (E)	938	-	494328 104917
132	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A18NE (N)	958	-	493395 105660
133	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1880	A19SE (NE)	993	-	494262 105198



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
134	Registered Landfill Sites Licence Holder: A & J Bull (Southern) Ltd Licence Reference: WSX/L1/0168 Site Location: Lidsey Landfill Site Extension, Lidsey Road, Lidsey, Bognor Regis, West Sussex, Po22 9pl Licence Easting: 492900 Licence Northing: 103700 Operator Location: 4 London Wall Buildings, Blomfield Street, LONDON, Greater London, EC2M 5UQ Authority: Environment Agency - Southern Region, Sussex Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Operational as far as is known Dated: 19th September 1997 Preceded By: 5/BT/88 Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Animal And Food Processing Wastes Asbestos Cement Products Cellulose Wastes Contaminated Rubbish/Bags/Sacks Contaminated Soil Dog Faeces From Poop Scoop Scheme Empty Used Containers Gully Empty'S (Spec.Waste By Oil Cont) House, Com + Ind.Waste Incinerator Residues Damped At Source Lighting Lamps/Tubes/Fluorescents Mineral Processing Wastes Oil/Diesel Contam.Spillage From Beach Polymeric Mat' (Prods/Scrap) Polyurethane Prods/Scrap Scrap Rubber And Shredded Tyres Silt And Dredgings Slag, Boiler/Flue Cleanings Spec.Waste Oil Contam.Spillage Beach Stable Wastes Tyres Used Filter Mat'Ls,Kieselguhr,Carbon,Cloth Waste Treated Timber Wastes From Sewage Treatment Prohibited Waste: Cadmium & Its Compounds Carcinogenic/Mutagenic/Teratogenic Sub Cyanides Difficult Waste Not Specified Below Liquids & Pumpable Sludges Mercury & Its Compounds Organohalogen Cpds (Or Sub'S May Form) Organophosphorus Cmpds Organotin Cmpds Pressurised Cont'Rs > 1000 MI Spec.Waste (Epa '90) Not Listed Below Waste N.O.S.	A7SE (SW)	1000	2	492900 103700



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Thames Group	A13SE (NE)	0	1	493365 104645
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (NE)	0	1	493365 104645
135	BGS Recorded Mineral Sites Site Name: Woodgate Brick Field Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 157580 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: River Terrace Deposits (Undifferentiated) Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	904	1	494111 103999
	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 No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NE)	0	1	493365 104645
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	195	1	493160 104809
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NE)	0	1	493365 104645
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NE)	0	1	493365 104645
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NE)	0	1	493365 104645
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NE)	0	1	493365 104645
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	195	1	493160 104809
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NE)	0	1	493365 104645
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	195	1	493160 104809
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (NE)	0	1	493365 104645



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	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	A13SE (NE)	0	1	493365 104645



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
136	Contemporary Trade Directory Entries Name: Elizabeth Robson Location: 12, Lamorna Gardens, Westergate, Chichester, West Sussex, PO20 3RL Classification: Furniture - Repairing & Restoring Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NE (E)	264	-	493686 104713
137	Contemporary Trade Directory Entries Name: D W Transport Refrigeration Location: 15, Orchard Gardens, Woodgate, Chichester, West Sussex, PO20 3QW Classification: Refrigerators & Freezers - Servicing & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (E)	480	-	493896 104450
138	Contemporary Trade Directory Entries Name: Time For You (Hampshire) Ltd Location: 12, Elmcroft Place, Westergate, Chichester, West Sussex, PO20 3XL Classification: Ironing & Home Laundry Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	504	-	493922 104763
138	Contemporary Trade Directory Entries Name: Time For You (West Sussex) Ltd Location: 12, Elmcroft Place, Westergate, Chichester, West Sussex, PO20 3XL Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	504	-	493922 104763
138	Contemporary Trade Directory Entries Name: Time For You (Hampshire) Ltd Location: 12, Elmcroft Place, Westergate, Chichester, West Sussex, PO20 3XL Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A14NW (E)	504	-	493922 104763
139	Contemporary Trade Directory Entries Name: Emberleaf Workshops Location: Martins, Westergate Street, Westergate, Chichester, West Sussex, PO20 3QU Classification: Builders' Tools & Equipment Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A14NW (NE)	510	-	493831 104975
139	Contemporary Trade Directory Entries Name: Dimensions (Chichester) Ltd Location: Westergate St, Westergate, Chichester, West Sussex, PO20 3QX Classification: Office Furniture & Equipment Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	546	-	493850 105010
140	Contemporary Trade Directory Entries Name: Polishedact Location: 5, Oak Tree Lane, Woodgate, Chichester, West Sussex, PO20 3GU Classification: Furniture - Repairing & Restoring Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	513	-	493820 104259
141	Contemporary Trade Directory Entries Name: Scotts Direct Location: The Grange, Westergate Street, Woodgate, Chichester, West Sussex, PO20 3SQ Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (SE)	592	-	493982 104365
142	Contemporary Trade Directory Entries Name: The Cleaning Biz Location: White House, Westergate Street, Westergate, Chichester, West Sussex, PO20 3QY Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	669	-	493858 105181
143	Contemporary Trade Directory Entries Name: H S Cars Location: Lidsey Road, Woodgate, Chichester, West Sussex, PO20 3SU Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	765	-	493830 103947



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
144	Contemporary Trade Directory Entries Name: L J M Transport Location: 2, St. Richards Road, Westergate, Chichester, West Sussex, PO20 3RD Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	774	-	493985 105203
145	Contemporary Trade Directory Entries Name: Daven Ports Location: Woodgate Centre, Oak Tree Lane, Woodgate, Chichester, West Sussex, PO20 3GU Classification: Cabinet Makers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NE (SE)	782	-	494120 104216
145	Contemporary Trade Directory Entries Name: Polishedact Location: Woodgate Centre, Oak Tree Lane, Woodgate, Chichester, West Sussex, PO20 3GU Classification: Antiques - Repairing & Restoring Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NE (SE)	784	-	494120 104212
145	Contemporary Trade Directory Entries Name: Weston Heating Services Location: Woodgate Centre, Unit B2, Chichester, West Sussex, PO20 6ST Classification: Heating Services - Industrial and Commercial Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	812	-	494133 104180
146	Contemporary Trade Directory Entries Name: Servac International Marine Technology Location: Rock House, Westergate Street, Westergate, Chichester, West Sussex, PO20 3RJ Classification: Marine Engineering Equipment Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A19SW (NE)	785	-	493872 105318
147	Contemporary Trade Directory Entries Name: National Plastics Location: Unit 8, Lees Yard, Lidsey Road, Woodgate, Chichester, PO20 3SU Classification: Cladding Suppliers & Installers Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	826	-	493932 103942
148	Contemporary Trade Directory Entries Name: Prettywaste Location: 12, School Close, Westergate, Chichester, West Sussex, PO20 3AB Classification: Shredding Equipment & Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	857	-	494031 105275
149	Contemporary Trade Directory Entries Name: Ashton Heating Services Location: 27, Barnetts Field, Westergate, CHICHESTER, West Sussex, PO20 3UD Classification: Boilers - Servicing, Replacements & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	867	-	493765 105473
150	Contemporary Trade Directory Entries Name: G P Oven Cleaners Location: Grove Farmhouse, Lidsey Road, Bognor Regis, PO22 9PL Classification: Oven cleaning Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	926	-	493802 103753
150	Contemporary Trade Directory Entries Name: Chanctonbury Pet Foods Location: Headholme Cottage, Lidsey Road, Bognor Regis, West Sussex, PO22 9PL Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	939	-	493795 103737
151	Points of Interest - Commercial Services Name: Wallis Transport Ltd Location: 1 Ivy Lane, Westergate, Chichester, PO20 3RA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A19SW (NE)	733	8	493866 105257



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
152	Points of Interest - Commercial Services Name: L J M Transport Location: 2 St. Richards Road, Westergate, Chichester, PO20 3RD Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A19SW (NE)	773	8	493985 105202
153	Points of Interest - Commercial Services Name: Sparkles Mobile Valeting Chichester West Sussex Location: 34 Ivy Lane, Westergate, Chichester, PO20 3RE Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A19SE (NE)	877	8	494155 105152
154	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	156	8	493400 104454
154	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	156	8	493404 104454
154	Points of Interest - Manufacturing and Production Name: Tanks Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (S)	158	8	493412 104451
154	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	163	8	493402 104447
154	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	167	8	493402 104443
154	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	173	8	493401 104437
155	Points of Interest - Manufacturing and Production Name: Piggery Location: PO20 Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A8NE (S)	321	8	493392 104289
156	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	385	8	493624 105003
157	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14SW (E)	422	8	493864 104621
158	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	751	8	493614 103875



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
158	Points of Interest - Manufacturing and Production Name: Tank Location: PO20 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	764	8	493592 103857
159	Points of Interest - Manufacturing and Production Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	776	8	493865 105312
159	Points of Interest - Manufacturing and Production Name: Factory Location: PO20 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A19SW (NE)	784	8	493869 105319
160	Points of Interest - Public Infrastructure Name: Sluice Location: PO20 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	640	8	492753 104997
161	Points of Interest - Public Infrastructure Name: Sluice Location: PO20 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	870	8	492475 104941
161	Points of Interest - Public Infrastructure Name: Sluice Location: PO20 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	890	8	492462 104965
162	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	A18SE (NE)	590	8	493685 105204
162	Points of Interest - Recreational and Environmental Name: Playground Location: Olivers Meadow, PO20 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A18SE (NE)	594	8	493695 105203



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
163	Nitrate Vulnerable Zones Name: Aldingbourne Rife Nvz Description: Surface Water Source: Environment Agency, Head Office	A13SE (NE)	0	10	493365 104645



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Arun District Council - Environmental Health Department Chichester District Council - Environmental Health Department	July 2013 July 2013	Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Southern Region	July 2018	Quarterly
Enforcement and Prohibition Notices Environment Agency - Southern Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - Southern Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region	July 2018 July 2018	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Arun District Council - Environmental Health Department Chichester District Council - Environmental Health Department	December 2014 October 2014	Variable Variable
Local Authority Pollution Prevention and Controls Arun District Council - Environmental Health Department Chichester District Council - Environmental Health Department	December 2014 October 2014	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Arun District Council - Environmental Health Department Chichester District Council - Environmental Health Department	December 2014 October 2014	Variable Variable
Nearest Surface Water Feature Ordnance Survey	September 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	July 2018 July 2018 July 2018	Quarterly Quarterly Quarterly
Water Abstractions Environment Agency - Southern Region	July 2018	Quarterly
Water Industry Act Referrals Environment Agency - Southern Region	October 2017	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified



Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	January 2018	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2018	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2018	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2018	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2018	Quarterly
Flood Defences Environment Agency - Head Office	August 2018	Quarterly
OS Water Network Lines Ordnance Survey	May 2018	Quarterly
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	As notified



Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	July 2018	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	July 2018 July 2018 July 2018	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	July 2018 July 2018 July 2018	Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Arun District Council - Technical Support Unit Chichester District Council - Environmental Health Department West Sussex County Council - Environment & Development	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Arun District Council - Technical Support Unit Chichester District Council - Environmental Health Department West Sussex County Council - Environment & Development	May 2000 May 2000 May 2000	Not Applicable 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 - Solent and South Downs Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Variable
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Arun District Council - Technical Support Unit Chichester District Council - Planning Department West Sussex County Council - Environment & Development	February 2016 February 2016 October 2006	Variable Variable Annual Rolling Update
Planning Hazardous Substance Consents Arun District Council - Technical Support Unit Chichester District Council - Planning Department West Sussex County Council - Environment & Development	February 2016 February 2016 October 2006	Variable Variable Annual Rolling Update



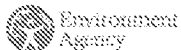
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2018	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	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	August 2018	Quarterly
Fuel Station Entries Experian Catalyst	August 2018	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	September 2018	Quarterly
Points of Interest - Education and Health PointX	September 2018	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2018	Quarterly
Points of Interest - Public Infrastructure PointX	September 2018	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2018	Quarterly
Underground Electrical Cables National Grid	December 2015	



Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	August 2018	Bi-Annually
Areas of Outstanding Natural Beauty Natural England	August 2018	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	August 2018	Bi-Annually
Marine Nature Reserves Natural England	January 2018	Bi-Annually
National Nature Reserves Natural England	August 2018	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
Ramsar Sites Natural England	August 2018	Bi-Annually
Sites of Special Scientific Interest Natural England	October 2018	Bi-Annually
Special Areas of Conservation Natural England	August 2018	Bi-Annually
Special Protection Areas Natural England	August 2018	Bi-Annually



A selection of organisations who provide data within this report

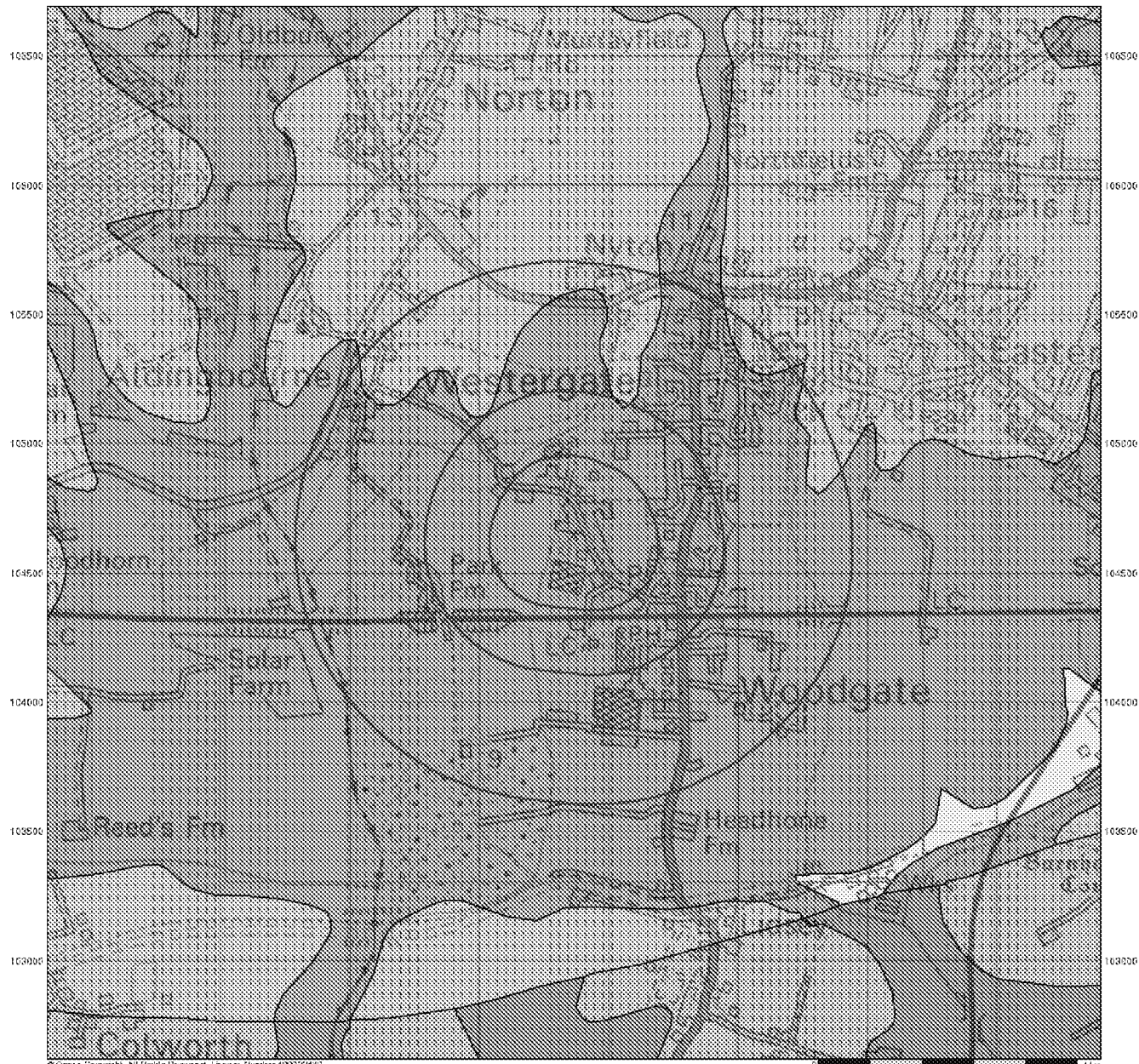
Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT 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, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	
3	Arun District Council - Environmental Health Department Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF	
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	
5	Arun District Council - Technical Support Unit Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF	
6	West Sussex County Council - Environment & Development County Hall, Tower hall, Chichester, West Sussex, PO19 1RH	
7	Chichester District Council - Environmental Health Department East Pallant House, 1 East Pallant, Chichester, West Sussex, PO19 1TY	
8	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	
9	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	
10	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	

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

491500 492000 492500 493000 493500 494000 494500 495000



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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

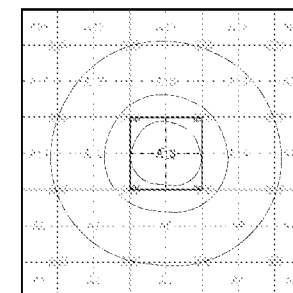


Drift Deposit



Soil Classes

Site Sensitivity Context Map - Slice A



Order Details

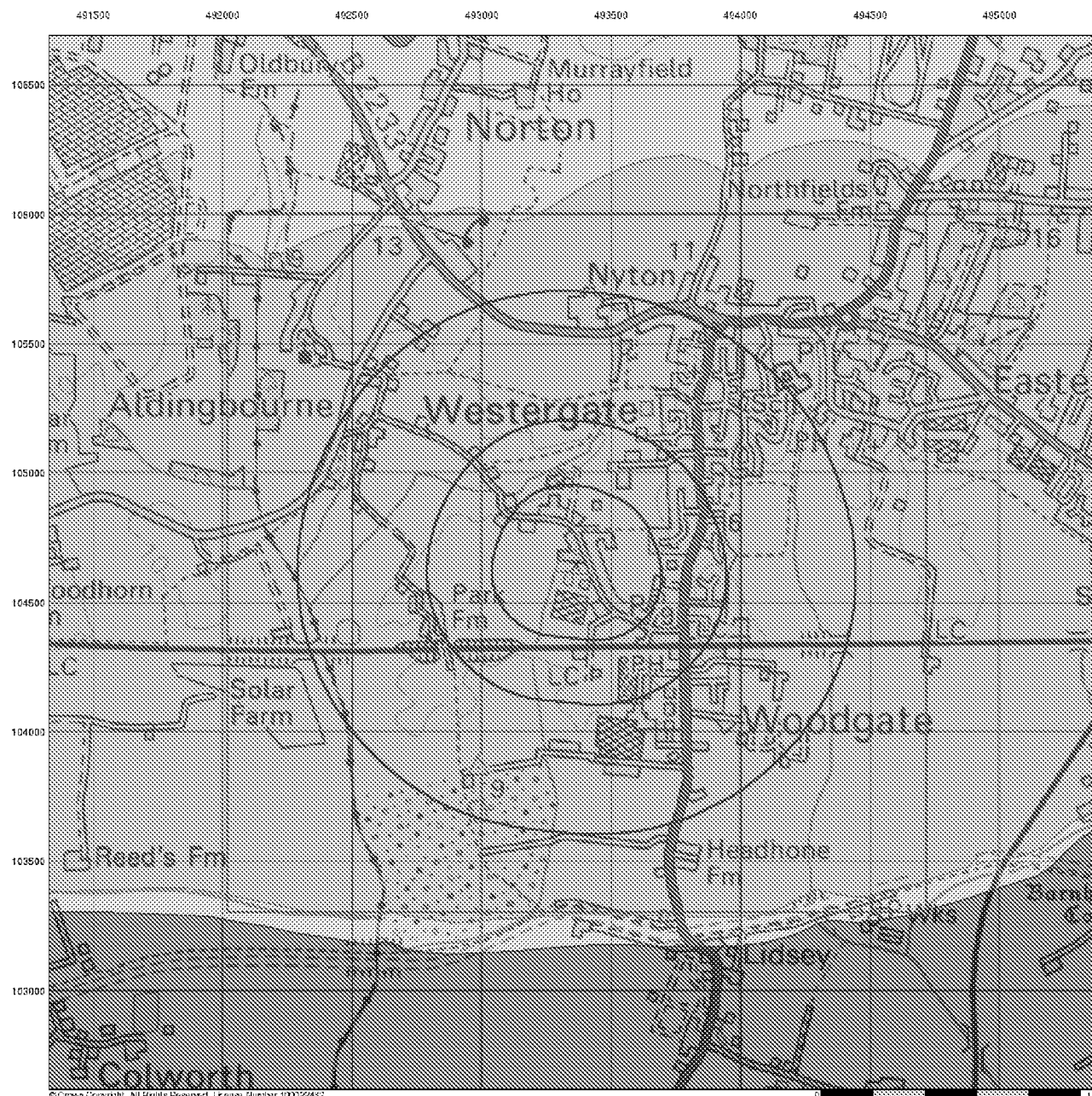
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Customer Ref: GE17712
National Grid Reference: 493360, 104650
Slice: A
Site Area (Ha): 1.02
Search Buffer (m): 1000

Site Details

Banff, Hook Lane, Aldingbourne, CHICHESTER, PO20 3TE

Landmark
INFORMATION GROUP

Tel: 0544 544 0052
Fax: 0544 544 5551
Web: www.environment.co.uk



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Geo-Environmental Bedrock Aquifer Designation

General

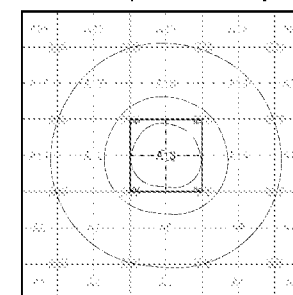
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

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

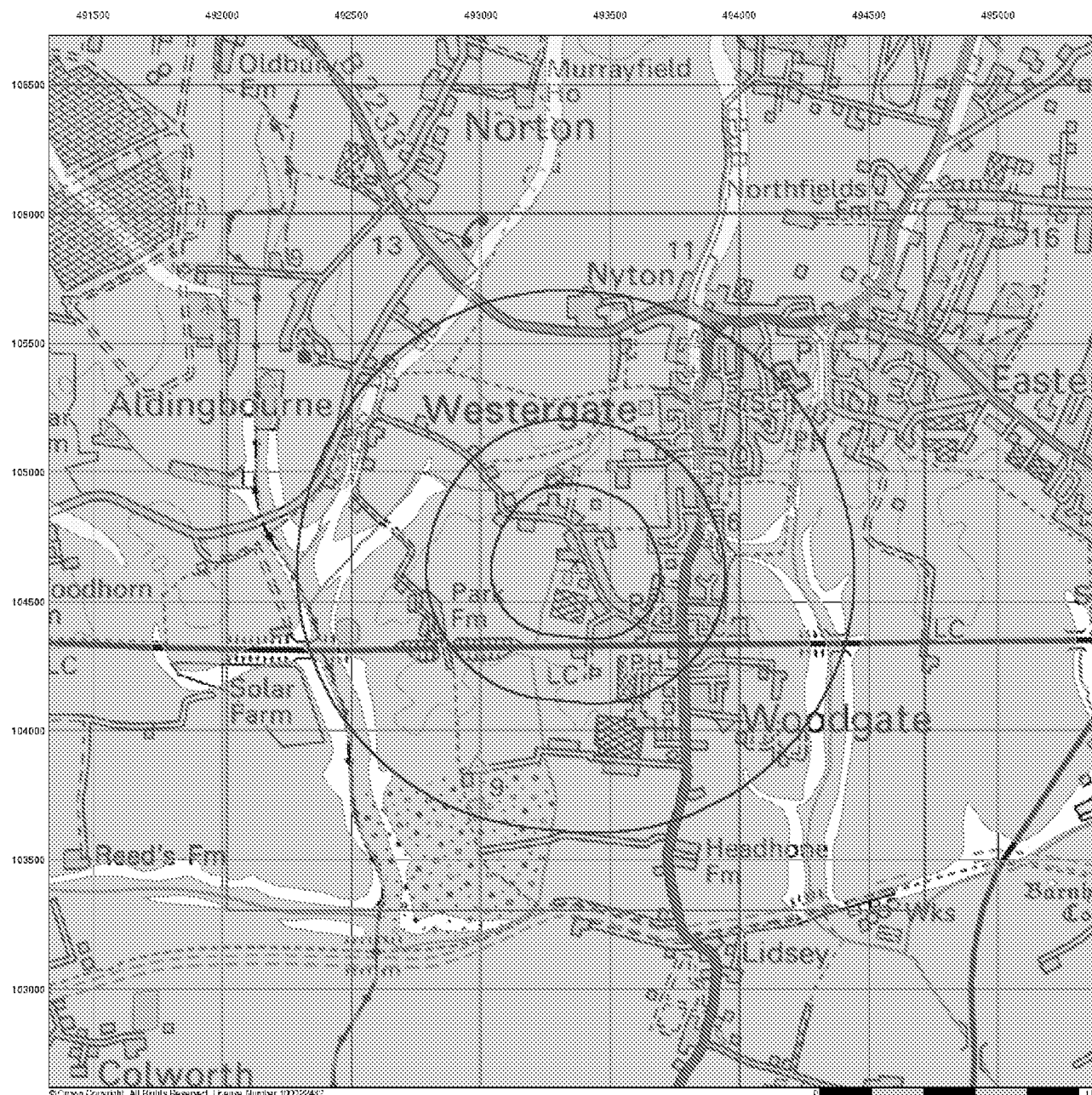
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 Slice: A
 Site Area (Ha): 1.02
 Search Buffer (m): 1000

Site Details

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Geo-Environmental Superficial Aquifer Designation

General

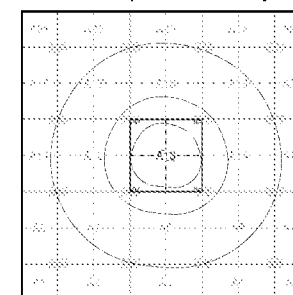
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

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

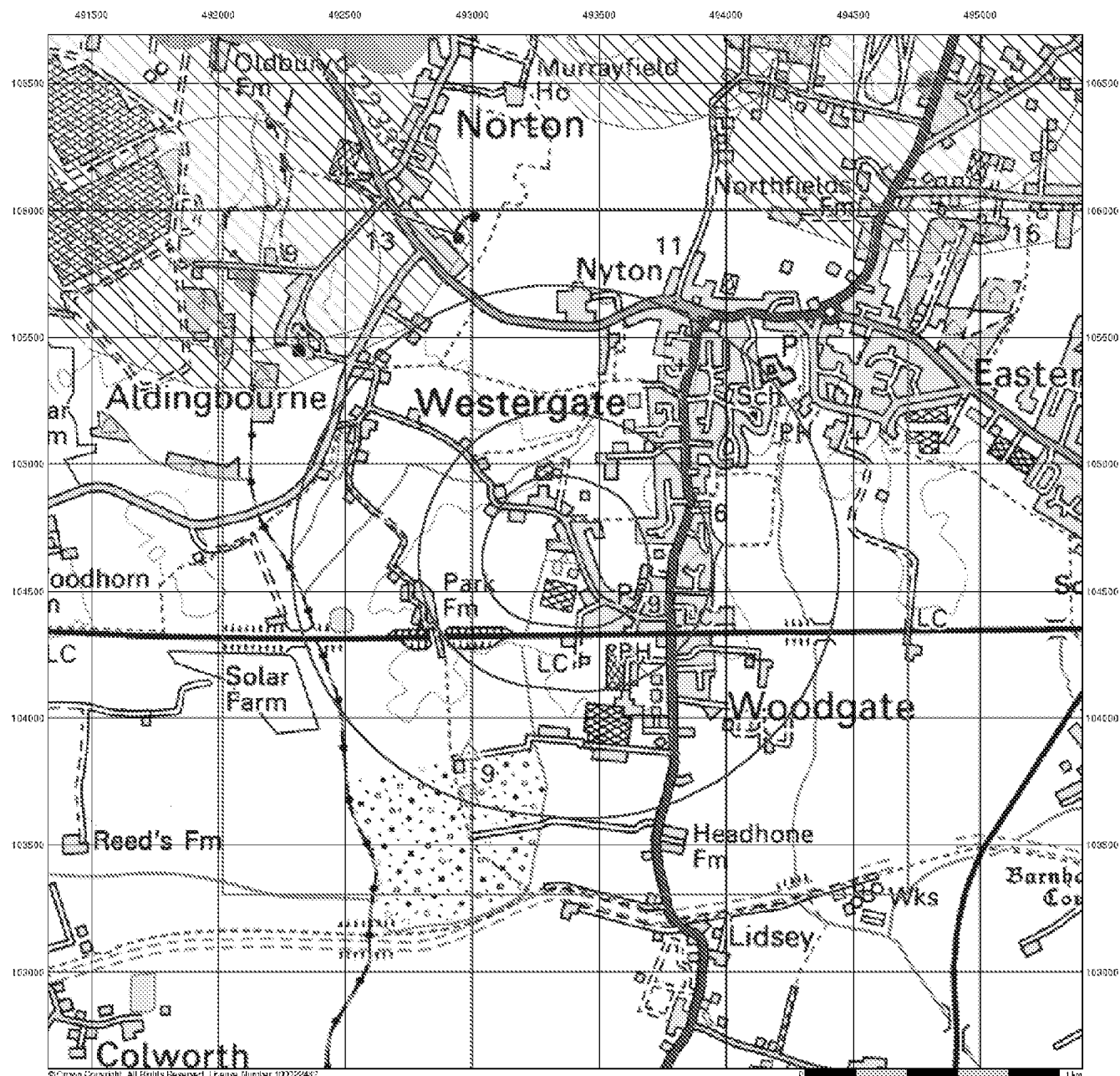
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 Site Area (Ha): 1.02
 Search Buffer (m): 1000

Site Details

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Geo-Environmental Source Protection Zones

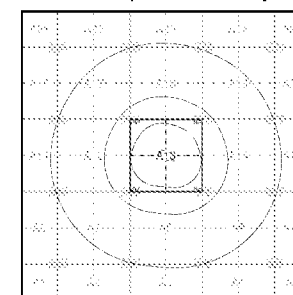
General

- 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)

Site Sensitivity Context Map - Slice A



Order Details

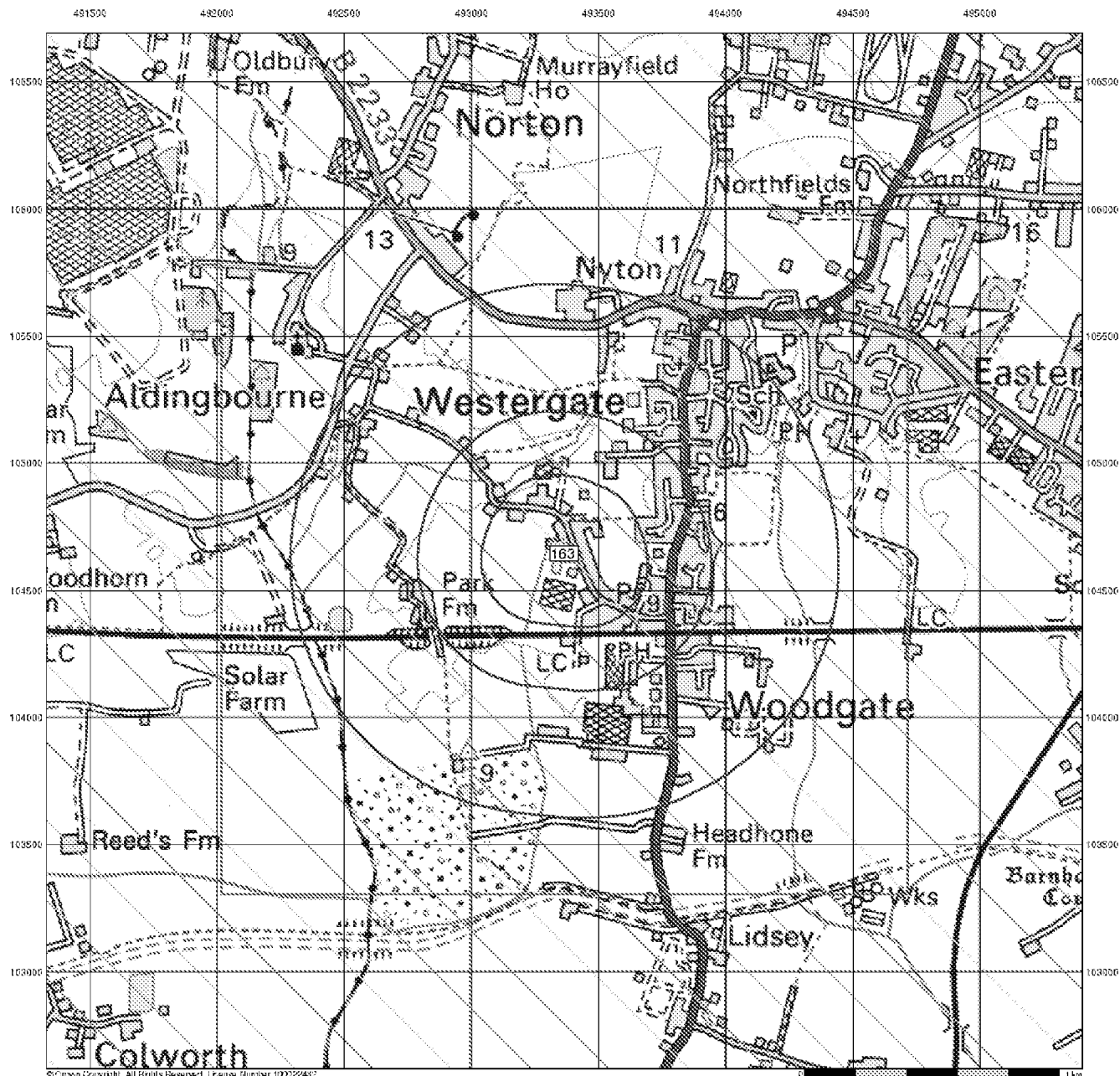
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 Site Area (Ha): 1.02
 Search Buffer (m): 1000

Site Details

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Geo-Environmental Sensitive Land Uses

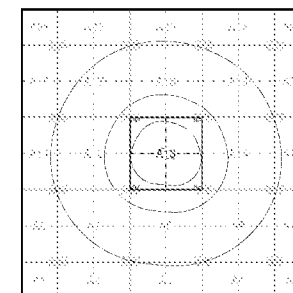
General

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

Sensitive Land Uses

- Ancient Woodlands
- 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

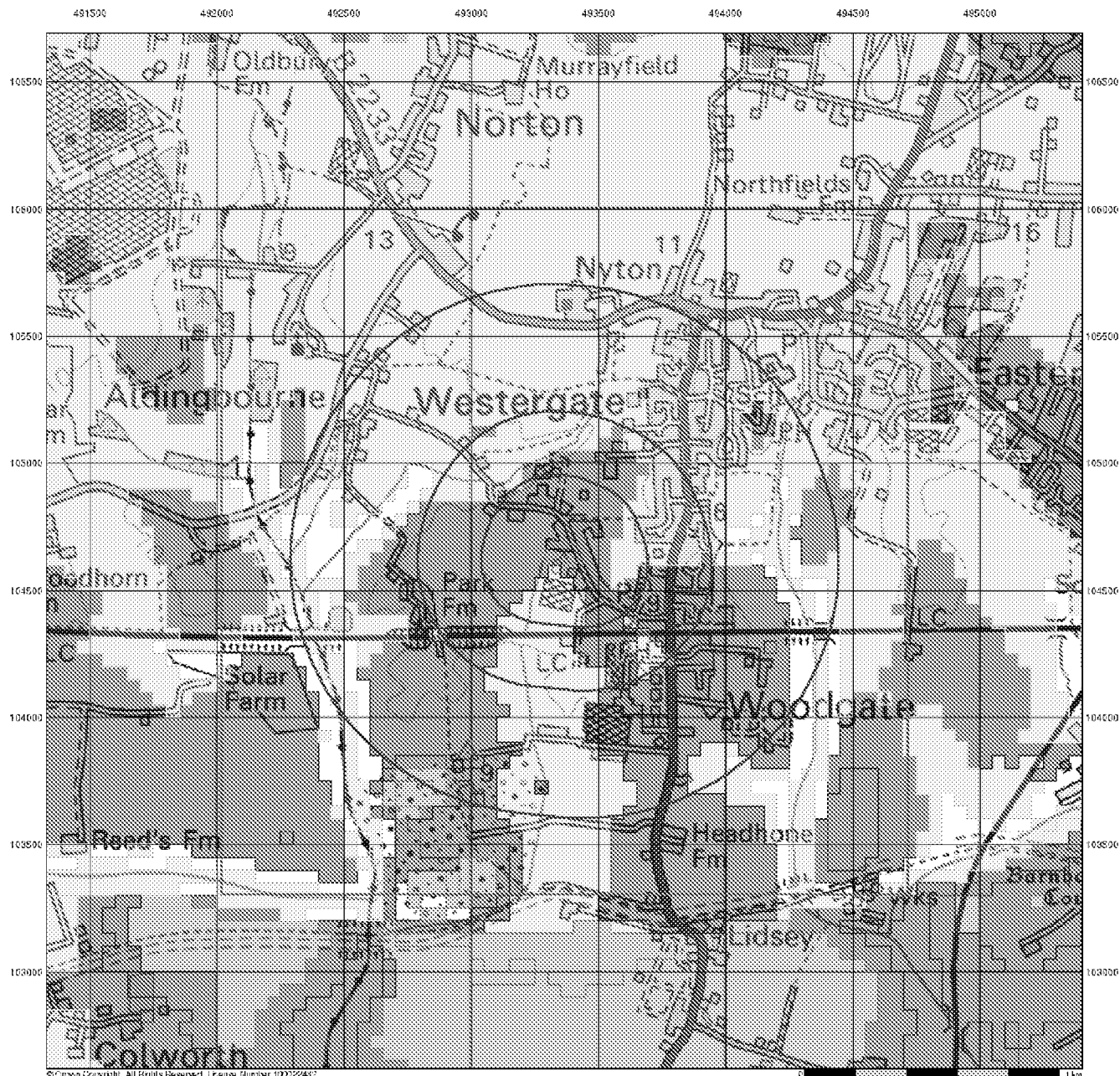
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 Slice: A
 Site Area (Ha): 1.02
 Search Buffer (m): 1000

Site Details

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Geo-Environmental

BGS Flood GFS Data

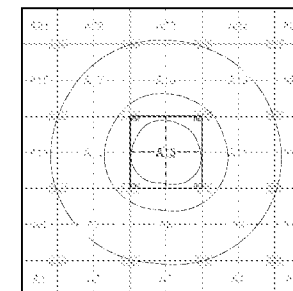
General

- 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: 182826946_1_1
 Customer Ref: GE17712
 National Grid Reference: 493360, 104650
 Slice: A
 Site Area (Ha): 1.02
 Search Buffer (m): 1000

Site Details

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Geo-Environmental Industrial Land Use Map

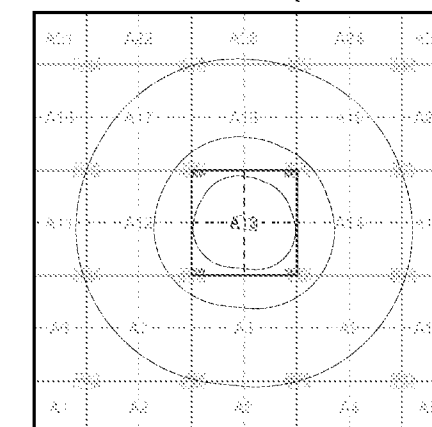
General

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

Industrial Land Use

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

Industrial Land Use Map - Slice A



Order Details

Order Number: 182826946_1_1
Customer Ref: GE17712
National Grid Reference: 493360, 104650
Slice: A
Site Area (Ha): 1.02
Search Buffer (m): 1000

Site Details

Banff, Hook Lane, Aldingbourne, CHICHESTER, PO20 3TE

Landmark
INFORMATION GROUP

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