



**Geo-Environmental**

**GROUND APPRAISAL REPORT**

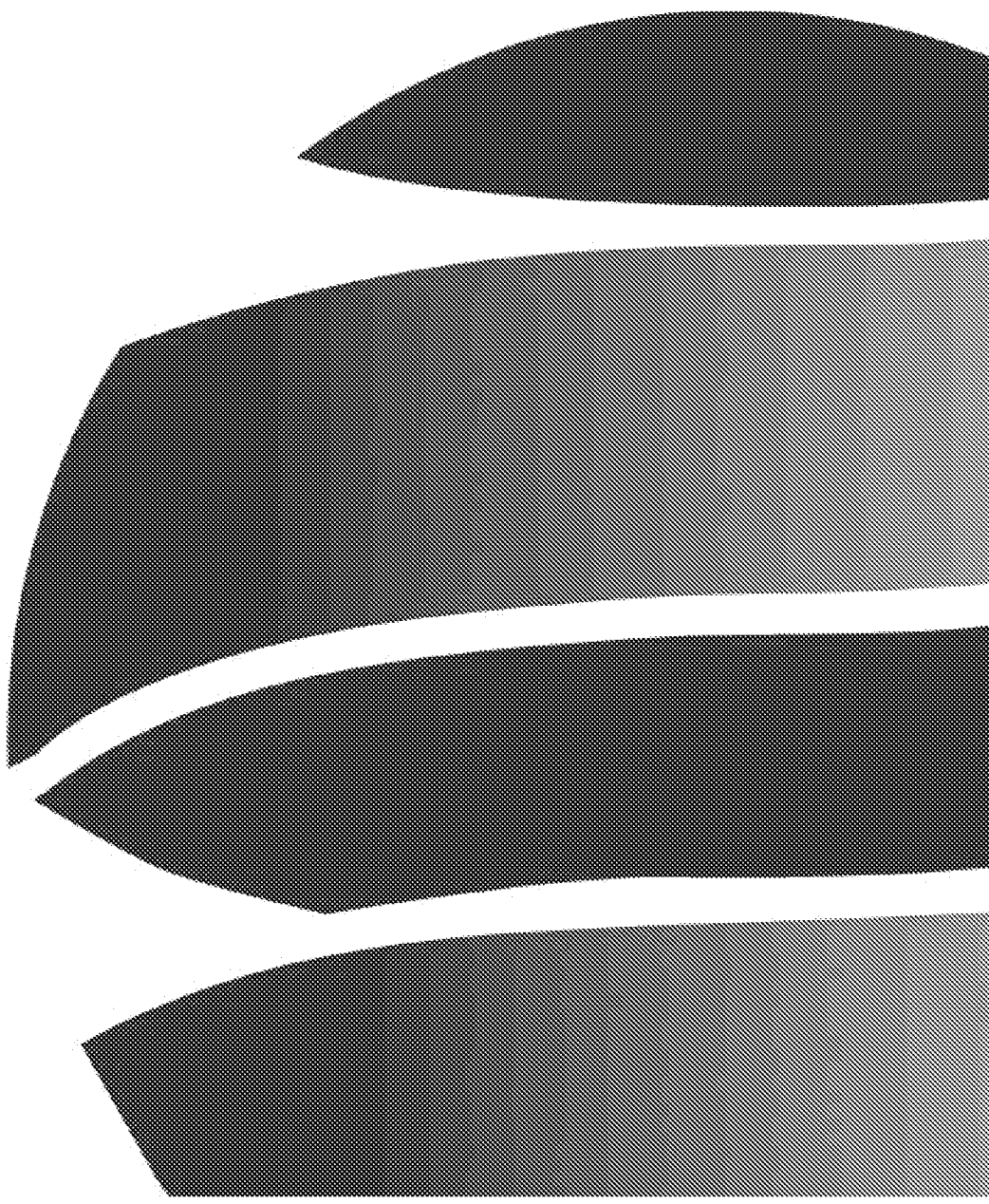
**for the site at**

**LAND OFF LIDSEY ROAD, WOODGATE**

**WEST SUSSEX, PO20 3SU**

**on behalf of**

**THAKEHAM CLIENT LIMITED**





|              |                                                                                               |
|--------------|-----------------------------------------------------------------------------------------------|
| Report:      | GROUND APPRAISAL REPORT                                                                       |
| Site:        | LAND OFF LIDSEY ROAD, WOODGATE, WEST SUSSEX, PO20 3SU                                         |
| Client:      | THAKEHAM CLIENT LIMITED                                                                       |
| Date:        | 10/10/2019                                                                                    |
| Reference:   | GE18390-GAR-OCT-19                                                                            |
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| 1.0           | 04/10/2019 | First issue                                 | AP                |
| 2.0           | 10/10/2019 | Second issue, amendment to pavement section | AP                |
|               |            |                                             |                   |
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| EXECUTIVE SUMMARY           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | Site Address        | Land At Lidsey Road, Woodgate, West Sussex, PO20 3SU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                             | Form of Development | Construction of residential properties with gardens, car parking, access road and associated infrastructure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Encountered Conditions      | Scope of works      | An intrusive investigation to confirm the ground and groundwater conditions and support the development of geotechnical and geo-environmental assessments of the site in relation to the proposed development.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                             | Ground Conditions   | The ground conditions comprised a limited thickness of Topsoil and Made Ground overlying River Terrace Deposits and the London Clay Formation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                             | Groundwater         | Groundwater was encountered at depths of between 1.85m and 3.00m bgl, during the fieldworks, with water standing at depths of between 1.20m and 2.50m bgl after twenty minutes. Groundwater monitoring wells were installed within WS1, WS2, WS3 and WS6 to depths of between 2.50m and 3.70m bgl. Two return monitoring visits have been made to date, with further visits to be undertaken throughout the winter period. To date, groundwater has been recorded at depths of between 0.91m and 1.75m bgl.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Geotechnical Considerations | Foundations         | <p>Based on the ground and groundwater conditions encountered in the boreholes conventional foundations are considered suitable for the proposed low rise development.</p> <p>Foundations should be taken below any Made Ground, soft, desiccated or disturbed ground and bear onto the firm to very stiff sandy silty gravelly clays or silty sands of the River Terrace Deposits.</p> <p>Based on the laboratory results, the more clayey parts of the River Terrace Deposits <i>en masse</i> should be considered Medium Volume Change Potential in accordance with the NHBC Standards, Chapter 4.2. A minimum founding depth within the River Terrace Deposits of 0.90m is therefore applicable remote from trees. Foundations should not be less than 450mm in width.</p> <p>Within the zone of moisture demand of any existing, proposed or recently felled trees it is recommended that foundation depths be calculated in accordance with the NHBC Standards, Chapter 4.2. Foundations should also be taken through any major root zone and desiccated clay soils should this be found at greater depth. Design measures will be required to prevent heave forces from developing on the faces of the foundations where footing depths are in excess of 1.5m on account of trees. It should be noted that the NHBC stipulate that foundations cast at depths greater than 2.5m should be "engineer designed".</p> <p>Based on the typical settlement parameters for the types of soil encountered, a maximum net allowable bearing capacity of 125kPa is applicable for trench, strip or isolated pad foundations taken through any Made Ground, soft or loose zones, desiccated or disturbed soils and placed wholly into or onto the firm to very stiff sandy silty gravelly clays of the River Terrace Deposits. Under the above loading the settlements should remain within tolerable limits for the proposed scheme.</p> <p>It would be prudent to further consider the depth to the groundwater during the winter months as this could cause construction difficulties</p> |



|  |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |             | where intercepted within foundation or service trenches. The risk of intercepting the groundwater would be higher where foundations are required to be deepened on account of the presence of trees and careful design is required in this respect.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|  | Floor Slabs | Based on the laboratory testing results and the presence of trees and shrinkable soils, it is recommended that suspended ground floor slabs be adopted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|  | Excavations | <p>Shallow excavations within the Made Ground should remain relatively stable in the short term. Long deep excavations within the Made Ground are likely to be prone to instability, particularly where left open for prolonged periods, and should be battered back to a safe angle, or suitable shoring techniques should be adopted to provide stability.</p> <p>Shallow excavations within the River Terrace Deposits should remain relatively stable in the short term. Long, deep excavations within the River Terrace Deposits are likely to be prone to instability, particularly where left open for prolonged periods, or open to wet weather conditions and should be battered back to a safe angle, or suitable shoring techniques should be adopted to provide stability. Any excavations taken below the groundwater table is likely to be prone to collapse and running sand.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|  | Pavements   | <p>Where encountered, the Made Ground was noted to be of mixed composition and of limited thickness. The engineering characteristics of such soils are variable and unpredictable and the CBR value of Made Ground does not predict the overall settlements that may occur in such materials. Due to the heterogeneity of the variable amounts of Made Ground it would be prudent to assume the material to be deemed non-frost susceptible throughout.</p> <p>As part of the investigation, three bulk samples of the underlying River Terrace Deposits were taken from hand pits referenced TP DCP1, TP DCP4 and TP DCP6, with samples taken from depths of 0.50m bgl. The results of the laboratory remoulded (2.5kg rammer method) soaked CBR tests from gave results in the range of 1% and 9.5%.</p> <p>In addition, six dynamic cone penetrometer tests were undertaken across the site. The results between the depth of 300mm and 600mm bgl ranged between 5% and 22%.</p> <p>The Transport and Road Research Laboratory Report (LR1132) entitled '<i>The Structural Design of Bituminous Roads</i>' (1984) cites an estimated equilibrium suction index of 5% for the sandy silty gravelly clays such as those of the near surface River Terrace Deposits, under average construction conditions and a high groundwater level.</p> <p>An overall CBR value of 5% is recommended.</p> <p>Furthermore, based on the geotechnical results, the near surface River Terrace Deposits should be considered as being frost susceptible for pavement design purposes with abundant gravel noted within the sandy silty clays within the upper metre.</p> |



|                |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |                   | It is recommended that the sub-grade be proof rolled and any soft spots removed and replaced with a suitable compacted granular fill.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                | Drainage          | The results indicate a relatively poor infiltration rate within the River Terrace Deposits, whilst groundwater was also noted to be shallow. Based on these findings, the design and construction of conventional soakaways may be viable, though the storage capacity will be severely restricted by the presence of the groundwater table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                | Buried Concrete   | Seven pH and Sulphate tests were undertaken on the River Terrace Deposits. The results for the River Terrace Deposits corresponded to design class DS-1 as defined within the BRE Special Digest 1 (2005). The pH analyses indicate the ACEC class to be AC-1. It is recommended that a design class of DS-1 and an ACEC class of AC-1 be applied to all sub-surface concrete within this stratum.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Considerations | Human Health      | <p>All of the results indicated concentrations less than the Atkins ATRISK/C4SI screening values with the exception of Benzo(a)pyrene (TP1 0.10m 120mg/kg, TP2 0.10m 64mg/kg), Barium (TP2 0.10m 290mg/kg, WS7 0.20m 130mg/kg) and Beryllium (TP2 0.10m 2.40mg/kg). The Atkins ATRISK values for Benzo(a)pyrene are 4.95mg/kg, Barium 110mg/kg and 1.71mg/kg for Beryllium.</p> <p>The locations of TP1 and TP2 were within the area of the glasshouse, formerly used as a nursery. The location of WS7 was within the grounds of the residential property. Based on these initial findings, a cover system will be required within these areas. However, based on the limited sampling within these locations, it is recommended that further investigation in and around the garden nursery and residential property be undertaken. Those findings, along with these findings should be used to finalise a cover system for affected plots within those areas. As a preliminary guide it is likely that recommendations will be to strip the existing Made Ground from the proposed gardens and soft landscaping areas for the units located within the grounds of the house and glasshouse.</p> |
|                | Ground gas        | Two ground gas monitoring visits have been undertaken to date to provide an initial assessment. No significant ground gas concentrations were noted and therefore no remedial works are required in this respect. A final assessment will be made upon completion of all monitoring visits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                | Built Environment | 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 indicated elevated concentrations of SVOCs and TPH, barrier pipe is likely to be required on the area of the site currently occupied by the house and glasshouse, unless they are wholly placed in natural soils. 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Waste Disposal | Initially, the results of the laboratory testing were submitted for Catwaste classification, the results Confirmed that the near surface soils did not have any properties that would deem the material hazardous waste for all but two samples. Samples TP1 0.10m and TP2 0.10m had hydrocarbon/oil with benzo(a)pyrene marker. Waste soils within this area require further analysis in the form of Waste Characterisation testing and Waste Acceptance Criteria testing to determine classification for off-site disposal. |
| <p>Further Action:</p> <ul style="list-style-type: none"><li>• 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.</li><li>• The results of this investigation be presented to the water utility company as soon as reasonably practicable in order to confirm the pipe material</li><li>• Further investigation within the locations of the former garden nursery and residential property.</li><li>• Further waste disposal classification comprising Waste Characterisation tests and Waste Acceptance Criteria testing.</li></ul> |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



## Desk Study Report

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### 1.0 INTRODUCTION

Geo-Environmental Services Limited was instructed by Thakeham Client Limited to undertake an investigation of the geotechnical and geo-environmental factors pertaining to Land Off Lidsey Road, Woodgate, West Sussex, PO20 3SU. The site's location is presented in Figure 1.

The proposed development is understood to comprise the construction of residential properties with private gardens, car parking access roads and associated infrastructure.

#### 1.1 Site Description

The development site comprised a grassed field with a large dilapidated glasshouse within the south-eastern corner. The site was roughly rectangular in shape and was generally flat and level. One the eastern side of the site was a single residential property which for the purposes of the investigation was included within the site boundary. The property was a large two storey detached house with garage and indoor swimming pool with gardens on the eastern and western sides. The area immediately around the glasshouse was overgrown both within and around the structure. It was noted that immediately outside of the building was an area of fly tipped material comprising potential asbestos cement board sheeting and a fridge. Anecdotal evidence suggested that the glasshouse had been formerly used as a small commercial nursery. The site was bounded by mature trees and hedges, with a ditch along Lidsey Road, which formed the eastern boundary. A large oak tree was noted centrally within the western portion of the site.

The surrounding area comprised a small field and a public house to the north, residential properties to the east and south and a large commercial nursery to the west.

#### 1.2 Desk Study

A standalone Desk Study was undertaken for the site in August 2019, reference GE18390-DSR-AUG19, and this is presented in Appendix A.

The poignant sections relating to the Preliminary Risk Assessment are presented in the following section for ease of reference.



## **2.0 PRELIMINARY ASSESSMENT**

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

### **2.1 Geotechnical Risk Assessment**

#### **2.1.1 Potential Geotechnical Issues**

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

- The presence of shallow groundwater and associated excavation stability
- Viability of soakaways.
- The presence of mature trees will need to be considered for foundation design where shrinkable clay soils are present.
- Lateral changes in ground conditions.

### **2.2 Preliminary Environmental Conceptual Site Model & Risk Assessment**

#### **2.2.1 Methodology**

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

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



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

Table 2.1 Risk Ratings Matrix

| Risk Rating          | Definitions                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Very high risk       | <p>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.</p> <p>This risk, if realised, is likely to result in a substantial liability.</p> <p>Urgent investigation (if not already undertaken) and remediation are likely to be required.</p> |
| High risk            | <p>Harm is likely to arise to a designated receptor from an identified hazard</p> <p>Realisation of the risk is likely to present a substantial liability.</p> <p>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.</p>                                                              |
| 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 2.2 Risk Rating Definitions



### 2.2.2 Summary of Plausible Sources

Possible sources of contamination identified from the desk study are summarised in Table 3.3.

| Source                        | Description                                                                                                                              | Contaminants                                                                                                                                         |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Made Ground and shallow soils | The general quality of Made Ground and shallow soils could be impacted by the presence of contamination.                                 | Possible elevated concentrations of metals, metalloids, TPH and PAH compounds, and asbestos in Made Ground (if present) or in shallow natural soils. |
| Ground Gases                  | Possible presence of ground gases as a result of Made Ground (if present) and vapours associated with organic contaminants (if present). | Possible elevated Methane, Carbon Dioxide, depleted Oxygen and Volatile Organic Compounds (VOCs)                                                     |

**Table 2.3 Possible Sources of Contamination**

### 2.2.3 Summary of Plausible Pathways

The plausible pathways are summarised in Table 3.4. These pathways are based on the proposed end use, including residential properties and private gardens.

| Pathway                      | Description                                                                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Direct Contact               | Ingestion of soil particles, ingestion and bioaccumulation in vegetables/fruit and inhalation of soil derived dust (including tracked back dust), dermal contact. |
| Inhalation                   | Inhalation of ground gases and soil dust both inside and outside of buildings.                                                                                    |
| Vertical & Lateral Migration | Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways, e.g. services trenches, or with groundwater.          |
| Root Uptake                  | Uptake of soil and waterborne contaminants by plants.                                                                                                             |
| Chemical Attack              | Attack of buried plastics and concrete by aggressive ground conditions.                                                                                           |

**Table 2.4 Possible Contamination Pathways**

### 2.2.4 Summary of Plausible Receptors

Potential receptors associated with the site and its development are summarised in Table 3.5.

| Receptor                     | Description                                                                                                                 | Comments                                                                                                                                       |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Workers                 | Persons involved in construction and future maintenance of the proposed development.                                        | Ground Workers could become exposed during site clearance, construction and maintenance.                                                       |
| End Users                    | Residents/occupants of the proposed development.                                                                            | The proposed development is likely to include private gardens and areas of soft landscaping.                                                   |
| Soft Landscaping             | Possible areas of planting including lawns, shrubs, trees, etc.                                                             | Planting is anticipated in private gardens and soft landscaping.                                                                               |
| Buildings and Infrastructure | Buried concrete for foundations and plastics for potable water supply pipes may be laid in contact with contaminated soils. | Significant depths of Made Ground are not anticipated; however contamination may also be present within shallow Made Ground and natural soils. |
| Adjacent Land Users          | Sensitive land uses identified within the immediate vicinity.                                                               | Adjacent land uses include predominantly commercial and residential.                                                                           |



| Receptor      | Description                                                                 | Comments                                                                                                     |
|---------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Groundwater   | Controlled Waters contained within the aquifer(s) beneath the site.         | The site overlies a Secondary A Aquifer and an Unproductive Strata. The site is situated outside of any SPZ. |
| Surface Water | Controlled Waters within lakes, rivers, and ponds, etc., or coastal waters. | Surface water features are present on-site (ditches).                                                        |

**Table 2.5 Possible Receptors of Contamination**

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

Whilst the above sources and receptors have been identified, Table 3.6 summarises the identified plausible pollution linkages and a qualitative assessment of the risks based on the desk study research.



## Desk Study Report

| Potential Source/ media                                              | Potential Receptors          | Potential Pathways | Probability | Consequence | Risk and Justification                                                                                                                          |
|----------------------------------------------------------------------|------------------------------|--------------------|-------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General chemical quality/Made Ground &amp; Near Surface Soils</b> | End Users                    | Direct contact     | Low         | Medium      | Moderate to Low<br>Future end users are likely to come into contact with potentially impacted soils via direct contact in private garden areas. |
|                                                                      | Adjacent Land Users          | Direct contact     | Low         | Mild        | Low<br>During the development fugitive dust may be released which could impact neighboring land users through direct contact.                   |
|                                                                      | Soft Landscaping             | Root uptake        | Low         | Mild        | Low<br>Plants are likely within soft landscaped areas.                                                                                          |
|                                                                      | Water Supply Pipes           | Chemical attack    | Low         | Mild        | Low<br>Water supply pipes are likely to come into contact with soils.                                                                           |
|                                                                      | Buildings and Infrastructure | Chemical attack    | Low         | Mild        | Low<br>Foundations and utilities will be placed within soils. However, the consequence is anticipated to be mild.                               |
|                                                                      | Groundwater                  | Vertical migration | Low         | Medium      | Moderate to Low<br>Groundwater is anticipated within the granular parts of the River Terrace Deposits.                                          |



## Desk Study Report

| Potential Source/ media | Potential Receptors | Potential Pathways | Probability | Consequence | Risk and Justification                                                                                                                                   |
|-------------------------|---------------------|--------------------|-------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ground Gases            | End Users           | Inhalation         | Low         | Medium      | <p>Moderate to Low</p> <p>It is likely that end users of the site will come into contact with ground gases as off-site sources have been identified.</p> |

Table 2.6 Plausible Pollutant Linkages & Qualitative Risk Assessment



## 2.3 Preliminary Risk Assessment Summary

The PRA and CSM developed from the information gathered as part of the desk study process have identified plausible potential pollutant linkages that exist in relation to the proposed redevelopment of the site.

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

It is considered that the overall risk from potential contamination on the site is 'moderate to low to low' and that further assessment would be necessary to satisfy planning conditions or to provide clarification of the risk assessment.

## 2.4 Investigation Scope

The scope of works for the investigation included:

- Seven window sampler boreholes to a maximum depth of 4m bgl or maximum achievable depth with in-situ testing and regular sampling.
- The installation of ground gas and groundwater monitoring wells with return monitoring visit to be undertaken during the winter period.
- Six machine excavated trial pits to a maximum depth of 3.0m bgl or maximum achievable depth with in-situ testing and regular sampling.
- Six dynamic cone penetrometer tests for CBR values along with sampling of pits adjacent to each location.
- Geotechnical laboratory testing on soil samples recovered from the exploratory holes to support the geotechnical assessment.
- Geochemical laboratory testing on near surface soils for a suite of commonly occurring brownfield contaminants (including asbestos screening of all samples).
- Provision of a Ground Appraisal Report detailing the ground and groundwater conditions encountered during the intrusive investigation, laboratory testing results, geotechnical assessment and contamination assessment.

## 2.5 Investigation Rationale

The exploratory holes were located to provide broad coverage across the proposed development area. The following tables summarise the strategy of the environmental (Table 1) and geotechnical (Table 2) investigations.

| Environmental Area of Concern      | Investigation                                                                                                  | Positions          |
|------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------|
| Near Surface Soils and Made Ground | Window Sampler boreholes and trial pits situated across the site with regular sampling and laboratory analysis | All locations      |
| Ground Gas and Vapours             | Ground gas monitoring standpipe installed within the window sampler boreholes.                                 | WS1, WS2, WS3, WS6 |

**Table 2.7 Summary of Environmental Investigation Strategy**



| Geotechnical Area of Concern                                          | Investigation                                                                                             | Positions          |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------|
| Lateral changes in ground conditions                                  | Boreholes and trial pits undertaken with regular in-situ testing and sampling.                            | All locations      |
| Shrinkable soils                                                      | Boreholes and trial pits undertaken with regular in-situ testing and sampling.                            | All locations      |
| Highly compressible/low bearing capacity soils (soft clay)            | Boreholes and trial pits undertaken across the site with regular in-situ testing and sampling.            | All Locations      |
| High groundwater table and/or flooding (including waterlogged ground) | Standpipes installed within boreholes and groundwater observations made within all holes during drilling. | WS1, WS2, WS3, WS6 |
| Significant depths of Made Ground                                     | Boreholes and trial pits undertaken with regular in-situ testing and sampling.                            | All locations      |
| Aggressive chemical ground conditions (sulphates)                     | Boreholes and trial pits undertaken with regular in-situ testing and sampling.                            | All locations      |
| California Bearing Ratio                                              | DCP's and shallow trial pits undertaken to obtain samples for laboratory analysis                         | DCP1-DCP6          |

**Table 2.8 Summary of Geotechnical Investigation Strategy**



### 3.0 ENCOUNTERED CONDITIONS

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

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

#### 3.1 Ground Conditions

With reference to British Geological Survey (BGS) mapping, the geology of the site was anticipated to comprise the Alluvium overlying the River Terrace Deposits overlying the London Clay Formation.

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

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

Beneath a thin mantle of Topsoil and Made Ground the ground conditions encountered were generally consistent with those anticipated.

Topsoil was encountered within all locations with the exception of TP1, TP2 and WS7 to depths of between 0.15m and 0.30m bgl and generally comprised dark brown silty sand with roots and rootlets.

Made Ground was encountered within TP1, TP2 and WS7 to depths of between 0.25m and 0.45m bgl and was of a mixed composition comprising silty sand with ash, brick and concrete, dark brown sandy silt and reworked chalk.

Underlying the Topsoil and Made Ground, the River Terrace Deposits were encountered within all locations to depths of between 2.00m and 4.00m bgl and generally comprised soft to very stiff silty sandy clay becoming silty sandy clay with occasional fine to coarse sub-angular chert, overlying fine to medium sand.

Underlying the River Terrace Deposits at a depth of 3.50m bgl, the London Clay Formation was encountered within WS1 and WS7 only and proven to a depth of 4.00m bgl (maximum depth of the investigation). The London Clay was described as stiff grey clay.

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

#### 3.2 Groundwater

Groundwater was encountered at depths of between 1.85m and 3.00m bgl, during the fieldworks, with water standing at depths of between 1.20m and 2.50m bgl after twenty minutes. Groundwater monitoring wells were installed within WS1, WS2, WS3 and WS6 to depths of between 2.50m and 3.70m bgl. Two return monitoring visits have been made to date, with further visits to be undertaken throughout the winter period. To date, groundwater has been recorded at depths of between 0.91m and 1.75m bgl.



It should be noted that changes in groundwater and perched water 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.

### 3.3 Ground Gases

Dual purpose gas and water monitoring standpipes were installed within WS1, WS2, WS3 and WS6 to depths of between 2.50m and 3.70m bgl. Two return monitoring visits have been made to date, with further visits to be undertaken throughout the winter period. To date, no methane has been recorded, whilst carbon dioxide and oxygen have been recorded within the range of 0.0% v/v to 2.0% v/v and 12.6% v/v to 20.9% v/v respectively. A maximum VOC concentration of 0.2ppm has been recorded, whilst atmospheric pressure has been recorded within the range of 996mb to 1018mb. No flows have been recorded.

For further details, reference should be made to the ground gas assessment sheet in Appendix C.

### 3.4 Obstructions

No artificial underground obstructions were encountered on site during the intrusive works. Although unlikely, the potential for obstructions elsewhere on site should not be discounted.

### 3.5 Geochemical Analysis

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

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

Eight soil samples were submitted for analysis for a comprehensive suite of common zootoxic and phytotoxic elements based upon determinants listed within the above guidance. In addition, four samples were scheduled for a pesticide suite while four samples were scheduled for BS 3882:2015 specification for Topsoil.

### 3.6 Geotechnical Analysis

The results of geotechnical testing undertaken as part of the ground investigation are summarised in Tables 3 & 4, with test results presented in Appendix D.

| Parameter                                     | River Terrace Deposits |
|-----------------------------------------------|------------------------|
| pH                                            | 5.9-8.3                |
| Water soluble sulphate (mg/l)                 | <0.02                  |
| Natural Moisture Content (%)                  | 10-21                  |
| Liquid Limit (%)                              | 32-50                  |
| Plastic Limit (%)                             | 16-19                  |
| Plasticity Indices (%)                        | 16-31                  |
| Modified Plasticity Indices (%)               | 10.64-30.38            |
| Particle Size Distribution Fines <0.063mm (%) | 7-16.1                 |



|                              |       |
|------------------------------|-------|
| California Bearing Ratio (%) | 1-9.5 |
|------------------------------|-------|

**Table 3.1: Summary of Geotechnical Laboratory Test Results (River Terrace Deposits)**



## 4.0 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.

### 4.1 Foundations

Based on the ground and groundwater conditions encountered in the boreholes conventional foundations are considered suitable for the proposed low rise development.

Foundations should be taken below any Made Ground, soft, desiccated or disturbed ground and bear onto the firm to very stiff sandy silty gravelly clays or silty sands of the River Terrace Deposits.

Based on the laboratory results, the more clayey parts of the River Terrace Deposits *en masse* should be considered Medium Volume Change Potential in accordance with the NHBC Standards, Chapter 4.2. A minimum founding depth within the River Terrace Deposits of 0.90m is therefore applicable remote from trees. Foundations should not be less than 450mm in width.

Within the zone of moisture demand of any existing, proposed or recently felled trees it is recommended that foundation depths be calculated in accordance with the NHBC Standards, Chapter 4.2. Foundations should also be taken through any major root zone and desiccated clay soils should this be found at greater depth. Design measures will be required to prevent heave forces from developing on the faces of the foundations where footing depths are in excess of 1.5m on account of trees. It should be noted that the NHBC stipulate that foundations cast at depths greater than 2.5m should be "engineer designed".

Based on the typical settlement parameters for the types of soil encountered, a maximum net allowable bearing capacity of 125kPa is applicable for trench, strip or isolated pad foundations taken through any Made Ground, soft or loose zones, desiccated or disturbed soils and placed wholly into or onto the firm to very stiff sandy silty gravelly clays of the River Terrace Deposits. Under the above loading the settlements should remain within tolerable limits for the proposed scheme.

It would be prudent to further consider the depth to the groundwater during the winter months as this could cause construction difficulties where intercepted within foundation or service trenches. The risk of intercepting the groundwater would be higher where foundations are required to be deepened on account of the presence of trees and careful design is required in this respect.

### 4.2 Excavations

Shallow excavations within the Made Ground should remain relatively stable in the short term. Long deep excavations within the Made Ground are likely to be prone to instability, particularly where left open for prolonged periods, and should be battered back to a safe angle, or suitable shoring techniques should be adopted to provide stability.

Shallow excavations within the River Terrace Deposits should remain relatively stable in the short term. Long, deep excavations within the River Terrace Deposits are likely to be prone to instability, particularly where left open for prolonged periods, or open to wet weather conditions and should be battered back to a safe angle, or suitable shoring techniques should be adopted to provide stability. Any excavations taken below the groundwater table is likely to be prone to collapse and running sand.

Ground works should always be designed in such a manner to avoid man entry into excavations. 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.

#### 4.3 Floor Slabs

Based on the laboratory testing results and the presence of trees and shrinkable soils, it is recommended that suspended ground floor slabs be adopted.

#### 4.4 Pavements

Where encountered, the Made Ground was noted to be of mixed composition and of limited thickness. The engineering characteristics of such soils are variable and unpredictable and the CBR value of Made Ground does not predict the overall settlements that may occur in such materials. Due to the heterogeneity of the variable amounts of Made Ground it would be prudent to assume the material to be deemed non-frost susceptible throughout.

As part of the investigation, three bulk samples of the underlying River Terrace Deposits were taken from hand pits referenced TP DCP1, TP DCP4 and TP DCP6, with samples taken from depths of 0.50m bgl. The results of the laboratory remoulded (2.5kg rammer method) soaked CBR tests from gave results in the range of 1% and 9.5%.

In addition, six dynamic cone penetrometer tests were undertaken across the site. The results between the depth of 300mm and 600mm bgl ranged between 5% and 22%.

The Transport and Road Research Laboratory Report (LR1132) entitled '*The Structural Design of Bituminous Roads*' (1984) cites an estimated equilibrium suction index of 5% for the sandy silty gravelly clays such as those of the near surface River Terrace Deposits, under average construction conditions and a high groundwater level.

Based on the laboratory results, in-situ testing and TRRL report, a CBR value of 5% is recommended.

Furthermore, based on the geotechnical results, the near surface River Terrace Deposits should be considered as being frost susceptible for pavement design purposes with abundant gravel noted within the sandy silty clays within the upper metre.

It is recommended that the sub-grade be proof rolled and any soft spots removed and replaced with a suitable compacted granular fill.

#### 4.5 Sulphates

Seven pH and Sulphate tests were undertaken on the River Terrace Deposits. The results for the River Terrace Deposits corresponded to design class DS-1 as defined within the BRE Special Digest 1 (2005). The pH analyses indicate the ACEC class to be AC-1. It is recommended that a design class of DS-1 and an ACEC class of AC-1 be applied to all sub-surface concrete within this stratum.

#### 4.6 Soakaways

As part of the investigation, full scale soakage testing to BRE Digest 365 was undertaken within TP2, TP3, TP5 and TP6. Infiltration rates were calculated as follows:

| Location | Test No | Infiltration Rate (m/s) |
|----------|---------|-------------------------|
| TP2      | Run1    | $4.9 \times 10^{-6}$    |
|          | Run2    | $5.9 \times 10^{-6}$    |
|          | Run3    | $5.4 \times 10^{-6}$    |
| TP3      | Run1    | $3.4 \times 10^{-6}$    |



|     |      |                      |
|-----|------|----------------------|
|     | Run2 | $5.8 \times 10^{-6}$ |
|     | Run3 | $5.1 \times 10^{-6}$ |
| TP5 | Run1 | $5.7 \times 10^{-6}$ |
|     | Run2 | $9.4 \times 10^{-6}$ |
|     | Run3 | $7.2 \times 10^{-6}$ |
| TP6 | Run1 | $5.4 \times 10^{-6}$ |
|     | Run2 | $1.2 \times 10^{-5}$ |
|     | Run3 | $5.7 \times 10^{-6}$ |

**Table 4.1: Infiltration Rates (River Terrace Deposits)**

The results indicate a relatively poor infiltration rate within the River Terrace Deposits, whilst groundwater was also noted to be shallow. Based on these findings, the design and construction of conventional soakaways may be viable, though the storage capacity will be severely restricted by the presence of the groundwater table.



## 5.0 ENVIRONMENTAL CONSIDERATIONS

A Generic Quantitative Risk Assessment (GQRA) was undertaken on the results of the chemical testing on the soil samples, the findings of which are presented in the following sections.

### 5.1 Environmental Risk Assessment

Based on a visual assessment of the soils encountered, in conjunction with the Desk Study and the proposed end use, eight soil samples from TP1 (0.10m), TP2 (0.10m), WS1 (0.10m), WS2 (0.50m), WS3 (0.20m), WS4 (0.20m), WS7 (0.20m) and WS6 (0.20m) were submitted for a suite of commonly occurring contaminants including metals, metalloids, inorganic compounds, TPH, PAH and asbestos. In addition, samples WS1 (0.10m), WS3 (0.20m), WS4 (0.20m), WS7 (0.20m) and WS6 (0.20m) were submitted for organochlorine Pesticides screen suite.

Samples TP3 (0.10m), TP4 (0.10m), TP5 (0.10m) and TP6 (0.15m) were submitted for specification of Topsoil BS3882: 2015.

### 4.2 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 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.

The results have been compared directly against Atkins ATRISK guideline values for residential end use with plant uptake. Any results that may have been greater than the guideline values or where there are no comparable values, the results have subsequently been compared against Land Quality Management Suitable 4 Use Levels (LQM S4UL) and Category 4 Screening Levels (C4SL).

Benzo(a)pyrene has been used in the assessment as a surrogate marker for PAH contamination.

All of the results indicated concentrations less than the Atkins ATRISK/C4SL screening values with the exception of Benzo(a)pyrene (TP1 0.10m 120mg/kg, TP2 0.10m 64mg/kg), Barium (TP2 0.10m 290mg/kg, WS7 0.20m 130mg/kg) and Beryllium (TP2 0.10m 2.40mg/kg). The Atkins ATRISK values for Benzo(a)pyrene are 4.95mg/kg, Barium 110mg/kg and 1.71mg/kg for Beryllium.

The locations of TP1 and TP2 were within the area of the glasshouse, formerly used as a nursery. The location of WS7 was within the grounds of the residential property. Based on these initial findings, a cover system will be required within these areas (it should be noted that these locations have had different uses to the main portion of the site). However, based on the limited sampling within these locations, it is recommended that further investigation in and around the garden nursery and residential property be undertaken. Those findings, along with these findings should be used to finalise a cover system for affected plots within those areas. As a preliminary guide it is likely that recommendations will be to strip the existing Made Ground from the proposed gardens and soft landscaping areas for the units located within the grounds of the house and glasshouse.

### 5.3 Specification for Topsoil

As part of the investigation, four Topsoil samples taken from locations TP3 (0.10m), TP4 (0.10m), TP5 (0.10m) and TP6 (0.15m) and were submitted for specification of Topsoil BS3882: 2015. The results indicated that with the exception of the sample from TP4 which passed BS 3882 for Low Fertility Topsoil, the remaining samples did not meet the criteria on account of the textural classification in addition to soil pH, available plant nutrients and carbon nitrogen ratio.



#### 5.4 Soil Contamination vs. Adjacent land Users

Surrounding land uses were identified to mostly comprise agricultural and residential properties. As no significant concentrations of concern were identified in relation to human health (end users), no significant risks to adjacent land users are considered to exist.

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

#### 5.5 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 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.

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

**Table 5.1: Summary of Plant Phytotoxicity Assessment**

The phytotoxicity assessment indicated that no concentrations exceeded the assessment criteria. Therefore, remedial measures to protect plants from phytotoxic effects are not considered necessary for the proposed redevelopment.

#### 5.6 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 indicated elevated concentrations of SVOCs and TPH, barrier pipe is likely to be required on the area of the site currently occupied by the house and glasshouse, unless they are wholly placed in natural soils. 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.

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.



## 5.7 Ground Gases

Two ground gas monitoring visits have been undertaken to date to provide an initial assessment. No significant ground gas concentrations were noted and therefore no remedial works are required in this respect. A final assessment will be made upon completion of all monitoring visits.

The results of the ground gas monitoring are presented in Appendix C.

## 5.8 Waste Disposal

The following information is provided for preliminary guidance purposes, as different facilities or operators may have differing acceptance criteria and Waste Acceptance Criteria (WAC) analysis may be required to confirm the exact classification. In addition, if the intention is to retain excess spoil/arising on site for specific purposes, then these soils would not comprise waste, although this is subject to confirmation and relevant declaration under the Definition of Waste Code of Practice.

Initially, the results of the laboratory testing were submitted for Catwaste classification, the results Confirmed that the near surface soils did not have any properties that would deem the material hazardous waste for all but two samples. Samples TP1 0.10m and TP2 0.10m had hydrocarbon/oil with benzo(a)pyrene marker. Waste soils within this area require further analysis in the form of Waste Characterisation testing and Waste Acceptance Criteria testing to determine classification for off-site disposal.

Further chemical and waste acceptance criteria tests are recommended for soils destined for off-site disposal.

Natural soils (River Terrace Deposits) are likely be classified as Inert Waste (under the respective EWC codes for naturally occurring soils), suitable for disposal at an inert landfill facility.

## 5.9 Discovery Strategy

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

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

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

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

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

- All discoveries are to be reported to the Site Manager immediately and works at that location are to halt until further notice;
- The Site Manager is to report any such discoveries to the Client and the Environmental Consultant;
- Following notification from the Site Manager, the Environmental Consultant shall discuss the discovery



with the Local Authority and if considered necessary, arrange to meet an Officer on site to view the discovery;

- The Environmental Consultant shall attend the site to record the location, extent and nature of the discovery and implement an appropriate sampling and analysis regime, taking due account of the type and nature of the discovery, known and probable land uses in that area of the site;
- Where remedial action is required, regulatory consultation and approval will be sought;
- A record will be produced by the Environmental Consultant and held on site (with copies held by the Environmental Consultant, Client and Local Authority), detailing the discovery, assessment works undertaken, findings thereof, confirmation either of no action required or detailing the remedial action taken and validation thereof.

The process is shown below.

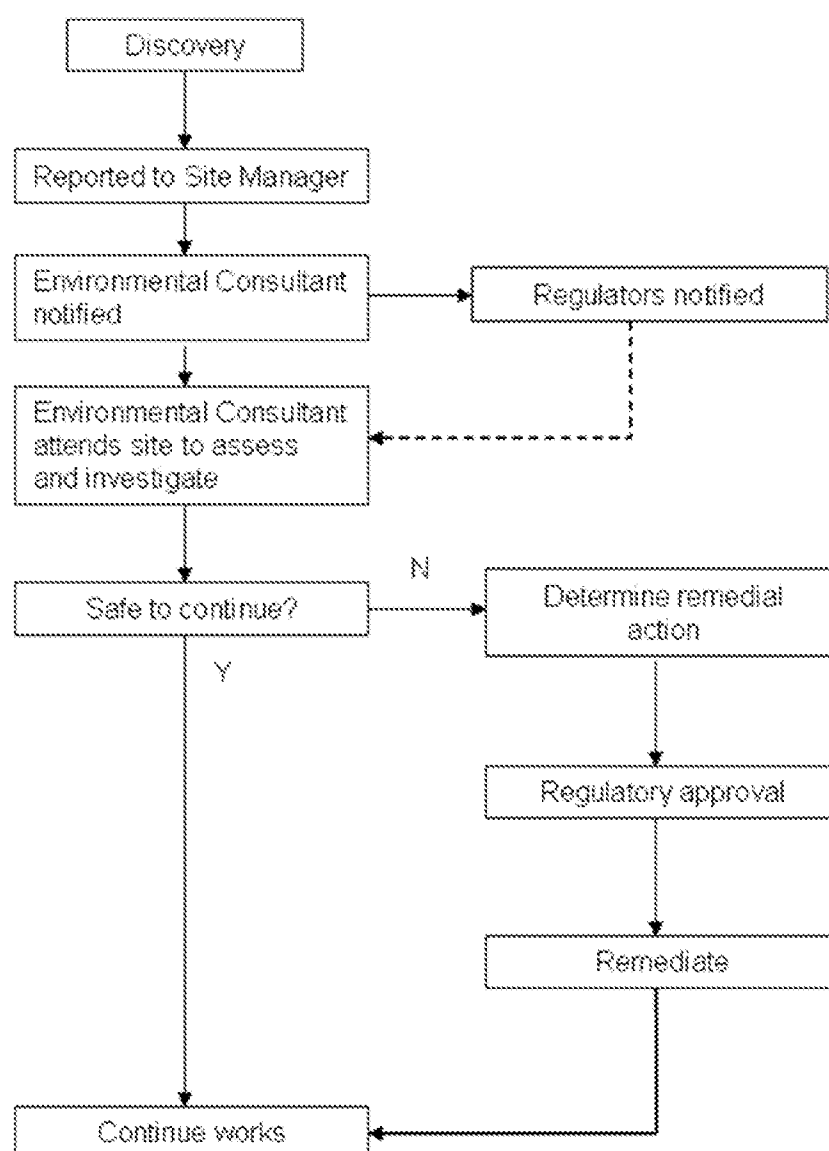


Chart 1 Discovery Strategy Process



### **Caveat**

*The data collected from the investigations have been used to provide an interpretation of the geo-environmental conditions pertaining to the site. The recommendations and opinions expressed in this report are based on the data obtained.*

*Geo-Environmental Service Limited 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.*

*Information contained in this report is intended for the use of the client and their agents, and Geo-Environmental Services Limited can take no responsibility for the use of this information by any third party for uses other than that described in this report.*

*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. Such reservations have been indicated in the text where such conditions are considered to apply.*

*Geo-Environmental Services Limited does not indemnify any third parties such as the vendor against any dispute or claim arising from any finding or result of this investigation or any claim or dispute arising as a result of any decisions made thereof.*

**FIGURE 1**

**Site Location Plan**

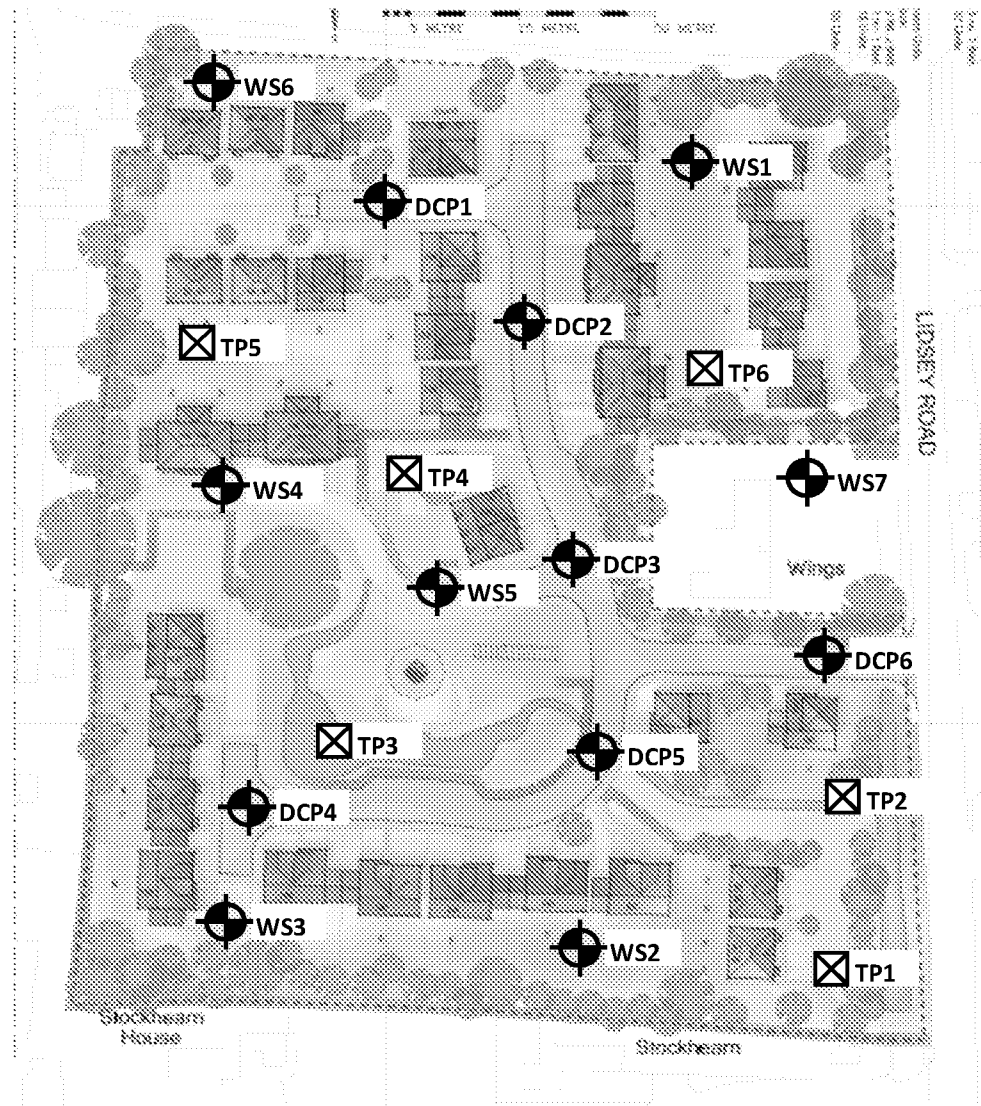


|                 |                                |                  |              |                                                                                                                                                                    |                                                                                                                   |  |
|-----------------|--------------------------------|------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--|
| <b>Project:</b> | Land Off Lidsey Road, Woodgate |                  |              | <b>Title</b>                                                                                                                                                       | Site Location Plan                                                                                                |  |
| <b>Client:</b>  | Thakeham Homes Ltd             |                  |              | <b>Geo-Environmental Services Ltd</b><br><br>Unit 7 Danworth Farm, Cuckfield Road<br><br>Hurstpierpoint, West Sussex BN6 9GL<br><br>+44(0)1273 832972 www.gesl.net | <br><b>Geo-Environmental</b> |  |
| <b>Ref No:</b>  | GE18390                        | <b>Revision:</b> | 1.0          |                                                                                                                                                                    |                                                                                                                   |  |
| <b>Drawn:</b>   | AP                             | <b>Date:</b>     | 09/08/2019   |                                                                                                                                                                    |                                                                                                                   |  |
| <b>Figure:</b>  | 1                              | <b>Scale:</b>    | Not To Scale |                                                                                                                                                                    |                                                                                                                   |  |

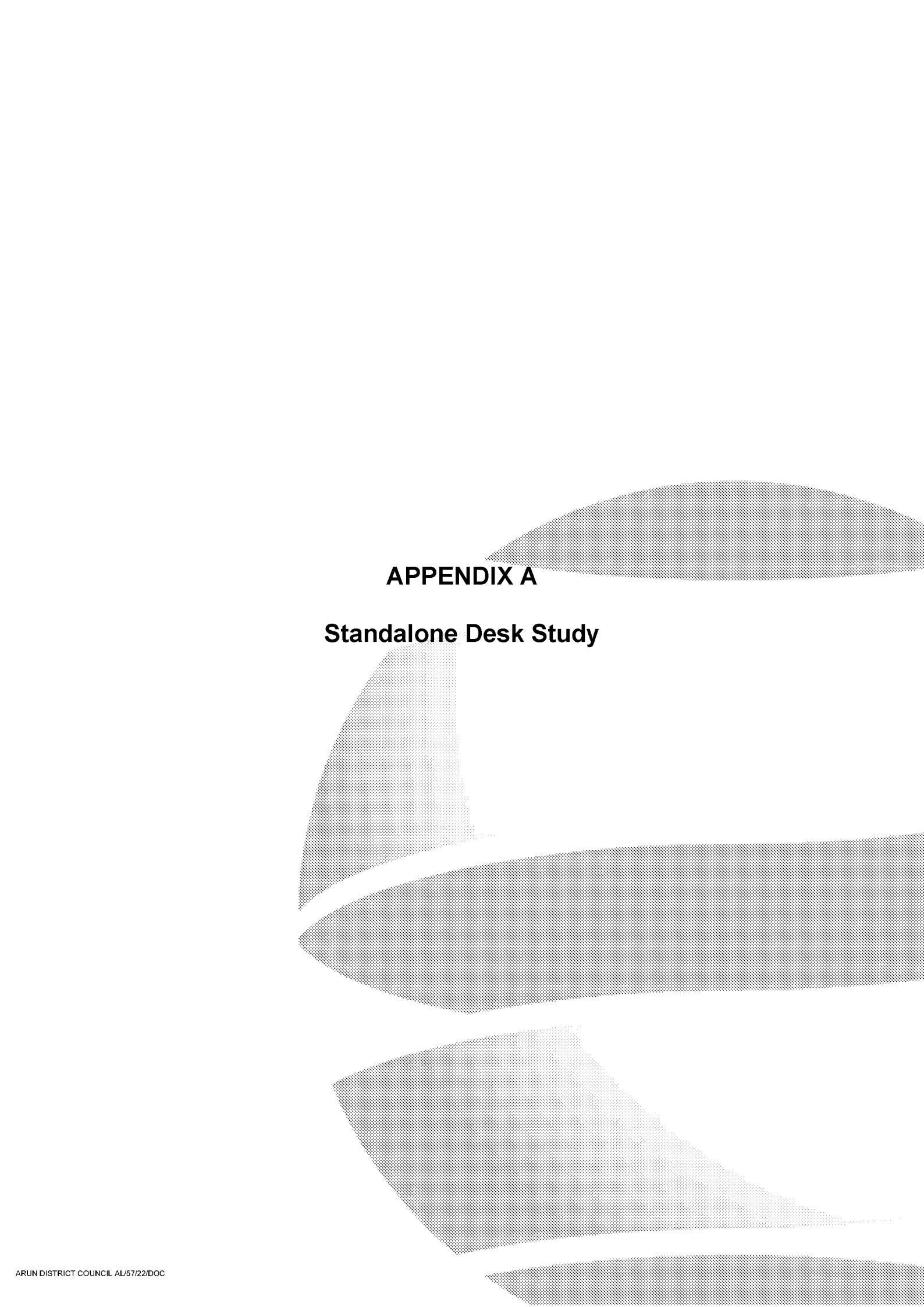


**FIGURE 2**

**Site Investigation Plan**



|                 |                                |                  |              |                                                                                                                                                                                                      |                                                                                                                   |  |
|-----------------|--------------------------------|------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--|
| <b>Project:</b> | Land Off Lidsey Road, Woodgate |                  |              | <b>Title</b>                                                                                                                                                                                         | Site Investigation Plan                                                                                           |  |
| <b>Client:</b>  | Thakeham Client Limited        |                  |              | <b>Geo-Environmental Services Ltd</b><br><br>Unit 7 Danworth Farm, Cuckfield Road<br><br>Hurstpierpoint, West Sussex BN6 9GL<br><br>+44(0)1273 832972 <a href="http://www.gesl.net">www.gesl.net</a> | <br><b>Geo-Environmental</b> |  |
| <b>Ref No:</b>  | GE18390                        | <b>Revision:</b> | v1           |                                                                                                                                                                                                      |                                                                                                                   |  |
| <b>Drawn:</b>   | AP                             | <b>Date:</b>     | 09/08/2019   |                                                                                                                                                                                                      |                                                                                                                   |  |
| <b>Figure:</b>  | 2                              | <b>Scale:</b>    | Not To Scale |                                                                                                                                                                                                      |                                                                                                                   |  |



## **APPENDIX A**

### **Standalone Desk Study**



Geo-Environmental

**DESK STUDY REPORT**

**for the site at**

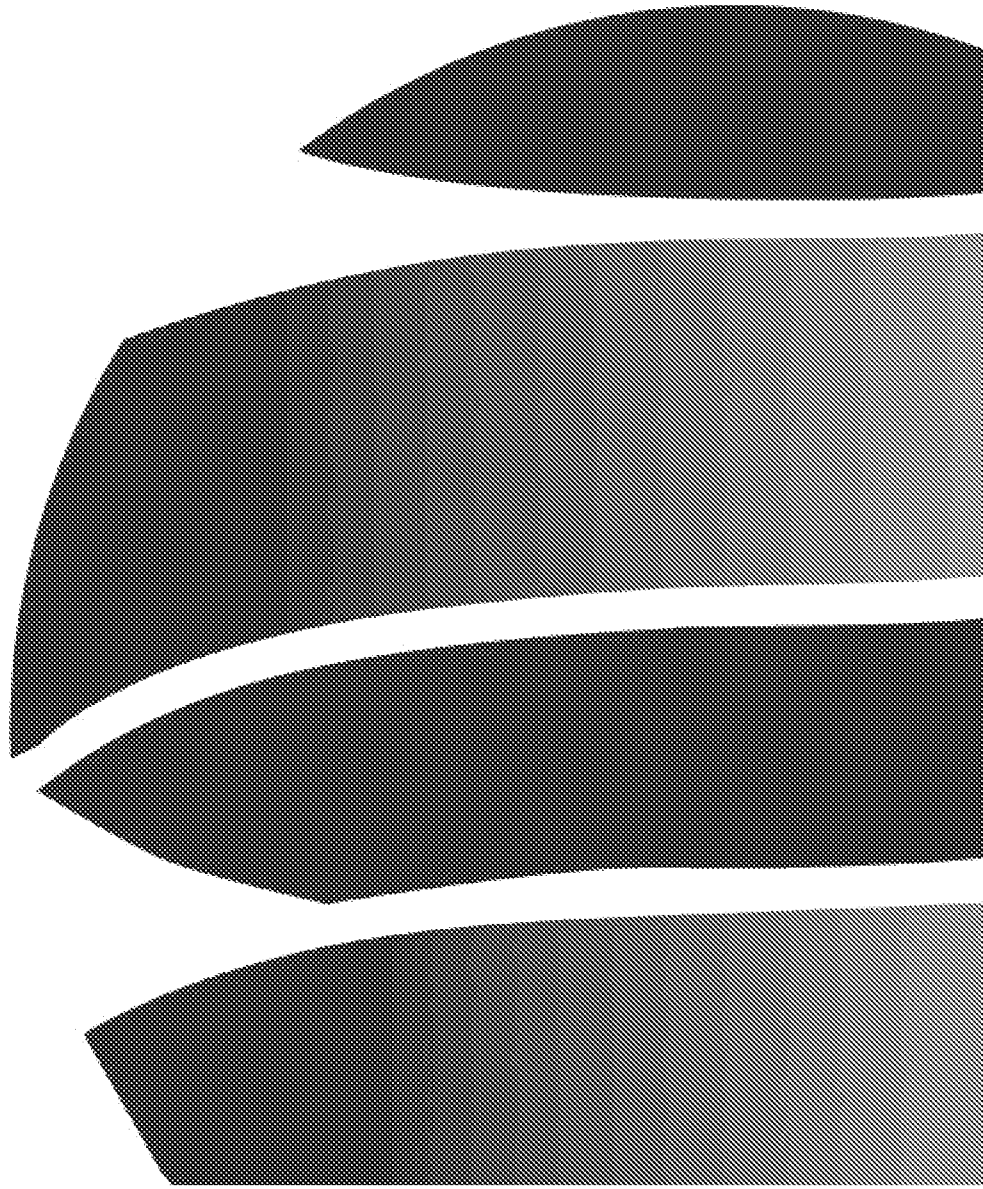
**LAND OFF LIDSEY ROAD, WOODGATE**

**CHICHESTER, WEST SUSSEX**

**PO20 3SU**

**on behalf of**

**THAKEHAM CLIENT LIMITED**



**Desk Study Report**

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|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| <b>Report:</b>      | <b>DESK STUDY REPORT</b>                                                             |
| <b>Site:</b>        | <b>LAND OFF LIDSEY ROAD, WOODGATE, CHICHESTER,<br/>WEST SUSSEX, PO20 3SU</b>         |
| <b>Client:</b>      | <b>THAKEHAM CLIENT LIMITED</b>                                                       |
| <b>Date:</b>        | <b>21/08/2019</b>                                                                    |
| <b>Reference:</b>   | <b>GE18390-DSR-AUG19</b>                                                             |
| <b>Version:</b>     | <b>2.0</b>                                                                           |
| <b>Prepared by:</b> |   |
| <b>Reviewed by:</b> | <b>ANTHONY POTTER M.Sc.,BSc (HONS),FGS.<br/>SENIOR CONSULTANT ENGINEER</b>           |
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## **1.0 INTRODUCTION**

### **1.1 General**

Geo-Environmental Services Limited (Geo-Environmental) was instructed by Thakeham Client Limited to undertake a Phase I desk study into the geotechnical and geo-environmental factors pertaining to the planned development of land off Lidsey Road, Woodgate, Chichester, West Sussex, PO20 3SU herein referred to as 'the site'. The site's location is presented in Figure 1.

### **1.2 Form of Development**

The proposed development is expected to consist of 56 residential properties with parking, private gardens, access roads and associated infrastructure.

### **1.3 Objectives**

The investigation was to comprise a desk study of geotechnical and geo-environmental factors pertaining to the site, including a review of available historic maps and an examination of other available sources of geo-environmental information.

A preliminary Risk Assessment (PRA) was to be undertaken as part of the desk study in accordance with CLR11. The objective of the risk assessment was to evaluate plausible pollutant linkages with respect to the proposed development, adjacent land uses, and the wider environment, in the context of planning, immediate liabilities under the Environment Act 1990, and risks posed to Controlled Waters under the Water Resources Act.

### **1.4 Standards**

Where practicable, the desk study was undertaken in accordance with the following documents and guidance:

- National Planning Policy Framework – March 2012
- Planning Policy Statement 23 – Planning and Pollution Control;
- Model Procedures for the Management of Contaminated Land, CLR11, DEFRA and Environment Agency 2004;
- Environment Agency Guidance on Requirements for Land Contamination Reports, Version 1 dated July 2005;
- BS10175:2011 - Investigation of Potentially Contaminated Sites - Code of Practice, BSI 2011;
- BS5930: 2015 - Code of Practice for Site Investigations, BSI 2015;
- EN ISO 14688 Geotechnical Investigation and Testing Part 1-2002 and Part 2-2004;
- BS1377: 1990 - Soils for Civil Engineering Purposes, BSI1990;
- NHBC Standards Chapter 4.1 Land Quality - Managing Ground Conditions, September 1999;
- NHBC Standards Chapter 4.2 Building Near Trees;
- CIRIA C665 – Assessing risks posed by hazardous ground gases to buildings (2007);
- NHBC 10627-R01(04)- Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present (2007);
- BS8485:2015+A1 2019 Code of practice for the characterisation and remediation from ground gas in affected developments;
- Department of Environment - Industry Profiles (1995 - 1996).



## **1.5 Conditions**

The information collected from the desk study has been used to provide an interpretation of the geotechnical and 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 have either not been revealed in the available records or that occur between or under points of any 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.

Information contained in this report is intended for the use of the Client, and Geo-Environmental can take no responsibility for the use of this information by any party for uses other than that described in this report. Geo-Environmental makes no warranty or representation whatsoever expressed or implied with respect to the use of this information by any third party. 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.



## 2.0 DESK STUDY

The findings of the Phase I desk study are presented in the following section. A copy of the information obtained as part of the desk study is presented in Appendix A.

### 2.1 Site Description

The site is located approximately 6.44km north of Bognor Regis, 10.94km east of Chichester, 26.07km west of Worthing and 40km east of Portsmouth. The site itself is currently largely an undeveloped greenfield located within a semi-rural/residential area. An area to the south-east of the site is currently occupied by a number of greenhouses with some areas of hardstanding.

The topography of the site is demonstrated as lying at approximately 9.51m to 8.19m AOD, generally falling from west to east. This has been assessed via LiDAR information obtained as no topographical survey has yet been undertaken on site.

A watercourse is present to the east of site which stretches from the south-eastern corner up to the northern boundary of the site. Sections of this watercourse are culverted, including across the frontage of the existing 'Wings Nursery' building(s). It is believed that this watercourse diverts under Lidsey Road, to the east via an existing culvert. In addition to this watercourse, a further open watercourse runs along the western boundary of the site. Both watercourses are unnamed. It is believed the watercourse to the east of the site flows in a northerly direction, whilst the watercourse at the western boundary flows in a southerly direction.

### 2.2 Geology

British Geological Survey mapping indicated the geology of the site to comprise River Terrace Deposits overlying the London Clay Formation.

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

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

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

For further details, reference should be made to the Geology Datasheets, appended to this report.

### 2.3 Hydrogeology

With reference to information provided by the Environment Agency, the site was indicated to overlie Secondary A Aquifer (River Terrace Deposits) with the underlying solid geology (London Clay Formation) forming an Unproductive Strata.

Secondary A Aquifers are permeable layers capable of supporting water supplies at a local rather than



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strategic scale and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

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

According to information provided by the Environment Agency the site lies outside of any Source Protection Zone (SPZs). An SPZ is a protection zone placed around a well or borehole that supplies groundwater of potable quality. An SPZ is divided into three zones defined as follows:

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

### 2.4 Hydrology

The nearest surface water feature identified on the environmental dataset was 0m northeast (drainage ditch).

The site was indicated to be located outside any area designated as being at risk from flooding and extreme fluvial flooding from rivers without defences, outside any area at risk of flooding from surface water, with the exception of a small pocket within the northern portion which as at a low risk of surface water flooding (1000 year return). The site was within an area with potential for groundwater flooding of the property below ground level and at surface level to occur.

No surface water abstractions were recorded within 500m of the site.

No pollution incidents to controlled waters were recorded within 500m of the site.

The desk study identified one discharge consent within 500m of the site boundary:

- 469m S – Messrs John Turner & Partners, unknown discharge, pre NRA status, receiving water: controlled sea.

### 2.5 Radon

Reference has been made to the Envirocheck data report. The report indicates that the site lies in an area where radon protection measures are not required.

### 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) sites, registered radioactive substances, COMAH sites, explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS) sites, planning permissions for sites involving hazardous substances and fuel station registers.

One local authority pollution prevention and controls permit was identified within 500m of the site boundary:

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- 95m SE – Lee Fencing, PG6/2 manufacturing of timber and wood based products, authorisation revoked.

Four potentially contaminative contemporary trade directory entries were identified within a 250m radius of the site boundary:

- 48m NE – Polishedact, furniture repairing and restoring, inactive.
- 97m SE – HS Cars, used car dealers, inactive.
- 166m SE – National Plastics, cladding suppliers and installers, active.
- 240m NE – Scotts Direct, car dealers, inactive.

## 2.7 Soil Chemistry

Data obtained as part of the desk study provides details on the estimated soil chemistry for the natural soils in the vicinity of the site. The estimated soil quality on the subject site is presented Table 2.1.

| Contaminant | Estimated Concentration |
|-------------|-------------------------|
| Arsenic     | <15                     |
| Cadmium     | <1.8                    |
| Chromium    | 60-90                   |
| Lead        | <100                    |
| Nickel      | 15-30                   |

**Table 2.1 Estimated Soil Concentrations on site**

The natural background concentrations were below respective published Soil Guideline Values, Generic Assessment Criteria and Category 4 Screening Levels for the protection of human health under a residential land use, i.e. the most conservative proposed end use.

However these values are not necessarily representative of the site's soil chemistry. Furthermore, some SGVs and GACs are dependent on pH and soil organic matter content. Therefore, concentrations of specific determinants and the utilised SGV/GAC cannot be determined without site specific investigation and analysis.

## 2.8 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 situated within a nitrate vulnerable zone.

## 2.9 Geotechnical Data

The Coal Authority designated the site as being in an area 'that might not have been affected by coal mining activity'.

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 on the following table below. In accordance with BGS recommendations, the highest rating within 50m of the site boundary (or a 250m radius for shallow mining) has been recorded.

National databases for a number of different geological hazards have been compiled by the BGS, and a summary of the hazard data pertaining to the site itself is presented in Table 2.2.

| Hazard | Designation |
|--------|-------------|
|--------|-------------|



|                             |           |
|-----------------------------|-----------|
| Non-coal mining             | No hazard |
| Collapsible ground          | Low       |
| Compressible ground         | No hazard |
| Ground dissolution          | No hazard |
| Landslide                   | Very low  |
| Running sand                | Low       |
| Shrinking and Swelling clay | Low       |

**Table 2.2 Summary of BGS Geological Hazards**

One BGS recorded mineral site was identified within 500m of the site boundary:

- 316m E – Woodgate Brick Field, opencast, Lambeth Group, ceased.

## 2.10 Landfill and Waste Management Facilities

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

One licenced waste management facility was recorded within 500m of the site boundary:

- 417m SW – Lidsey Landfill Site Extension, co-disposal landfill site, licence issued.

One area of potentially infilled land (non-water) was identified within 500m of the site boundary:

- 303m E – Unknown filled ground (pit, quarry, etc) mapped 1993.

Twenty-four areas of potentially infilled land (water) were identified within 500m of the site boundary:

- 0m W – Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 0m N - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 0m S - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 0m NE - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 4m SW - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 8m NW - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 12m N - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 30m NE - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 37m S - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 45m N - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 58m SW - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 78m S - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 83m SE - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 122m NW - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 154m E - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 164m S - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 164m E - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 173m NW - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 214m N - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 228m S - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 256m SE - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.

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- 292m NW - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1914.
- 481m NW - Unknown filled ground (pond, marsh, river, stream, dock etc), mapped 1938.

With reference to the Envirocheck site sensitivity report the above appeared to mostly relate to linear features so most likely represent small scale infilled drainage ditches around fields.

## 2.11 Historic Mapping

Historic maps dating back to 1876 were obtained as part of the desk study. A summary of the apparent key features observed on the map extracts both on the site and within the local area is presented within Table 2.3.

| Date           | On Site                                                                                                                               | Off Site                                                                                                                |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1876           | The site comprised part of a field network.                                                                                           | The surrounding area comprised a field network with the village of Woodgate c.40m north and a railway line c.80m north. |
| 1880           | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1897           | Few changes since the previous map edition.                                                                                           | The land to the west was indicated to form a nursery.                                                                   |
| 1899           | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1912           | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1914           | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1937           | Few changes since the previous map edition.                                                                                           | There had been some residential development to the north, east and south.                                               |
| 1938-51        | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1947-49 Aerial | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1951           | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1961-62        | Few changes since the previous map edition.                                                                                           | Four large glass houses were indicated adjacent to the south-western boundary.                                          |
| 1970-79        | Either a roadway or water course was indicated running in an L-shape, east to west (centrally) and north to south (western boundary). | An additional three large glass houses were indicated to the south-west and three glass houses to the west.             |
| 1974-77        | Few changes since the previous map edition.                                                                                           | There had been further residential development to the north and east.                                                   |
| 1974           | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1978-92        | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1980           | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1982           | Few changes since the previous map edition.                                                                                           | Few changes since the previous map edition.                                                                             |
| 1992           | Few changes since the previous map edition.                                                                                           | Additional glasshouses were indicated to the west.                                                                      |



| Date        | On Site                                                                                                                                      | Off Site                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 1994        | A glass house was indicated within the south-eastern portion of the site, this was commensurate with that observed during the site walkover. | Few changes since the previous map edition. |
| 1995        | Few changes since the previous map edition.                                                                                                  | Few changes since the previous map edition. |
| 1999 Aerial | The north-eastern portion of the site was partly wooded.                                                                                     | Few changes since the previous map edition. |
| 2000        | Few changes since the previous map edition.                                                                                                  | Few changes since the previous map edition. |
| 2006        | Few changes since the previous map edition.                                                                                                  | Few changes since the previous map edition. |
| 2019        | Few changes since the previous map edition.                                                                                                  | Few changes since the previous map edition. |

**Table 2.3 Summary of Historic Map extracts**

## **2.12 Previous Ground Investigations**

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

## **2.13 Potential Contamination**

Based on experience, potential contaminants associated with nurseries include pesticides, hydrocarbons from fuel storage for heating systems, and asbestos associated with insulation and heating systems. In addition, the near surface soils may have been by heavy metals and organic pollutants such as poly-aromatic hydrocarbons (PAHs) through direct placement (in the form of ash) or through aerial deposition.

Sampling and chemical testing would be recommended to verify the actual concentrations of these substances within the near surface soils.

## **2.14 Ground Gas Summary**

The desk study has identified both on-site and off-site sources of ground gases including infilled land and a licenced landfill site albeit c.400m from the site.



### **3.0 PRELIMINARY ASSESSMENT**

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

#### **3.1 Geotechnical Risk Assessment**

##### **3.1.1 Potential Geotechnical Issues**

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

- The presence of shallow groundwater and associated excavation stability
- Viability of soakaways.
- The presence of mature trees will need to be considered for foundation design where shrinkable clay soils are present.
- Lateral changes in ground conditions.

#### **3.2 Preliminary Environmental Conceptual Site Model & Risk Assessment**

##### **3.2.1 Methodology**

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

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



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

Table 3.1 Risk Ratings Matrix

| Risk Rating          | Definitions                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Very high risk       | <p>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.</p> <p>This risk, if realised, is likely to result in a substantial liability.</p> <p>Urgent investigation (if not already undertaken) and remediation are likely to be required.</p> |
| High risk            | <p>Harm is likely to arise to a designated receptor from an identified hazard</p> <p>Realisation of the risk is likely to present a substantial liability.</p> <p>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.</p>                                                              |
| Moderate risk        | <p>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.</p>                                                                                                                          |
| Moderate to low risk | <p>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.</p>                                                                                                                                               |
| Low risk             | <p>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.</p>                                                                                                                                                                                                                |
| Very low risk        | <p>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.</p>                                                                                                                                                                                                                                                  |

Table 3.2 Risk Rating Definitions



### 3.2.2 Summary of Plausible Sources

Possible sources of contamination identified from the desk study are summarised in Table 3.3.

| Source                        | Description                                                                                                                              | Contaminants                                                                                                                                         |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Made Ground and shallow soils | The general quality of Made Ground and shallow soils could be impacted by the presence of contamination.                                 | Possible elevated concentrations of metals, metalloids, TPH and PAH compounds, and asbestos in Made Ground (if present) or in shallow natural soils. |
| Ground Gases                  | Possible presence of ground gases as a result of Made Ground (if present) and vapours associated with organic contaminants (if present). | Possible elevated Methane, Carbon Dioxide, depleted Oxygen and Volatile Organic Compounds (VOCs)                                                     |

**Table 3.3 Possible Sources of Contamination**

### 3.2.3 Summary of Plausible Pathways

The plausible pathways are summarised in Table 3.4. These pathways are based on the proposed end use, including residential properties and private gardens.

| Pathway                      | Description                                                                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Direct Contact               | Ingestion of soil particles, ingestion and bioaccumulation in vegetables/fruit and inhalation of soil derived dust (including tracked back dust), dermal contact. |
| Inhalation                   | Inhalation of ground gases and soil dust both inside and outside of buildings.                                                                                    |
| Vertical & Lateral Migration | Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways, e.g. services trenches, or with groundwater.          |
| Root Uptake                  | Uptake of soil and waterborne contaminants by plants.                                                                                                             |
| Chemical Attack              | Attack of buried plastics and concrete by aggressive ground conditions.                                                                                           |

**Table 3.4 Possible Contamination Pathways**

### 3.2.4 Summary of Plausible Receptors

Potential receptors associated with the site and its development are summarised in Table 3.5.

| Receptor                     | Description                                                                                                                 | Comments                                                                                                                                       |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Workers                 | Persons involved in construction and future maintenance of the proposed development.                                        | Ground Workers could become exposed during site clearance, construction and maintenance.                                                       |
| End Users                    | Residents/occupants of the proposed development.                                                                            | The proposed development is likely to include private gardens and areas of soft landscaping.                                                   |
| Soft Landscaping             | Possible areas of planting including lawns, shrubs, trees, etc.                                                             | Planting is anticipated in private gardens and soft landscaping.                                                                               |
| Buildings and Infrastructure | Buried concrete for foundations and plastics for potable water supply pipes may be laid in contact with contaminated soils. | Significant depths of Made Ground are not anticipated; however contamination may also be present within shallow Made Ground and natural soils. |
| Adjacent Land Users          | Sensitive land uses identified within the immediate vicinity.                                                               | Adjacent land uses include predominantly commercial and residential.                                                                           |



| Receptor      | Description                                                                 | Comments                                                                                                     |
|---------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Groundwater   | Controlled Waters contained within the aquifer(s) beneath the site.         | The site overlies a Secondary A Aquifer and an Unproductive Strata. The site is situated outside of any SPZ. |
| Surface Water | Controlled Waters within lakes, rivers, and ponds, etc., or coastal waters. | Surface water features are present on-site (ditches).                                                        |

**Table 3.5 Possible Receptors of Contamination**

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

Whilst the above sources and receptors have been identified, Table 3.6 summarises the identified plausible pollution linkages and a qualitative assessment of the risks based on the desk study research.



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| Potential Source/<br>media                                                           | Potential<br>Receptors          | Potential<br>Pathways | Probability | Consequence | Risk and Justification                                                                                                                          |
|--------------------------------------------------------------------------------------|---------------------------------|-----------------------|-------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General<br/>chemical<br/>quality/Made<br/>Ground &amp; Near<br/>Surface Soils</b> | End Users                       | Direct contact        | Low         | Medium      | Moderate to Low<br>Future end users are likely to come into contact with potentially impacted soils via direct contact in private garden areas. |
|                                                                                      | Adjacent Land<br>Users          | Direct contact        | Low         | Mild        | Low<br>During the development fugitive dust may be released which could impact neighboring land users through direct contact.                   |
|                                                                                      | Soft<br>Landscaping             | Root uptake           | Low         | Mild        | Low<br>Plants are likely within soft landscaped areas.                                                                                          |
|                                                                                      | Water Supply<br>Pipes           | Chemical<br>attack    | Low         | Mild        | Low<br>Water supply pipes are likely to come into contact with soils.                                                                           |
|                                                                                      | Buildings and<br>Infrastructure | Chemical<br>attack    | Low         | Mild        | Low<br>Foundations and utilities will be placed within soils. However, the consequence is anticipated to be mild.                               |
|                                                                                      | Groundwater                     | Vertical<br>migration | Low         | Medium      | Moderate to Low<br>Groundwater is anticipated within the granular parts of the River Terrace Deposits.                                          |
| <b>Ground Gases</b>                                                                  | End Users                       | Inhalation            | Low         | Medium      | Moderate to Low<br>It is likely that end users of the site will come into contact with ground gases as off-site sources have been identified.   |

Table 3.6 Plausible Pollutant Linkages &amp; Qualitative Risk Assessment



### **3.3 Preliminary Risk Assessment Summary**

The PRA and CSM developed from the information gathered as part of the desk study process have identified plausible potential pollutant linkages that exist in relation to the proposed redevelopment of the site.

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

It is considered that the overall risk from potential contamination on the site is 'moderate to low to low' and that further assessment would be necessary to satisfy planning conditions or to provide clarification of the risk assessment.

In order to progress this assessment in line with the National Planning Policy Framework, to provide further characterisation of the site and refinement of the PRA and CSM, it is recommended that intrusive investigation and associated testing is undertaken to confirm the findings of the desk study report and to provide a robust risk assessment for the site and proposed development. As such it is recommended that geochemical and geotechnical investigation be carried out on the site to include analysis of soil and groundwater (if encountered) samples for the range of potential contaminants identified within the Desk Study.

## **4.0 CONCLUSIONS AND RECOMMENDATIONS**

### **4.1 Conclusions**

The desk study has shown the site to have formerly comprised fields with a glass house. The proposed end use of the site is understood to comprise a residential development with private gardens, soft landscaping and associated infrastructure. As such, sensitive uses such as in private gardens with gardening activities (including dust being tracked back into buildings) and growing vegetables are considered likely to form part of the end use scenario for this site.

It is concluded that the overall risk of harm to end users is moderate to low, to low (as defined in Section 3) and that further assessment is likely to be required to better characterise contamination on site to inform an update of the conceptual site model and allow a robust assessment of the risk to human health and the environment.

### **4.2 Recommendations**

At this stage and based on the findings of the desk study and preliminary risk assessment, the following scope of works is recommended for the intrusive investigation on the site.

- Intrusive investigation works should be carried out in order to clarify the geo-environmental issues pertaining to redevelopment of the site.
- Laboratory analysis, on shallow soil samples and groundwater samples recovered from the exploratory holes, for an analytical suite to include the potential contaminants identified within the desk study and encountered during any intrusive investigation
- Ground gas monitoring in accordance with best practice.
- Laboratory and in-situ testing for the engineering parameters of the encountered soils to provide a basis for foundation, pavements and soakaway design.

It may be necessary to undertake remediation/risk mitigation measures on this site to break pollutant linkages and thus protect key receptors such as human health, controlled waters, built environment, soft landscaping and the like. The requirement and extent of any such remediation cannot be determined until such time as an intrusive investigation and associated testing has been completed.



**FIGURE 1**

**Site Location Plan**

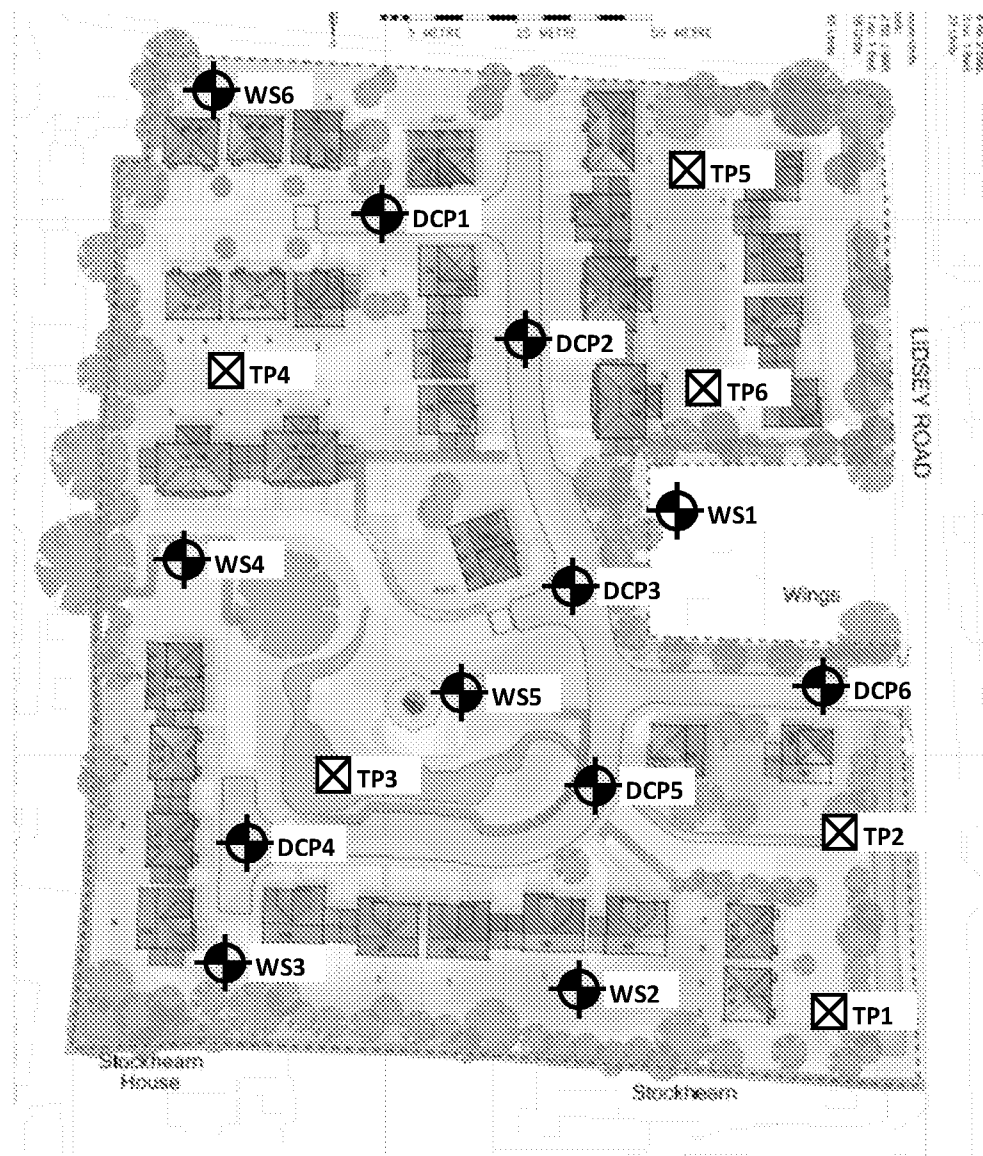


|                 |                                |                  |              |                                                                                                                                                                                                      |                                                                                                                   |  |
|-----------------|--------------------------------|------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--|
| <b>Project:</b> | Land Off Lidsey Road, Woodgate |                  |              | <b>Title</b>                                                                                                                                                                                         | Site Location Plan                                                                                                |  |
| <b>Client:</b>  | Thakeham Homes Ltd             |                  |              | <b>Geo-Environmental Services Ltd</b><br><br>Unit 7 Danworth Farm, Cuckfield Road<br><br>Hurstpierpoint, West Sussex BN6 9GL<br><br>+44(0)1273 832972 <a href="http://www.gesl.net">www.gesl.net</a> | <br><b>Geo-Environmental</b> |  |
| <b>Ref No:</b>  | GE18390                        | <b>Revision:</b> | 1.0          |                                                                                                                                                                                                      |                                                                                                                   |  |
| <b>Drawn:</b>   | AP                             | <b>Date:</b>     | 09/08/2019   |                                                                                                                                                                                                      |                                                                                                                   |  |
| <b>Figure:</b>  | 1                              | <b>Scale:</b>    | Not To Scale |                                                                                                                                                                                                      |                                                                                                                   |  |

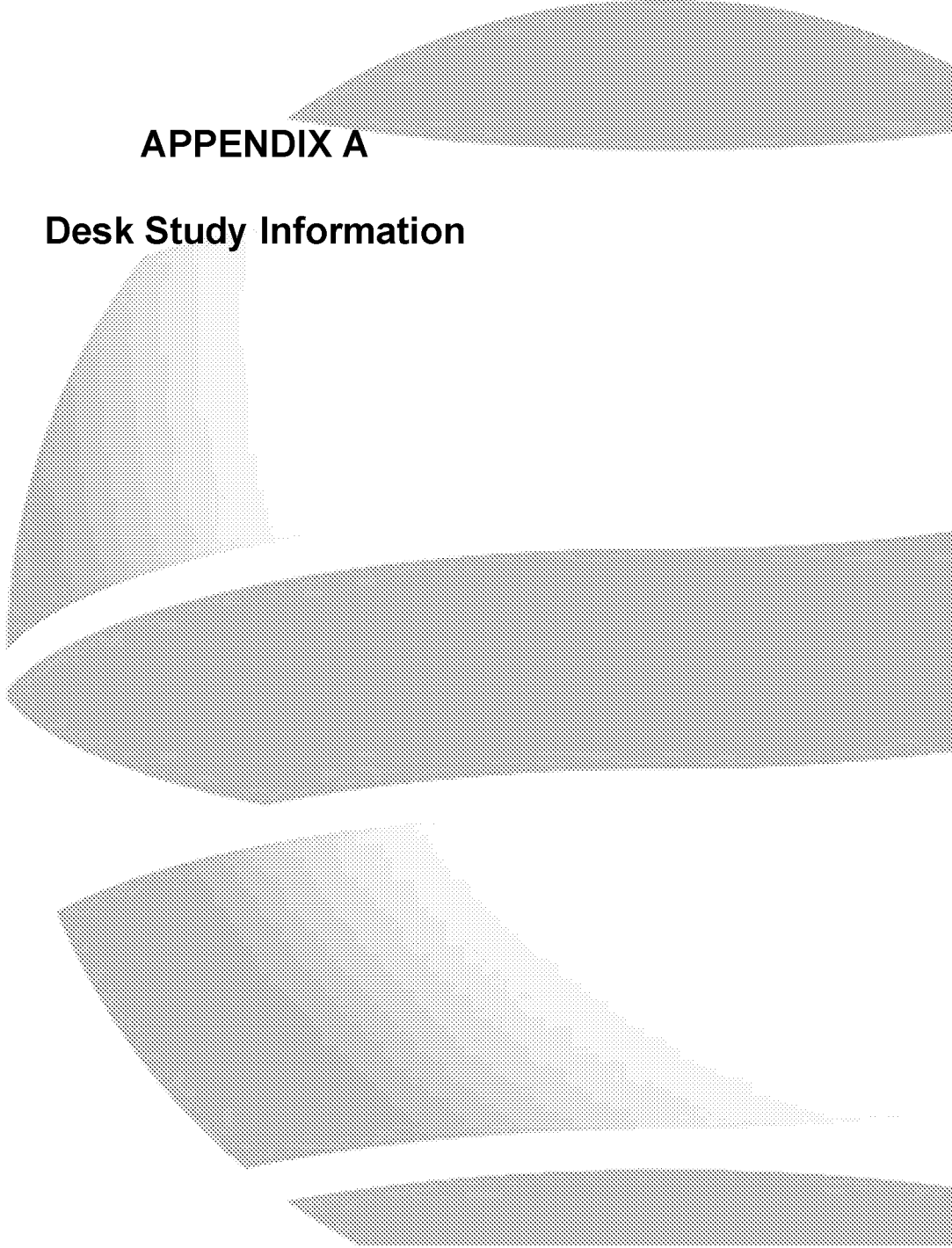


**FIGURE 2**

**Proposed Layout Plan**



|                 |                                |                  |              |                                                                                                                                                                                                      |                                                                                                                       |  |
|-----------------|--------------------------------|------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--|
| <b>Project:</b> | Land Off Lidsey Road, Woodgate |                  |              | <b>Title</b>                                                                                                                                                                                         | Site Investigation Plan                                                                                               |  |
| <b>Client:</b>  | Thakeham Homes Limited         |                  |              | <b>Geo-Environmental Services Ltd</b><br><br>Unit 7 Danworth Farm, Cuckfield Road<br><br>Hurstpierpoint, West Sussex BN6 9GL<br><br>+44(0)1273 832972 <a href="http://www.gesl.net">www.gesl.net</a> | <br><br><b>Geo-Environmental</b> |  |
| <b>Ref No:</b>  | GE18390                        | <b>Revision:</b> | v1           |                                                                                                                                                                                                      |                                                                                                                       |  |
| <b>Drawn:</b>   | AP                             | <b>Date:</b>     | 09/08/2019   |                                                                                                                                                                                                      |                                                                                                                       |  |
| <b>Figure:</b>  | 2                              | <b>Scale:</b>    | Not To Scale |                                                                                                                                                                                                      |                                                                                                                       |  |



## **APPENDIX A**

### **Desk Study Information**



Geo-Environmental

# Envirocheck® Report:

## Datasheet

### Order Details:

Order Number:

214178583\_1\_1

Customer Reference:

GE18390

National Grid Reference:

493720, 104130

Slice:

A

Site Area (Ha):

2.44

Search Buffer (m):

1000

### Site Details:

Lidsey Road

Woodgate

CHICHESTER

PO20 3SU

### Client Details:

Mr A Potter

Geo Environmental Services Ltd

Unit 7 Danworth Farm

Cuckfield Road

Hurstpierpoint

West Sussex

BN6 9GL



| Report Section        | Page Number |
|-----------------------|-------------|
| Summary               | -           |
| Agency & Hydrological | 1           |
| Waste                 | 28          |
| Hazardous Substances  | -           |
| Geological            | 33          |
| Industrial Land Use   | 35          |
| Sensitive Land Use    | 39          |
| Data Currency         | 40          |
| Data Suppliers        | 45          |
| Useful Contacts       | 46          |

**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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Geo-Environmental

Report Version v53.0

## Contents



| Data Type                                                     | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|---------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| <b>Agency &amp; Hydrological</b>                              |             |         |           |             |                             |
| BGS Groundwater Flooding Susceptibility                       | pg 1        | Yes     | Yes       | Yes         | n/a                         |
| Contaminated Land Register Entries and Notices                |             |         |           |             |                             |
| Discharge Consents                                            | pg 1        |         |           | 1           | 10                          |
| Prosecutions Relating to Controlled Waters                    |             |         | n/a       | n/a         | n/a                         |
| Enforcement and Prohibition Notices                           |             |         |           |             |                             |
| Integrated Pollution Controls                                 |             |         |           |             |                             |
| Integrated Pollution Prevention And Control                   | pg 4        |         |           |             | 19                          |
| Local Authority Integrated Pollution Prevention And Control   |             |         |           |             |                             |
| Local Authority Pollution Prevention and Controls             | pg 9        |         | 1         |             |                             |
| Local Authority Pollution Prevention and Control Enforcements |             |         |           |             |                             |
| Nearest Surface Water Feature                                 | pg 9        | Yes     |           |             |                             |
| Pollution Incidents to Controlled Waters                      | pg 9        |         |           |             | 3                           |
| Prosecutions Relating to Authorised Processes                 |             |         |           |             |                             |
| Registered Radioactive Substances                             |             |         |           |             |                             |
| River Quality                                                 | pg 9        |         |           |             | 1                           |
| River Quality Biology Sampling Points                         |             |         |           |             |                             |
| River Quality Chemistry Sampling Points                       |             |         |           |             |                             |
| Substantiated Pollution Incident Register                     |             |         |           |             |                             |
| Water Abstractions                                            | pg 9        |         |           |             | 12 (*35)                    |
| Water Industry Act Referrals                                  |             |         |           |             |                             |
| Groundwater Vulnerability Map                                 | pg 21       | Yes     | n/a       | n/a         | n/a                         |
| Groundwater Vulnerability - Soluble Rock Risk                 |             |         | n/a       | n/a         | n/a                         |
| Groundwater Vulnerability - Local Information                 |             |         | n/a       | n/a         | n/a                         |
| Bedrock Aquifer Designations                                  | pg 21       | Yes     | n/a       | n/a         | n/a                         |
| Superficial Aquifer Designations                              | pg 21       | 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 22       | 5       | 6         | 14          | 27                          |



| Data Type                                                           | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
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| <b>Waste</b>                                                        |             |         |           |             |                             |
| BGS Recorded Landfill Sites                                         |             |         |           |             |                             |
| Historical Landfill Sites                                           | pg 28       |         |           |             | 2                           |
| Integrated Pollution Control Registered Waste Sites                 |             |         |           |             |                             |
| Licensed Waste Management Facilities (Landfill Boundaries)          | pg 28       |         |           | 1           | 1                           |
| Licensed Waste Management Facilities (Locations)                    | pg 28       |         |           |             | 3                           |
| Local Authority Landfill Coverage                                   | pg 29       | 2       | n/a       | n/a         | n/a                         |
| Local Authority Recorded Landfill Sites                             | pg 29       |         |           |             | 1                           |
| Potentially Infilled Land (Non-Water)                               | pg 29       |         |           | 1           |                             |
| Potentially Infilled Land (Water)                                   | pg 29       | 4       | 16        | 3           | 7                           |
| Registered Landfill Sites                                           | pg 31       |         |           |             | 2                           |
| Registered Waste Transfer Sites                                     |             |         |           |             |                             |
| Registered Waste Treatment or Disposal Sites                        |             |         |           |             |                             |
| <b>Hazardous Substances</b>                                         |             |         |           |             |                             |
| 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<br>(*up to 2000m) |
|-------------------------------------------------------------------|-------------|---------|-----------|-------------|--------------------------------|
| <b>Geological</b>                                                 |             |         |           |             |                                |
| BGS 1:625,000 Solid Geology                                       | pg 33       | Yes     | n/a       | n/a         | n/a                            |
| BGS Estimated Soil Chemistry                                      | pg 33       | Yes     |           |             | Yes                            |
| BGS Recorded Mineral Sites                                        | pg 33       |         |           | 1           | 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 33       | 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 34       | Yes     |           | n/a         | n/a                            |
| Potential for Running Sand Ground Stability Hazards               | pg 34       | Yes     | Yes       | n/a         | n/a                            |
| Potential for Shrinking or Swelling Clay Ground Stability Hazards | pg 34       | Yes     |           | n/a         | n/a                            |
| Radon Potential - Radon Affected Areas                            | pg 34       | Yes     | n/a       | n/a         | n/a                            |
| Radon Potential - Radon Protection Measures                       |             |         | n/a       | n/a         | n/a                            |
| <b>Industrial Land Use</b>                                        |             |         |           |             |                                |
| Contemporary Trade Directory Entries                              | pg 35       |         | 4         | 7           | 10                             |
| Fuel Station Entries                                              |             |         |           |             |                                |
| Points of Interest - Commercial Services                          | pg 36       |         |           |             | 2                              |
| Points of Interest - Education and Health                         |             |         |           |             |                                |
| Points of Interest - Manufacturing and Production                 | pg 37       |         | 2         | 8           | 6                              |
| Points of Interest - Public Infrastructure                        | pg 38       |         |           |             | 5                              |
| Points of Interest - Recreational and Environmental               | pg 38       |         |           |             | 2                              |
| Gas Pipelines                                                     |             |         |           |             |                                |
| Underground Electrical Cables                                     |             |         |           |             |                                |



| Data Type                            | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m<br>(*up to 2000m) |
|--------------------------------------|-------------|---------|-----------|-------------|--------------------------------|
| <b>Sensitive Land Use</b>            |             |         |           |             |                                |
| 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 39       | 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           |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A13NW (NW)                             | 0                            | 1       | 493700 104150 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A13SW (W)                              | 96                           | 1       | 493550 104130 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A13NW (N)                              | 123                          | 1       | 493650 104350 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A13SE (SE)                             | 173                          | 1       | 493900 103900 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A18SW (N)                              | 278                          | 1       | 493600 104500 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | A14NW (E)                              | 360                          | 1       | 494150 104250 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | A7NE (SW)                              | 453                          | 1       | 493300 103750 |
| 1      | <b>Discharge Consents</b><br>Operator: Messrs John Turner & Partners<br>Property Type: Undefined Or Other<br>Location: Headhone Farm, Shripney West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: S01094<br>Permit Version: 1<br>Effective Date: 19th September 1963<br>Issued Date: 19th September 1963<br>Revocation Date: Not Supplied<br>Discharge Type: Unknown<br>Discharge: Controlled Sea<br>Environment: Controlled Sea<br>Receiving Water: Controlled Sea<br>Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989<br>Positional Accuracy: Located by supplier to within 100m                                                                   | A8NE (S)                               | 469                          | 2       | 493790 103570 |
| 2      | <b>Discharge Consents</b><br>Operator: Westergate Developments Ltd.<br>Property Type: Undefined Or Other<br>Location: Dev. North Of Orchard Gardens, Westergate Street, Westergate , Chichester West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: S01708<br>Permit Version: 1<br>Effective Date: 18th April 1968<br>Issued Date: 18th April 1968<br>Revocation Date: 31st March 1997<br>Discharge Type: Discharge Of Other Matter-Surface Water<br>Discharge: Freshwater Stream/River<br>Environment: Freshwater River<br>Receiving Water: Freshwater River<br>Status: Lapsed (under Environment Act 1995, Schedule 23)<br>Positional Accuracy: Located by supplier to within 100m | A18SE (NE)                             | 537                          | 2       | 493990 104720 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 3      | <b>Discharge Consents</b><br>Operator: Ashmarden Ltd<br>Property Type: Mixed Farming<br>Location: Headhone Farm, Shripney, Bognor Regis, West Sussex, Po22 9pe<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Supplied<br>Reference: App/So/101su<br>Permit Version: 1<br>Effective Date: 1st April 1999<br>Issued Date: 1st April 1999<br>Revocation Date: Not Supplied<br>Discharge Type: Trade Discharge - Process Water<br>Discharge: Into Land<br>Environment:<br>Receiving Water: Into Land<br><b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b><br>Positional Accuracy: Located by supplier to within 10m    | A8NE (S)                               | 541                          | 2       | 493750<br>103500 |
| 4      | <b>Discharge Consents</b><br>Operator: G.H. Crockett Esq. A.R.I.B.A.<br>Property Type: CONSTRUCTION OF BUILDINGS<br>Location: Housing Site At Westergate Stree, Westergate, Chichester, West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: S01096<br>Permit Version: 1<br>Effective Date: 9th September 1963<br>Issued Date: 9th September 1963<br>Revocation Date: 31st March 1997<br>Discharge Type: Discharge Of Other Matter-Surface Water<br>Discharge: Controlled Sea<br>Environment:<br>Receiving Water: Controlled Sea<br><b>Status: Lapsed (under Environment Act 1995, Schedule 23)</b><br>Positional Accuracy: Located by supplier to within 100m | A18SE (N)                              | 562                          | 2       | 493850<br>104780 |
| 5      | <b>Discharge Consents</b><br>Operator: Pollards' Nurseries Ltd.<br>Property Type: Undefined Or Other<br>Location: Greenhouses At Hook Lane, Aldingbourn, West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: S01981<br>Permit Version: 1<br>Effective Date: 3rd February 1971<br>Issued Date: 3rd February 1971<br>Revocation Date: 31st March 1997<br>Discharge Type: Discharge Of Other Matter-Surface Water<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Freshwater River<br><b>Status: Lapsed (under Environment Act 1995, Schedule 23)</b><br>Positional Accuracy: Located by supplier to within 100m                       | A18SW (N)                              | 583                          | 2       | 493470<br>104780 |
| 5      | <b>Discharge Consents</b><br>Operator: Pollards' Nurseries Ltd.<br>Property Type: Undefined Or Other<br>Location: Greenhouses At Hook Lane, Aldingbourn, West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: S01981<br>Permit Version: 1<br>Effective Date: 3rd February 1971<br>Issued Date: 3rd February 1971<br>Revocation Date: 31st March 1997<br>Discharge Type: Discharge Of Other Matter-Surface Water<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Freshwater River<br><b>Status: Lapsed (under Environment Act 1995, Schedule 23)</b><br>Positional Accuracy: Located by supplier to within 10m                        | A18SW (N)                              | 593                          | 2       | 493470<br>104790 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 6      | <b>Discharge Consents</b><br>Operator: Lindsey Caravan Park Ltd<br>Property Type: HOLIDAY ACCOM/CAMP SITE/CARAVAN SITE/HOTEL/HOSTEL<br>Location: Lidsey Farm Caravan Pk, Lidsey, Bognor Regis, West Sussex, Po22 9pg<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Aldingbourne/Bamham Rife<br>Reference: S00001<br>Permit Version: 1<br>Effective Date: 3rd August 1981<br>Issued Date: 3rd August 1981<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Tributary Of The Lidsey Rife<br><b>Status:</b> Pre National Rivers Authority Legislation where issue date < 01/09/1989<br>Positional Accuracy: Located by supplier to within 100m | A18NE (N)                              | 640                          | 2       | 493840<br>104860 |
| 7      | <b>Discharge Consents</b><br>Operator: The Occupier<br>Property Type: Undefined Or Other<br>Location: Black Shed, Eastergate, Chichester, West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: S01102<br>Permit Version: 1<br>Effective Date: 17th July 1963<br>Issued Date: 17th July 1963<br>Revocation Date: 31st March 1997<br>Discharge Type: Discharge Of Other Matter-Surface Water<br>Discharge: Controlled Sea<br>Environment:<br>Receiving Water: Controlled Sea<br><b>Status:</b> Lapsed (under Environment Act 1995, Schedule 23)<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                   | A12SW (W)                              | 726                          | 2       | 492950<br>103830 |
| 8      | <b>Discharge Consents</b><br>Operator: Phillpot Contractors Ltd.<br>Property Type: Undefined Or Other<br>Location: Plots 1/2 Westergate St., Westergate, Chichester, West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Supplied<br>Reference: P00337<br>Permit Version: 1<br>Effective Date: 4th February 1986<br>Issued Date: 4th February 1986<br>Revocation Date: 1st July 1991<br>Discharge Type: Trade Effluent Discharge-Site Drainage<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Freshwater River<br><b>Status:</b> Pre National Rivers Authority Legislation where issue date < 01/09/1989<br>Positional Accuracy: Located by supplier to within 10m                                                                                 | A18NE (N)                              | 778                          | 2       | 493790<br>105000 |
| 9      | <b>Discharge Consents</b><br>Operator: Mr E. Sawday<br>Property Type: Undefined Or Other<br>Location: Manor Farm House, Manor Farm, Apuldrum, Chichester West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: D01069<br>Permit Version: 1<br>Effective Date: 13th March 1963<br>Issued Date: 13th March 1963<br>Revocation Date: Not Supplied<br>Discharge Type: Discharge Of Other Matter-Surface Water<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Freshwater River<br><b>Status:</b> Pre National Rivers Authority Legislation where issue date < 01/09/1989<br>Positional Accuracy: Located by supplier to within 100m                                                                                                   | A9SW (S)                               | 813                          | 2       | 494060<br>103270 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 10     | <b>Discharge Consents</b><br>Operator: Mrs Linda Cooper<br>Property Type: SPORT, AMUSEMENT+RECREATION/GOLF CLUB/GYM/THEME PK/SPA<br>Location: Old Canal Caravan Site, Lidsey Road, Bognor Regis, West Sussex, PO22 9pf<br>Authority: Environment Agency, Southern Region<br>Catchment Area: The River Arun<br>Reference: Npswd008337<br>Permit Version: 1<br>Effective Date: 23rd July 2009<br>Issued Date: 23rd July 2009<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: The Old Canal<br><b>Status: New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b><br>Positional Accuracy: Located by supplier to within 10m                                                                | A8SE (S)                               | 844                          | 2       | 493737<br>103197 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site Epr/Cp3735sm, Lidsey Landfill Site, Lidsey Road, Woodgate., Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: UP3932JF<br>Original Permit Ref: Cp3735sm<br>Effective Date: 28th September 2018<br><b>Status: Effective</b><br>Application Type: Variation<br>App. Sub Type: Standard<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 5.1 A(1) (A)<br>Activity Description: THE INCINERATION OF HAZARDOUS WASTE IN AN INCINERATION OR CO-INCINERATION PLANT WITH A CAPACITY EXCEEDING 10 TONNES PER DAY<br>Primary Activity: Y<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N | A7NE (SW)                              | 629                          | 2       | 493254<br>103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road, Woodgate., Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: YP3239DT<br>Original Permit Ref: Cp3735sm<br>Effective Date: 30th June 2016<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Minor<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N                                    | A7NE (SW)                              | 629                          | 2       | 493254<br>103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road, Woodgate., Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: DP3137NV<br>Original Permit Ref: Cp3735sm<br>Effective Date: 31st October 2013<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Standard<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N                              | A7NE (SW)                              | 629                          | 2       | 493254<br>103552 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road,Woodgate,, Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: DP3135NC<br>Original Permit Ref: Cp3735sm<br>Effective Date: 28th May 2013<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Minor<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y                         | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road,Woodgate,, Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: GP3031FY<br>Original Permit Ref: Cp3735sm<br>Effective Date: 3rd December 2011<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Simple Standard Variation<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road,Woodgate,, Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: FP3239HA<br>Original Permit Ref: Cp3735sm<br>Effective Date: 7th October 2010<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Simple Standard Variation<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y  | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road,Woodgate,, Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency, Southern Region<br>Permit Reference: FP3239HA<br>Original Permit Ref: Cp3735sm<br>Effective Date: 7th October 2010<br><b>Status: Effective</b><br>Application Type: Variation<br>App. Sub Type: Simple Standard Variation<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y                                              | A7NE (SW)                              | 629                          | 2       | 493254 103552 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road, Woodgate., Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: WP3230KD<br>Original Permit Ref: Cp3735sm<br>Effective Date: 20th April 2010<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Standard<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y       | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road, Woodgate., Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency, Southern Region<br>Permit Reference: WP3230KD<br>Original Permit Ref: Cp3735sm<br>Effective Date: 20th April 2010<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Standard<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y                                     | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road, Woodgate., Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: ZP3138UQ<br>Original Permit Ref: Cp3735sm<br>Effective Date: 22nd December 2007<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Substantial<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Road, Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency, Southern Region<br>Permit Reference: ZP3138UQ<br>Original Permit Ref: Cp3735sm<br>Effective Date: 22nd December 2007<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Substantial<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N                                                                                      | A7NE (SW)                              | 629                          | 2       | 493254 103552 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road, Woodgate,, Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: MP3130MH<br>Original Permit Ref: Cp3735sm<br>Effective Date: 18th June 2007<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Minor<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N     | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Road, Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency, Southern Region<br>Permit Reference: MP3130MH<br>Original Permit Ref: Cp3735sm<br>Effective Date: 18th June 2007<br><b>Status: Superseded By Variation</b><br>Application Type: Variation<br>App. Sub Type: Minor<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y                                                                                          | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road, Woodgate,, Bognor Regis, West Sussex, PO22 9PL<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: CP3735SM<br>Original Permit Ref: Cp3735sm<br>Effective Date: 16th December 2005<br><b>Status: Superseded By Variation</b><br>Application Type: Application<br>App. Sub Type: New<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y | A7NE (SW)                              | 629                          | 2       | 493254 103552 |
| 11     | <b>Integrated Pollution Prevention And Control</b><br>Name: Lidsey Landfill Limited<br>Location: Lidsey Landfill Site, Lidsey Landfill Site, Lidsey Road, Woodgate, BOGNOR REGIS, West Sussex, PO22 9PL<br>Authority: Environment Agency, Southern Region<br>Permit Reference: Cp3735sm<br>Original Permit Ref: Cp3735sm<br>Effective Date: 16th December 2005<br><b>Status: Superseded By Variation</b><br>Application Type: Application<br>App. Sub Type: New<br>Positional Accuracy: Automatically positioned to the address<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 5.2 A(1) (A)<br>Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste<br>Primary Activity: Y                                | A7NE (SW)                              | 629                          | 2       | 493254 103552 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 12     | <b>Integrated Pollution Prevention And Control</b><br>Name: Angus Energy Weald Basin No.3 Limited<br>Location: Lidsey Well Site, Lidsey Well Site, Lidsey Road,Lidsey,Nr Bognor Regis, Bognor Regis, West Sussex, PO22 9PH<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: GP3238YH<br>Original Permit Ref: Yp3232II<br>Effective Date: Not Supplied<br><b>Status: Valid</b><br>Application Type: Variation<br>App. Sub Type: Standard<br>Positional Accuracy: Located by supplier to within 10m<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 1.2 A(1) (H) (I)<br>Activity Description: Loading/Storage/Treatment Etc Of Crude Oil<br>Primary Activity: Y                                                                                                                                            | A9SE (SE)                              | 906                          | 2       | 494430 103390 |
| 12     | <b>Integrated Pollution Prevention And Control</b><br>Name: Key Petroleum Weald Basin Ltd<br>Location: Lidsey Well Site, Lidsey Oilfield, Lidsey Road, Bognor Regis, West Sussex, PO22 9PH<br>Authority: Environment Agency, Southern Region<br>Permit Reference: YP3232LL<br>Original Permit Ref: Yp3232II<br>Effective Date: 28th February 2007<br><b>Status: Effective</b><br>Application Type: Application<br>App. Sub Type: New<br>Positional Accuracy: Manually positioned within the geographical locality<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 1.2 A(1) (H) (I)<br>Activity Description: Loading/Storage/Treatment Etc Of Crude Oil<br>Primary Activity: Y                                                                                                                                                                                | A9SE (SE)                              | 930                          | 2       | 494433 103360 |
| 12     | <b>Integrated Pollution Prevention And Control</b><br>Name: Angus Energy Weald Basin No3 Limited<br>Location: Lidsey Well Site - Epr/Yp3232II, Lidsey Oilfield, Lidsey Road,,, BOGNOR REGIS, West Sussex, PO22 9PH<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: DP3236ZM<br>Original Permit Ref: Yp3232II<br>Effective Date: 15th March 2013<br><b>Status: Effective</b><br>Application Type: Variation<br>App. Sub Type: Minor<br>Positional Accuracy: Located by supplier to within 10m<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N<br>Activity Code: 1.2 A(1) (H) (I)<br>Activity Description: Loading/Storage/Treatment Etc Of Crude Oil<br>Primary Activity: Y<br>Activity Code: 1.2 Part A (1) e) (A) 2017<br>Activity Description: Activities are less than 500,000 tonnes per annum<br>Primary Activity: N | A9SE (SE)                              | 951                          | 2       | 494420 103320 |
| 12     | <b>Integrated Pollution Prevention And Control</b><br>Name: Key Petroleum Weald Basin Ltd<br>Location: Lidsey Well Site, Lidsey Oilfield, Lidsey Road,,, BOGNOR REGIS, West Sussex, PO22 9PH<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Permit Reference: YP3232LL<br>Original Permit Ref: Yp3232II<br>Effective Date: 28th February 2007<br><b>Status: Superseded By Variation</b><br>Application Type: Application<br>App. Sub Type: New<br>Positional Accuracy: Located by supplier to within 10m<br>Activity Code: 1.2 A(1) (H) (I)<br>Activity Description: Loading/Storage/Treatment Etc Of Crude Oil<br>Primary Activity: Y<br>Activity Code: 0.0 Associated Process<br>Activity Description: Associated Process<br>Primary Activity: N                                                                                                                                                     | A9SE (SE)                              | 951                          | 2       | 494420 103320 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 13     | <b>Local Authority Pollution Prevention and Controls</b><br>Name: Lee Fencing<br>Location: Lidsey Road, Woodgate, CHICHESTER, West Sussex, PO20 6SU<br>Authority: Arun District Council, Environmental Health Department<br>Permit Reference: Epa/2/92<br>Dated: 22nd April 1992<br>Process Type: Local Authority Air Pollution Control<br>Description: PG6/2 Manufacture of timber and wood-based products<br><b>Status: Authorisation revoked</b><br>Positional Accuracy: Manually positioned to the road within the address or location                                                                                                                                                             | A13SE (SE)                             | 95                           | 3       | 493809 103945 |
|        | <b>Nearest Surface Water Feature</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A13SE (E)                              | 0                            | -       | 493792 104106 |
| 14     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Water Company Sewage: Other<br>Location: Watercourse/Barnham Rife<br>Authority: Environment Agency, Southern Region<br>Pollutant: Sewage Debris/Litter<br>Note: Surcharging Manhole; Water Company Sewage: Combined Sewer Overflow<br>Incident Date: 18th January 1994<br>Incident Reference: 845<br>Catchment Area: Not Given<br>Receiving Water: Not Given<br>Cause of Incident: Plc Sewage Other<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                     | A19SW (NE)                             | 573                          | 2       | 494290 104500 |
| 15     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Water Company Sewage: Storm Overflow<br>Location: Tributary Of Lidsey Rife<br>Authority: Environment Agency, Southern Region<br>Pollutant: Storm Sewage<br>Note: Surcharging Manhole<br>Incident Date: 20th December 1993<br>Incident Reference: 812<br>Catchment Area: Not Given<br>Receiving Water: Not Given<br>Cause of Incident: Plc Sewage Other<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                                  | A14SW (E)                              | 584                          | 2       | 494380 104090 |
| 16     | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Miscellaneous Premises: Unknown<br>Location: Adjacent To Lec, ALDINGBOURNE<br>Authority: Environment Agency, Southern Region<br>Pollutant: Oils - Unknown<br>Note: Oil On The Aldingbourne Rife<br>Incident Date: 15th December 1998<br>Incident Reference: 2842<br>Catchment Area: Not Given<br>Receiving Water: Not Given<br>Cause of Incident: Poor Operational Practice<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Unknown                                                                                                                                                                        | A18NE (N)                              | 854                          | 2       | 493950 105060 |
|        | <b>River Quality</b><br>Name: Lidsey Rife<br>GQA Grade: River Quality E<br>Reach: Aldingbourne/Barnham Rifes - Westergate<br>Estimated Distance (km): 6.1<br>Flow Rate: Flow less than 0.31 cumecs<br>Flow Type: River<br>Year: 2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A14SE (E)                              | 650                          | 2       | 494451 104042 |
| 17     | <b>Water Abstractions</b><br>Operator: Ashmarden Limited<br>Licence Number: 10/41/542102/R01<br>Permit Version: 2<br>Location: Between Points A&B At Lidsey, Bersted<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 13th December 2018<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A14NW (E)                              | 575                          | 2       | 494358 104312 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 17     | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/542102/R01<br>Permit Version: 1<br>Location: Between Points A&B At Lidsey,Bersted<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 1st April 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                                         | A14NW (E)                              | 575                          | 2       | 494358<br>104312 |
| 17     | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/542102<br>Permit Version: 101<br>Location: Between Points A&B At Lidsey,Bersted<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Plan Accompanying This Licence<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A14NW (E)                              | 598                          | 2       | 494380<br>104320 |
| 17     | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/542102<br>Permit Version: 100<br>Location: Between Points A&B At Lidsey,Bersted<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): 909<br>Yearly Rate (m3): 24545.2<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Plan Accompanying This Licence<br>Authorised Start: 01 March<br>Authorised End: 31 August<br>Permit Start Date: 20th May 1966<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                 | A14NW (E)                              | 598                          | 2       | 494380<br>104320 |
| 18     | <b>Water Abstractions</b><br>Operator: Mr R Eggs<br>Licence Number: 27/208/R01<br>Permit Version: 1<br>Location: West Branch Of The Lidsey Rife<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 1st April 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                                                                                        | A9SW (SE)                              | 855                          | 2       | 494290<br>103340 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 18     | <b>Water Abstractions</b><br>Operator: Lidsey Farm<br>Licence Number: 27/208<br>Permit Version: 1<br>Location: West Branch Of The Lidsey Rife<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 16th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                               | A9SW (SE)                              | 855                          | 2       | 494290 103340 |
| 18     | <b>Water Abstractions</b><br>Operator: Ashmarden Limited<br>Licence Number: So/041/0024/007<br>Permit Version: 3<br>Location: Lidsey Rife (West Branch) At Headhone Farm<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 April<br>Authorised End: 31 March<br>Permit Start Date: 13th December 2018<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m   | A9SW (SE)                              | 859                          | 2       | 494281 103329 |
| 18     | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: So/041/0024/007<br>Permit Version: 2<br>Location: Lidsey Rife (West Branch) At Headhone Farm<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 April<br>Authorised End: 31 March<br>Permit Start Date: 8th February 2018<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m        | A9SW (SE)                              | 859                          | 2       | 494281 103329 |
| 18     | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: So/041/0024/007<br>Permit Version: 1<br>Location: Lidsey Rife (West Branch) At Headhone Farm<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Headhone Farm, Lidsey<br>Authorised Start: 01 April<br>Authorised End: 31 March<br>Permit Start Date: 31st March 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A9SW (SE)                              | 859                          | 2       | 494281 103329 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 19     | <b>Water Abstractions</b><br>Operator: Messrs W H & D Gillbard<br>Licence Number: 10/41/541301<br>Permit Version: 100<br>Location: Park Farm Reach E-F, Aldingbourne<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used Only On Land Marked Pink On The Plan Accompanying This Licence<br>Authorised Start: 01 April<br>Authorised End: 31 October<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m          | A17NE (NW)                             | 929                          | 2       | 493050<br>104930 |
| 20     | <b>Water Abstractions</b><br>Operator: Lidsey Farm<br>Licence Number: 10/41/542010<br>Permit Version: 101<br>Location: Lidsey Rife Reach A-B, Lidsey<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land Coloured Pink On The Said Map<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 31st March 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                   | A9SW (SE)                              | 933                          | 2       | 494310<br>103260 |
| 20     | <b>Water Abstractions</b><br>Operator: Lidsey Farm<br>Licence Number: 10/41/542010<br>Permit Version: 100<br>Location: Lidsey Rife Reach A-B, Lidsey<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land Coloured Pink On The Said Map<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 10th May 1995<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                    | A9SW (SE)                              | 933                          | 2       | 494310<br>103260 |
|        | <b>Water Abstractions</b><br>Operator: The Woodhorn Group<br>Licence Number: 10/41/541310<br>Permit Version: 103<br>Location: Points A To B On Aldingbourne Rife At Upper Woodhorn<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A11SE (W)                              | 1139                         | 2       | 492510<br>103930 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Water Abstractions</b><br>Operator: The Woodhorn Group<br>Licence Number: 10/41/541310<br>Permit Version: 102<br>Location: Points A To B On Aldingbourne Rife At Upper Woodhorn<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 16th August 2002<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A11SE (W)                              | 1139                         | 2       | 492510 103930 |
|        | <b>Water Abstractions</b><br>Operator: Mr A J Pitts<br>Licence Number: 10/41/541310<br>Permit Version: 101<br>Location: Points A To B On Aldingbourne Rife At Upper Woodhorn<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land Outlined In Black On Map Labelled Amendment No. 2<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 30th May 2001<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m          | A11SE (W)                              | 1139                         | 2       | 492510 103930 |
|        | <b>Water Abstractions</b><br>Operator: Messrs W H & D Gillbard<br>Licence Number: 10/41/541301<br>Permit Version: 100<br>Location: Park Farm Reach C-D, Aldingbourne<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used Only On Land Marked Pink On The Plan Accompanying This Licence<br>Authorised Start: 01 April<br>Authorised End: 31 October<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m           | A17NW (NW)                             | 1203                         | 2       | 492840 105110 |
|        | <b>Water Abstractions</b><br>Operator: Lidsey Farm<br>Licence Number: 10/41/542010<br>Permit Version: 101<br>Location: Lidsey Rife Reach C-D, Lidsey<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used Be Used On Land Coloured Pink On The Said Map<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 31st March 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                            | A10NW (SE)                             | 1238                         | 2       | 494930 103540 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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|        | <b>Water Abstractions</b><br>Operator: Lidsey Farm<br>Licence Number: 10/41/542010<br>Permit Version: 100<br>Location: Lidsey Rife Reach C-D, Lidsey<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): 227<br>Yearly Rate (m3): 14090<br>Details: Water Abstracted Shall Be Used Be Used On Land Coloured Pink On The Said Map<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 10th May 1995<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A10NW (SE)                             | 1238                         | 2       | 494930<br>103540 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Limited<br>Licence Number: 10/41/541309/R01<br>Permit Version: 2<br>Location: Points B-C, Lidsey, Berstead<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                        | A11NE (W)                              | 1261                         | 2       | 492392<br>104272 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/541309/R01<br>Permit Version: 1<br>Location: Points B-C, Lidsey, Berstead<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 1st April 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                             | A11NE (W)                              | 1261                         | 2       | 492392<br>104272 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/541309<br>Permit Version: 101<br>Location: Points B-C, Lidsey, Berstead<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                               | A11NE (W)                              | 1263                         | 2       | 492390<br>104270 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/541309<br>Permit Version: 100<br>Location: Points A-B, Lidsey, Berstead<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): 909<br>Yearly Rate (m3): 12272.6<br>Details: Water Abstracted Shall Be Used Only On Land And Buildings Shown In Pink On The Plan Accompanying This Licence<br>Authorised Start: 01 May<br>Authorised End: 31 August<br>Permit Start Date: 22nd May 1966<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A11NE (W)                              | 1263                         | 2       | 492390 104270 |
|        | <b>Water Abstractions</b><br>Operator: A J Pitts<br>Licence Number: 541203<br>Permit Version: Not Supplied<br>Location: Upper Woodhorn, Oving Chichester<br>Authority: Environment Agency, Southern Region<br>Abstraction: Spray Irrigation<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 1241<br>Yearly Rate (m3): 113635<br>Details: Oving Rife<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                                                       | A6SE (SW)                              | 1284                         | 2       | 492620 103270 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 541309<br>Permit Version: Not Supplied<br>Location: Lidsey, BERSTED<br>Authority: Environment Agency, Southern Region<br>Abstraction: Spray Irrigation<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 909<br>Yearly Rate (m3): 12272<br>Details: Aldingbourne Rife<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                                                               | A1NE (SW)                              | 1401                         | 2       | 492600 103110 |
|        | <b>Water Abstractions</b><br>Operator: Hall Hunter Partnership (Farming)<br>Licence Number: 27/185<br>Permit Version: 102<br>Location: Right Bank Of The Aldingbourne Rife Looking Downstream.<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined In Black On Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                          | A1NE (SW)                              | 1668                         | 2       | 492490 102840 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Water Abstractions</b><br>Operator: Mr A Tukker<br>Licence Number: 27/185<br>Permit Version: 101<br>Location: Right Bank Of The Aldingbourne Rife Looking Downstream.<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined In Black On Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 16th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                            | A1NE (SW)                              | 1668                         | 2       | 492490 102840 |
|        | <b>Water Abstractions</b><br>Operator: The Donald Langmead Partnership<br>Licence Number: 10/41/541002<br>Permit Version: 100<br>Location: Point 1 At Shripney Farm & Flansham Farm<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Farming And Domestic<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): 5<br>Yearly Rate (m3): 1659.1<br>Details: Water Abstracted Shall Be Used On Land And Buildings In The Occupation Of The Licence Holder At Shripney And Flansham<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 21st March 2001<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A1SE (SW)                              | 1668                         | 2       | 492580 102760 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Limited<br>Licence Number: 10/41/542102/R01<br>Permit Version: 2<br>Location: Between Points C&D At Lidsey,Bersted<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 13th December 2018<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                           | A5SW (SE)                              | 1717                         | 2       | 494931 102749 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/542102/R01<br>Permit Version: 1<br>Location: Between Points C&D At Lidsey,Bersted<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 1st April 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                   | A5SW (SE)                              | 1717                         | 2       | 494931 102749 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/542102<br>Permit Version: 101<br>Location: Between Points C&D At Lidsey,Bersted<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Plan Accompanying This Licence<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A5SW (SE)                              | 1737                         | 2       | 494950<br>102740 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/542102<br>Permit Version: 100<br>Location: Between Points C&D At Lidsey,Bersted<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Plan Accompanying This Licence<br>Authorised Start: 01 March<br>Authorised End: 31 August<br>Permit Start Date: 20th May 1966<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m   | A5SW (SE)                              | 1737                         | 2       | 494950<br>102740 |
|        | <b>Water Abstractions</b><br>Operator: J R Robinson<br>Licence Number: 10/41/542105<br>Permit Version: 100<br>Location: Point A At Eastergate<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted To Be Used On Land Marked Pink On Said Map<br>Authorised Start: 01 April<br>Authorised End: 31 October<br>Permit Start Date: 31st March 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                       | (N)                                    | 1753                         | 2       | 494260<br>105910 |
|        | <b>Water Abstractions</b><br>Operator: Langmead Farms Ltd<br>Licence Number: 10/41/541004<br>Permit Version: 102<br>Location: At Shripney Farm, Bognor Regis<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Licence Map<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                              | (SW)                                   | 1782                         | 2       | 492870<br>102440 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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|        | <b>Water Abstractions</b><br>Operator: Mr D W Langmead<br>Licence Number: 10/41/541004<br>Permit Version: 100<br>Location: At Shripney Farm, Bognor Regis<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Licence Map<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 11th March 1994<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                  | (SW)                                   | 1782                         | 2       | 492870<br>102440 |
|        | <b>Water Abstractions</b><br>Operator: A J Pitts Esq<br>Licence Number: 541310<br>Permit Version: Not Supplied<br>Location: Aldingbourne Rife, UPPER WOODHORN<br>Authority: Environment Agency, Southern Region<br>Abstraction: Spray Irrigation<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 1241<br>Yearly Rate (m3): 22727<br>Details: Aldingbourne Rife<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                                | (W)                                    | 1925                         | 2       | 491730<br>104330 |
|        | <b>Water Abstractions</b><br>Operator: Langmead Farms Ltd<br>Licence Number: 27/186<br>Permit Version: 103<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined In Black On Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 16th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                | A1SE<br>(SW)                           | 1926                         | 2       | 492428<br>102551 |
|        | <b>Water Abstractions</b><br>Operator: Mr D W Langmead<br>Licence Number: 10/41/541001/R01<br>Permit Version: 1<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Licence Map<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A1SE<br>(SW)                           | 1934                         | 2       | 492430<br>102539 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Water Abstractions</b><br>Operator: Langmead Farms Ltd<br>Licence Number: 27/186<br>Permit Version: 104<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                        | A1SE (SW)                              | 1934                         | 2       | 492430 102539 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Limited<br>Licence Number: 10/41/541309/R01<br>Permit Version: 2<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                   | A1SE (SW)                              | 1934                         | 2       | 492430 102539 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/541309/R01<br>Permit Version: 1<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 1st April 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                        | A1SE (SW)                              | 1934                         | 2       | 492430 102539 |
|        | <b>Water Abstractions</b><br>Operator: Mr D W Langmead<br>Licence Number: 10/41/541001<br>Permit Version: 101<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Licence Map<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A1SE (SW)                              | 1934                         | 2       | 492430 102539 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/541309<br>Permit Version: 101<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Not Supplied<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                                           | A1SE (SW)                              | 1934                         | 2       | 492430 102540 |
|        | <b>Water Abstractions</b><br>Operator: Ashmarden Ltd<br>Licence Number: 10/41/542102<br>Permit Version: 101<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings Marked Pink On The Plan Accompanying This Licence<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A1SE (SW)                              | 1934                         | 2       | 492430 102540 |
|        | <b>Water Abstractions</b><br>Operator: Langmead Farms Ltd<br>Licence Number: 27/186<br>Permit Version: 102<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined In Black On Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 1st November 2003<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                           | A1SE (SW)                              | 1934                         | 2       | 492430 102540 |
|        | <b>Water Abstractions</b><br>Operator: Mr D W Langmead<br>Licence Number: 27/186<br>Permit Version: 101<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined In Black On Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 1st January 2003<br>Permit End Date: 31st October 2003<br>Positional Accuracy: Located by supplier to within 10m                                                                          | A1SE (SW)                              | 1934                         | 2       | 492430 102540 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Water Abstractions</b><br>Operator: Mr D W Langmead<br>Licence Number: 27/186<br>Permit Version: 100<br>Location: Left Bank Of The Aldingbourne Rife Looking Downstream<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined In Black On Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 20th February 1996<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A1SE (SW)                              | 1934                         | 2       | 492430 102540 |
|        | <b>Water Abstractions</b><br>Operator: The Woodhorn Group<br>Licence Number: 10/41/541310<br>Permit Version: 103<br>Location: Point E At Tangmere Airfield Composting Site<br>Authority: Environment Agency, Southern Region<br>Abstraction: Refuse And Recycling: Process Water<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: At Tangmere Airfield<br>Authorised Start: 01 March<br>Authorised End: 31 October<br>Permit Start Date: 16th April 2019<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                      | A21SW (NW)                             | 1950                         | 2       | 492130 105440 |
|        | <b>Groundwater Vulnerability Map</b><br>Combined Classification: Secondary Superficial Aquifer - High Vulnerability<br>Combined Vulnerability: High<br>Combined Aquifer: Unproductive Bedrock Aquifer, Productive Superficial Aquifer<br>Pollutant Speed: High<br>Bedrock Flow: Mixed<br>Dilution: 300-550 mm/year<br>Baseflow Index: >70%<br>Superficial: >90%<br>Patchiness:<br>Superficial Thickness: 3-10m<br>Superficial Recharge: High                                                                                                                                                                                                                                               | A13SE (N)                              | 0                            | 4       | 493722 104130 |
|        | <b>Groundwater Vulnerability - Soluble Rock Risk</b><br>None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |                              |         |               |
|        | <b>Bedrock Aquifer Designations</b><br>Aquifer Designation: Unproductive Strata                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | A13SE (N)                              | 0                            | 4       | 493722 104130 |
|        | <b>Superficial Aquifer Designations</b><br>Aquifer Designation: Secondary Aquifer - A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | A13SE (N)                              | 0                            | 4       | 493722 104130 |
|        | <b>Extreme Flooding from Rivers or Sea without Defences</b><br>None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                              |         |               |
|        | <b>Flooding from Rivers or Sea without Defences</b><br>None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |                              |         |               |
|        | <b>Areas Benefiting from Flood Defences</b><br>None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                              |         |               |
|        | <b>Flood Water Storage Areas</b><br>None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                        |                              |         |               |
|        | <b>Flood Defences</b><br>None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |                              |         |               |



| Map ID | Details                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 21     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 58.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 2  | A13SE (E)                              | 0                            | 5       | 493792<br>104106 |
| 22     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 62.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 2  | A13SE (E)                              | 0                            | 5       | 493792<br>104132 |
| 23     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 1.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1   | A13NE (NE)                             | 0                            | 5       | 493788<br>104168 |
| 24     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 49.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A13NE (NE)                             | 0                            | 5       | 493788<br>104168 |
| 25     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 11.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A13NE (NE)                             | 0                            | 5       | 493786<br>104218 |
| 26     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 189.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A13SW (W)                              | 1                            | 5       | 493646<br>104132 |
| 27     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 18.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A13NE (NE)                             | 8                            | 5       | 493787<br>104230 |
| 28     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 3.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1   | A13NE (NE)                             | 27                           | 5       | 493787<br>104248 |
| 29     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 10.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A13NE (NE)                             | 30                           | 5       | 493788<br>104252 |



| Map ID | Details                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 30     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 80.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A13SE (SE)                             | 88                           | 5       | 493798<br>103951 |
| 31     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 136.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A13SW (S)                              | 177                          | 5       | 493633<br>103869 |
| 32     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 140.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A13NW (NW)                             | 260                          | 5       | 493401<br>104280 |
| 33     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 65.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A8NE (S)                               | 292                          | 5       | 493852<br>103753 |
| 34     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 337.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A8NW (S)                               | 295                          | 5       | 493599<br>103754 |
| 35     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 26.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A13NW (NW)                             | 301                          | 5       | 493410<br>104399 |
| 36     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 11.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A8NE (SE)                              | 329                          | 5       | 494007<br>103786 |
| 37     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 295.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A8NE (SE)                              | 341                          | 5       | 494024<br>103784 |
| 38     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 115.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A8NE (S)                               | 350                          | 5       | 493833<br>103691 |



| Map ID | Details                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 39     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 602.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A12SE (W)                              | 402                          | 5       | 493241<br>104046 |
| 40     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 6.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1   | A7NE (SW)                              | 424                          | 5       | 493302<br>103794 |
| 41     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 11.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A7NE (SW)                              | 429                          | 5       | 493296<br>103795 |
| 42     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 488.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A12SE (SW)                             | 437                          | 5       | 493284<br>103796 |
| 43     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 54.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A12NE (NW)                             | 437                          | 5       | 493251<br>104388 |
| 44     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 7.1<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1         | A12NE (NW)                             | 456                          | 5       | 493228<br>104380 |
| 45     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 252.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A12NE (NW)                             | 457                          | 5       | 493229<br>104387 |
| 46     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 301.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A18SE (N)                              | 510                          | 5       | 493928<br>104712 |
| 47     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 99.7<br>Watercourse Level: Not Supplied<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1       | A18SE (N)                              | 510                          | 5       | 493928<br>104712 |



| Map ID | Details                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 48     | <b>OS Water Network Lines</b><br>Watercourse Form: Lake<br>Watercourse Length: 14.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1          | A17SE (NW)                             | 533                          | 5       | 493298<br>104620 |
| 49     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 443.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A18SE (N)                              | 549                          | 5       | 493760<br>104772 |
| 50     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 115.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A14NW (E)                              | 551                          | 5       | 494322<br>104371 |
| 51     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 504.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A14SW (E)                              | 556                          | 5       | 494353<br>104120 |
| 52     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 242.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A14NW (NE)                             | 557                          | 5       | 494294<br>104457 |
| 53     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 340.3<br>Watercourse Level: Not Supplied<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1      | A14NW (NE)                             | 557                          | 5       | 494294<br>104457 |
| 54     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 28.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A18SE (N)                              | 563                          | 5       | 493855<br>104781 |
| 55     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 147.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A14SW (SE)                             | 587                          | 5       | 494354<br>103850 |
| 56     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 32.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A14SW (SE)                             | 588                          | 5       | 494354<br>103850 |



| Map ID | Details                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 57     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 3.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1   | A9NW (SE)                              | 598                          | 5       | 494298<br>103712 |
| 58     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 242.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A9NW (SE)                              | 600                          | 5       | 494301<br>103712 |
| 59     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 675.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A19SW (NE)                             | 633                          | 5       | 494222<br>104683 |
| 60     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 18.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A18NE (N)                              | 687                          | 5       | 493743<br>104911 |
| 61     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 29.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A18NE (N)                              | 705                          | 5       | 493746<br>104929 |
| 62     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 2.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1   | A18NE (N)                              | 705                          | 5       | 493746<br>104929 |
| 63     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 48.0<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1        | A18NE (N)                              | 734                          | 5       | 493744<br>104958 |
| 64     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 7.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1   | A9NW (SE)                              | 740                          | 5       | 494275<br>103474 |
| 65     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 147.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A9NW (SE)                              | 740                          | 5       | 494275<br>103474 |



| Map ID | Details                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 66     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 23.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A18NE (N)                              | 780                          | 5       | 493738<br>105005 |
| 67     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 402.7<br>Watercourse Level: Not Supplied<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1      | A7SE (SW)                              | 837                          | 5       | 493226<br>103320 |
| 68     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 891.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A17NE (NW)                             | 859                          | 5       | 493168<br>104933 |
| 69     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 40.8<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1        | A9SW (SE)                              | 862                          | 5       | 494284<br>103328 |
| 70     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 213.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A19SE (NE)                             | 878                          | 5       | 494514<br>104717 |
| 71     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 160.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1 | A9SW (SE)                              | 899                          | 5       | 494290<br>103287 |
| 72     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 57.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1  | A3NW (S)                               | 989                          | 5       | 493715<br>103053 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 73     | <b>Historical Landfill Sites</b><br>Licence Holder: Bower Farms Limited<br>Location: Lidsey, Sussex<br>Name: Disused Canal<br>Operator Location: Not Supplied<br>Boundary Accuracy: As Supplied<br>Provider Reference: EAHLD20081<br>First Input Date: 31st December 1979<br>Last Input Date: 31st December 1988<br>Specified Waste: Deposited Waste included Inert and Industrial Waste<br>Type:<br>EA Waste Ref: 0<br>Regis Ref: Not Supplied<br>WRC Ref: 3800/8107<br>BGS Ref: Not Supplied<br>Other Ref: WD27/142, WD13/69                                                                                                                                                                   | A8SW (S)                               | 774                          | 2       | 493484 103287 |
| 74     | <b>Historical Landfill Sites</b><br>Licence Holder: Not Supplied<br>Location: Lidsey, Sussex<br>Name: Disused Canal East Of A27<br>Operator Location: Not Supplied<br>Boundary Accuracy: As Supplied<br>Provider Reference: EAHLD20381<br>First Input Date: 31st December 1950<br>Last Input Date: 31st December 1960<br>Specified Waste: Deposited Waste included Inert Waste<br>Type:<br>EA Waste Ref: 0<br>Regis Ref: Not Supplied<br>WRC Ref: 3800/8106<br>BGS Ref: Not Supplied<br>Other Ref: WD27/141                                                                                                                                                                                      | A9SW (SE)                              | 883                          | 2       | 494290 103306 |
| 75     | <b>Licensed Waste Management Facilities (Landfill Boundaries)</b><br>Name: Lidsey Landfill Site Extension<br>Licence Number: 19728<br>Location: Lidsey Landfill Site Extension, Lidsey Road, Lidsey, Bognor Regis, West Sussex, PO22 9PL<br>Licence Holder: Sita Southern Ltd<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Site Category: Co-disposal Landfill Sites<br>Max Input Rate: Not Supplied<br><b>Licence Status: Issued</b><br>Issued: 19th September 1997<br>Positional Accuracy: Positioned by the supplier<br>Boundary Accuracy: As Supplied                                                                                                  | A12SE (SW)                             | 417                          | 2       | 493261 103881 |
| 76     | <b>Licensed Waste Management Facilities (Landfill Boundaries)</b><br>Name: Lidsey Landfill Site<br>Licence Number: 19729<br>Location: Lidsey Landfill Site, Lidsey Road, Lidsey, Bognor Regis, West Sussex, PO22 9PL<br>Licence Holder: Sita Southern Ltd<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Site Category: Co-disposal Landfill Sites<br>Max Input Rate: Not Supplied<br><b>Licence Status: Closure</b><br>Issued: 12th September 1989<br>Positional Accuracy: Positioned by the supplier<br>Boundary Accuracy: As Supplied                                                                                                                     | A7NE (SW)                              | 571                          | 2       | 493288 103599 |
| 77     | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 19728<br>Location: Lidsey Landfill Site Extension, Lidsey Road, Lidsey, Bognor Regis, West Sussex, PO22 9PL<br>Operator Name: Sita Southern Ltd<br>Operator Location: Not Supplied<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Site Category: Co-disposal Landfill Sites<br><b>Licence Status: Issued</b><br>Issued: 19th September 1997<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Manually corrected supplier location | A7NE (SW)                              | 633                          | 2       | 493250 103550 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 78     | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 19729<br>Location: Lidsey Landfill Site, Lidsey Road, Lidsey, Bognor Regis, West Sussex, PO22 9PL<br>Operator Name: Sita Southern Ltd<br>Operator Location: Not Supplied<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Site Category: Co-disposal Landfill Sites<br><b>Licence Status: Closed</b><br>Issued: 12th September 1989<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m          | A7NW (SW)                              | 844                          | 2       | 493000 103500 |
| 79     | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 404020<br>Location: Lidsey Well Site, Lidsey Road, Lidsey, Bognor Regis, West Sussex, PO22 9PH<br>Operator Name: Angus Energy Weald Basin No.3 Limited<br>Operator Location: Not Supplied<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Site Category: Mining Waste Operations<br><b>Licence Status: Issued</b><br>Issued: 28th April 2017<br>Last Modified: Not Supplied<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A9SE (SE)                              | 908                          | 2       | 494437 103394 |
|        | <b>Local Authority Landfill Coverage</b><br>Name: Arun District Council<br>- Has no landfill data to supply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                        | 0                            | 6       | 493722 104130 |
|        | <b>Local Authority Landfill Coverage</b><br>Name: West Sussex County Council<br>- Has supplied landfill data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        | 0                            | 7       | 493722 104130 |
| 80     | <b>Local Authority Recorded Landfill Sites</b><br>Location: Old Canal East Of A29, Lidsey<br>Reference: Not Supplied<br>Authority: West Sussex County Council, Environment & Development<br><b>Last Reported Status: Unknown</b><br>Types of Waste: Not Supplied<br>Date of Closure: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m<br>Boundary Quality: Not Applicable                                                                                                                                                                                                                                                                                              | A9SE (SE)                              | 954                          | 7       | 494400 103300 |
| 81     | <b>Potentially Infilled Land (Non-Water)</b><br>Bearing Ref: E<br>Use: Unknown Filled Ground (Pit, quarry etc)<br>Date of Mapping: 1993                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A14SW (E)                              | 303                          | -       | 494099 104018 |
| 82     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A13NW (W)                              | 0                            | -       | 493647 104134 |
| 83     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A13SE (N)                              | 0                            | -       | 493722 104133 |
| 84     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A13SW (S)                              | 0                            | -       | 493718 104046 |
| 85     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1961                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A13NE (NE)                             | 0                            | -       | 493789 104211 |
| 86     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A13SW (SW)                             | 4                            | -       | 493641 104079 |
| 87     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A13NW (NW)                             | 8                            | -       | 493650 104224 |



| Map ID | Details                                                                                                                                | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 88     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13NE (N)                              | 12                           | -       | 493729<br>104237 |
| 89     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13NE (NE)                             | 30                           | -       | 493817<br>104234 |
| 90     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SW (S)                              | 37                           | -       | 493717<br>104005 |
| 91     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13NE (N)                              | 45                           | -       | 493737<br>104272 |
| 92     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SW (SW)                             | 58                           | -       | 493647<br>103987 |
| 93     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SW (S)                              | 78                           | -       | 493709<br>103964 |
| 94     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SE (SE)                             | 83                           | -       | 493821<br>103960 |
| 95     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13NW (NW)                             | 122                          | -       | 493603<br>104337 |
| 96     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SE (E)                              | 154                          | -       | 493951<br>104053 |
| 97     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SW (S)                              | 164                          | -       | 493633<br>103882 |
| 98     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SE (E)                              | 164                          | -       | 493961<br>104128 |
| 99     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13NW (NW)                             | 173                          | -       | 493522<br>104335 |
| 100    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13NW (N)                              | 214                          | -       | 493615<br>104437 |
| 101    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SW (S)                              | 228                          | -       | 493682<br>103812 |
| 102    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A13SE (SE)                             | 256                          | -       | 494003<br>103887 |
| 103    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914 | A18SW (NW)                             | 292                          | -       | 493513<br>104481 |
| 104    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1938 | A12NE (NW)                             | 481                          | -       | 493203<br>104384 |
| 105    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1880 | A18SE (N)                              | 515                          | -       | 493930<br>104717 |
| 106    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1961 | A17SE (NW)                             | 538                          | -       | 493303<br>104632 |
| 107    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1880 | A18SE (N)                              | 552                          | -       | 493931<br>104756 |
| 108    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1880 | A18NE (N)                              | 638                          | -       | 493879<br>104854 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 109    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A19NW (NE)                             | 774                          | -       | 494104 104929 |
| 110    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1961                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A19NW (NE)                             | 880                          | -       | 494328 104917 |
| 111    | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1914                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A19NW (N)                              | 941                          | -       | 494094 105112 |
| 112    | <b>Registered Landfill Sites</b><br>Licence Holder: Bower Farms Ltd<br>Licence Reference: 5/AS/80<br>Site Location: Dis-Used Chichester/Arundel Canal, (West Of A29), Lidsey, Bognor Regis, West Sussex<br>Licence Easting: 493600<br>Licence Northing: 103250<br>Operator Location: Basing Park, Privett, Alton, Hampshire<br>Authority: Environment Agency - Southern Region, Sussex Area<br>Site Category: Landfill<br>Max Input Rate: Undefined<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled<br>Dated: 8th August 1980<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Manually positioned to the address or location<br>Boundary Accuracy: Not Applicable<br>Authorised Waste: Brick Rubble,Broken Concrete, Stone<br>Chalk, Subsoil<br>Other Totally Inert Solid Waste<br>Prohibited Waste: Any Non-Totally Inert Waste<br>Contaminated Soil<br>Grass Cuttings<br>Paper<br>Vegetable Matter<br>Waste Ex Sites With Haz./Poll. Mat'Ls<br>Wood | A8SW (S)                               | 797                          | 2       | 493600 103250 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 113    | <p><b>Registered Landfill Sites</b></p> <p>Licence Holder: A &amp; J Bull (Southern) Ltd<br/> Licence Reference: WSX/L1/0168<br/> Site Location: Lidsey Landfill Site Extension, Lidsey Road, Lidsey, Bognor Regis, West Sussex, PO22 9PL<br/> Licence Easting: 492900<br/> Licence Northing: 103700<br/> Operator Location: 4 London Wall Buildings, Blomfield Street, LONDON, Greater London, EC2M 5UQ<br/> Authority: Environment Agency - Southern Region, Sussex Area<br/> Site Category: Landfill<br/> Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year)<br/> Waste Source: No known restriction on source of waste<br/> Restrictions:<br/> Status: Operational as far as is known<br/> Dated: 19th September 1997<br/> Preceded By: 5/BT/88<br/> Licence:<br/> Superseded By: Not Given<br/> Licence:<br/> Positional Accuracy: Manually positioned to the address or location<br/> Boundary Accuracy: Not Applicable<br/> Authorised Waste: Animal And Food Processing Wastes<br/> Asbestos Cement Products<br/> Cellulose Wastes<br/> Contaminated Rubbish/Bags/Sacks<br/> Contaminated Soil<br/> Dog Faeces From Poop Scoop Scheme<br/> Empty Used Containers<br/> Gully Empty'S (Spec.Waste By Oil Cont)<br/> House, Com + Ind.Waste<br/> Incinerator Residues Damped At Source<br/> Lighting Lamps/Tubes/Fluorescents<br/> Mineral Processing Wastes<br/> Oil/Diesel Contam.Spillage From Beach<br/> Polymeric Mat' (Prods/Scrap)<br/> Polyurethane Prods/Scrap<br/> Scrap Rubber And<br/> Shredded Tyres<br/> Silt And Dredgings<br/> Slag, Boiler/Flue Cleanings<br/> Spec.Waste Oil Contam.Spillage Beach<br/> Stable Wastes<br/> Tyres<br/> Used Filter Mat'Ls,Kieselguhr,Carbon,Cloth<br/> Waste Treated Timber<br/> Wastes From Sewage Treatment<br/> Prohibited Waste: Cadmium &amp; Its Compounds<br/> Carcinogenic/Mutagenic/Teratogenic Sub<br/> Cyanides<br/> Difficult Waste Not Specified Below<br/> Liquids &amp; Pumpable Sludges<br/> Mercury &amp; Its Compounds<br/> Organohalogen Cpd's (Or Sub'S May Form)<br/> Organophosphorus Cmpds<br/> Organotin Cmpds<br/> Pressurised Cont'Rs &gt; 1000 MI<br/> Spec.Waste (Epa '90) Not Listed Below<br/> Waste N.O.S.</p> | A7NW (SW)                              | 820                          | 2       | 492900<br>103700 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>BGS 1:625,000 Solid Geology</b><br>Description: Thames Group                                                                                                                                                                                                                                                                                                                                                                                                                                                | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Sediment<br>Arsenic Concentration: <15 mg/kg<br>Cadmium Concentration: <1.8 mg/kg<br>Chromium Concentration: 60 - 90 mg/kg<br>Lead Concentration: <100 mg/kg<br>Nickel Concentration: 15 - 30 mg/kg                                                                                                                                                                     | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Sediment<br>Arsenic Concentration: 15 - 25 mg/kg<br>Cadmium Concentration: <1.8 mg/kg<br>Chromium Concentration: 60 - 90 mg/kg<br>Lead Concentration: <100 mg/kg<br>Nickel Concentration: 15 - 30 mg/kg                                                                                                                                                                 | A8SW (S)                               | 755                          | 1       | 493680 103289 |
| 114    | <b>BGS Recorded Mineral Sites</b><br>Site Name: Woodgate Brick Field<br>Location: Woodgate, Bognor Regis, West Sussex<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 157580<br>Type: Opencast<br>Status: Ceased<br>Operator: Unknown Operator<br>Operator Location: Not Supplied<br>Periodic Type: Quaternary<br>Geology: River Terrace Deposits (Undifferentiated)<br>Commodity: Common Clay and Shale<br>Positional Accuracy: Located by supplier to within 10m | A14SW (E)                              | 316                          | 1       | 494111 103999 |
| 115    | <b>BGS Recorded Mineral Sites</b><br>Site Name: Lidsey Canal Brick Works<br>Location: Lidsey, Bognor Regis, West Sussex<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 18269<br>Type: Opencast<br>Status: Ceased<br>Operator: Unknown Operator<br>Operator Location: Not Supplied<br>Periodic Type: Palaeocene<br>Geology: Lambeth Group (Woolwich & Reading Beds)<br>Commodity: Common Clay and Shale<br>Positional Accuracy: Located by supplier to within 10m  | A8SW (S)                               | 842                          | 1       | 493400 103240 |
|        | <b>BGS Measured Urban Soil Chemistry</b><br>No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |                              |         |               |
|        | <b>BGS Urban Soil Chemistry Averages</b><br>No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |                              |         |               |
|        | <b>Coal Mining Affected Areas</b><br>In an area that might not be affected by coal mining                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                              |         |               |
|        | <b>Non Coal Mining Areas of Great Britain</b><br>No Hazard                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                              |         |               |
|        | <b>Potential for Collapsible Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                               | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>Potential for Collapsible Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                          | A13SE (SE)                             | 218                          | 1       | 493989 103935 |
|        | <b>Potential for Compressible Ground Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                        | A13SE (N)                              | 0                            | 1       | 493722 104130 |



| Map ID | Details                                                                                                                                                                                                                                                                      | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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|        | <b>Potential for Ground Dissolution Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                       | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>Potential for Landslide Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                          | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>Potential for Running Sand Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                            | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>Potential for Running Sand Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                       | A13SE (SE)                             | 218                          | 1       | 493989 103935 |
|        | <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                              | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                        | A13SE (SE)                             | 218                          | 1       | 493989 103935 |
|        | <b>Radon Potential - Radon Affected Areas</b><br>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).<br>Source: British Geological Survey, National Geoscience Information Service | A13SE (N)                              | 0                            | 1       | 493722 104130 |
|        | <b>Radon Potential - Radon Protection Measures</b><br>Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions<br>Source: British Geological Survey, National Geoscience Information Service                        | A13SE (N)                              | 0                            | 1       | 493722 104130 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 116    | <b>Contemporary Trade Directory Entries</b><br>Name: Polishedact<br>Location: 5, Oak Tree Lane, Woodgate, Chichester, West Sussex, PO20 3GU<br>Classification: Furniture - Repairing & Restoring<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                                   | A13NE (NE)                             | 48                           | -       | 493820 104259 |
| 117    | <b>Contemporary Trade Directory Entries</b><br>Name: H S Cars<br>Location: Lidsey Road, Woodgate, Chichester, West Sussex, PO20 3SU<br>Classification: Car Dealers - Used<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                                                          | A13SE (SE)                             | 97                           | -       | 493830 103947 |
| 118    | <b>Contemporary Trade Directory Entries</b><br>Name: National Plastics<br>Location: Unit 8, Lees Yard, Lidsey Road, Woodgate, Chichester, PO20 3SU<br>Classification: Cladding Suppliers & Installers<br>Status: Active<br>Positional Accuracy: Automatically positioned to the address                                | A13SE (SE)                             | 166                          | -       | 493932 103942 |
| 119    | <b>Contemporary Trade Directory Entries</b><br>Name: Scotts Direct<br>Location: The Grange, Westergate Street, Woodgate, Chichester, West Sussex, PO20 3SQ<br>Classification: Car Dealers<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                                          | A13NE (NE)                             | 240                          | -       | 493982 104365 |
| 120    | <b>Contemporary Trade Directory Entries</b><br>Name: D W Transport Refrigeration<br>Location: 15, Orchard Gardens, Woodgate, Chichester, West Sussex, PO20 3QW<br>Classification: Refrigerators & Freezers - Servicing & Repairs<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address   | A13NE (NE)                             | 252                          | -       | 493896 104450 |
| 121    | <b>Contemporary Trade Directory Entries</b><br>Name: G P Oven Cleaners<br>Location: Grove Farmhouse, Lidsey Road, Bognor Regis, PO22 9PL<br>Classification: Oven cleaning<br>Status: Active<br>Positional Accuracy: Automatically positioned to the address                                                            | A8NE (S)                               | 286                          | -       | 493802 103753 |
| 121    | <b>Contemporary Trade Directory Entries</b><br>Name: Chanctonbury Pet Foods<br>Location: Headholme Cottage, Lidsey Road, Bognor Regis, West Sussex, PO22 9PL<br>Classification: Pet Foods & Animal Feeds<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                           | A8NE (S)                               | 303                          | -       | 493795 103737 |
| 122    | <b>Contemporary Trade Directory Entries</b><br>Name: Polishedact<br>Location: Woodgate Centre, Oak Tree Lane, Woodgate, Chichester, West Sussex, PO20 3GU<br>Classification: Antiques - Repairing & Restoring<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                      | A14NW (E)                              | 328                          | -       | 494120 104212 |
| 122    | <b>Contemporary Trade Directory Entries</b><br>Name: Daven Ports<br>Location: Woodgate Centre, Oak Tree Lane, Woodgate, Chichester, West Sussex, PO20 3GU<br>Classification: Cabinet Makers<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                                        | A14NW (E)                              | 329                          | -       | 494120 104216 |
| 122    | <b>Contemporary Trade Directory Entries</b><br>Name: Weston Heating Services<br>Location: Woodgate Centre, Unit B2, Chichester, West Sussex, PO20 6ST<br>Classification: Heating Services - Industrial and Commercial<br>Status: Inactive<br>Positional Accuracy: Manually positioned within the geographical locality | A14NW (E)                              | 341                          | -       | 494133 104180 |
| 123    | <b>Contemporary Trade Directory Entries</b><br>Name: Elizabeth Robson<br>Location: 12, Lamorna Gardens, Westergate, Chichester, West Sussex, PO20 3RL<br>Classification: Furniture - Repairing & Restoring<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                         | A18SW (N)                              | 486                          | -       | 493686 104713 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                   | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
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| 124    | <b>Contemporary Trade Directory Entries</b><br>Name: Microplumb<br>Location: Headhorne Barns, Lidsey Road, Bognor Regis, West Sussex, PO22 9RG<br>Classification: Water Softeners<br>Status: Active<br>Positional Accuracy: Automatically positioned to the address                                                       | A8NE (S)                               | 501                          | -       | 493780 103539 |
| 125    | <b>Contemporary Trade Directory Entries</b><br>Name: Time For You (Hampshire) Ltd<br>Location: 12, Elmcroft Place, Westergate, Chichester, West Sussex, PO20 3XL<br>Classification: Ironing & Home Laundry Services<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                   | A18SE (N)                              | 557                          | -       | 493922 104763 |
| 125    | <b>Contemporary Trade Directory Entries</b><br>Name: Time For You (West Sussex) Ltd<br>Location: 12, Elmcroft Place, Westergate, Chichester, West Sussex, PO20 3XL<br>Classification: Cleaning Services - Domestic<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                    | A18SE (N)                              | 557                          | -       | 493922 104763 |
| 125    | <b>Contemporary Trade Directory Entries</b><br>Name: Time For You (Hampshire) Ltd<br>Location: 12, Elmcroft Place, Westergate, Chichester, West Sussex, PO20 3XL<br>Classification: Cleaning Services - Domestic<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                      | A18SE (N)                              | 557                          | -       | 493922 104763 |
| 126    | <b>Contemporary Trade Directory Entries</b><br>Name: Lidsey Landfill Ltd<br>Location: Lidsey Road, Bognor Regis, West Sussex, PO22 9PL<br>Classification: Waste Disposal Services<br>Status: Active<br>Positional Accuracy: Automatically positioned to the address                                                       | A7NE (SW)                              | 629                          | -       | 493254 103552 |
| 127    | <b>Contemporary Trade Directory Entries</b><br>Name: Emberleaf Workshops<br>Location: Martins, Westergate Street, Westergate, Chichester, West Sussex, PO20 3QU<br>Classification: Builders' Tools & Equipment Manufacturers<br>Status: Active<br>Positional Accuracy: Automatically positioned to the address            | A18NE (N)                              | 755                          | -       | 493831 104975 |
| 127    | <b>Contemporary Trade Directory Entries</b><br>Name: Dimensions (Chichester) Ltd<br>Location: Westergate St, Westergate, Chichester, West Sussex, PO20 3QX<br>Classification: Office Furniture & Equipment<br>Status: Inactive<br>Positional Accuracy: Manually positioned to the road within the address or location     | A18NE (N)                              | 791                          | -       | 493850 105010 |
| 128    | <b>Contemporary Trade Directory Entries</b><br>Name: E & T Plumbing & Heating Ltd<br>Location: The Mission Hall, Lidsey Road, Bognor Regis, West Sussex, PO22 9PH<br>Classification: Boilers - Servicing, Replacements & Repairs<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address      | A8SE (S)                               | 851                          | -       | 493858 103190 |
| 129    | <b>Contemporary Trade Directory Entries</b><br>Name: The Cleaning Biz<br>Location: White House, Westergate Street, Westergate, Chichester, West Sussex, PO20 3QY<br>Classification: Cleaning Services - Domestic<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address                      | A23SE (N)                              | 962                          | -       | 493858 105181 |
| 130    | <b>Contemporary Trade Directory Entries</b><br>Name: Howla Mountain Boards<br>Location: Polson Dairy, Lidsey Road, Bognor Regis, West Sussex, PO22 9PF<br>Classification: Sports Equipment Manufacturers & Distributors<br>Status: Inactive<br>Positional Accuracy: Automatically positioned to the address               | A3NE (S)                               | 993                          | -       | 493944 103057 |
| 131    | <b>Points of Interest - Commercial Services</b><br>Name: Sparkles Mobile Valeting Chichester West Sussex<br>Location: 34 Ivy Lane, Westergate, Chichester, PO20 3RE<br>Category: Personal, Consumer and other Services<br>Class Code: Vehicle Cleaning Services<br>Positional Accuracy: Positioned to address or location | A24SW (NE)                             | 1000                         | 8       | 494155 105152 |



| Map ID | Details                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 132    | <b>Points of Interest - Commercial Services</b><br>Name: L J M Transport<br>Location: 2 St. Richards Road, Westergate, Chichester, PO20 3RD<br>Category: Transport, Storage and Delivery<br>Class Code: Distribution and Haulage<br>Positional Accuracy: Positioned to address or location | A23SE (N)                              | 1000                         | 8       | 493985<br>105202 |
| 133    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                             | A13SW (SW)                             | 173                          | 8       | 493614<br>103875 |
| 133    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                             | A13SW (SW)                             | 196                          | 8       | 493592<br>103857 |
| 134    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Piggery<br>Location: PO20<br>Category: Farming<br>Class Code: Livestock Farming<br>Positional Accuracy: Positioned to address or location                                                                                | A13NW (NW)                             | 271                          | 8       | 493392<br>104289 |
| 135    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                                         | A13NW (NW)                             | 331                          | 8       | 493401<br>104437 |
| 135    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tanks<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                            | A13NW (NW)                             | 332                          | 8       | 493412<br>104451 |
| 135    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                                         | A13NW (NW)                             | 334                          | 8       | 493402<br>104443 |
| 135    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                                         | A13NW (NW)                             | 337                          | 8       | 493402<br>104447 |
| 135    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                                         | A13NW (NW)                             | 340                          | 8       | 493404<br>104454 |
| 135    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                                         | A13NW (NW)                             | 343                          | 8       | 493400<br>104454 |
| 136    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                                         | A18SE (N)                              | 406                          | 8       | 493864<br>104621 |
| 137    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO20<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                             | A18NW (N)                              | 776                          | 8       | 493624<br>105003 |



| Map ID | Details                                                                                                                                                                                                                                                                                             | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
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| 138    | <b>Points of Interest - Manufacturing and Production</b><br>Name: R A Eggins<br>Location: New Barn Farm, Lidsey Road, Bognor Regis, PO22 9TH<br>Category: Farming<br>Class Code: Arable Farming<br>Positional Accuracy: Positioned to address or location                                           | A8SW (S)                               | 817                          | 8       | 493413<br>103262 |
| 138    | <b>Points of Interest - Manufacturing and Production</b><br>Name: R A Eggins<br>Location: Lidsey Road, Bognor Regis, PO22 9TH<br>Category: Farming<br>Class Code: Livestock Farming<br>Positional Accuracy: Positioned to address or location                                                       | A8SW (S)                               | 817                          | 8       | 493414<br>103262 |
| 139    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                                      | A9SW (SE)                              | 874                          | 8       | 494391<br>103397 |
| 140    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Lidsey Landfill - Landfill Gas (DECC)<br>Location: Headhome Farm, Near Bognor Regis, PO22<br>Category: Industrial Features<br>Class Code: Energy Production<br>Positional Accuracy: Positioned to an adjacent address or location | A7SW (SW)                              | 911                          | 8       | 493000<br>103400 |
| 141    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                                      | A9SE (SE)                              | 969                          | 8       | 494511<br>103383 |
| 142    | <b>Points of Interest - Public Infrastructure</b><br>Name: SITA UK Ltd<br>Location: Headhome Farm, Lidsey Road, Bognor Regis, PO22 9PL<br>Category: Infrastructure and Facilities<br>Class Code: Waste Storage, Processing and Disposal<br>Positional Accuracy: Positioned to address or location   | A8NE (S)                               | 536                          | 8       | 493789<br>103503 |
| 143    | <b>Points of Interest - Public Infrastructure</b><br>Name: Lidsey Landfill Ltd<br>Location: Lidsey Road, Bognor Regis, PO22 9PL<br>Category: Infrastructure and Facilities<br>Class Code: Waste Storage, Processing and Disposal<br>Positional Accuracy: Positioned to address or location          | A7NE (SW)                              | 629                          | 8       | 493254<br>103552 |
| 143    | <b>Points of Interest - Public Infrastructure</b><br>Name: Lidsey Landfill Ltd<br>Location: Lidsey Road, Bognor Regis, PO22 9PL<br>Category: Infrastructure and Facilities<br>Class Code: Waste Storage, Processing and Disposal<br>Positional Accuracy: Positioned to address or location          | A7NE (SW)                              | 629                          | 8       | 493253<br>103552 |
| 144    | <b>Points of Interest - Public Infrastructure</b><br>Name: Landfill Site<br>Location: PO22<br>Category: Infrastructure and Facilities<br>Class Code: Refuse Disposal Facilities<br>Positional Accuracy: Positioned to an adjacent address or location                                               | A7SE (SW)                              | 829                          | 8       | 493129<br>103395 |
| 145    | <b>Points of Interest - Public Infrastructure</b><br>Name: Landfill Site<br>Location: PO22<br>Category: Infrastructure and Facilities<br>Class Code: Refuse Disposal Facilities<br>Positional Accuracy: Positioned to an adjacent address or location                                               | A7NW (SW)                              | 986                          | 8       | 492840<br>103474 |
| 146    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Playground<br>Location: Olivers Meadow, PO20<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to address or location                                                                     | A23SW (N)                              | 976                          | 8       | 493695<br>105203 |
| 146    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Playground<br>Location: Not Supplied<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to an adjacent address or location                                                                 | A23SW (N)                              | 977                          | 8       | 493685<br>105204 |



| Map ID | Details                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 147    | <b>Nitrate Vulnerable Zones</b><br>Name: Aldingbourne Rife Nvz<br>Description: Surface Water<br>Source: Environment Agency, Head Office | A13SE (N)                              | 0                            | 4       | 493722<br>104130 |



| Agency & Hydrological                                                                                                                                                                                                                         | Version                                | Update Cycle                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------|
| <b>Contaminated Land Register Entries and Notices</b><br>Arun District Council - Environmental Health Department<br>Chichester District Council - Environmental Health Department                                                             | July 2013<br>July 2013                 | Annual Rolling Update<br>Annual Rolling Update |
| <b>Discharge Consents</b><br>Environment Agency - Southern Region                                                                                                                                                                             | April 2019                             | Quarterly                                      |
| <b>Enforcement and Prohibition Notices</b><br>Environment Agency - Southern Region                                                                                                                                                            | March 2013                             | Annual Rolling Update                          |
| <b>Integrated Pollution Controls</b><br>Environment Agency - Southern Region                                                                                                                                                                  | October 2008                           | Variable                                       |
| <b>Integrated Pollution Prevention And Control</b><br>Environment Agency - South East Region - Solent & South Downs Area<br>Environment Agency - Southern Region                                                                              | April 2019<br>April 2019               | Quarterly<br>Quarterly                         |
| <b>Local Authority Integrated Pollution Prevention And Control</b><br>Arun District Council - Environmental Health Department<br>Chichester District Council - Environmental Health Department                                                | December 2014<br>October 2014          | Variable<br>Variable                           |
| <b>Local Authority Pollution Prevention and Controls</b><br>Arun District Council - Environmental Health Department<br>Chichester District Council - Environmental Health Department                                                          | December 2014<br>October 2014          | Not Applicable<br>Not Applicable               |
| <b>Local Authority Pollution Prevention and Control Enforcements</b><br>Arun District Council - Environmental Health Department<br>Chichester District Council - Environmental Health Department                                              | December 2014<br>October 2014          | Variable<br>Variable                           |
| <b>Nearest Surface Water Feature</b><br>Ordnance Survey                                                                                                                                                                                       | January 2019                           |                                                |
| <b>Pollution Incidents to Controlled Waters</b><br>Environment Agency - Southern Region                                                                                                                                                       | December 1999                          | Not Applicable                                 |
| <b>Prosecutions Relating to Authorised Processes</b><br>Environment Agency - Southern Region                                                                                                                                                  | March 2013                             | Annual Rolling Update                          |
| <b>Prosecutions Relating to Controlled Waters</b><br>Environment Agency - Southern Region                                                                                                                                                     | March 2013                             | Annual Rolling Update                          |
| <b>Registered Radioactive Substances</b><br>Environment Agency - Southern Region                                                                                                                                                              | June 2016                              |                                                |
| <b>River Quality</b><br>Environment Agency - Head Office                                                                                                                                                                                      | November 2001                          | Not Applicable                                 |
| <b>River Quality Biology Sampling Points</b><br>Environment Agency - Head Office                                                                                                                                                              | July 2012                              | Annually                                       |
| <b>River Quality Chemistry Sampling Points</b><br>Environment Agency - Head Office                                                                                                                                                            | July 2012                              | Annually                                       |
| <b>Substantiated Pollution Incident Register</b><br>Environment Agency - South East Region - Solent & South Downs Area<br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area | April 2019<br>April 2019<br>April 2019 | Quarterly<br>Quarterly<br>Quarterly            |
| <b>Water Abstractions</b><br>Environment Agency - Southern Region                                                                                                                                                                             | July 2019                              | Quarterly                                      |
| <b>Water Industry Act Referrals</b><br>Environment Agency - Southern Region                                                                                                                                                                   | October 2017                           | Quarterly                                      |
| <b>Groundwater Vulnerability Map</b><br>Environment Agency - Head Office                                                                                                                                                                      | June 2018                              | Annually                                       |
| <b>Groundwater Vulnerability - Soluble Rock Risk</b><br>Environment Agency - Head Office                                                                                                                                                      | June 2018                              | Annually                                       |
| <b>Bedrock Aquifer Designations</b><br>Environment Agency - Head Office                                                                                                                                                                       | January 2018                           | Annually                                       |



| Agency & Hydrological                                                                                                 | Version      | Update Cycle |
|-----------------------------------------------------------------------------------------------------------------------|--------------|--------------|
| <b>Superficial Aquifer Designations</b><br>Environment Agency - Head Office                                           | January 2018 | Annually     |
| <b>Source Protection Zones</b><br>Environment Agency - Head Office                                                    | July 2019    | Quarterly    |
| <b>Extreme Flooding from Rivers or Sea without Defences</b><br>Environment Agency - Head Office                       | May 2019     | Quarterly    |
| <b>Flooding from Rivers or Sea without Defences</b><br>Environment Agency - Head Office                               | May 2019     | Quarterly    |
| <b>Areas Benefiting from Flood Defences</b><br>Environment Agency - Head Office                                       | May 2019     | Quarterly    |
| <b>Flood Water Storage Areas</b><br>Environment Agency - Head Office                                                  | May 2019     | Quarterly    |
| <b>Flood Defences</b><br>Environment Agency - Head Office                                                             | May 2019     | Quarterly    |
| <b>OS Water Network Lines</b><br>Ordnance Survey                                                                      | April 2019   | Quarterly    |
| <b>Surface Water 1 in 30 year Flood Extent</b><br>Environment Agency - Head Office                                    | October 2013 | Annually     |
| <b>Surface Water 1 in 100 year Flood Extent</b><br>Environment Agency - Head Office                                   | October 2013 | Annually     |
| <b>Surface Water 1 in 1000 year Flood Extent</b><br>Environment Agency - Head Office                                  | October 2013 | Annually     |
| <b>Surface Water Suitability</b><br>Environment Agency - Head Office                                                  | October 2013 | Annually     |
| <b>BGS Groundwater Flooding Susceptibility</b><br>British Geological Survey - National Geoscience Information Service | May 2013     | Annually     |



| Waste                                                                                                                                                                                                                                                          | Version                                        | Update Cycle                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------|
| <b>BGS Recorded Landfill Sites</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                                                      | June 1996                                      | Not Applicable                                     |
| <b>Historical Landfill Sites</b><br>Environment Agency - Head Office                                                                                                                                                                                           | July 2019                                      | Quarterly                                          |
| <b>Integrated Pollution Control Registered Waste Sites</b><br>Environment Agency - Southern Region                                                                                                                                                             | October 2008                                   | Not Applicable                                     |
| <b>Licensed Waste Management Facilities (Landfill Boundaries)</b><br>Environment Agency - South East Region - Solent & South Downs Area<br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area | July 2018<br>July 2018<br>July 2018            | Quarterly<br>Quarterly<br>Quarterly                |
| <b>Licensed Waste Management Facilities (Locations)</b><br>Environment Agency - South East Region - Solent & South Downs Area<br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area           | April 2019<br>April 2019<br>April 2019         | Quarterly<br>Quarterly<br>Quarterly                |
| <b>Local Authority Landfill Coverage</b><br>Arun District Council - Technical Support Unit<br>Chichester District Council - Environmental Health Department<br>West Sussex County Council - Environment & Development                                          | May 2000<br>May 2000<br>May 2000               | Not Applicable<br>Not Applicable<br>Not Applicable |
| <b>Local Authority Recorded Landfill Sites</b><br>Arun District Council - Technical Support Unit<br>Chichester District Council - Environmental Health Department<br>West Sussex County Council - Environment & Development                                    | May 2000<br>May 2000<br>May 2000               | Not Applicable<br>Not Applicable<br>Not Applicable |
| <b>Potentially Infilled Land (Non-Water)</b><br>Landmark Information Group Limited                                                                                                                                                                             | December 1999                                  | Not Applicable                                     |
| <b>Potentially Infilled Land (Water)</b><br>Landmark Information Group Limited                                                                                                                                                                                 | December 1999                                  | Not Applicable                                     |
| <b>Registered Landfill Sites</b><br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area                                                                                                        | March 2003<br>March 2003                       | Not Applicable<br>Not Applicable                   |
| <b>Registered Waste Transfer Sites</b><br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area                                                                                                  | March 2003<br>March 2003                       | Not Applicable<br>Not Applicable                   |
| <b>Registered Waste Treatment or Disposal Sites</b><br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area                                                                                     | March 2003<br>March 2003                       | Not Applicable<br>Not Applicable                   |
| Hazardous Substances                                                                                                                                                                                                                                           | Version                                        | Update Cycle                                       |
| <b>Control of Major Accident Hazards Sites (COMAH)</b><br>Health and Safety Executive                                                                                                                                                                          | April 2018                                     | Bi-Annually                                        |
| <b>Explosive Sites</b><br>Health and Safety Executive                                                                                                                                                                                                          | March 2017                                     | Annually                                           |
| <b>Notification of Installations Handling Hazardous Substances (NIHHS)</b><br>Health and Safety Executive                                                                                                                                                      | November 2000                                  | Not Applicable                                     |
| <b>Planning Hazardous Substance Enforcements</b><br>Arun District Council - Technical Support Unit<br>Chichester District Council - Planning Department<br>West Sussex County Council - Environment & Development                                              | February 2016<br>February 2016<br>October 2006 | Variable<br>Variable<br>Annual Rolling Update      |
| <b>Planning Hazardous Substance Consents</b><br>Arun District Council - Technical Support Unit<br>Chichester District Council - Planning Department<br>West Sussex County Council - Environment & Development                                                  | February 2016<br>February 2016<br>October 2006 | Variable<br>Variable<br>Annual Rolling Update      |



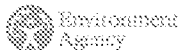
| Geological                                                                                                                                      | Version       | Update Cycle          |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------|
| <b>BGS 1:625,000 Solid Geology</b><br>British Geological Survey - National Geoscience Information Service                                       | January 2009  | Not Applicable        |
| <b>BGS Estimated Soil Chemistry</b><br>British Geological Survey - National Geoscience Information Service                                      | October 2015  | Annually              |
| <b>BGS Recorded Mineral Sites</b><br>British Geological Survey - National Geoscience Information Service                                        | April 2019    | Bi-Annually           |
| <b>CBSCB Compensation District</b><br>Cheshire Brine Subsidence Compensation Board (CBSCB)                                                      | August 2011   | Not Applicable        |
| <b>Coal Mining Affected Areas</b><br>The Coal Authority - Property Searches                                                                     | March 2014    | Annual Rolling Update |
| <b>Mining Instability</b><br>Ove Arup & Partners                                                                                                | October 2000  | Not Applicable        |
| <b>Non Coal Mining Areas of Great Britain</b><br>British Geological Survey - National Geoscience Information Service                            | May 2015      | Not Applicable        |
| <b>Potential for Collapsible Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                | January 2019  | Annually              |
| <b>Potential for Compressible Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service               | January 2019  | Annually              |
| <b>Potential for Ground Dissolution Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                | January 2019  | Annually              |
| <b>Potential for Landslide Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                  | January 2019  | Annually              |
| <b>Potential for Running Sand Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service               | January 2019  | Annually              |
| <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service | January 2019  | Annually              |
| <b>Radon Potential - Radon Affected Areas</b><br>British Geological Survey - National Geoscience Information Service                            | July 2011     | Annually              |
| <b>Radon Potential - Radon Protection Measures</b><br>British Geological Survey - National Geoscience Information Service                       | July 2011     | Annually              |
| Industrial Land Use                                                                                                                             | Version       | Update Cycle          |
| <b>Contemporary Trade Directory Entries</b><br>Thomson Directories                                                                              | April 2019    | Quarterly             |
| <b>Fuel Station Entries</b><br>Catalist Ltd - Experian                                                                                          | May 2019      | Quarterly             |
| <b>Gas Pipelines</b><br>National Grid                                                                                                           | July 2014     |                       |
| <b>Points of Interest - Commercial Services</b><br>PointX                                                                                       | July 2019     | Quarterly             |
| <b>Points of Interest - Education and Health</b><br>PointX                                                                                      | July 2019     | Quarterly             |
| <b>Points of Interest - Manufacturing and Production</b><br>PointX                                                                              | July 2019     | Quarterly             |
| <b>Points of Interest - Public Infrastructure</b><br>PointX                                                                                     | July 2019     | Quarterly             |
| <b>Points of Interest - Recreational and Environmental</b><br>PointX                                                                            | July 2019     | Quarterly             |
| <b>Underground Electrical Cables</b><br>National Grid                                                                                           | December 2015 |                       |



| Sensitive Land Use                                                                                                                                | Version                       | Update Cycle   |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------|
| <b>Ancient Woodland</b><br>Natural England                                                                                                        | August 2018                   | Bi-Annually    |
| <b>Areas of Outstanding Natural Beauty</b><br>Natural England                                                                                     | June 2019                     | Bi-Annually    |
| <b>Environmentally Sensitive Areas</b><br>Natural England                                                                                         | January 2017                  |                |
| <b>Forest Parks</b><br>Forestry Commission                                                                                                        | April 1997                    | Not Applicable |
| <b>Local Nature Reserves</b><br>Natural England                                                                                                   | March 2019                    | Bi-Annually    |
| <b>Marine Nature Reserves</b><br>Natural England                                                                                                  | July 2019                     | Bi-Annually    |
| <b>National Nature Reserves</b><br>Natural England                                                                                                | July 2019                     | Bi-Annually    |
| <b>National Parks</b><br>Natural England                                                                                                          | April 2017                    | Bi-Annually    |
| <b>Nitrate Vulnerable Zones</b><br>Environment Agency - Head Office<br>Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) | December 2017<br>October 2015 | Bi-Annually    |
| <b>Ramsar Sites</b><br>Natural England                                                                                                            | April 2019                    | Bi-Annually    |
| <b>Sites of Special Scientific Interest</b><br>Natural England                                                                                    | March 2019                    | Bi-Annually    |
| <b>Special Areas of Conservation</b><br>Natural England                                                                                           | June 2019                     | Bi-Annually    |
| <b>Special Protection Areas</b><br>Natural England                                                                                                | April 2019                    | Bi-Annually    |



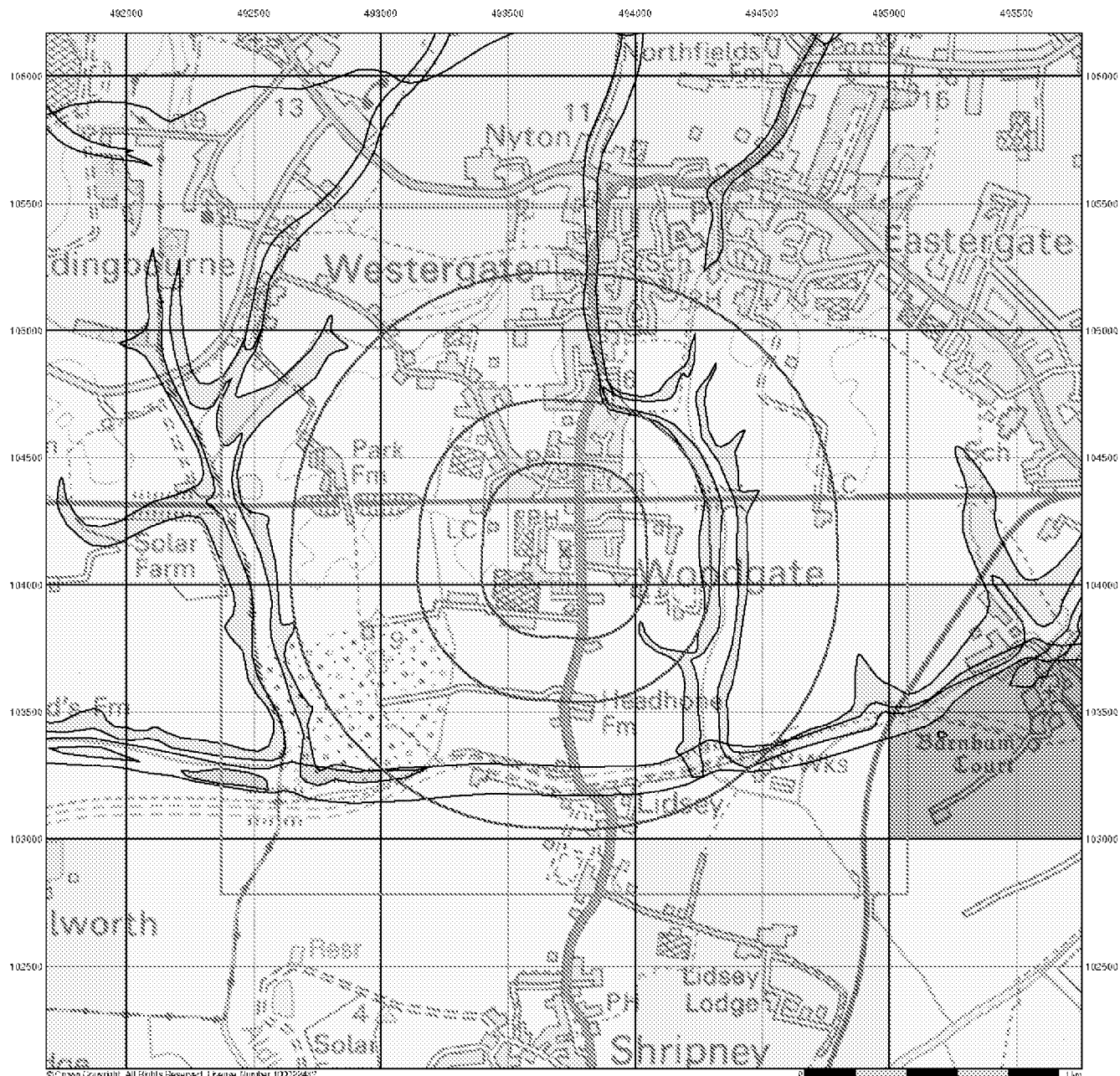
A selection of organisations who provide data within this report

| Data Supplier                          | Data Supplier Logo                                                                                                                                                       |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ordnance Survey                        |                                                                                       |
| Environment Agency                     |                                                                                       |
| Scottish Environment Protection Agency |                                                                                       |
| The Coal Authority                     |                                                                                       |
| British Geological Survey              | <br><b>British Geological Survey</b><br>NATURAL ENVIRONMENT RESEARCH COUNCIL          |
| Centre for Ecology and Hydrology       | <br><b>Centre for Ecology &amp; Hydrology</b><br>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       | <b>British Geological Survey - Enquiry Service</b><br>British Geological Survey, Environmental Science Centre, Keyworth,<br>Nottingham, Nottinghamshire, NG12 5GG | Telephone: 0115 936 3143<br>Fax: 0115 936 3276<br>Email: enquiries@bgs.ac.uk<br>Website: www.bgs.ac.uk                          |
| 2       | <b>Environment Agency - National Customer Contact Centre (NCCC)</b><br>PO Box 544, Templeborough, Rotherham, S60 1BY                                              | Telephone: 03708 506 506<br>Email: enquiries@environment-agency.gov.uk                                                          |
| 3       | <b>Arun District Council - Environmental Health Department</b><br>Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF                                  | Telephone: 01903 737696<br>Fax: 01903 723936<br>Email: Environment@arun.gov.uk<br>Website: www.arun.gov.uk                      |
| 4       | <b>Environment Agency - Head Office</b><br>Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon,<br>BS32 4UD                                        | Telephone: 01454 624400<br>Fax: 01454 624409                                                                                    |
| 5       | <b>Ordnance Survey</b><br>Adanac Drive, Southampton, Hampshire, SO16 0AS                                                                                          | Telephone: 03456 05 05 05<br>Email: customerservices@ordnancesurvey.co.uk<br>Website: www.ordnancesurvey.gov.uk                 |
| 6       | <b>Arun District Council - Technical Support Unit</b><br>Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF                                           | Telephone: 01903 737500<br>Fax: 01903 730442<br>Website: www.arun.gov.uk                                                        |
| 7       | <b>West Sussex County Council - Environment &amp; Development</b><br>County Hall, Tower hall, Chichester, West Sussex, PO19 1RH                                   | Telephone: 01243 777100<br>Website: www.westsussex.gov.uk                                                                       |
| 8       | <b>PointX</b><br>7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY                                                                                         | Website: www.pointx.co.uk                                                                                                       |
| 9       | <b>Natural England</b><br>County Hall, Spetchley Road, Worcester, WR5 2NP                                                                                         | Telephone: 0300 060 3900<br>Email: enquiries@naturalengland.org.uk<br>Website: www.naturalengland.org.uk                        |
| -       | <b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b><br>Chilton, Didcot, Oxfordshire, OX11 0RQ                   | Telephone: 01235 822622<br>Fax: 01235 833891<br>Email: radon@phe.gov.uk<br>Website: www.ukradon.org                             |
| -       | <b>Landmark Information Group Limited</b><br>Imperium, Imperial Way, Reading, Berkshire, RG2 0TD                                                                  | Telephone: 0844 844 9952<br>Fax: 0844 844 9951<br>Email: customerservices@landmarkinfo.co.uk<br>Website: www.landmarkinfo.co.uk |

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



## Geo-Environmental Groundwater Vulnerability

### General

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

### Agency and Hydrological

#### Bedrock Aquifers

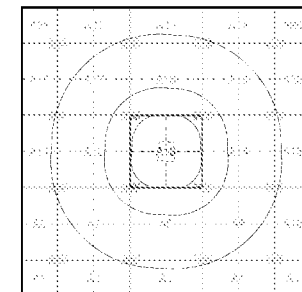
- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

#### Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

- Unproductive Aquifer
- Soluble Rock

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 214178583\_1\_1  
 Customer Ref: GE18390  
 National Grid Reference: 493720, 104130  
 Slice: A  
 Site Area (Ha): 2.44  
 Search Buffer (m): 1000

### Site Details

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

**Landmark**  
 INFORMATION GROUP

Tel: 0544 244 0032  
 Fax: 0544 544 5651  
 Web: www.ewcocheck.co.uk



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## Geo-Environmental Bedrock Aquifer Designation

### General

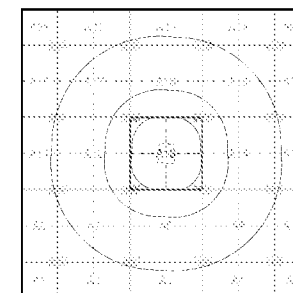
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### 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

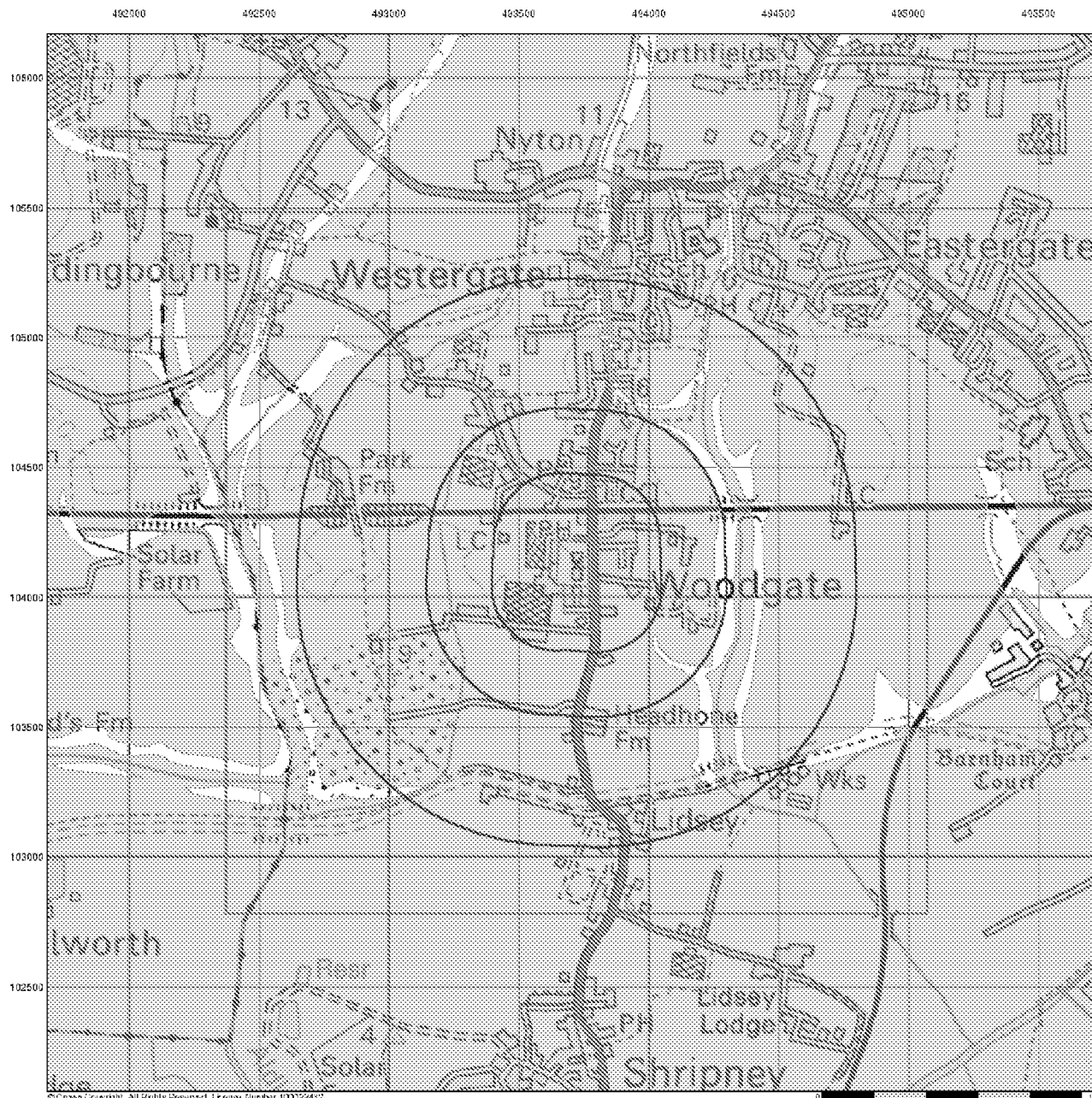
Order Number: 214178583\_1\_1  
 Customer Ref: GE18390  
 National Grid Reference: 493720, 104130  
 Slice: A  
 Site Area (Ha): 2.44  
 Search Buffer (m): 1000

### Site Details

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

**Landmark**  
 INFORMATION GROUP

Tel: 0544 544 0033  
 Fax: 0544 544 5551  
 Web: www.envirocheck.co.uk



## Geo-Environmental Superficial Aquifer Designation

### General

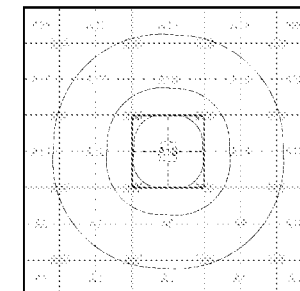
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### 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

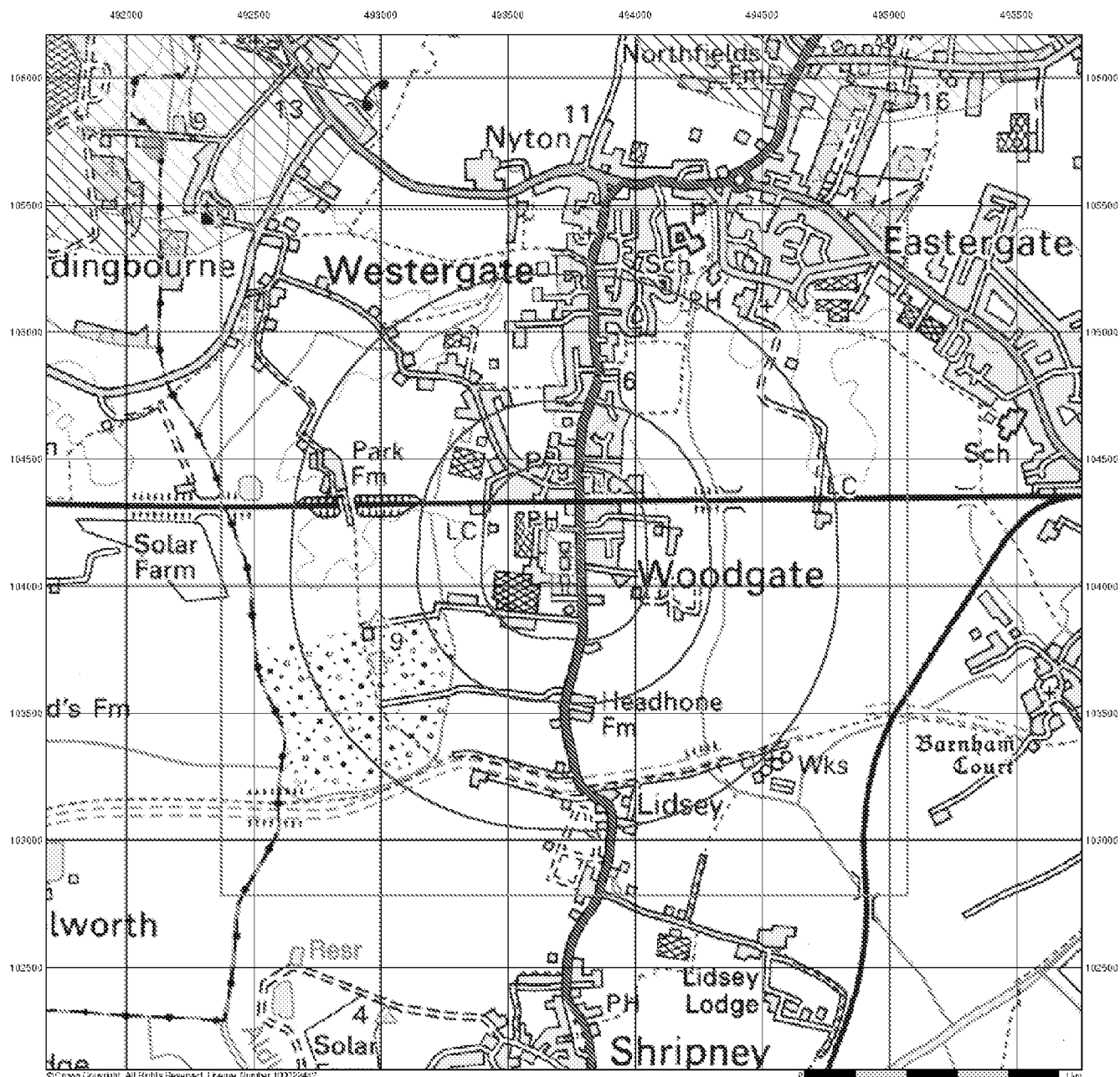
Order Number: 214178583\_1\_1  
 Customer Ref: GE18390  
 National Grid Reference: 493720, 104130  
 Slice: A  
 Site Area (Ha): 2.44  
 Search Buffer (m): 1000

### Site Details

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

**Landmark**  
 INFORMATION GROUP

Tel: 0544 544 0033  
 Fax: 0544 544 5551  
 Web: www.ewcocheck.co.uk



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## Geo-Environmental Source Protection Zones

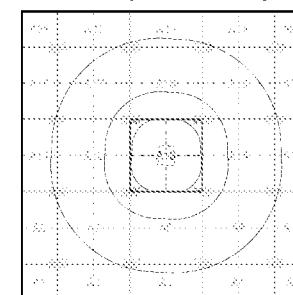
### General

- 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

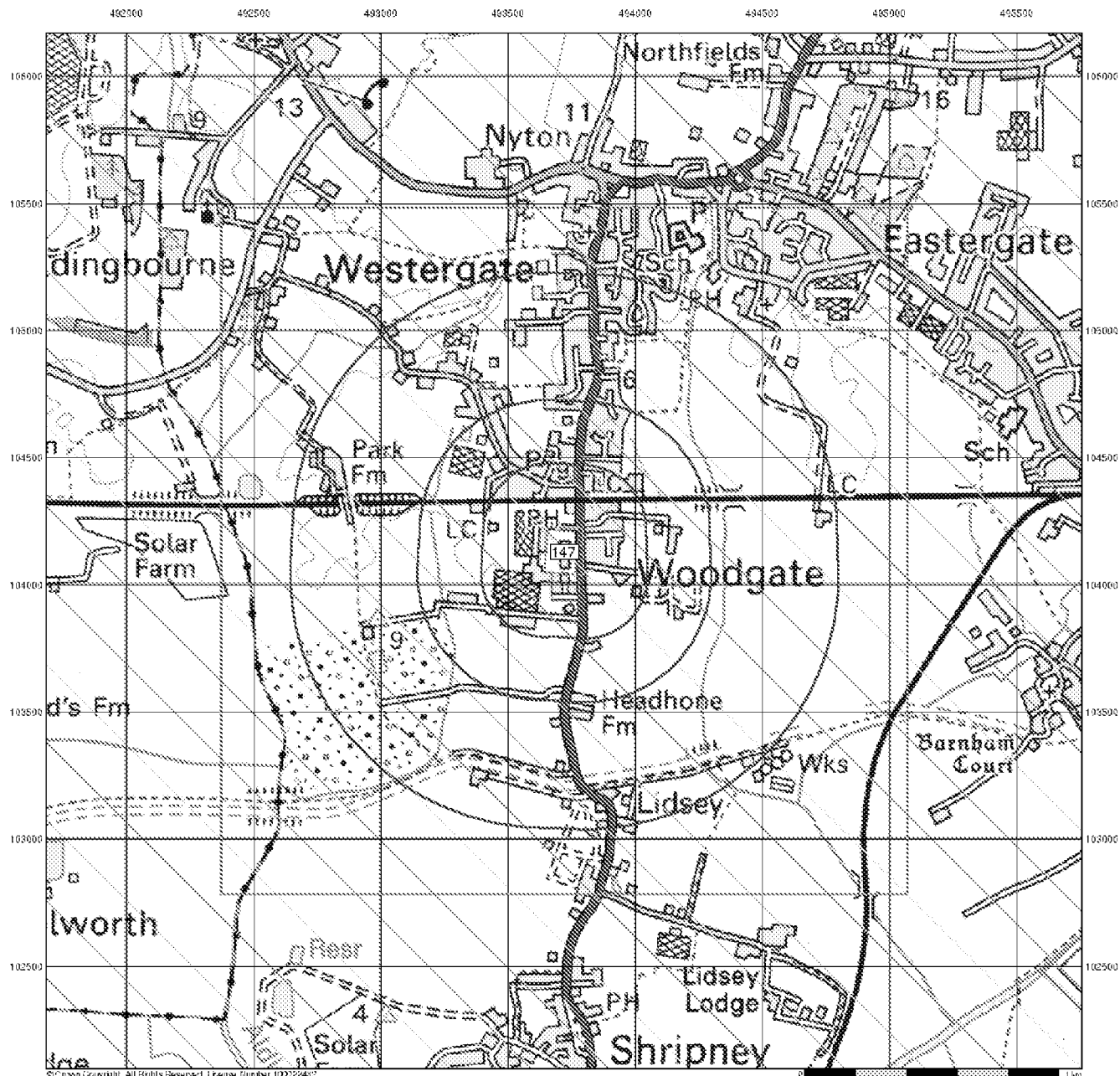
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 Customer Ref: GE18390  
 National Grid Reference: 493720, 104130  
 Slice: A  
 Site Area (Ha): 2.44  
 Search Buffer (m): 1000

### Site Details

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

**Landmark**  
 INFORMATION GROUP

Tel: 0544 244 0050  
 Fax: 0544 544 5651  
 Web: www.ewcocheck.co.uk



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## Geo-Environmental Sensitive Land Uses

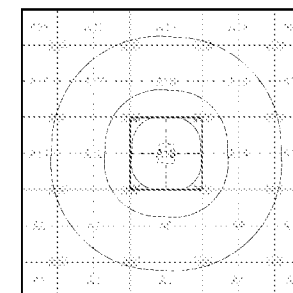
### General

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

### Sensitive Land Uses

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

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 214178583\_1\_1  
 Customer Ref: GE18390  
 National Grid Reference: 493720, 104130  
 Slice: A  
 Site Area (Ha): 2.44  
 Search Buffer (m): 1000

### Site Details

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## Geology 1:50,000 Maps Legends

### Superficial Geology

| Map Colour | Lex Code | Rock Name                                 | Rock Type                   | Min and Max Age           |
|------------|----------|-------------------------------------------|-----------------------------|---------------------------|
|            | ALV      | Alluvium                                  | Clay, Silt, Sand and Gravel | Not Supplied - Holocene   |
|            | RTDU     | River Terrace Deposits (Undifferentiated) | Sand, Silt and Clay         | Not Supplied - Quaternary |
|            | RBD1     | Raised Beach Deposits, 1                  | Sand and Gravel             | Not Supplied - Quaternary |
|            | RMD      | Raised Marine Deposits                    | Clay, Silt, Sand and Gravel | Not Supplied - Quaternary |
|            | HEAD     | Head                                      | Clay, Silt, Sand and Gravel | Not Supplied - Quaternary |
|            | HEAD     | Head                                      | Gravel, Sand, Silt and Clay | Not Supplied - Quaternary |
|            | ALF      | Alluvial Fan Deposits                     | Gravel, Sand, Silt and Clay | Not Supplied - Quaternary |

### Bedrock and Faults

| Map Colour | Lex Code | Rock Name                                                                                                                                                 | Rock Type           | Min and Max Age          |
|------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------|
|            | LC       | London Clay Formation                                                                                                                                     | Clay, Silt and Sand | Not Supplied - Ypresian  |
|            | LMBE     | Lambeth Group                                                                                                                                             | Clay, Silt and Sand | Not Supplied - Thanetian |
|            | LPCK     | Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (Undifferentiated) | Chalk               | Not Supplied - Turonian  |



## Geo-Environmental

### Geology 1:50,000 Maps

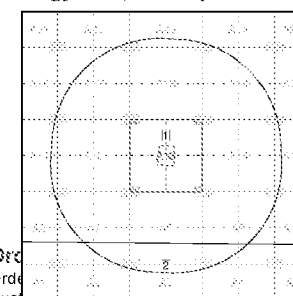
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published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

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

### Geology 1:50,000 Maps Coverage

|                      |                  |                      |                  |
|----------------------|------------------|----------------------|------------------|
| Map ID:              | 1                | Map ID:              | 2                |
| Map Sheet No:        | 317              | Map Sheet No:        | 332              |
| Map Name:            | Chichester and I | Map Name:            | Chichester and I |
| Map Date:            | 1996             | Map Date:            | 1996             |
| Bedrock Geology:     | Available        | Bedrock Geology:     | Available        |
| Superficial Geology: | Available        | Superficial Geology: | Available        |
| Artificial Geology:  | Available        | Artificial Geology:  | Available        |
| Faults:              | Not Supplied     | Faults:              | Not Supplied     |
| Landslip:            | Available        | Landslip:            | Available        |
| Rock Segments:       | Not Supplied     | Rock Segments:       | Not Supplied     |

### Geology 1:50,000 Maps - Slice A



Ord

Order

Customer Reference: GE10000

National Grid Reference: 493720, 104130

Slice: A

Site Area (Ha): 2.44

Search Buffer (m): 1000

### Site Details:

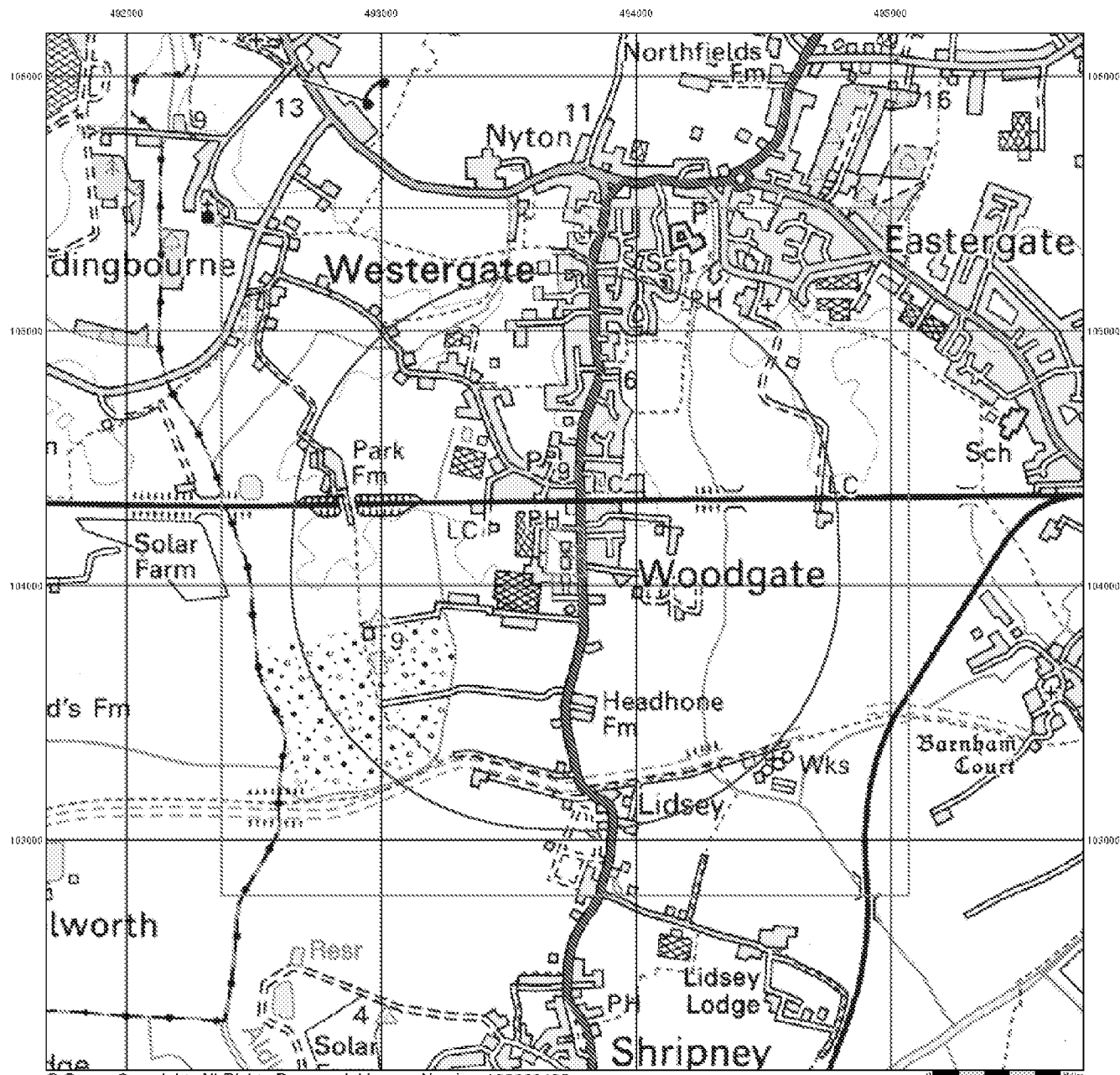
Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

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## Geo-Environmental

### Artificial Ground and Landslip

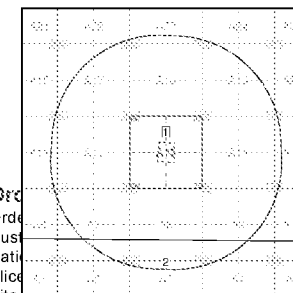
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

Artificial ground includes:

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

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

### Artificial Ground and Landslip Map - Slice A



Ord  
Ord  
Cust  
Natr  
Slice  
Site

Search Buffer (m): 1000

#### Site Details:

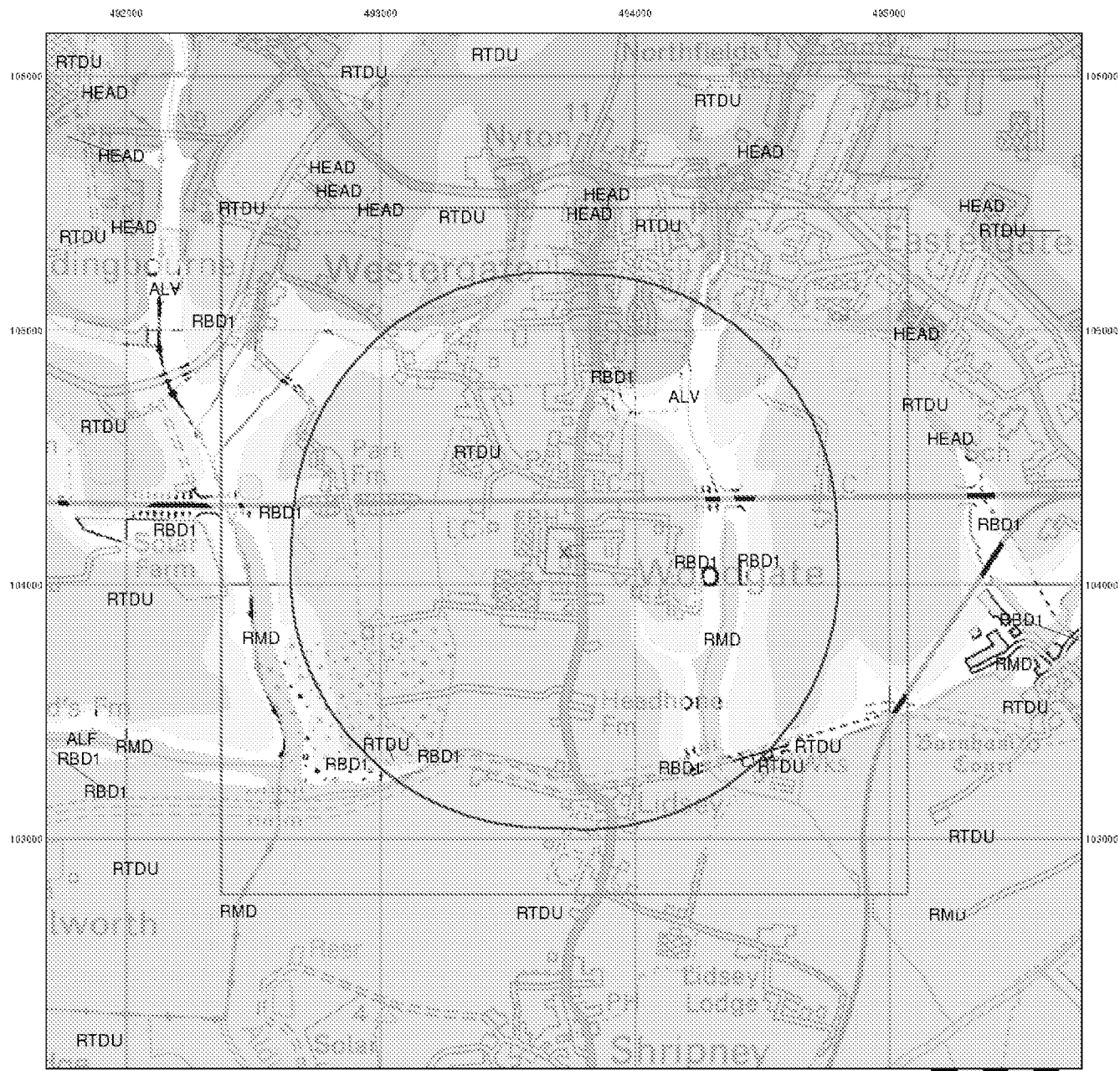
Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

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## Geo-Environmental

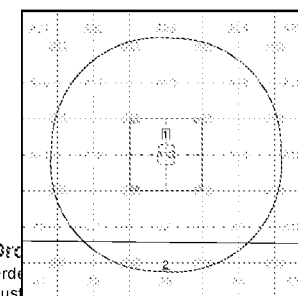
### Superficial Geology

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

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

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

### Superficial Geology Map - Slice A



National Grid Reference: 493720, 104130

Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details:

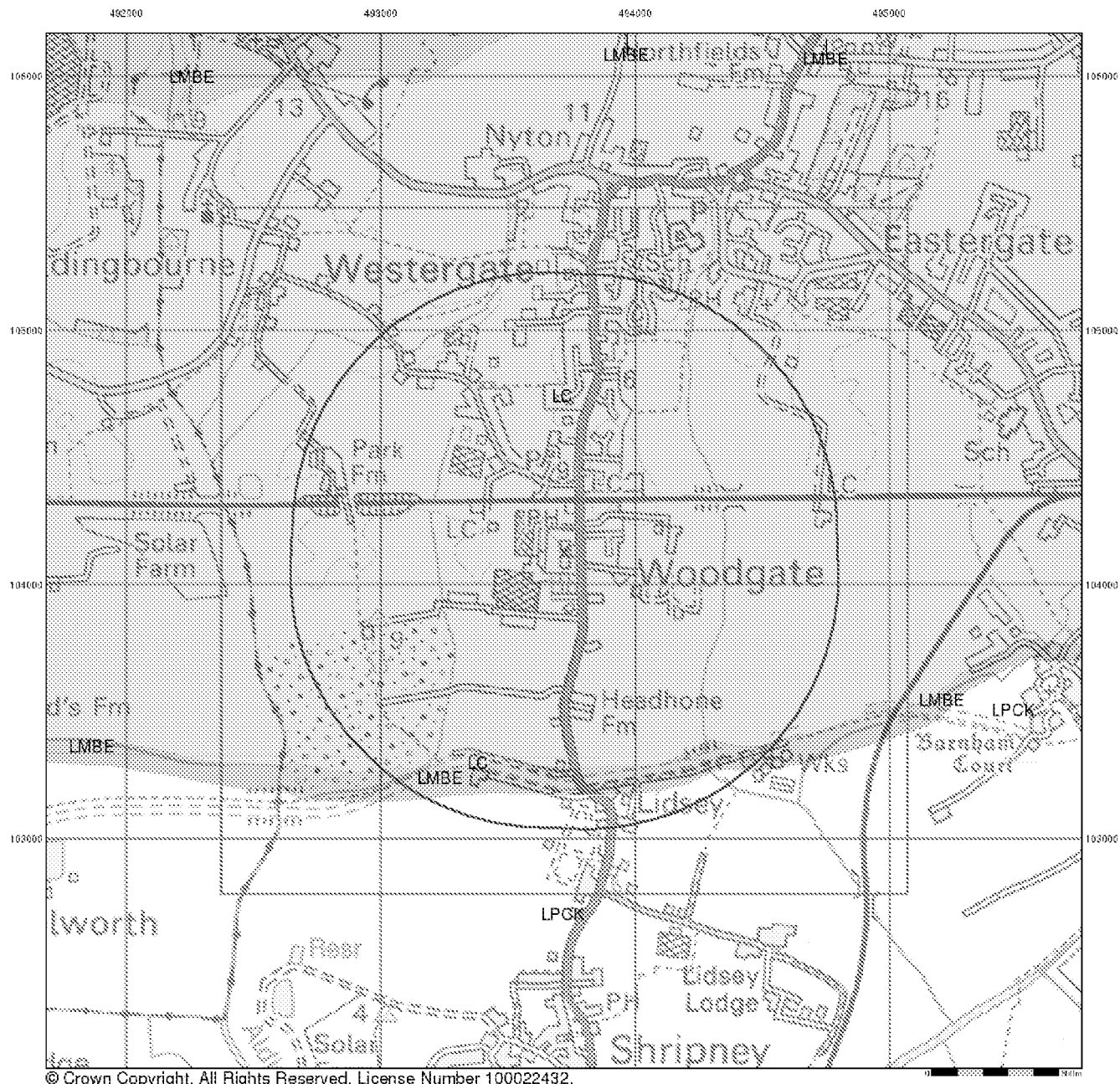
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## Geo-Environmental

### Bedrock and Faults

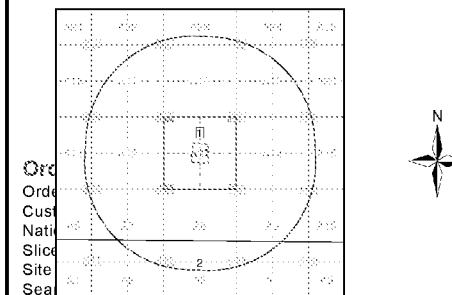
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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

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

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

### Bedrock and Faults Map - Slice A



### Site Details:

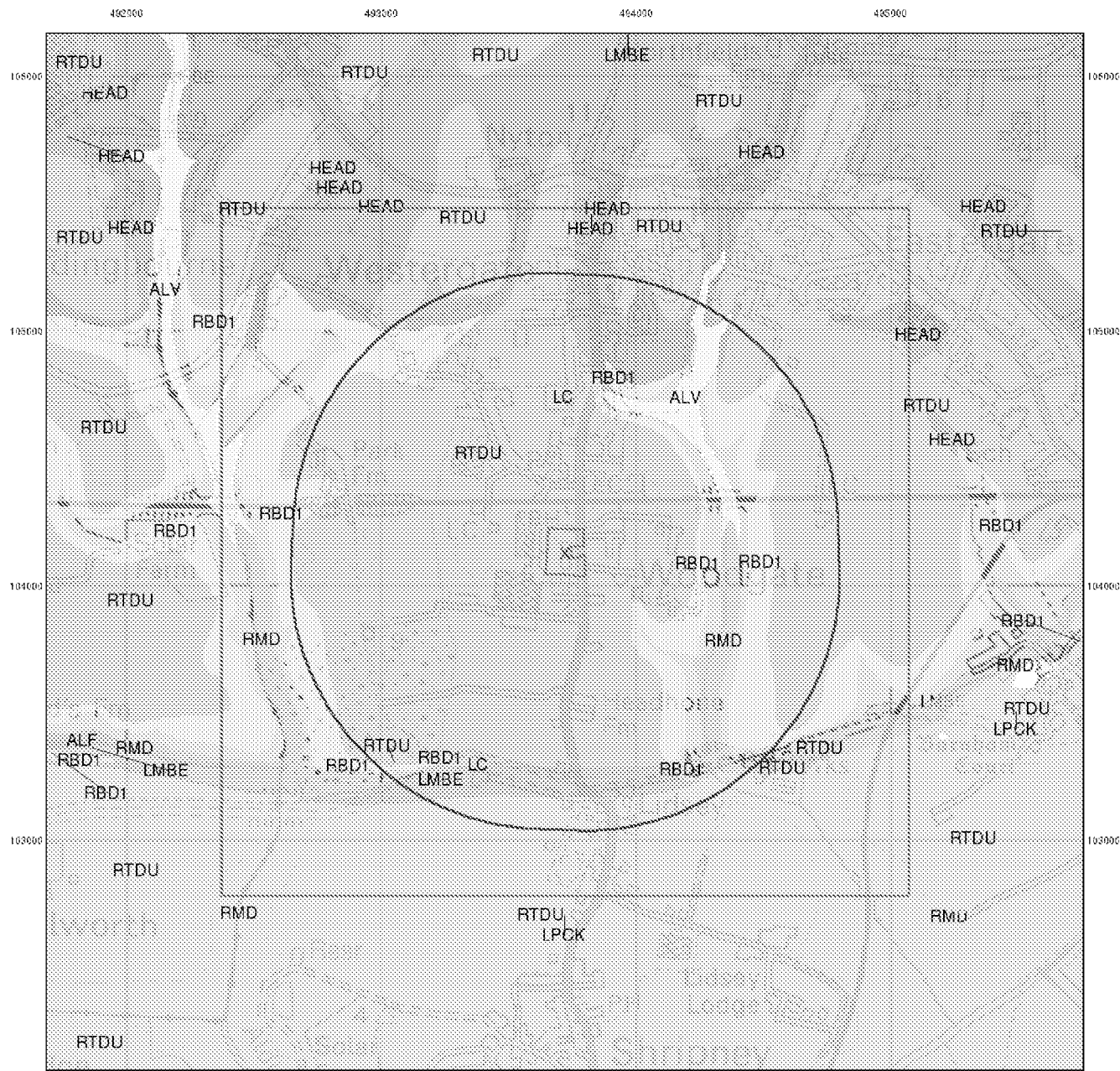
Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

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## Geo-Environmental

### Combined Surface Geology

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

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

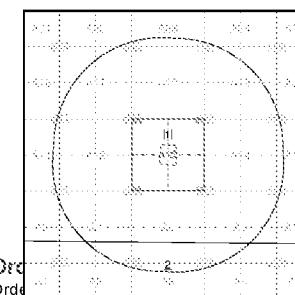
### Additional information

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

### Contact

British Geological Survey  
Kingsley Dunham Centre  
Keyworth  
Nottingham  
NG12 5GG  
Telephone: 0115 936 3143  
Fax: 0115 936 3276  
email: [enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)  
website: [www.bgs.ac.uk](http://www.bgs.ac.uk)

### Combined Geology Map - Slice A



Ord  
Ord

Customer Reference: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details:

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

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## Geo-Environmental

### General

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

### Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

- Waste
- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

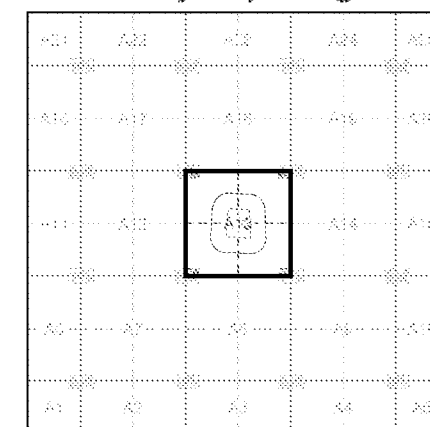
### Hazardous Substances

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

### Geological

- BGS Recorded Mineral Site

### Site Sensitivity Map - Segment A13



### Order Details

Order Number: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Plot Buffer (m): 100

### Site Details

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## Geo-Environmental

### General

○ Specified Site    ○ Specified Buffer(s)    X Bearing Reference Point    [ ] Map ID

[ ] Several of Type at Location

### Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- ◆ Discharge Consent
- ▲ Enforcement or Prohibition Notice
- ▲ Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- ▲ Local Authority Pollution Prevention and Control
- ▼ Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- ▼ Prosecution Relating to Authorised Processes
- ◆ Prosecution Relating to Controlled Waters
- ▲ Registered Radioactive Substance
- River Network or Water Feature
- ✱ River Quality Sampling Point
- ✱ Substantiated Pollution Incident Register
- ◆ Water Abstraction
- ◆ Water Industry Act Referral

### Hazardous Substances

- ✱ COMAH Site
- ✱ Explosive Site
- ✱ NIHS Site
- ✱ Planning Hazardous Substance Consent
- ✱ Planning Hazardous Substance Enforcement

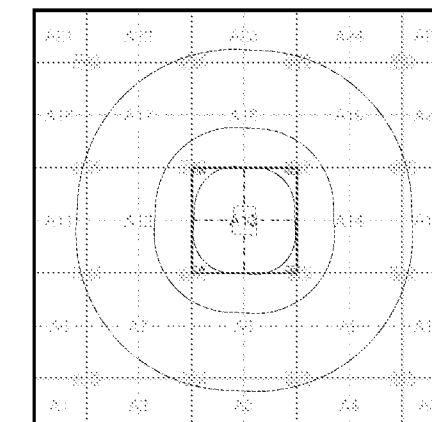
### Geological

- ▼ BGS Recorded Mineral Site

### Waste

- ▼ BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- ▲ Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- ▲ Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- ▲ Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

## Site Sensitivity Map - Slice A



## Order Details

Order Number: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

## Site Details

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

**Landmark**  
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## Geo-Environmental Industrial Land Use Map

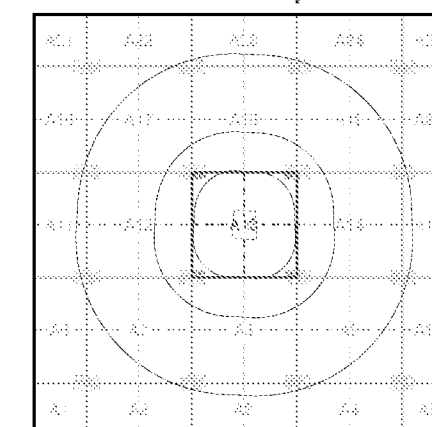
### General

- 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

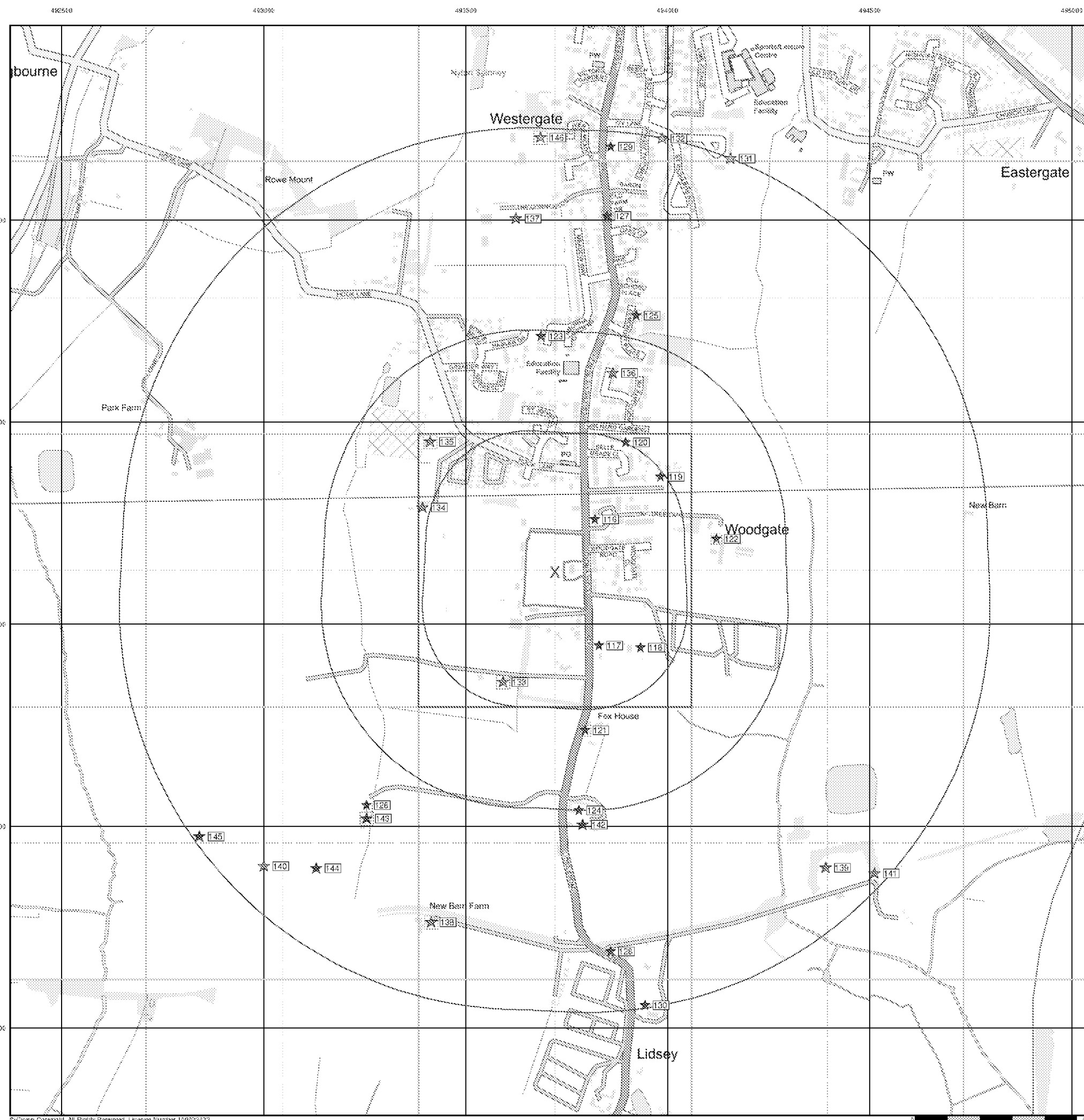
Order Number: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

**Landmark**  
INFORMATION GROUP

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## Geo-Environmental

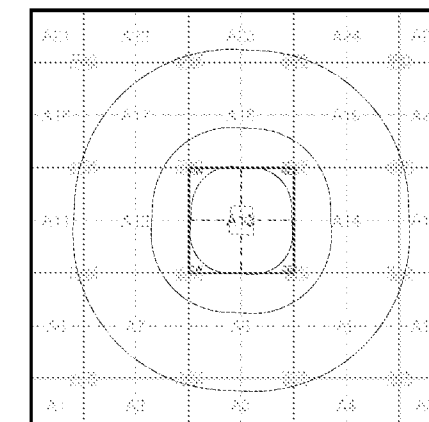
### General

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

### Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

### Flood Map - Slice A



### Order Details

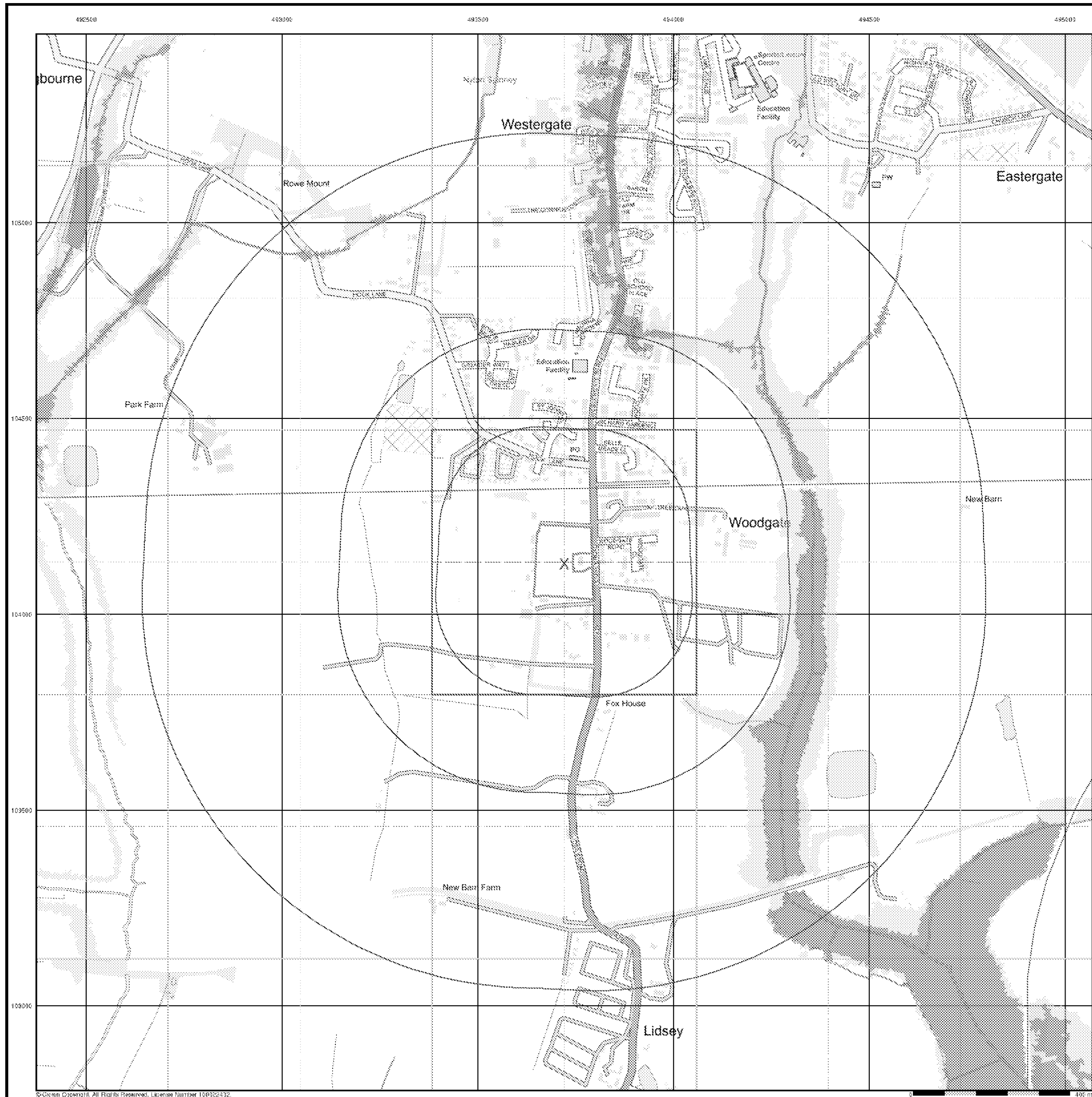
Order Number: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

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## Geo-Environmental

### General

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

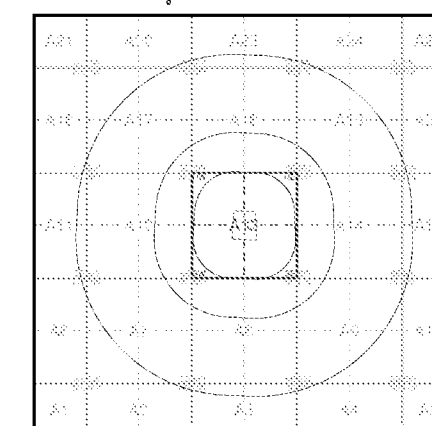
### Agency and Hydrological (Boreholes)

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

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [www.envirocheck.co.uk](http://www.envirocheck.co.uk).

### Borehole Map - Slice A



### Order Details

Order Number: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

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## Geo-Environmental

### General

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

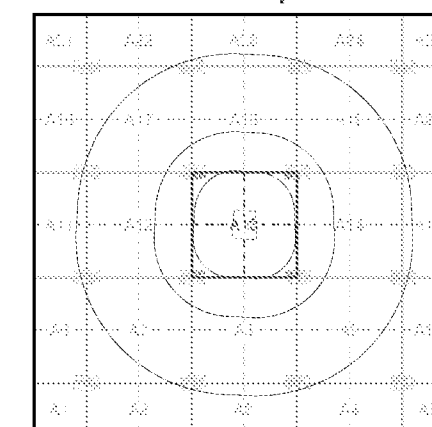
### OS Water Network Data

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

### Contours (height in meters)

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

### OS Water Network Map - Slice A



### Order Details

Order Number: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

**Landmark**  
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## Geo-Environmental

### General

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

### Risk of Flooding from Surface Water

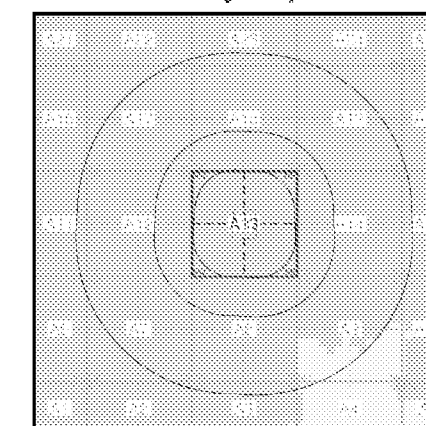
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

### Suitability

See the suitability map below

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

### EA/NRW Suitability Map - Slice A



### Order Details

Order Number: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

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**Landmark**  
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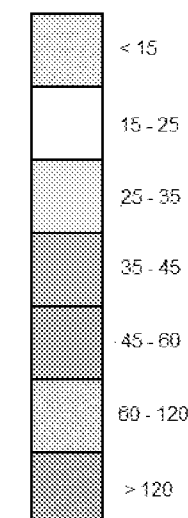
## Geo-Environmental

### General

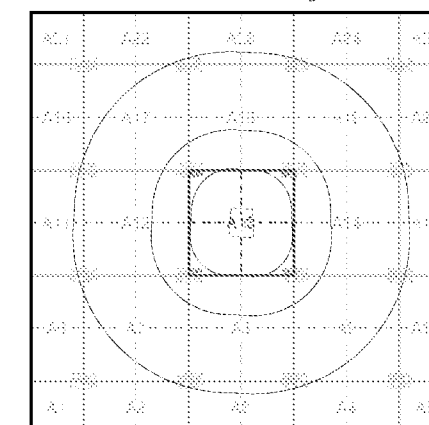
○ Specified Site      ○ Specified Buffer(s)      X Bearing Reference Point

### Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



### Estimated Soil Chemistry Arsenic - Slice A



### Order Details

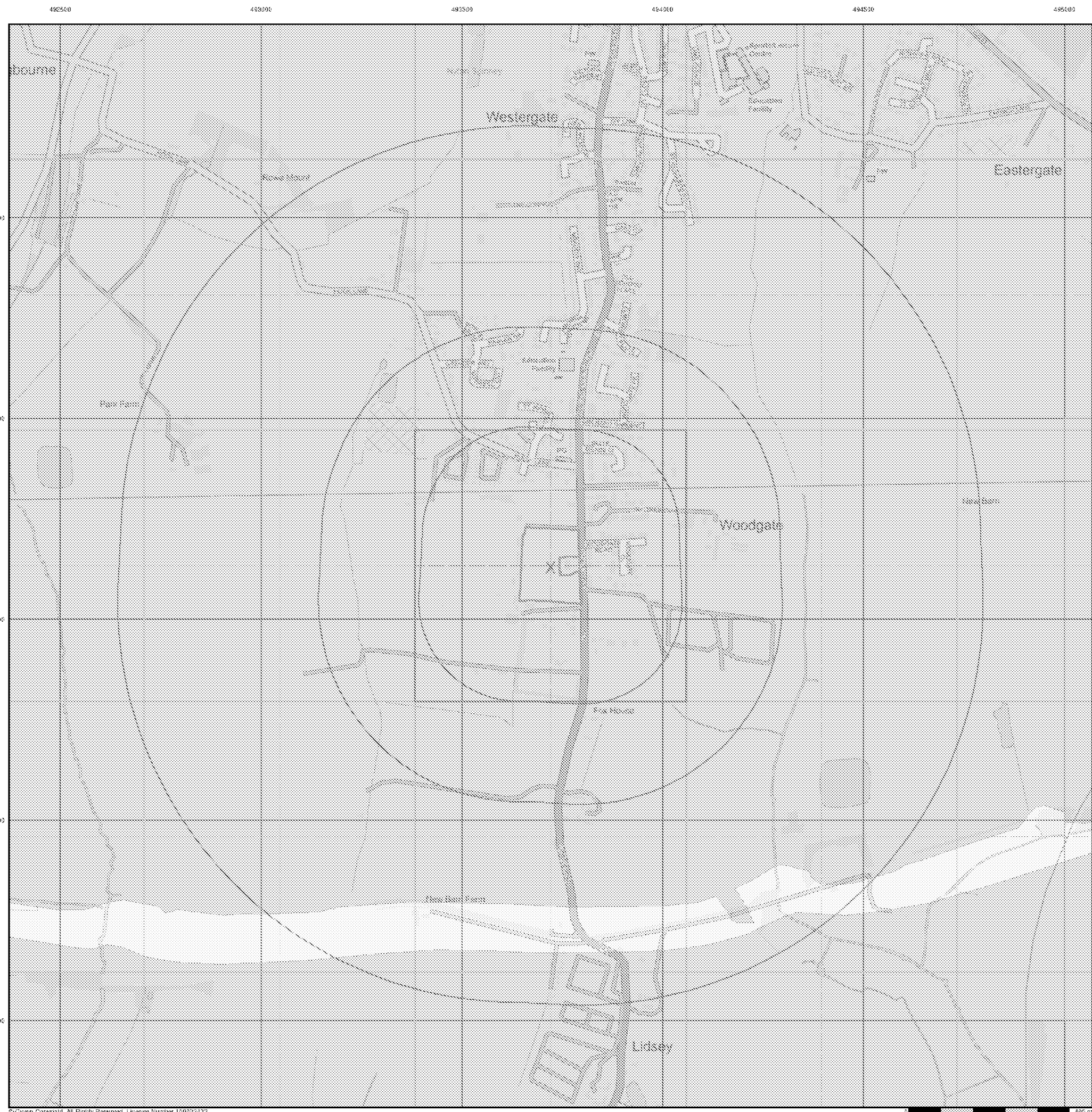
Order Details: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

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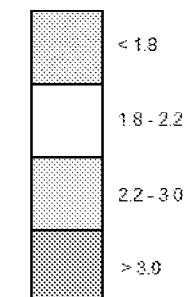
## Geo-Environmental

### General

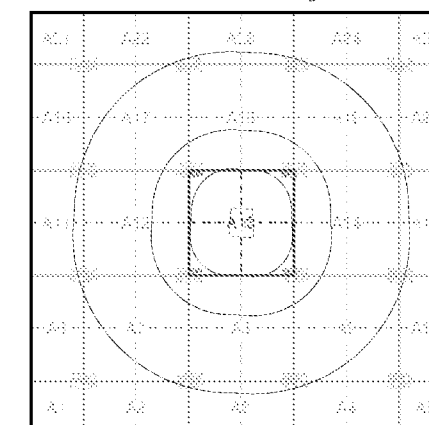
○ Specified Site    ○ Specified Buffer(s)    X Bearing Reference Point

### Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



### Estimated Soil Chemistry Cadmium - Slice A



### Order Details

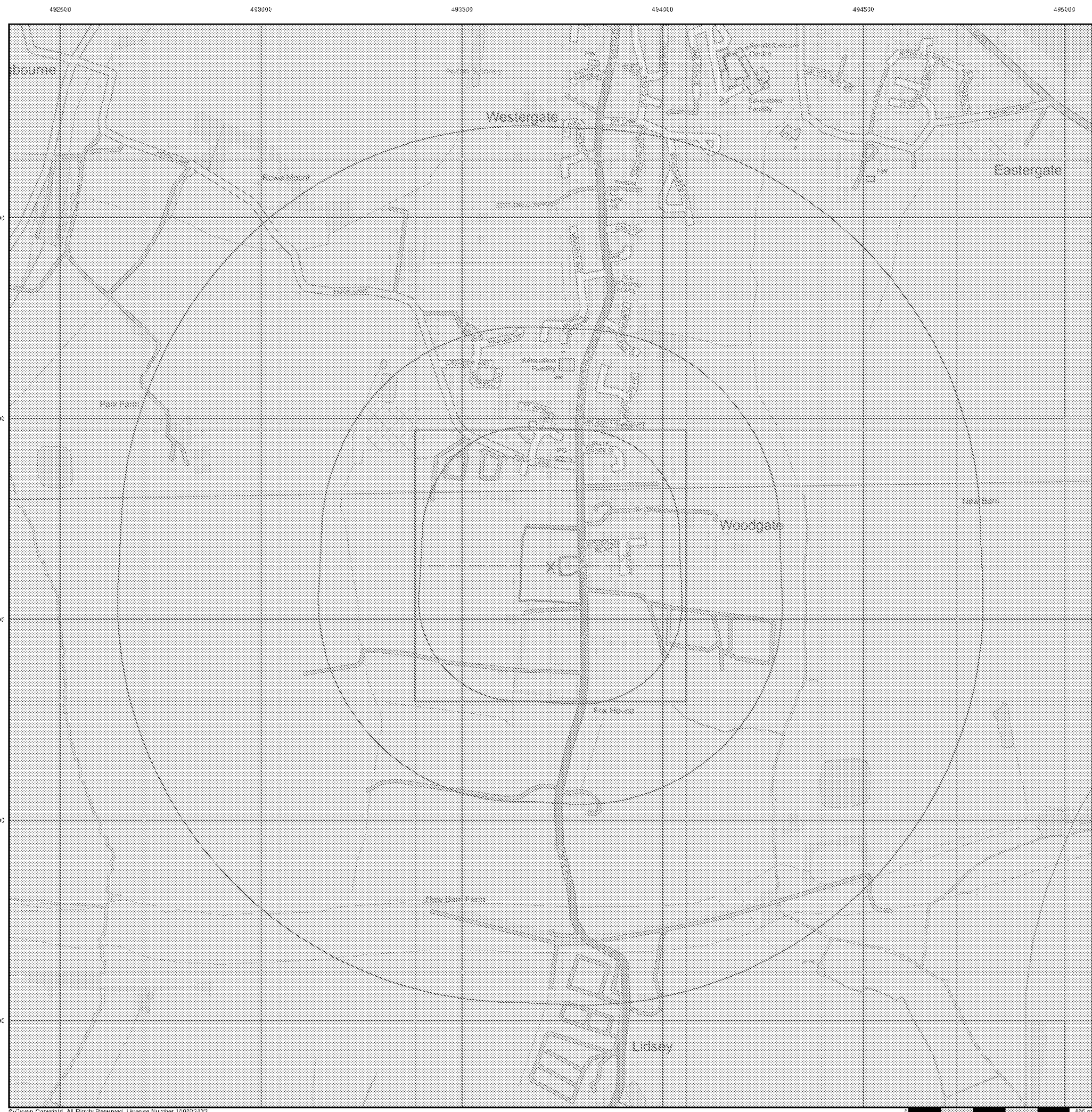
Order Details: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

Lidsey Road, Woodgate, CHICHESTER, PO20 3SU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9852  
Fax: 0844 844 9851  
Web: [www.onwirocheck.co.uk](http://www.onwirocheck.co.uk)





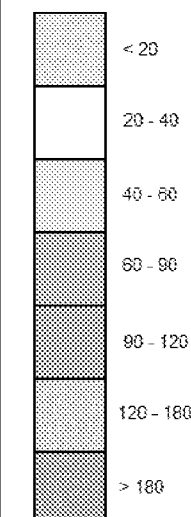
## Geo-Environmental

### General

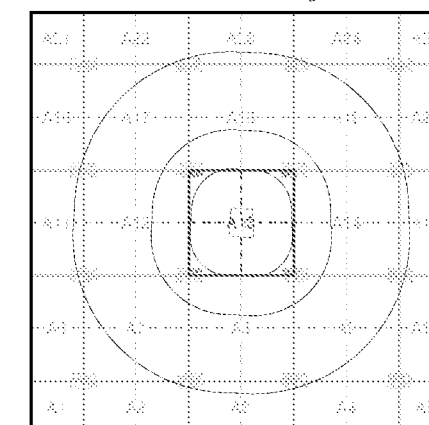
○ Specified Site    ○ Specified Buffer(s)    X Bearing Reference Point

### Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



### Estimated Soil Chemistry Chromium - Slice A



### Order Details

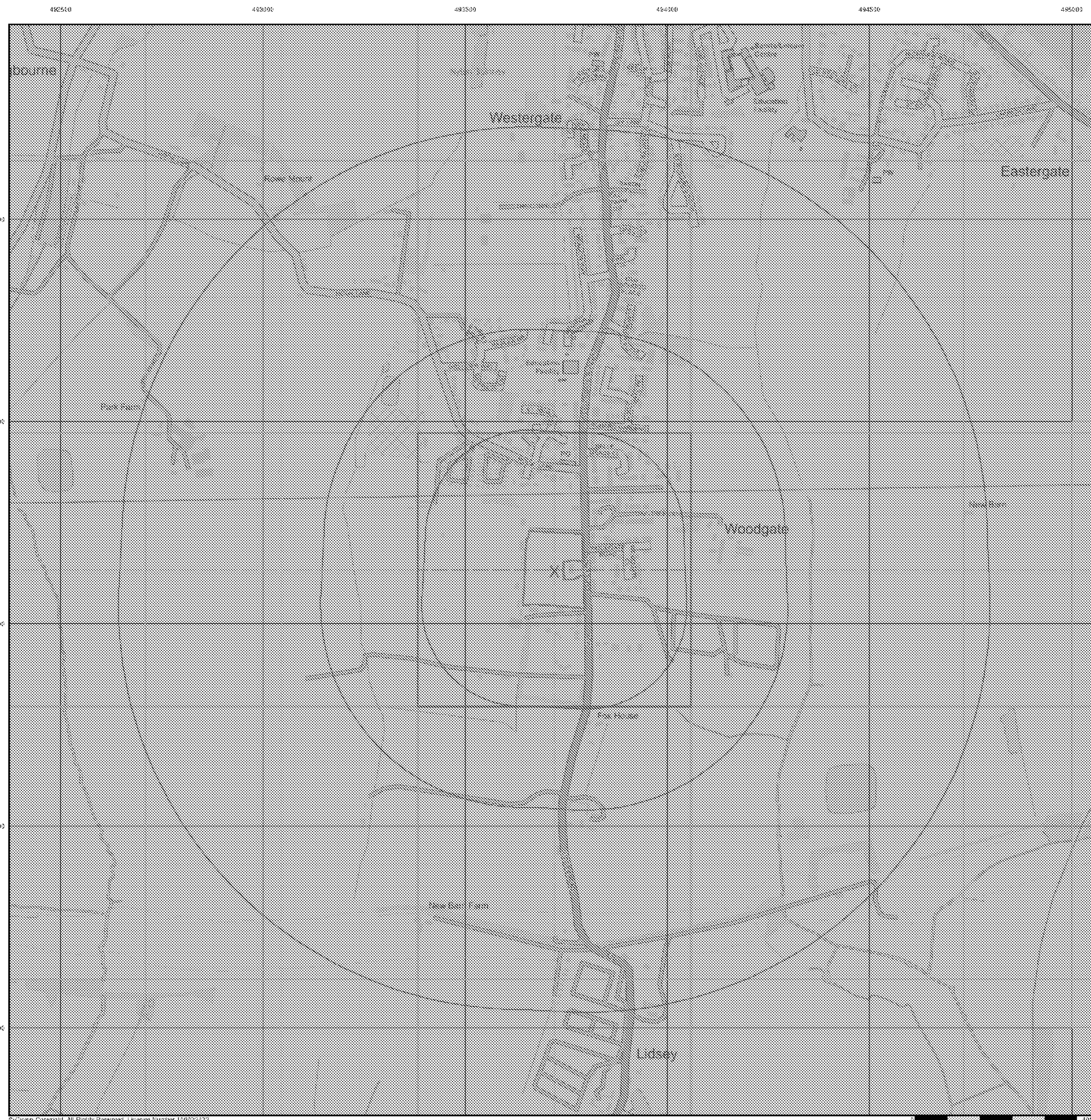
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Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

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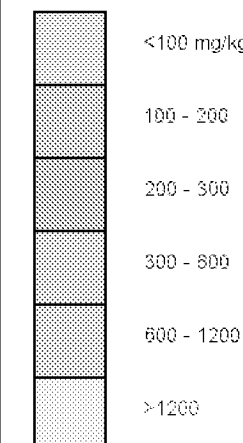
## Geo-Environmental

### General

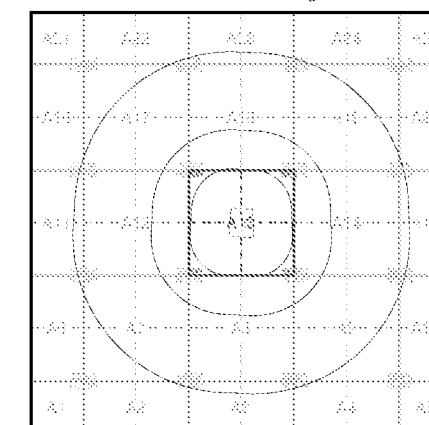
○ Specified Site      ○ Specified Buffer(s)      X Bearing Reference Point

### Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



### Estimated Soil Chemistry Lead - Slice A



### Order Details

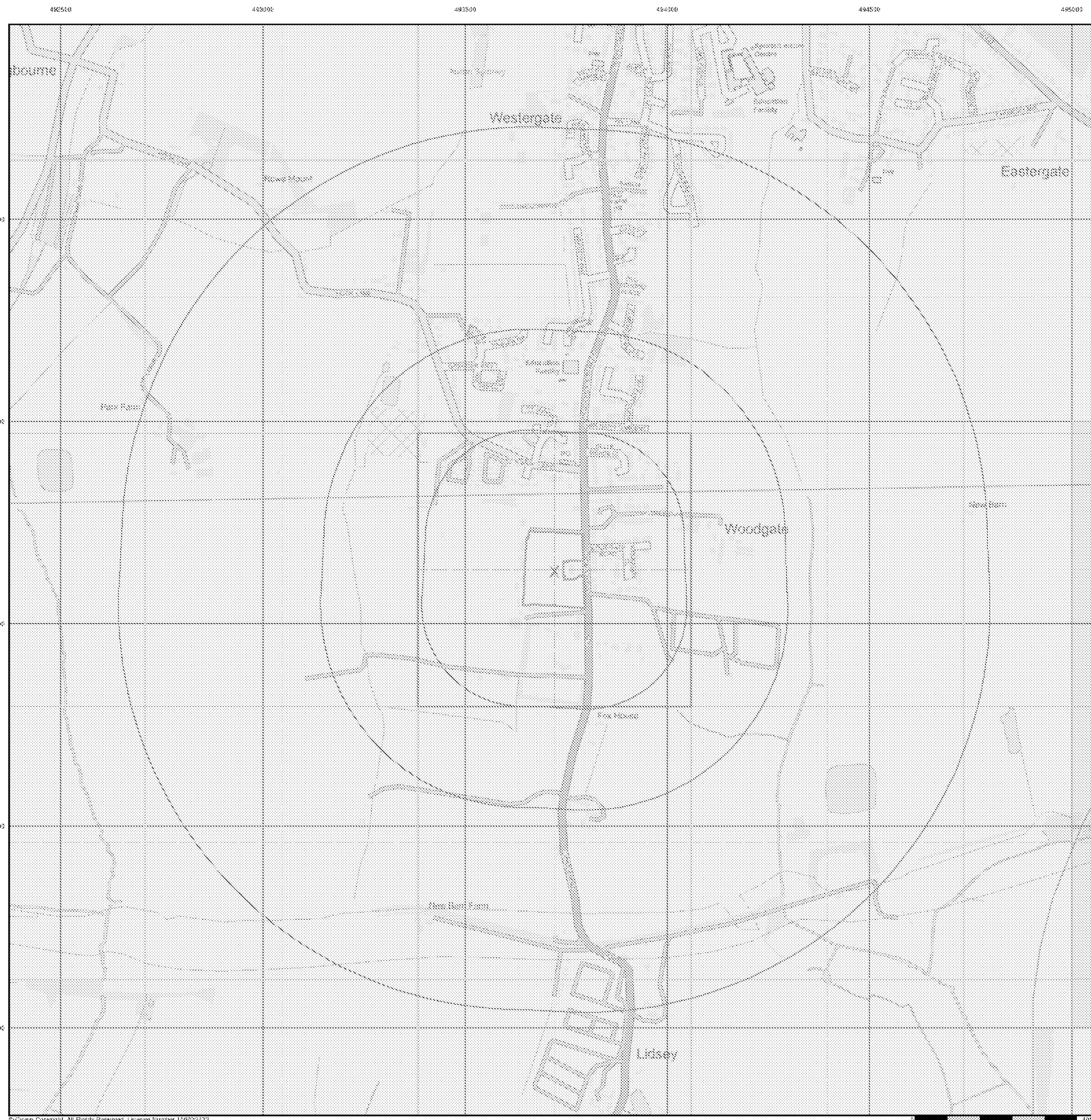
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Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

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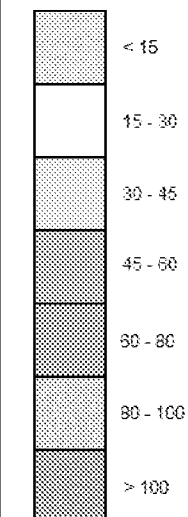
## Geo-Environmental

### General

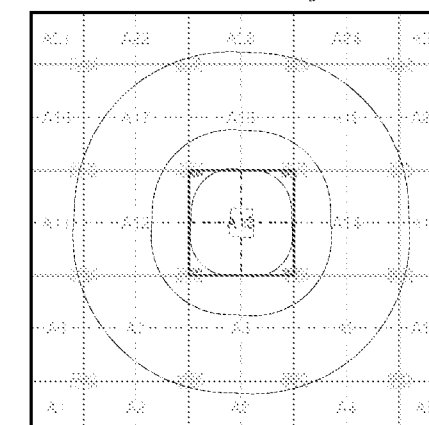
○ Specified Site    ○ Specified Buffer(s)    X Bearing Reference Point

### Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



### Estimated Soil Chemistry Nickel - Slice A



### Order Details

Order Details: 214178583\_1\_1  
Customer Ref: GE18390  
National Grid Reference: 493720, 104130  
Slice: A  
Site Area (Ha): 2.44  
Search Buffer (m): 1000

### Site Details

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