Ground Condition Consultants

HAMBLE AIRFIELD, HAMBLE LE RICE

GROUND CONDITION DESK TOP STUDY

APRIL 2018

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VERSION CONTROL

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Desk Top Study	
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0. EXECUTIVE SUMMARY

Brief	The brief was to undertake a site visit to inspect the site and, using the information provided in an Environmental Database Search relating to the site, assess and report on the findings with respect to potential ground contamination and potential associated future liabilities in accordance with the Preliminary Risk Assessment procedure outlined in the Model Procedures for the Management of Land Contamination (CLR 11), published by the Environment Agency.
Current Site Status	The study site is located at Hamble Airfield, Hamble Lane, Hamble le Rice, Hampshire, SO31 4HU (at approximate grid ref: 447792, 107868) and comprises a 61ha area of open rough grassland on the northern edge of Hamble Le Rice. At the time of the walkover survey, the site was noted to be predominantly covered by long grass with patches of bramble thicket and young trees with informal paths crossing the area, predominately used by dog walkers. It is understood that gas and oil pipelines run within the eastern boundary of the site, connecting the BP Depot to the south, a storage facility to the northeast of the site and beyond to the north.
Site History	According to the Ordnance Survey maps provided and reviewed from 1859 to 2014 (scales 1:2,500, 1:10.000, 1:1,250, 1:10,560) the majority of the site is not identified on any of the historical maps as having been developed although the original field boundary markings cease to be shown from the 1932 map extract and the site is identified as an airfield from the 1957 map extract. The airfield is identified as disused by the 1989 map extract.
Geology	Reference to the British Geological Survey (BGS) Map extracts indicates the whole of the site to directly overlie superficial River Terrace Deposits (sand and gravel). The underlying bedrock geology comprises Earnley Sand Formation (sand, silt and clay) in the northeast, Marsh Farm Formation (clay, silt and sand) through the central majority of the site and Selsey Sand Formation (sand, silt and clay) in the southeast.
Hydrogeology	The Environment Agency Groundwater Vulnerability Map extracts indicate the site to be overlying a superficial and bedrock Secondary A Aquifers, interpreted as the River Terrace Deposits, Earnley Sand, Marsh Farm Formation and Selsey Sand Formation.
Hydrology	The closest surface water features to the site are a Tertiary River (drain) 160m to the west, which outfalls to Southampton Water, and Badnam Creek 300m to the east, which outfalls to the River Hamble.
Risk Assessment	The following potential sources of contamination were identified: • Potential for asbestos containing material fragments within the ground from possible localised ground stability improvement and from use within aircraft components. • Potential for a range of contaminants, including oil and fuel hydrocarbons, associated with the former airfield use of the site. • Potential for oil and fuel hydrocarbons from pipelines along the east of the site. It should be noted that additional sources of contamination may become apparent during any future investigation and development of the site.

Conclusions and Recommendations	The risk of impact to identified receptors from the identified potential sources, in relation to the proposed use, is considered to be very low to low. As such, an intrusive investigation is not recommended for the proposed development to further assess the risks associated with potential contamination in the soil and groundwater. Given the proposed use of the site for mineral extraction, it is considered more appropriate to maintain a discovery strategy for the duration of the extraction works, such that any evidence of contamination encountered during the development is reported to and assessed by a qualified geo-environmental consultant and significant impacts reported to the Local Authority and remediated appropriately. Appropriate PPE is also recommended during any redevelopment of the site to address any as yet unidentified contamination that may be identified during the works.
This sheet is intended to provide a summary only of the initial indicative assessment study of the site in relation to ground contamination. It does not provide a definitive engineering analysis for the purposes of costing or construction, and is subject to the limitation of the agreed brief.	

1. INTRODUCTION

1.1 INSTRUCTION

Ground Condition Consultants Ltd. (GCC) was commissioned by Helen Hudson Planning on behalf of CEMEX in March 2018 to undertake a Ground Condition Desk Top Study of a site at Hamble Airfield, Hamble Lane, Hamble le Rice, Hampshire, SO31 4HU.

The brief was to undertake a site visit to inspect the site and, using the information provided in an Environmental Database Search relating to the site, assess and report on the findings with respect to potential ground contamination and potential associated future liabilities in accordance with the Preliminary Risk Assessment procedure outlined in the Model Procedures for the Management of Land Contamination (CLR 11), published by the Environment Agency.

This report is prepared in line with the agreed brief and is subject to the report conditions shown in Appendix 1.

1.2 LEGAL CONTEXT

Part IIA of the Environmental Protection Act 1990 (inserted by Section 57 of the Environment Act 1995) provides a regime for the control of specific threats to health or the environment from land contamination. In accordance with the Act and the statutory guidance document 'The Contaminated Land (England) Regulations 2000', the definition of contaminated land is intended to embody the concept of risk assessment. Within the meaning of the Act, land is only "contaminated land" where it appears to the Regulatory Authority, by reason of substances within or under the land, that:

- Significant harm is being caused, or there is a significant possibility of such harm being caused; or
- Pollution of controlled waters is being, or is likely to be, caused."

Inherent in this definition is the requirement for contamination risk assessment to be undertaken on a site specific basis, as the potential for harm is determined by the site's end use and its specific environmental setting.

The guidance defines "risk" as the combination of:

- The probability, or frequency, of occurrence of a defined hazard (for example, exposure of a property to a substance with the potential to cause harm); and

- The magnitude (including the seriousness) of the consequences.

While Part IIA of the Environmental Protection Act provides a risk based approach to the identification and remediation of land where contamination poses an unacceptable risk to human health or the environment, the regime does not take into account future uses. New developments are therefore controlled by the planning regime, with reference to the National Planning Policy Framework (NPPF), rather than directly by Part IIA of the Environmental Protection Act.

The NPPF is based on the principal that the site should be suitable for its new use, taking account of ground conditions, including from natural hazards or former activities and states that "Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner". The NPPF also links the planning and Part IIA regimes by stating that "after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990". Key components of the Part IIA regime, such as the definition of Contaminated Land and the associated risk based assessment approach, are therefore considered to also be applicable to the planning regime.

1.3 METHODOLOGY

This report has been prepared in accordance with published Environment Agency guidance ('Model Procedures for the Management of Land Contamination – Contaminated Land Report (CLR) 11'). CLR 11 provides the technical framework for structured decision making about land contamination and builds on previous work carried out under the Contaminated Land Research Programme (of the former Department of the Environment). CLR 11 has adopted and refined the well recognised methodology and terminology that has been used in contaminated land risk assessment for a number of years.

1.3.1. Pollutant linkage concept

In the context of land contamination, there are three essential elements to any risk:

- A **contaminant source** – a substance that is in, on or under the land and has the potential to cause harm or to cause pollution of controlled waters.
- A **receptor** – in general terms, something that could be adversely affected by a contaminant, such as people, an ecological system, property, or a water body.

- A **pathway** – a route or means by which a receptor can be exposed to, or affected by, a contaminant.

Each of these elements can exist independently, but they create a risk only where they are linked together, so that a particular contaminant affects a particular receptor through a particular pathway. This kind of linked combination of contaminant–pathway–receptor is described as a pollutant linkage.

1.3.2. Conceptual model

An important thread throughout the overall process of risk assessment is the need to formulate and develop a **conceptual model** for the site, which supports the identification and assessment of pollutant linkages. A conceptual model represents the characteristics of the site in diagrammatic or written form that shows the possible relationships between contaminants, pathways and receptors (pollutant linkages).

1.3.3. Risk assessment

CLR 11 advocates a phased approach to risk assessment comprising the following in order, as necessary:

Preliminary Risk Assessment – a desk study consisting of a review of documentary, anecdotal and site walk over evidence.

Generic Quantitative Risk Assessment (GQRA) - comparison of contaminant concentrations obtained from site investigation with generic assessment criteria.

Detailed Quantitative Risk Assessment (DQRA) - comparison of contaminant concentrations obtained from site investigation with site-specific assessment criteria.

This document constitutes a Preliminary Risk Assessment.

1.4 PROPOSED USE

It is currently understood that the site is to be subject to mineral abstraction. A change in the site use from that currently proposed may result in the need for re-assessment of risk criteria and the conclusions and recommendations resulting from the risk assessment could therefore significantly change.

1.5 REPORT SCOPE AND LIMITATIONS

This report is based upon a review of readily available historical and current information, a site walkover survey, geological and hydrogeological maps and information from an environmental database search. The assessment is based on the proposed use stated in Section 1.4 and the outcomes of this assessment could change if the end uses change.

The information contained in this report is intended for the use of CEMEX. GCC can take no responsibility for the use of this information by any other party or for uses other than that described in this report.

2. PRELIMINARY RISK ASSESSMENT

2.1 SITE LOCATION AND DESCRIPTON

The study site is located at Hamble Airfield, Hamble Lane, Hamble le Rice, Hampshire, SO31 4HU (at approximate grid ref: 447792, 107868) and comprises a 61ha area of open rough grassland on the northern edge of Hamble Le Rice. At the time of the walkover survey, the site was noted to be predominantly covered by long grass with patches of bramble thicket and young trees with informal paths crossing the area, predominately used by dog walkers.

It is understood that gas and oil pipelines run within the eastern boundary of the site, connecting the BP Depot to the south, a storage facility to the northeast of the site and beyond to the north.

The site is bounded to the south by a sports ground and associated pavilion and facilities, to the southeast and southwest by residential properties, to the northeast by Satchel Lane with fields beyond, to the northwest by a railway line with a sports complex beyond and to the west by Hamble Lane, several residential properties and a self-storage facility.

2.2 SITE HISTORY

According to the Ordnance Survey maps provided and reviewed from 1859 to 2014 (scales 1:2,500, 1:10.000, 1:1,250, 1:10,560) the majority of the site is not identified on any of the historical maps as having been developed although the original field boundary markings cease to be shown from the 1932 map extract and the site is identified as an airfield from the 1957 map extract. The airfield is identified as disused by the 1989 map extract.

The Hamble Local History Society website (http://www.hamblehistory.org.uk/community/hamble-local-history-society-12978/hambles-airfields/ accessed 12 March 2018) indicates that the site was opened as an airfield in 1926 and was linked to an aircraft factory located some 500m to the south of the site with a hanger adjacent to the southwest of the site. The airfield is understood to have been operational during World War II. The last aircraft was reportedly flown out of Hamble in 1986.

2.3 DOCUMENTATED GROUND CONDITIONS

Ground conditions recorded in readily available sources are summarised below.

2.3.1. Geology

Reference to the British Geological Survey (BGS) Map extracts (see Appendix 2) indicate the whole of the site to directly overlie superficial River Terrace Deposits (sand and gravel). The underlying bedrock geology comprises Earnley Sand Formation (sand, silt and clay) in the northeast, Marsh Farm Formation (clay, silt and sand) through the central majority of the site and Selsey Sand Formation (sand, silt and clay) in the southeast.

Data has been provided by the client in relation to previous investigations of the site, undertaken to assess the commercial viability of mineral extraction. The data provided indicates the stratigraphy across the site to comprise an average of 0.5m of topsoil over an average of 1.0m of soft, light brown, slightly sandy, slightly gravelly clay (upper River Terrace Deposits) over an average of 3.2m of light brown to orangish brown, slightly clayey, sandy gravel (lower River Terrace Deposits) over yellowish green, occasionally clayey fine sand (typically encountered from about 4.8mbgl), indicative of the bedrock formations.

2.3.2. Hydrogeology

The Environment Agency Groundwater Vulnerability Map extracts (see Appendix 2) indicate the site to be overlying a superficial and bedrock Secondary A Aquifers, interpreted as the River Terrace Deposits, Earnley Sand, Marsh Farm Formation and Selsey Sand Formation.

Secondary A Aquifers are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

The site is not located within a Groundwater Source Protection Zone.

Data provided by the client from previous investigations of the site include groundwater level monitoring undertaken over several years, indicating seasonal fluctuations. The recorded groundwater levels range from about 21mAOD (3mbgl) on the north-eastern corner of the site to about 13mAOD (7mbgl) on the southern part of the site. Groundwater flow direction is from northeast to southwest.

2.3.3. Hydrology

The closest surface water features to the site are a Tertiary River (drain) 160m to the west, which outfalls to Southampton Water, and Badnam Creek 300m to the east, which outfalls to the River Hamble.

2.3.4. Radon

Radon is a naturally occurring radioactive gas which may be harmful to human health. Radon is generally released into the atmosphere in areas underlain by granite and limestone. Harmful concentrations of radon may build up if it becomes trapped in an enclosed space such as a building.

BGS/Public Health England data presented within the Groundsure Report indicates that the percentage of houses exceeding the Action Levels for Radon in this area is less than 1%. Therefore the property is not in a Radon Affected Area, as defined by the Health Protection Agency (HPA), and radon protection measures are not necessary in new dwellings or extensions.

2.4 ENVIRONMENTAL DATA SEARCH

A search of an environmental database was undertaken together with information from various other organisations as part of the desk study and is summarised in the following sections. The following summary is generally limited to locations within 250m of the site boundaries unless it is considered that installations or activities beyond that range could potentially have an impact on the site or be affected by the redevelopment of the site.

Table 2.1. Data search results

Discharge consents	There are no current discharge consents located within 250m of the site.
Pollution incidents	There are no recorded pollution incidents to controlled waters within 250m of the site.
Water abstractions	There are no recorded water abstractions located within 500m of the site.
Fuel Stations	There are no recorded fuel stations within 250m of the site.
Landfill Sites	There is 1no. historical landfill site within 250m of the site, located 130m north and received Non-Biodegradable Wastes.

2.5 MINING

The site is located in an area which may not be affected by coal mining but which has been subject to small scale sand and gravel extraction.

2.6 DEPARTMENT OF ENVIRONMENT – INDUSTRY PROFILES

The Department of the Environment Industry Profile Airports has been reviewed in relation to the former use of the site.

As a result of this use, the following potential contaminants have a significant potential to be present:

- Metals
- Asbestos
- Inorganic chemicals
- Organic chemicals including oil and fuel hydrocarbons

However, the airfield use of the site between the 1920s and 1980s is not likely to have resulted in the same scale of contamination as a commercial airport.

2.7 REVIEW OF PREVIOUS INVESTIGATION DATA

From reports and data provided by the client, it is understood that several investigations have taken place on the site between 1995 and 2017 to assess the viability of the site for mineral extraction. These investigation appear to have focused on the particle size distribution of the sand and gravel and do not appear to have included contamination assessments.

However, while none of the borehole logs reviewed indicated deposits of Made Ground and most did not record any evidence of contamination, a set of borehole logs from 2008 for 12no boreholes drilled across the site note evidence of hydrocarbon or possible hydrocarbon contamination in 4no boreholes. The evidence of contamination is described as “dry black residue on gravel” with “no oil sheen on water” and was generally recorded towards the bottom of the sand and gravel deposits at around 3.0-5.0mbgl. The logs do not note any evidence of hydrocarbon odour.

These 4no boreholes with evidence of contamination were situated through the central southern area of the site, across the groundwater flow direction rather than with it. Similar evidence of contamination was not noted on the logs from boreholes up hydraulic gradient or down hydraulic gradient from the impacted boreholes.

This evidence is indicative of historical waterborne migration leaving a residue of sorbed hydrocarbon contamination on the gravel as it passed through, with a smear zone created with seasonal water level fluctuations. The descriptions provided in the logs of black residue and no noted odour or sheen suggests that the hydrocarbon may have been used engine oil, which often contains black particulate matter and does not have a high volatile fraction component. The absence of a noted odour may also indicate that a hydrocarbon product with a higher volatile content may have been present but degraded over time. As the potentially contaminative use of the site as an airfield ceased in 1986, the hydrocarbons present would have had over 20 years to degrade by the time of the investigation that recorded them and over 30 years to the time of this report.

The distribution of contamination evidence across the site from the 2008 investigation suggests that the impacts came from multiple sources across the groundwater flow direction and is not indicative of single source plume migrating in the direction of groundwater flow. The absence of contamination evidence in the down gradient boreholes also suggests that the contamination has not migrated over long distances from its sources.

All of these factors together indicate that activities such as aircraft and vehicle maintenance are likely to have taken place across the central area of the site during its working life as an airfield with used oil and similar hydrocarbons having been disposed of to the ground. These types of contaminants are generally considered to present a very low risk to human health and controlled waters receptors, particularly as any volatile fractions have had a long time to degrade. It is likely that with the evidence of contamination having been identified so far at depth, further contamination is likely to be locally encountered at shallow depth where it entered the ground.

2.8 UNEXPLODED ORDNANCE

A Preliminary UXO Threat Assessment report, prepared in January 2018 by Dynasafe BACTEC Ltd, was provided by the client in relation to the site. The report notes that small arms and land service ammunition may be present on site from the defensive positions on and near the site during World War II. It also notes that the area was targeted for bombing raid during World War II and that six items of UXO were located in the vicinity of the site in the 1980s.

The report concludes that there is a high risk of unexploded ordnance on the site.

3. CONCEPTUAL SITE MODEL

3.1 SOURCES

The conceptual model, based on information obtained as part of the preliminary risk assessment, identified the following potential contaminant sources:

3.1.1. On-Site – Historic and Current

- Potential for asbestos containing material fragments within the ground from possible localised ground stability improvement (in crushed demolition material in access points etc) and from use within aircraft components.
- Potential for a range of contaminants, including oil and fuel hydrocarbons, associated with the former airfield use of the site.
- Potential for oil and fuel hydrocarbons from pipelines along the east of the site.

It should be noted that additional sources of contamination may become apparent during any future investigation and development of the site.

3.1.2. Off-Site – Historic and Current

- None

3.2 PATHWAYS

The key environmental pathways and exposure routes by which potentially toxic substances can reach the identified potential receptors are considered to be:

3.2.1. Indirect

- Vertical and lateral migration driven by infiltration.

3.2.2. Direct

- Direct contact,
- Ingestion,
- Inhalation of dust.
- Inhalation of vapours

3.3 RECEPTORS

Receptors that may be affected by the potential contamination are:

3.3.1. Human

- Future users

3.3.2. Environmental

- Secondary A Aquifer
- Extracted minerals

4. RISK ASSESSMENT

4.1 RISK ASSESSMENT PROCEDURE

By considering the sources, pathways and receptors (pollutant linkages), an assessment of the human health/ environmental risks is made with reference to the significance and degree of the risk. This assessment is based on consideration of whether the source contamination can reach a receptor and hence whether it is of major or minor significance.

The risk assessment has been undertaken with reference to BS10175 and CIRIA Document C552: Contaminated Land Risk assessment 'A Guide to Good Practice'. The risk assessment has been carried out by assessing the severity of the potential consequence, taking into account both the potential magnitude of the hazard and the sensitivity of the target, based on the categories given overleaf.

Table 4.1. Sensitivity of receptor

Category	Examples
High	Residential with gardens/Groundwater Source Protection Zone
Medium	Residential without gardens/Principal (Major) Aquifer/sensitive watercourse
Low	Commercial and industrial use/Secondary (Minor) Aquifer
Very Low	Construction and maintenance workers/non-sensitive watercourse

Table 4.2. Magnitude of impact

Category	Examples
Gross Impact	Heavily contaminated gasworks or industrial site, hazardous waste landfill
Moderate Impact	Major leaks and spills from fuel infrastructure (e.g. petrol stations), domestic waste landfill
Slight Impact	Minor leaks and spills from fuel infrastructure, 'inert' waste landfills
No Impact	No identified or suspected contamination

Table 4.3. Level of severity for potential hazard

	Sensitivity of receptor			
Magnitude of Impact	**High**	**Medium**	**Low**	**Very Low**
Gross Impact	Severe	Medium	Mild	Minor
Moderate Impact	Medium	Mild	Minor	Minor
Slight Impact	Mild	Minor	Minor	Minor
No Impact	Minor	Minor	Minor	Minor

The likelihood of an event (probability) takes into account both the presence of the hazard and target and the integrity of the pathway and has been assessed based on the categories given below.

Table 4.4. Probability of risk definition

Category	Definition
High likelihood	Pollutant linkage may be present, and risk is almost certain to occur in long term, or there is evidence of harm to the receptor
Likely	Pollutant linkage may be present, and it is probable that the risk will occur over the long term
Low likelihood	Pollutant linkage may be present, and there is a possibility of the risk occurring, although there is no certainty that it will do so
Unlikely	Pollutant linkage may be present, but the circumstances under which harm would occur are improbable

The potential severity of the risk and the probability of the risk occurring have been combined in accordance with the following matrix in order to give a level of risk for each potential hazard.

Table 4.5. Level of risk for potential hazard definition

Probability of risk	Potential severity			
	Severe	**Medium**	**Mild**	**Minor**
High Likelihood	Very high	High	Moderate	Low/ Moderate
Likely	High	Moderate	Low/ Moderate	Low
Low likelihood	Moderate	Low/ Moderate	Low	Very low
Unlikely	Low/ Moderate	Low	Very low	Very low

The assessment is discussed below in terms of plausible pollutant linkages. A complete assessment of the pollutant linkages is presented in Table 4.6 overleaf.

A description of these risk classifications and likely action required are given in CIRIA 552 as:

Very high risk – High probability that severe harm could arise to a designated receptor from an identified hazard OR there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in substantial liability. Urgent investigation and remediation are likely to be required.

High risk – Harm is likely to arise to a designated receptor from an identified hazard. This risk, if realised, is likely to result in substantial liability. Urgent investigation is required and remedial works may be necessary in the short term and are likely over the long term.

Moderate risk – It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation is normally required to clarify risks and to determine potential liability. Some remedial works may be required in the long term.

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 – It is a low possibility that harm could arise to a designated receptor. In the event of such harm being realised it is not likely to be severe.

4.2 POLLUTANT LINKAGE ASSESSMENT

Table 4.6. Pollutant Linkage Assessment

Source	Pathway	Receptor	Severity	Likelihood	Risk Level
Potential for asbestos containing materials within the ground	Inhalation	Future Users	Mild	Low Likelihood	Low
		Adjacent Residents	Medium	Unlikely	Low
Potential for a range of contaminants, including oil and fuel hydrocarbons, associated with the former airfield use of the site	Direct Contact Ingestion Inhalation	Future Users	Minor	Low Likelihood	Very Low
	Vertical and lateral migration leading to direct contact	Secondary A Aquifer	Minor	Low Likelihood	Very Low
		Extracted minerals	Minor	Low Likelihood	Very Low
Potential for oil and fuel hydrocarbons from pipelines along the east of the site	Direct Contact Ingestion Inhalation	Future users	Minor	Unlikely	Very Low
	Vertical and lateral migration leading to direct contact	Secondary A Aquifer	Minor	Unlikely	Very Low
		Extracted minerals	Minor	Unlikely	Very Low

4.2.1. Potential for asbestos in ground

The investigation data provided by the client and reviewed as part of this assessment does not indicate the presence of any notable Made Ground in any of the investigation locations. Any asbestos contamination in the soil is therefore likely to be on or near the surface and potentially sporadic. Given the size of the site and the proposed use for mineral extraction, intrusive investigation to attempt to identify asbestos containing material is not considered to be cost effective as the potential would remain even if no asbestos containing material were encountered by the investigation.

It is therefore considered to more practical to ensure that all of the excavation workers involved in the mineral extraction works are trained in asbestos in soil awareness, such that they can identify any potentially suspect material during the works. It is anticipated that the most critical stage would be in the initial clearance and stockpiling of the surface topsoil, below which the potential of encountering asbestos is greatly reduced.

4.2.2. Contaminants from former airfield

A wide range of potential organic and inorganic contaminants have the potential to be present in the ground underlying the site as a result of the former airfield use of the site. The data from the set of borehole logs from a 2008 investigation of the site suggest that hydrocarbon products, potentially such as used engine oil, were locally disposed of across the site, particularly through the central section. The evidence from these logs indicates that the impacts did not migrate far from their source locations, not appearing in the down gradient borehole after more than 20 years, and did not appear to have high volatile contents. The risks to the future users of the site and controlled waters receptors have therefore been assessed to be very low.

However, it is recommended that the operators of the site remain vigilant for gross contamination during the mineral extraction works and contact GCC or an other qualified geo-environmental consultant to assess and evidence of contamination encountered. It is assumed that the client will have their own procedures and criteria for ensuring that the contaminant concentrations of the material they extract, process and dispatch meet their criteria for sale.

4.2.3. Oil pipelines

Several oil pipelines are known to be present along the eastern boundary of the site. It is understood that the mineral extraction works will maintain a 15m buffer from these pipelines to avoid disturbing them. It is therefore considered unlikely that any contamination that may have leaked from these pipelines will migrate to the working area of the mineral extraction. It is further noted that no evidence of contamination from these pipelines was recorded in the previous borehole records reviewed.

5. CONCLUSIONS AND RECOMMENDATIONS

The following potential sources of contamination were identified:

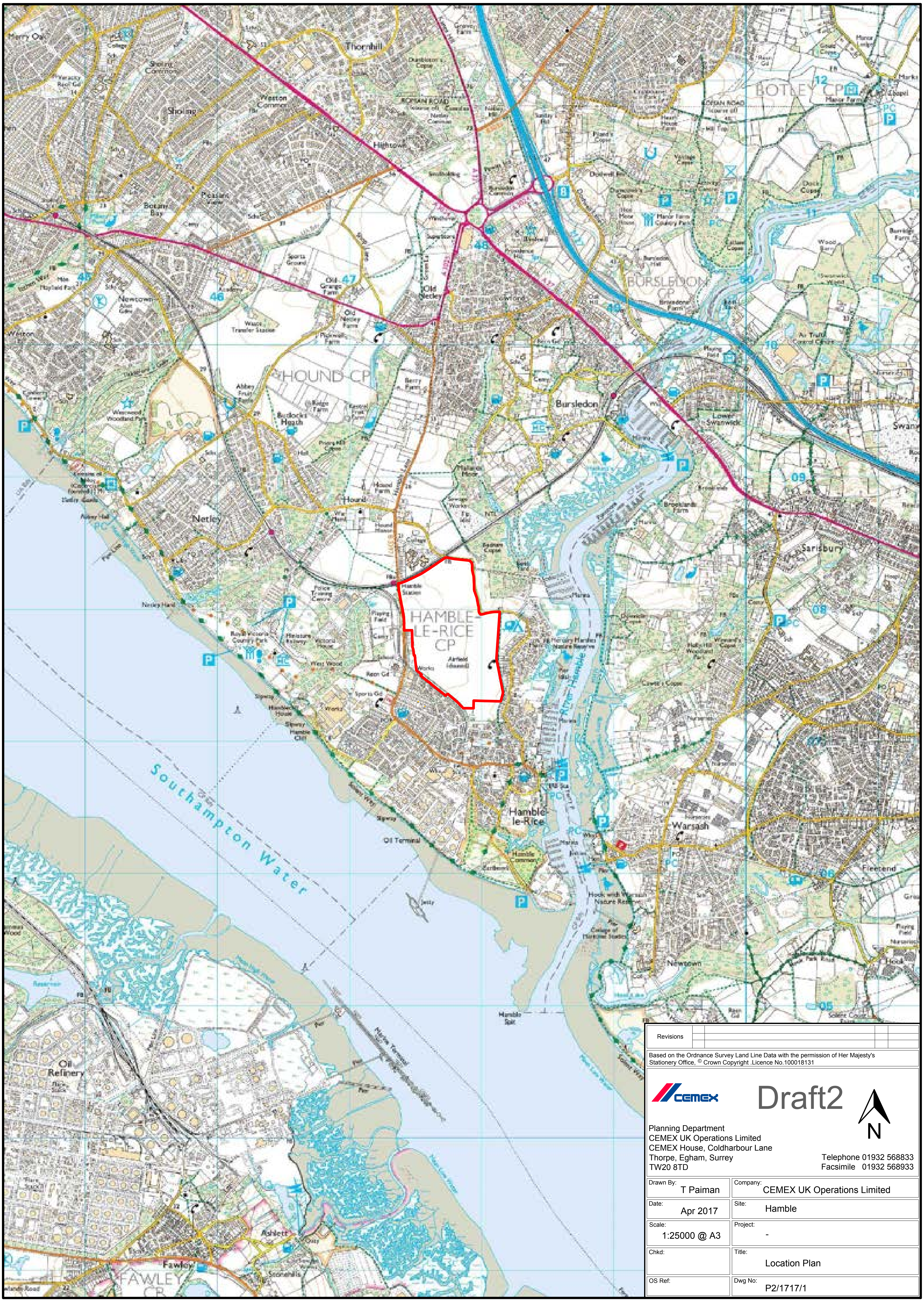
- Potential for asbestos containing material fragments within the ground from possible localised ground stability improvement and from use within aircraft components.
- Potential for a range of contaminants, including oil and fuel hydrocarbons, associated with the former airfield use of the site.
- Potential for oil and fuel hydrocarbons from pipelines along the east of the site.

It should be noted that additional sources of contamination may become apparent during any future investigation and development of the site.

The risk of impact to identified receptors from the identified potential sources, in relation to the proposed use, is considered to be **very low to low**. As such, an intrusive investigation is not recommended for the proposed development to further assess the risks associated with potential contamination in the soil and groundwater. Given the proposed use of the site for mineral extraction, it is considered more appropriate to maintain a discovery strategy for the duration of the extraction works, such that evidence of contamination encountered during the development is reported to and assessed by a qualified geo-environmental consultant and significant impacts reported to the Local Authority and remediated appropriately.

Appropriate PPE is also recommended during any redevelopment of the site to address any as yet unidentified contamination that may be identified during the works.

FIGURE 1: STUDY AREA LOCATION PLAN



Revisions				

CEMEX

Draft2

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Drawn By: T Paiman	Company: CEMEX UK Operations Limited
Date: Apr 2017	Site: Hamble
Scale: 1:25000 @ A3	Project: -
Chkd:	Title: Location Plan
OS Ref:	Dwg No: P2/1717/1

FIGURE 2: STUDY AREA LAYOUT PLAN

Application Boundary

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Date: Apr 2017	Site: Hamble
Scale: 1:5000 @ A3	Project: -
Chkd:	Title: Site Plan
OS Ref:	Dwg No: P2/1717/2

APPENDIX 1: REPORT CONDITIONS

This report is produced solely for the benefit of **CEMEX** and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the Site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the Site.

This report is based on a visual Site inspection, study of readily accessible referenced historical records, information supplied by those parties noted in the text and preliminary discussions with local and Statutory Authorities. Some of the opinions are based on unconfirmed data and information and are presented in good faith without exhaustive clarification. Where ground contamination is suspected but no physical Site test results are available to confirm this, the report must be regarded as initial advice only, and further assessment should be undertaken prior to detailed activities related to the Site. Where test results undertaken by others have been made available these can only be regarded as a limited sample. The possibility of the presence of contaminants, not revealed by this research cannot be discounted.

Whilst confident in the findings detailed within this report because there are no exact UK definitions of these matters, being subject to risk analysis, we are unable to give categoric assurances that they will be accepted by Authorities or Funds etc. without question, as such bodies may have unpublished, often more stringent objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to Ground Condition Consultants Ltd. In time improved practices or amended legislation may necessitate a re-assessment.

The report is necessarily limited to those aspects of land contamination specifically reported on and no liability is accepted for any other aspect especially concerning gradual or sudden pollution incidents that may occur. The opinions expressed cannot be absolute due to the limitations of time and resources within the context of the agreed brief and the possibility of unrecorded previous use and abuse of the Site and adjacent Sites. The report concentrates on the Site as defined in the report and provides an opinion on surrounding Sites. If migrating pollution or contamination (past or present) exists this can only practically be better assessed following extensive on and off Site intrusive investigations and monitoring.

APPENDIX 2: GROUNDSURE REPORT

Ground Condition Consultants Ltd

10, WALDEGRAVE CLOSE,
SOUTHAMPTON, SO19 9RY

Groundsure Reference:	GS-4789426
Your Reference:	Hamble
Report Date	8 Mar 2018
Report Delivery Method:	Email - pdf

Enviro Insight

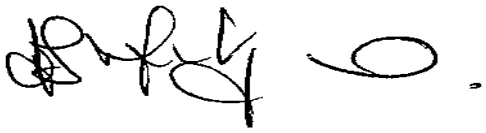
Address: HAMBLE AIRFIELD, HAMBLE-LE-RICE, SO31 4HU

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Enviro Insight

Address:	**HAMBLE AIRFIELD, HAMBLE-LE-RICE, SO31 4HU**
Date:	**8 Mar 2018**
Reference:	**GS-4789426**
Client:	**Ground Condition Consultants Ltd**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	04-Jun-2013
Grid Reference:	447792,107868
Site Size:	61.11ha

Report Reference: GS-4789426
Client Reference: Hamble

Contents Page

Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	11	20	57	84
1.2 Additional Information – Historical Tank Database	0	0	14	18
1.3 Additional Information – Historical Energy Features Database	0	0	17	51
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	1
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	2	7
1.6 Potentially Infilled Land	2	10	30	41

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	3
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	1
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	1	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	1	12
2.1.9 Records of Water Industry Referrals	0	0	0	1
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	1	0
2.2 Records of COMAH and NIHHS sites	0	0	0	2
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	2	1
2.3.2 National Incidents Recording System, List 1	0	0	1	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	1	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	2	1
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	1	2	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	5	1	0

Section 4: Current Land Use

	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	4	30	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	1
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology

5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology

	0-500m
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	1	3
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	1	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	0	0	3	14	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	2	7	5
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	1	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	3	3	2
8.5 Records of Ramsar sites	0	0	0	3	3	2
8.6 Records of Ancient Woodlands	0	0	3	2	3	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	1	3	3
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	0	1	2
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Moderate
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Moderate
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier “A” on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as “Not Shown”.

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use

Site Outline

250
500
Search Buffers (m)

Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Tanks

Garages

1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 172

ID	Distance [m]	Direction	Use	Date
1B	0	On Site	Unspecified Works	1971
2A	0	On Site	Air Field	1971
3A	0	On Site	Airfield	1971
4A	0	On Site	Disused Airfield	1989
5	0	On Site	Airfield	1957
6B	0	On Site	Unspecified Works	1971
7B	0	On Site	Unspecified Works	1971
8B	0	On Site	Unspecified Works	1989
9C	0	On Site	Cuttings	1942
10C	0	On Site	Cuttings	1908
11A	0	On Site	Air Field	1971
12D	1	NW	Cuttings	1931
13C	2	NW	Cuttings	1971
14C	2	NW	Cuttings	1989
15BP	2	E	Gravel Pit	1931
16D	2	NW	Cuttings	1896
17E	2	N	Cuttings	1971
18E	2	N	Cuttings	1971
19D	2	NW	Cuttings	1957
20	6	SW	Unspecified Commercial/Industrial	1957
21F	7	N	Cuttings	1942
22F	7	N	Cuttings	1908
23F	14	N	Cuttings	1971
24F	14	N	Cuttings	1971
25G	15	SW	Unspecified Works	1971
26H	15	E	Unspecified Ground Workings	1931
27G	16	SW	Unspecified Works	1971
28G	16	SW	Unspecified Works	1971
29	19	NW	Railway Station	1989
30G	23	SW	Unspecified Works	1989
31H	33	E	Gravel Pit	1908
32H	59	E	Gravel Pit	1896

33I	87	E	Unspecified Ground Workings	1957
34I	94	E	Unspecified Ground Workings	1942
35I	94	E	Unspecified Depot	1989
36I	95	E	Unspecified Depot	1971
37I	96	E	Unspecified Depot	1971
38I	96	E	Unspecified Depot	1971
39J	98	E	Unspecified Ground Workings	1971
40J	98	E	Unspecified Ground Workings	1971
41J	100	E	Unspecified Ground Workings	1989
42J	100	E	Unspecified Ground Workings	1971
43K	104	S	Railway Sidings	1931
44K	107	S	Railway Sidings	1942
45L	116	S	Unspecified Works	1971
46L	116	S	Unspecified Works	1971
47L	120	S	Unspecified Works	1989
48L	120	S	Unspecified Works	1971
49K	120	S	Railway Sidings	1957
50BQ	123	E	Unspecified Pit	1931
51M	135	N	Gravel Pit	1908
52M	135	N	Gravel Pit	1931
53N	139	E	Unspecified Works	1989
54N	139	E	Unspecified Works	1971
55P	139	N	Refuse Heap	1957
56N	141	E	Unspecified Works	1971
57N	141	E	Unspecified Works	1971
58M	144	N	Gravel Pit	1896
59O	154	NE	Unspecified Ground Workings	1942
60J	155	E	Unspecified Pit	1931
61O	161	NE	Unspecified Ground Workings	1971
62O	161	NE	Unspecified Ground Workings	1989
63O	162	NE	Gravel Pit	1931
64O	164	NE	Unspecified Ground Workings	1971
65O	164	NE	Unspecified Ground Workings	1971
66P	176	N	Unspecified Ground Workings	1971
67P	179	N	Unspecified Ground Workings	1971
68P	179	N	Unspecified Ground Workings	1971
69Q	181	N	Gravel Pit	1942

70Q	215	N	Railway Sidings	1971
71Q	215	N	Railway Sidings	1957
72R	221	S	Railway Building	1931
73R	222	S	Railway Building	1942
74R	228	S	Railway Building	1957
75T	233	W	Cemetery	1931
76U	241	N	Railway Sidings	1942
77S	243	W	Old Gravel Pit	1896
78S	243	W	Unspecified Pit	1942
79S	243	W	Old Gravel Pit	1908
80S	243	W	Unspecified Pit	1931
81S	245	W	Unspecified Pit	1871
82S	245	W	Unspecified Pit	1871
83S	247	W	Unspecified Pit	1989
84S	247	W	Unspecified Pit	1971
85S	247	W	Unspecified Pit	1957
86S	248	W	Unspecified Pit	1859
87S	249	W	Unspecified Ground Workings	1971
88S	249	W	Unspecified Ground Workings	1971
89T	255	W	Hospital Cemetery	1871
90T	255	W	Hospital Cemetery	1871
91Y	257	W	Cuttings	1896
92T	258	W	Cemetery	1942
93T	258	W	Cemetery	1908
94U	259	N	Railway Sidings	1971
95U	259	N	Railway Sidings	1971
96T	261	W	Cemetery	1859
97T	263	W	Cemetery	1957
98T	263	W	Cemetery	1896
99	272	E	Railway Sidings	1908
100V	276	E	Engine House	1931
101V	280	E	Engine House	1942
102V	280	E	Engine House	1908
103X	287	NE	Unspecified Works	1971
104W	296	E	Unspecified Pit	1971
105W	296	E	Unspecified Pit	1957
106W	303	E	Unspecified Pit	1931
107W	304	E	Unspecified Pit	1942
108BR	309	N	Gravel Pit	1989
109X	310	NE	Boat Yard	1989
110W	310	E	Unspecified Heap	1971
111W	310	E	Unspecified Heap	1971
112Y	317	W	Cuttings	1942
113Y	317	W	Cuttings	1908

114Y	317	W	Cuttings	1931
115AK	323	W	Cuttings	1957
116Z	328	W	Military Hospital	1971
117Z	328	W	Military Hospital	1971
118Z	331	W	Hospital	1971
119Z	332	W	Hospital	1957
120X	337	NE	Unspecified Works	1971
121X	337	NE	Unspecified Works	1971
122AA	356	E	Unspecified Heap	1931
123AA	356	E	Unspecified Ground Workings	1908
124AA	356	E	Unspecified Ground Workings	1942
125AA	358	E	Unspecified Heap	1896
126AB	367	S	Fire Station	1971
127AB	367	S	Fire Station	1971
128AC	370	W	Mental Hospital	1931
129BS	395	E	Unspecified Heap	1931
130AC	395	W	Mental Hospital	1908
131AC	395	W	Mental Hospital	1942
132AD	402	SW	Unspecified Commercial/Industrial	1957
133AE	404	NE	Unspecified Heap	1908
134AD	405	SW	Unspecified Works	1989
135AD	405	SW	Unspecified Works	1971
136AI	408	SW	Unspecified Commercial/Industrial	1931
137AE	412	NE	Unspecified Heap	1931
138AD	413	S	Unspecified Works	1971
139AD	413	S	Unspecified Works	1971
140AH	414	SW	Unspecified Works	1989
141AE	414	NE	Unspecified Heap	1942
142AF	418	N	Sewage Works	1989
143AF	418	N	Unspecified Works	1971
144AF	419	N	Unspecified Works	1971
145AF	419	N	Unspecified Works	1971
146AG	421	E	Unspecified Heap	1931
147AG	421	E	Unspecified Heap	1931
148AH	422	SW	Unspecified Works	1971
149AH	422	SW	Unspecified Works	1971
150AH	423	SW	Unspecified Works	1971
151AI	424	S	Railway Sidings	1931
152	425	S	Fire Station	1989
153AG	430	E	Unspecified Heap	1931
154AJ	435	S	Grave Yard	1871
155AJ	435	S	Grave Yard	1871
156	439	W	Mental Hospital	1957

157AJ	441	S	Grave Yard	1859
158BM	450	S	Fire Station	1971
159AK	456	W	Cuttings	1971
160AK	456	W	Cuttings	1971
161AC	456	W	Hospital	1896
162AF	457	N	Unspecified Tanks	1989
163AF	457	N	Unspecified Tanks	1971
164AK	458	W	Cuttings	1989
165AK	458	W	Cuttings	1971
166BO	485	S	Smithy	1896
167AL	486	SE	Unspecified Beds	1859
168AL	490	SE	Oyster Beds	1871
169AL	490	SE	Oyster Beds	1871
170AM	492	S	Unspecified Works	1971
171AM	493	S	Unspecified Works	1971
172AM	493	S	Unspecified Works	1971

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary: 32

ID	Distance (m)	Direction	Use	Date
173AN	73	SW	Unspecified Tank	1985
174AN	74	SW	Unspecified Tank	1985
175AO	97	SW	Unspecified Tank	1964
176AO	97	SW	Unspecified Tank	1959
177	122	NW	Tanks	1983
178K	141	S	Unspecified Tank	1964
179N	170	E	Unspecified Tank	1986
180N	170	E	Unspecified Tank	1993
181AP	228	S	Unspecified Tank	1959
182AP	229	S	Unspecified Tank	1964
183AQ	233	SE	Unspecified Tank	1986
184AQ	233	SE	Unspecified Tank	1993
185AR	236	S	Unspecified Tank	1993
186AR	236	S	Unspecified Tank	1986
187AT	357	NE	Tanks	1959
188AS	379	SE	Unspecified Tank	1986
189AS	380	SE	Unspecified Tank	1994
190AS	380	SE	Unspecified Tank	1986
191AT	399	NE	Unspecified Tank	1964

192AU	419	S	Unspecified Tank	1985
193AU	420	S	Unspecified Tank	1985
194AV	426	W	Tanks	1993
195AV	427	W	Tanks	1986
196AW	449	N	Unspecified Tank	1964
197AW	449	N	Unspecified Tank	1959
198AW	450	N	Unspecified Tank	1983
199AW	452	N	Unspecified Tank	1959
200AW	452	N	Unspecified Tank	1983
201AW	452	N	Unspecified Tank	1964
202AF	480	N	Tanks	1983
203AF	480	N	Tanks	1959
204AF	481	N	Tanks	1964

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary: 68

ID	Distance (m)	Direction	Use	Date
205AX	95	E	Electricity Substation	1986
206AX	95	E	Electricity Substation	1993
207AY	109	SE	Electricity Substation	1993
208AY	114	SE	Electricity Substation	1986
209	147	NW	Gas Governor	1983
210AZ	149	SW	Electricity Substation	1985
211AZ	149	SW	Electricity Substation	1993
212BA	186	S	Electricity Substation	1986
213BA	186	S	Electricity Substation	1993
214BB	187	SE	Electricity Substation	1989
215BB	194	SE	Electricity Substation	1986
216BB	195	SE	Electricity Substation	1993
217	206	E	Gas Governor	1986
218BC	223	E	Electricity Substation	1989
219BC	229	E	Electricity Substation	1986
220BD	235	NW	Electricity Substation	1959
221BD	236	NW	Electricity Substation	1983
222	253	NE	Electricity Substation	1959
223BE	284	S	Electricity Substation	1984
224BE	284	S	Electricity Substation	1993
225	310	NW	Gas Governor	1983
226BF	322	SW	Electricity Substation	1985

227BF	322	SW	Electricity Substation	1991
228BF	323	SW	Electricity Substation	1985
229BF	323	SW	Electricity Substation	1993
230BF	323	SW	Electricity Substation	1994
231	362	SW	Electricity Substation	1985
232AE	367	NE	Electricity Substation	1959
233AU	380	S	Gas Governor	1984
234AU	380	S	Gas Governor	1985
235AU	381	S	Gas Governor	1993
236BH	411	SW	Electricity Substation	1959
237BG	414	S	Electricity Substation	1994
238BG	414	S	Electricity Substation	1973
239BG	415	S	Electricity Substation	1986
240BG	415	S	Electricity Substation	1986
241BG	415	S	Electricity Substation	1988
242BG	415	S	Electricity Substation	1988
243BG	415	S	Electricity Substation	1989
244BG	415	S	Electricity Substation	1988
245BG	415	S	Electricity Substation	1989
246BH	417	SW	Electricity Substation	1985
247AI	420	SW	Electricity Substation	1985
248BI	421	SW	Gas Governor	1985
249BI	422	SW	Gas Governor	1993
250	423	SW	Electricity Substation	1985
251BJ	428	SW	Electricity Substation	1985
252BJ	429	SW	Electricity Substation	1993
253AI	429	SW	Electricity Substation	1984
254AI	429	SW	Electricity Substation	1993
255BH	429	SW	Gas Governors	1984
256BH	430	SW	Gas Governors	1993
257BI	432	SW	Electricity Substation	1959
258BI	433	SW	Electricity Substation	1993
259BK	466	SE	Electricity Substation	1973
260BK	466	SE	Electricity Substation	1994
261BK	467	SE	Electricity Substation	1988
262BK	467	SE	Electricity Substation	1988
263BK	467	SE	Electricity Substation	1989
264BK	467	SE	Electricity Substation	1988
265BK	467	SE	Electricity Substation	1989
266BK	467	SE	Electricity Substation	1986
267BK	467	SE	Electricity Substation	1986
268BL	481	NW	Electricity Substation	1959
269BL	483	NW	Electricity Substation	1983
270BM	484	S	Electricity Substation	1985
271BM	484	S	Electricity Substation	1984
272BM	486	S	Electricity Substation	1993

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 1

ID	Distance (m)	Direction	Use	Date
273	499	SE	Filling Station	1973

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 9

ID	Distance (m)	Direction	Use	Date
274	143	E	Repair Yard	1993
275	144	E	Repair Yard	1986
276BN	358	SW	Garage	1985
277BN	358	SW	Garage	1984
278BN	358	SW	Garage	1985
279BN	358	SW	Garage	1993
280BN	359	SW	Garage	1964
281BN	360	SW	Garage	1959
282BO	467	S	Garage	1963

1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 83

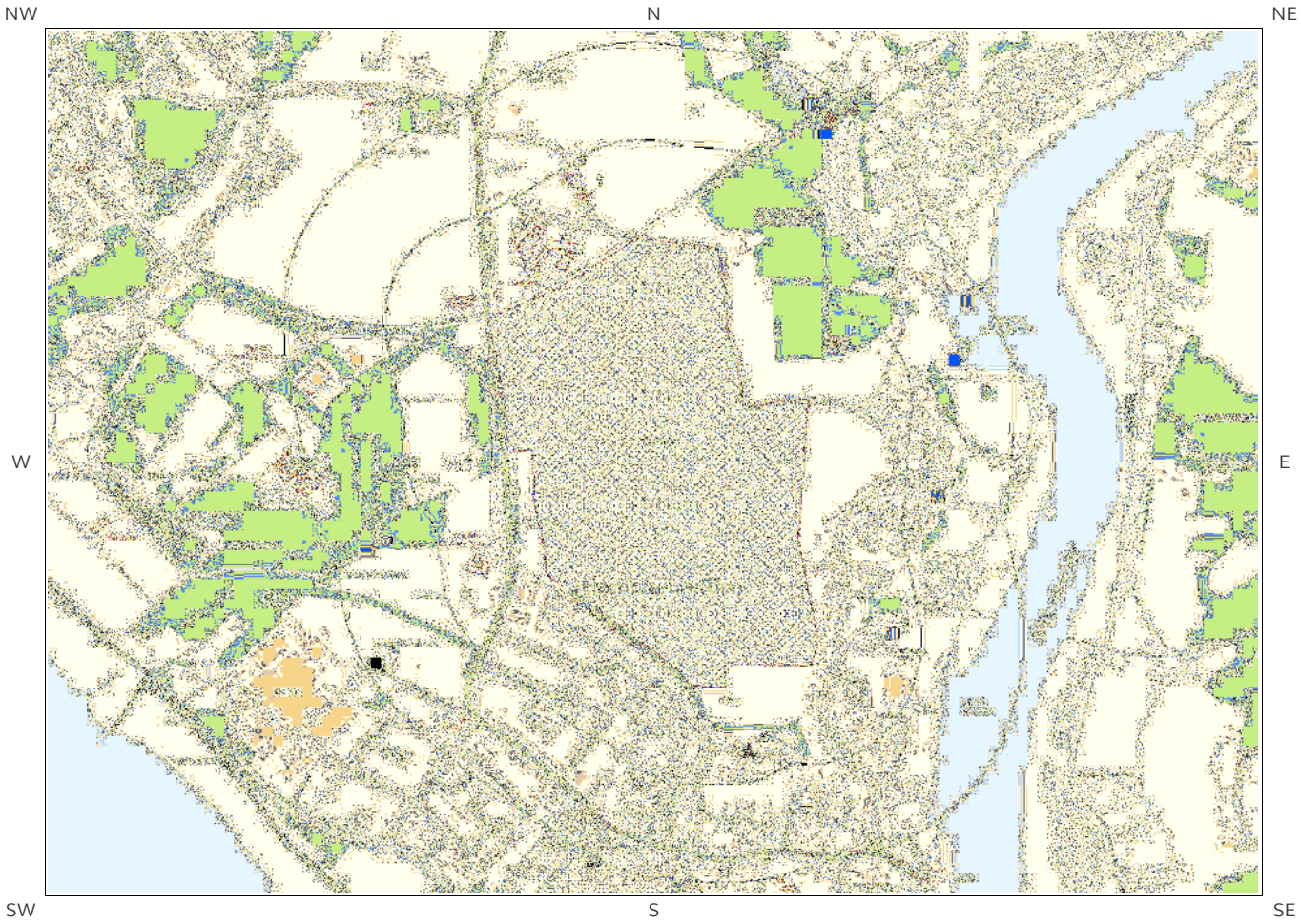
The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
283C	0	On Site	Cuttings	1942
284C	0	On Site	Cuttings	1908
285D	1	NW	Cuttings	1931
286C	2	NW	Cuttings	1989
287C	2	NW	Cuttings	1971
288BP	2	E	Gravel Pit	1931
289C	2	NW	Cuttings	1896

290D	2	NW	Cuttings	1957
291F	7	N	Cuttings	1908
292F	7	N	Cuttings	1942
293H	15	E	Unspecified Ground Workings	1931
294H	33	E	Gravel Pit	1908
295H	59	E	Gravel Pit	1896
296AY	76	SE	Pond	1908
297AY	76	SE	Pond	1942
298I	87	E	Unspecified Ground Workings	1957
299I	94	E	Unspecified Ground Workings	1942
300J	100	E	Unspecified Ground Workings	1989
301J	100	E	Unspecified Ground Workings	1971
302BQ	123	E	Unspecified Pit	1931
303M	135	N	Gravel Pit	1908
304M	135	N	Gravel Pit	1931
305P	139	N	Refuse Heap	1957
306M	144	N	Gravel Pit	1896
307O	154	NE	Unspecified Ground Workings	1942
308J	155	E	Unspecified Pit	1931
309O	161	NE	Unspecified Ground Workings	1971
310O	161	NE	Unspecified Ground Workings	1989
311O	162	NE	Gravel Pit	1931
312P	176	N	Unspecified Ground Workings	1971
313P	181	N	Gravel Pit	1942
314T	233	W	Cemetery	1931
315S	243	W	Old Gravel Pit	1908
316S	243	W	Unspecified Pit	1942
317S	243	W	Unspecified Pit	1931
318S	243	W	Old Gravel Pit	1896
319S	245	W	Unspecified Pit	1871
320S	245	W	Unspecified Pit	1871
321S	247	W	Unspecified Pit	1989
322S	247	W	Unspecified Pit	1971
323S	247	W	Unspecified Pit	1957
324S	248	W	Unspecified Pit	1859
325Y	257	W	Cuttings	1896
326T	258	W	Cemetery	1908
327T	258	W	Cemetery	1942
328T	261	W	Cemetery	1859
329T	263	W	Cemetery	1957

330T	263	W	Cemetery	1896
331W	296	E	Unspecified Pit	1971
332W	296	E	Unspecified Pit	1957
333W	303	E	Unspecified Pit	1931
334W	304	E	Unspecified Pit	1942
335BR	309	N	Gravel Pit	1989
336Y	317	W	Cuttings	1942
337Y	317	W	Cuttings	1931
338Y	317	W	Cuttings	1908
339AK	323	W	Cuttings	1957
340AS	351	SE	Pond	1859
341AS	356	SE	Ponds	1871
342AS	356	SE	Ponds	1871
343AA	356	E	Unspecified Heap	1931
344AA	356	E	Unspecified Ground Workings	1942
345AA	356	E	Unspecified Ground Workings	1908
346AA	358	E	Unspecified Heap	1896
347	392	SE	Pond	1859
348BS	395	E	Unspecified Heap	1931
349AE	404	NE	Unspecified Heap	1908
350AE	412	NE	Unspecified Heap	1931
351AE	414	NE	Unspecified Heap	1942
352AF	418	N	Sewage Works	1989
353AG	421	E	Unspecified Heap	1931
354AG	421	E	Unspecified Heap	1931
355BT	427	NE	Pond	1989
356BT	427	NE	Pond	1971
357AG	430	E	Unspecified Heap	1931
358AJ	435	S	Grave Yard	1871
359AJ	435	S	Grave Yard	1871
360AJ	441	S	Grave Yard	1859
361AK	458	W	Cuttings	1989
362AK	458	W	Cuttings	1971
363AL	486	SE	Unspecified Beds	1859
364AL	490	SE	Oyster Beds	1871
365AL	490	SE	Oyster Beds	1871

2. Environmental Permits, Incidents and Registers Map



Site Outline

250
500
Search Buffers (m)

Recorded Pollution Incident

Dangerous Substances (List 1)

Dangerous Substances (List 2)

Water Industry Referrals

Licenced Discharge Consents

Red List Discharge Consents

RAS 3 & 4 Authorisations

Part A(1) Authorised Processes and Historic IPC Authorisations

Part A(2) and Part B Authorised Processes

COMAH / NIHHS Sites

Sites Determined as Contaminated Land

Hazardous Substance Consents and Enforcements

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

3

The following IPC Authorisations are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
27D	475	SW	447100 107300	Operator: Aerostructures Hamble Ltd Address: Building Number 84, Titanium Etch Department, Kings Avenue, Hamble, Southampton, SO31 4NF Process: Acid Processes	Permit Number: BF1718 Original Permit Number: IPCMINVAR Date Approved: 31-1-1999 Effective Date: 31-1-1999 Status: Revoked - Now Ippc
28D	475	SW	447100 107300	Operator: Aerostructures Hamble Ltd Address: Building Number 84, Titanium Etch Department, Kings Avenue, Hamble, Southampton, SO31 4NF Process: Acid Processes	Permit Number: AL9556 Original Permit Number: IPCAIRAPP Date Approved: 23-5-1995 Effective Date: 1-6-1995 Status: Superseded By Variation
29D	475	SW	447100 107300	Operator: Aerostructures Hamble Ltd Address: Building Number 84, Titanium Etch Department, Kings Avenue, Hamble, Southampton, SO31 4NF Process: Acid Processes	Permit Number: BC8040 Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

1

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
5A	436	NE	448200 108700	Name: Bursledon S.t.w. Status: Active Receiving Water: None	Authorised Substances: Iron

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2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

1

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
22	175	S	448000 107079	Address: Glover Webb, Hamble Lane, Hamble, Hampshire, SO31 4NY Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

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2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
6	180	E	448350 107380	Address: SATCHELL LANE, SATCHELL LANE, HAMBLE HAMPSHIRE Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: W00294 Permit Version: 1	Receiving Water: SALINE ESTUARY Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/07/1977 Effective Date: 18-Jul-1977 Revocation Date: 17/02/1998
7	331	E	448460 107730	Address: HAMBLE WAY ESTATE, HAMBLE WAY ESTATE, OFF SATCHELL LANE, HAMSBLE, HAMPSHIRE Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: N01254 Permit Version: 1	Receiving Water: SALINE ESTUARY Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/10/1978 Effective Date: 18-Oct-1978 Revocation Date: 14/01/2000
8	368	E	448500 108080	Address: RIVERSIDE CARAVAN PARK, RIVERSIDE CARAVAN PARK, SATCHELL LANE, HAMBLE, HAMPSHIRE, SO31 4HR Effluent Type: SEWAGE DISCHARGES - UNSPECIFIED - NOT WATER COMPANY Permit Number: H01159 Permit Version: 1	Receiving Water: SALINE ESTUARY Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 13/04/1962 Effective Date: 13-Apr-1962 Revocation Date: 11/02/2010
9A	399	NE	448190 108660	Address: SALTERNS LANE BURSLEDON CEO, SALTERNS LANE BURSLEDON CEO, SALTERNS LANE, BURSLEDON, SOUTHAMPTON, HAMPSHIRE, SO31 8DH Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: A01282 Permit Version: 1	Receiving Water: BADNAM CREEK Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 30/04/2007 Effective Date: 30-Apr-2007 Revocation Date: -
10	418	W	447080 107590	Address: MOUNT PLEASANT PLAYING FIELD, MOUNT PLEASANT PLAYING FIELD, HAMBLE HAMPSHIRE Effluent Type: SEWAGE DISCHARGES - UNSPECIFIED - NOT WATER COMPANY Permit Number: H01080 Permit Version: 1	Receiving Water: FRESHWATER RIVER Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 05/02/1965 Effective Date: 05-Feb-1965 Revocation Date: 31/03/1997
11B	431	NE	448150 108730	Address: HAMBLE LANE BURSLEDON WASTEWATER PS, HAMBLE LANE, BURSLEDON, HAMPSHIRE, SO31 8DH Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: EPRGB3099NQ Permit Version: 2	Receiving Water: RIVER HAMBLE ESTUARY Status: VARIED UNDER EPR 2010 Issue date: 11/07/2017 Effective Date: 11-Jul-2017 Revocation Date: -
12B	431	NE	448150 108730	Address: HAMBLE LANE BURSLEDON WASTEWATER PS, HAMBLE LANE, BURSLEDON, HAMPSHIRE, SO31 8DH Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: EPRGB3099NQ Permit Version: 2	Receiving Water: RIVER HAMBLE ESTUARY Status: VARIED UNDER EPR 2010 Issue date: 11/07/2017 Effective Date: 11-Jul-2017 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details	
13A	436	NE	448200 108700	Address: BURSLEDON S.T.W., BURSLEDON S.T.W., HAMBLE LANE, BURSLEDON, SOUTHAMPTON, HAMPSHIRE, SO31 8DH Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: W00318 Permit Version: 1	Receiving Water: BADNAM CREEK Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 05/12/1984 Effective Date: 05-Dec-1984 Revocation Date: 30/03/2004
14B	437	NE	448158 108733	Address: HAMBLE LANE BURSLEDON WASTEWATER PS, HAMBLE LANE, BURSLEDON, HAMPSHIRE, SO31 8DH Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: EPRGB3099NQ Permit Version: 1	Receiving Water: RIVER HAMBLE ESTUARY Status: NEW ISSUED UNDER EPR 2010 Issue date: 29/11/2013 Effective Date: 11-Jun-2014 Revocation Date: 10/07/2017
15B	437	NE	448158 108733	Address: HAMBLE LANE BURSLEDON WASTEWATER PS, HAMBLE LANE, BURSLEDON, HAMPSHIRE, SO31 8DH Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: EPRGB3099NQ Permit Version: 1	Receiving Water: RIVER HAMBLE ESTUARY Status: NEW ISSUED UNDER EPR 2010 Issue date: 29/11/2013 Effective Date: 11-Jun-2014 Revocation Date: 10/07/2017
16B	439	NE	448150 108740	Address: BURSLEDON S.D.W., BURSLEDON S.D.W., BADNAM CREEK, HAMPSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: H01155 Permit Version: 1	Receiving Water: SALINE ESTUARY Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 01/02/1961 Effective Date: 01-Feb-1961 Revocation Date: 14/01/2000
17	458	NE	448530 108230	Address: SATCHELL LANE PSD, SATCHELL LANE PSD, SATCHELL LANE, HAMBLE, HAMPSHIRE Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: P06172 Permit Version: 1	Receiving Water: SALINE ESTUARY Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 25/07/1996 Effective Date: 25-Jul-1996 Revocation Date: -
18C	484	NE	448250 108720	Address: SALTERNS LANE PS, SALTERNS LANE PS, SALTERNS LANE, BURSLEDON, SOUTHAMPTON, HAMPSHIRE, SO31 8DH Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: W00289 Permit Version: 1	Receiving Water: RIVER HAMBLE ESTUARY Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 02/10/1979 Effective Date: 02-Oct-1979 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

1

The following Water Industry Referral records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Address	Permission reference	Local Authority	First Date Received	Last Date Received	Status
30D	475	SW	AEROSTRUCTURES HAMBLE LTD, KINGS AVENUE, KINGS AVENUE, HAMBLE, SOUTHAMPTON, SO3 5NF	AH8611	FAREHAM BOROUGH COUNCIL	01-Jun-2001	01-Oct-2017	EFFECTIVE

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

1

The following records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
31E	154	NE	No Details	448212 108119	Historical Consent	01/12/2006	Ministry Of Defence, Satchell Lane PSD, Satchell Lane, Hamble, Hants, SO31 4HQ	Storage and distribution of refined hydrocarbon liquids. 61,000 cubic metres (Gasolines, Kerosines, and Gasoils), 25 cubic metres (Di-ethylene Glycol Mono Methyl Ether), 1 cubic metre (Hi-Tec), 1 Cubic Metre (Stadis 450)	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 2

The following COMAH & NIHHS Authorisation records provided by the Health and Safety Executive are represented as polygons or buffered points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Company	Address	Operational Status	Tier
23	406	SW	Bp Oil (uk) Ltd	Bp Oil (uk) Ltd, Hamble Lane, Hamble, Southampton, SO31 4NR	Historical NIHHS Site	-
24	491	S	Bp Oil UK Ltd	Bp Oil UK Ltd, Hamble Bp Terminal, Hamble Lane, Southampton, Hampshire, SO31 4NR	Current COMAH Site	COMAH Upper Tier Operator

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

3

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
1	166	NW	447600 108502	Incident Date: 12-Mar-2003 Incident Identification: 142610 Pollutant: Inert Materials and Wastes Pollutant Description: Rocks and Gravel	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2	228	NW	447560 108550	Incident Date: 26-Jun-2003 Incident Identification: 169109 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3C	478	NE	448244 108717	Incident Date: 08-Feb-2002 Incident Identification: 57169 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

1

The following NIRS List 1 records are represented as points on the Environmental Permits, Incidents and Registers Map:

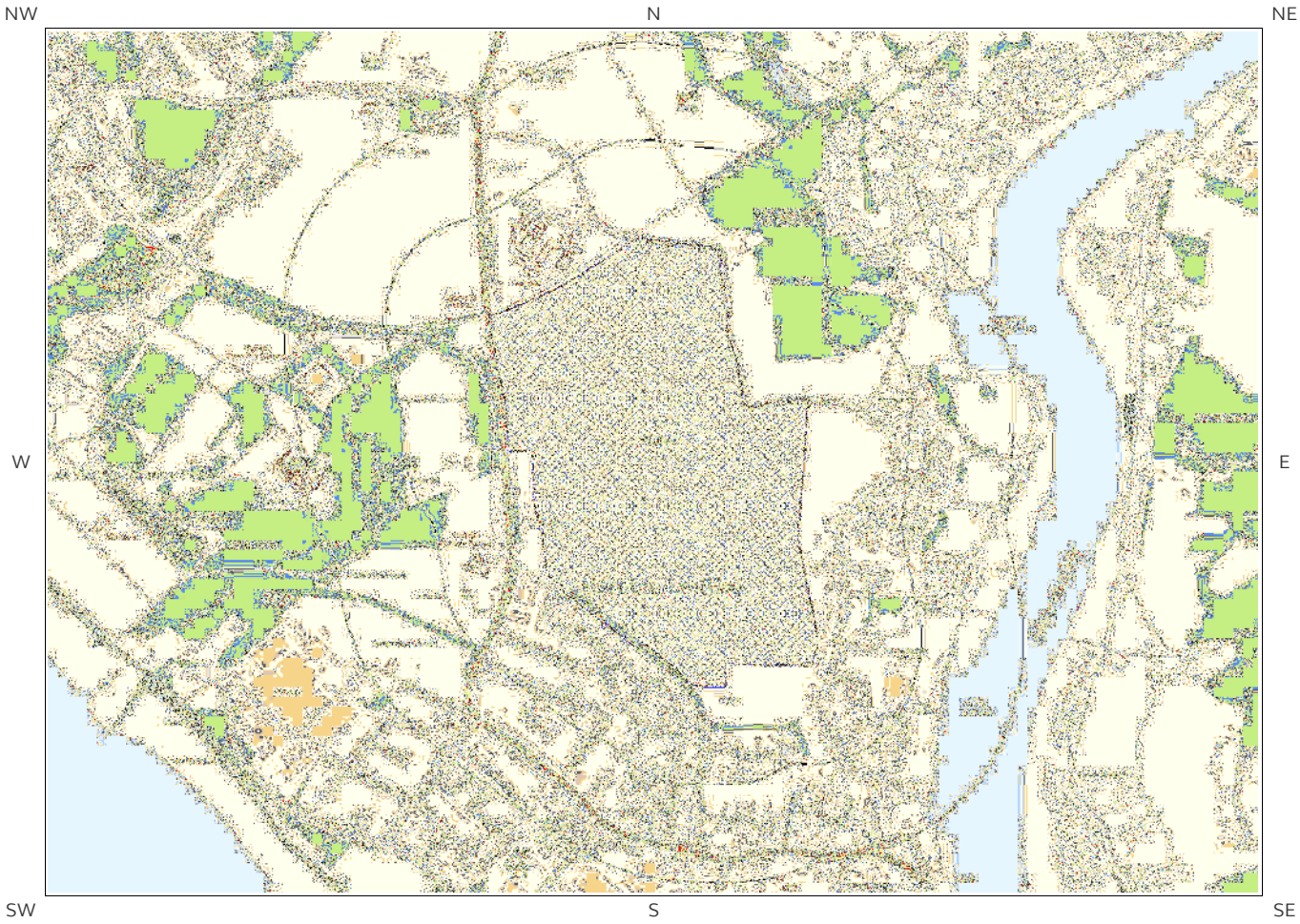
ID	Distance(m)	Direction	NGR	Details	
4	129	W		Incident Date: 05-Jul-1999 Incident Identification: 1240.0 Catchments Name: HAMBLE (NIRS) Water Description: RIVER STRETCH (FRESHWATER) Water Course: LOWER HAMBLE (NIRS) Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: Significant Impact Land Impact: Minor Impact Air Impact: No Impact Action Taken: Prosecution

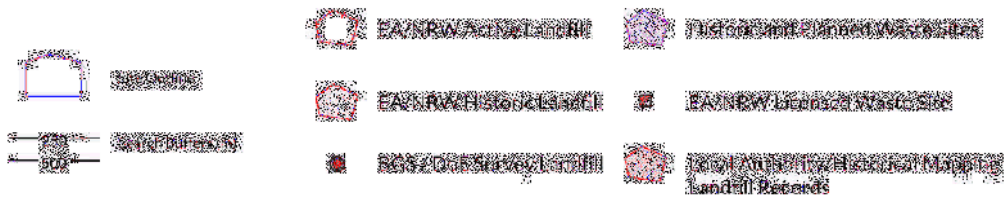
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site? 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map





3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

1

The following Environment Agency/Natural Resources Wales landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
1A	131	N	447850 108740	Address: Mallards Moor Sandpit, Hound, Hampshire Landfill Reference: 19922.0 Environmental Permitting Regulations (Waste) Reference: LEI002 Landfill Type: A05: Landfill taking Non-Biodegradeable Wastes	Operator: Leigh Environmental (Southern) Ltd Status: Closure IPPC Reference: EPR Reference:

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

3

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
2	737	NW	446600 108500	Site Address: Spear Pond Gully, Off Hound Road, Netley Waste Licence: - Site Reference: FEA25, E 3 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
3C	838	W	446400 108300	Site Address: Land Off Hound Road, Butlocks Heath Waste Licence: - Site Reference: FEA21 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	1073	N	448000 109700	Site Address: Recreation Ground At Pilands Wood, Pilands Wood and Warwick Crescent, Bursledon, Southampton Waste Licence: - Site Reference: FEA29 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

3

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
11	483	SW	447513 106874	Refuse Tip	1964 mapping	Polygon
12	587	SW	447436 106797	Refuse Tip	1964 mapping	Polygon
13C	826	W	446475 108311	Refuse Tip	1964 mapping	Polygon

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

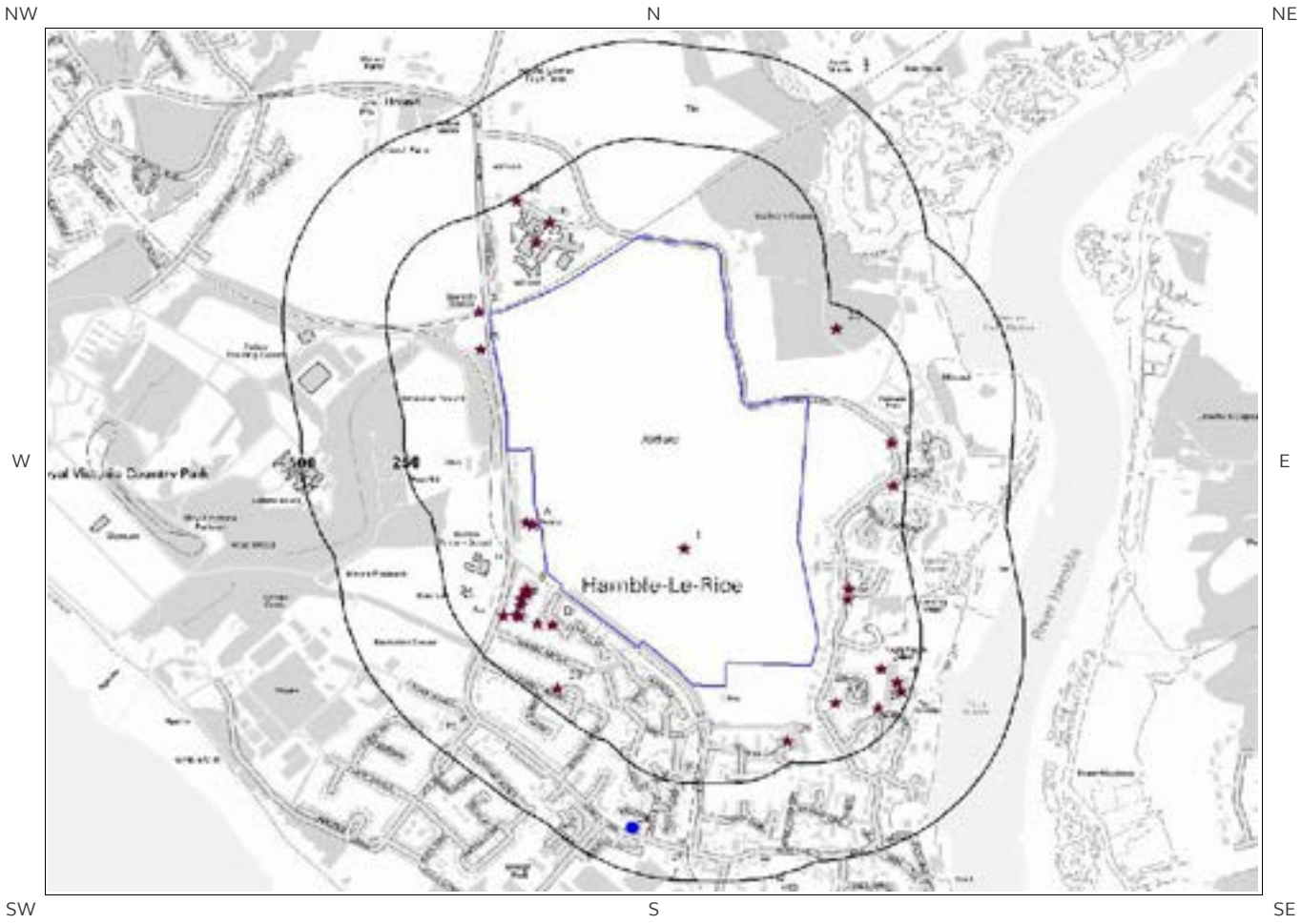
6

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
5A	362	N	447850 108740	Site Address: Mallards Moor Sandpit, Hound, Hampshire Type: Landfill taking Non-Biodegradeable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LEI002 EPR reference: EA/EPR/FP3492HN/V002 Operator: Leigh Environmental (Southern) Ltd Waste Management licence No: 19922 Annual Tonnage: 74999.0	Issue Date: 18/07/1994 Effective Date: - Modified: 09/08/2000 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Mallards Moor Sandpit Correspondence Address: Mallards Moor Sandpit, Hound, Hampsh
6A	362	N	447850 108740	Site Address: Mallards Moor Sandpit, Hound, Hampshire Type: Landfill taking Non-Biodegradeable Wastes Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LEI002 EPR reference: FP3492HN/V002 Operator: Leigh Environmental (Southern) Ltd Waste Management licence No: 19922 Annual Tonnage: 74999.0	Issue Date: 18/07/1994 Effective Date: - Modified: 09/08/2000 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Mallards Moor Sandpit Correspondence Address: Mallards Moor Sandpit, Hound, Hampsh
7A	362	N	447850 108740	Site Address: Mallards Moor Sandpit, Hound, Hampshire Type: Landfill taking Non-Biodegradeable Wastes Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LEI002 EPR reference: - Operator: Leigh Environmental (southern) Ltd Waste Management licence No: 19922 Annual Tonnage: 0.0	Issue Date: 18/07/1994 Effective Date: - Modified: 09/08/2000 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Mallards Moor Sandpit Correspondence Address: Dundas Spar, Dundas Lane, Copnor, Portsmouth, Hampshire, PO3 5NY
8B	425	S	447846 106823	Site Address: Land / Premises At, Hamble Lane, Hamble Le Rice, Southampton, Hampshire, SO31 4NR Type: Biological Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BPO003 EPR reference: EA/EPR/JP3495HP/A001 Operator: B P Oil Uk Ltd Waste Management licence No: 10249 Annual Tonnage: 1000.0	Issue Date: 22/02/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: B P Hamble Oil Terminal Correspondence Address: Land / Premises At, Hamble Lane, Hamble Le Rice, Southampton, Hampshire, SO31

ID	Distance (m)	Direction	NGR	Details	
9B	425	S	447846 106823	Site Address: B P Hamble Oil Terminal, Hamble Lane, Hamble Le Rice, Southampton, Hampshire, SO31 4NR Type: Biological Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BPO003 EPR reference: EA/EPR/JP3495HP/S002 Operator: B P Oil U K Ltd Waste Management licence No: 10249 Annual Tonnage: 0.0	Issue Date: 22/02/2005 Effective Date: - Modified: - Surrendered Date: 28/11/2013 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: B P Hamble Oil Terminal Correspondence Address: B P Hamble Oil Terminal, Hamble Lane, Hamble Le Rice, Southampton, Hampshire, SO31
10	830	W	446560 108350	Site Address: Unit 7, The Sidings, Hound Road, Netley Abbey, Hampshire, SO31 5QA Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: JOH001 EPR reference: EA/EPR/CP3892HR/S002 Operator: Johnsons Washroom Services Ltd Waste Management licence No: 19931 Annual Tonnage: 135.0	Issue Date: 24/07/1992 Effective Date: 23/07/2002 Modified: - Surrendered Date: 06/04/2004 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Netley Abbey Correspondence Address: Unit 7, The Sidings, Hound Road, Netley Abbey, Hampshire, SO31

4. Current Land Use Map



Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 35

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Hamble-Le-Rice Airfield (Disused)	447846 107598	SO31	Airports and Landing Strips	Air
2A	12	W	Hamble Self Storage Co Ltd	447480 107658	Hamble Lane, Hamble, Southampton, SO31 4HU	Container and Storage	Transport, Storage and Delivery
3	28	W	Hamble Rail Station	447348 108203	SO31	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure
4A	30	W	Works	447462 107664	SO31	Unspecified Works Or Factories	Industrial Features
5	32	W	Hamble Garage	447353 108105	Concept Court, Hamble Lane, Hamble, Southampton, SO31 4NL	Vehicle Repair, Testing and Servicing	Repair and Servicing
6B	65	SW	Wild Group International	447465 107491	Office A Hamble Court Business Park, Hamble Lane, Hamble, Southampton, SO31 4QJ	Marine Equipment Including Boats and Ships	Industrial Products
7B	68	SW	Hamble Court Estates	447462 107490	Office C Hamble Court Business Park, Hamble Lane, Hamble, Southampton, SO31 4QJ	Special Purpose Machinery and Equipment	Industrial Products
8B	68	SW	Yacht Tec Ltd	447462 107490	Unit 1 Hamble Court Business Park, Hamble Lane, Hamble, Southampton, SO31 4QJ	Marine Engineers and Services	Engineering Services
9B	68	SW	Advanced Coatings Paint Mixers & Distributors	447462 107490	Office A Hamble Court Business Park, Hamble Lane, Hamble, Southampton, SO31 4QJ	Industrial Coatings and Finishings	Industrial Products
10B	73	SW	Works	447462 107483	SO31	Unspecified Works Or Factories	Industrial Features
11D	81	SW	Smart Auto Mobile Wash & Valet	447527 107404	35, Tutor Close, Hamble, Southampton, SO31 4RU	Vehicle Cleaning Services	Personal, Consumer and Other Services
12C	88	E	The Superyacht Shop	448241 107467	68, Satchell Lane, Hamble, Southampton, SO31 4HL	Clothing, Components and Accessories	Consumer Products
13B	90	SW	Avko Ltd	447450 107469	Office B Hamble Court Business Park, Hamble Lane, Hamble, Southampton, SO31 4QJ	Paints, Varnishes and Lacquers	Industrial Products
14C	97	E	Electricity Sub Station	448245 107495	SO31	Electrical Features	Infrastructure and Facilities

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
15D	104	SW	Galeforce 8	447489 107405	43, Tutor Close, Hamble, Southampton, SO31 4RU	Boat Hiring Services	Hire Services
16E	104	SW	Hamble Court Business Park	447450 107452	SO31	Business Parks and Industrial Estates	Industrial Features
17	112	SE	Electricity Sub Station	448212 107203	SO31	Electrical Features	Infrastructure and Facilities
18E	119	SW	Viking Life-saving Equipment	447448 107424	Hamble Court Business Park, Hamble Lane, Hamble, Southampton, SO31 4QL	Marine Engineers and Services	Engineering Services
19E	124	SW	Works	447440 107428	SO31	Unspecified Works Or Factories	Industrial Features
20	125	NW	Tank	447488 108379	SO31	Tanks (Generic)	Industrial Features
21F	149	NW	Gas Governor Station	447521 108428	SO31	Gas Features	Infrastructure and Facilities
22F	150	NW	Gas Governor Station	447521 108429	SO31	Gas Features	Infrastructure and Facilities
23	151	SW	Electricity Sub Station	447409 107425	SO31	Electrical Features	Infrastructure and Facilities
24	165	E	Tank	448322 107290	SO31	Tanks (Generic)	Industrial Features
25	193	N	Depot	448214 108160	SO31	Container and Storage	Transport, Storage and Delivery
26	194	S	Electricity Sub Station	448096 107106	SO31	Electrical Features	Infrastructure and Facilities
27	196	SE	Electricity Sub Station	448315 107189	SO31	Electrical Features	Infrastructure and Facilities
28	202	SW	Motortrix Automotive Engineers	447539 107240	41, Sydney Avenue, Hamble, Southampton, SO31 4JQ	Vehicle Repair, Testing and Servicing	Repair and Servicing
29G	208	E	Gas Governor Station	448347 107867	SO31	Gas Features	Infrastructure and Facilities
30G	209	E	Gas Governor Station	448348 107867	SO31	Gas Features	Infrastructure and Facilities
31H	212	E	Grey Beard Yachting	448361 107255	Unit 15 Port Hamble Marina, Satchell Lane, Hamble-le-Rice, SO31 4NN	Marine Equipment Including Boats and Ships	Industrial Products
32	220	E	Electricity Sub Station	448351 107757	SO31	Electrical Features	Infrastructure and Facilities
33H	226	E	Stowaway Storage Ltd	448369 107233	Port Hamble, Hamble, Southampton, SO31 4NN	Container and Storage	Transport, Storage and Delivery
34H	226	E	Elvstrom Sails UK	448369 107233	Port Hamble, Hamble, Southampton, SO31 4NN	Marine Equipment Including Boats and Ships	Industrial Products
35	242	NW	Electricity Sub Station	447439 108486	SO31	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
36	394	S	447719 106883	Obsolete	Hamble Service Station, Hamble Lane, Hamble Lane, Hamble, Southampton, Hampshire, SO50 9JH	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
RTD3-XSV	RIVER TERRACE DEPOSITS, 3	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

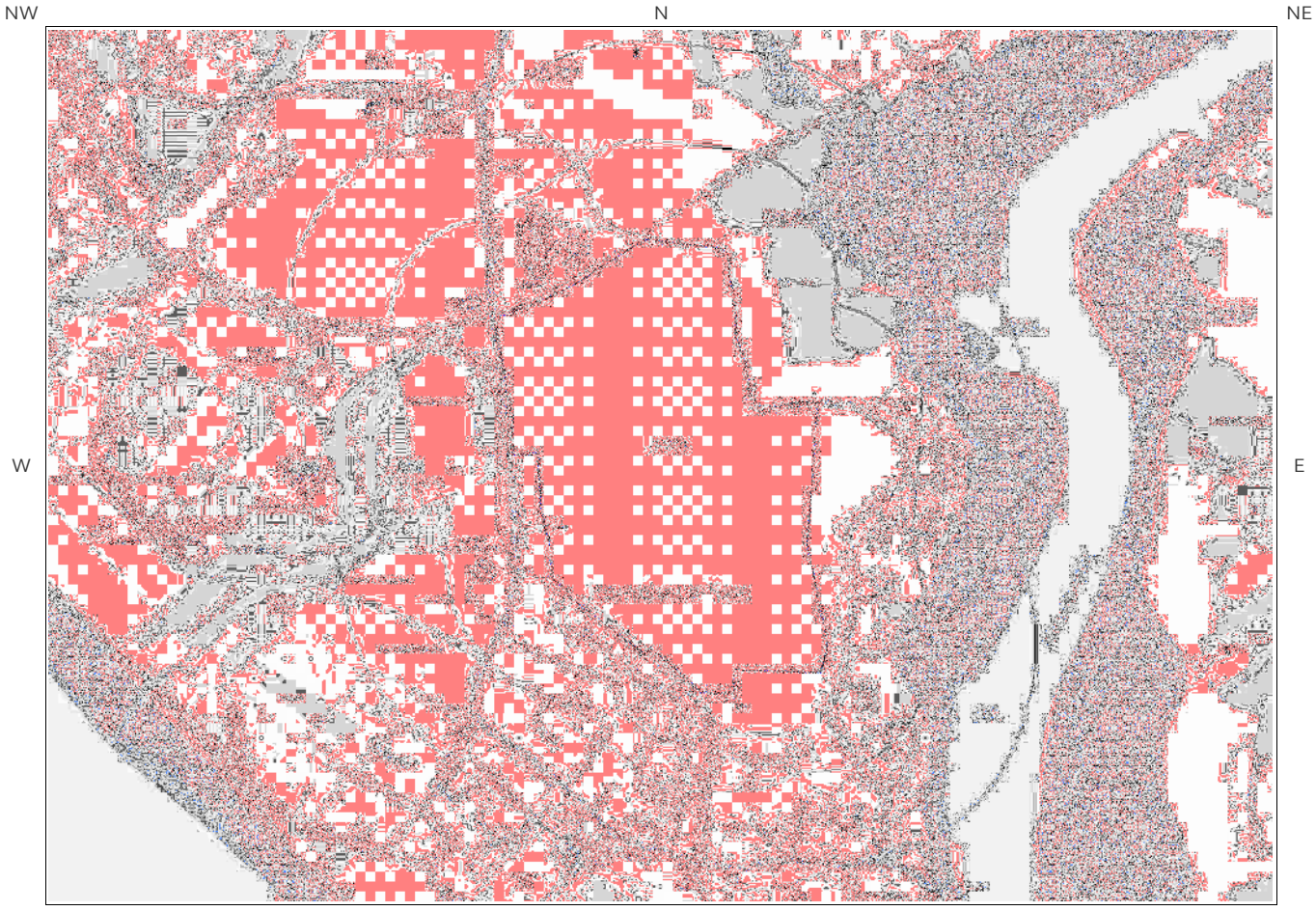
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
SLSY-XSZC	SELSEY SAND FORMATION	SAND, SILT AND CLAY
MARF-CLSISA	MARSH FARM FORMATION	CLAY, SILT AND SAND
EA-XSZC	EARNLEY SAND FORMATION	SAND, SILT AND CLAY

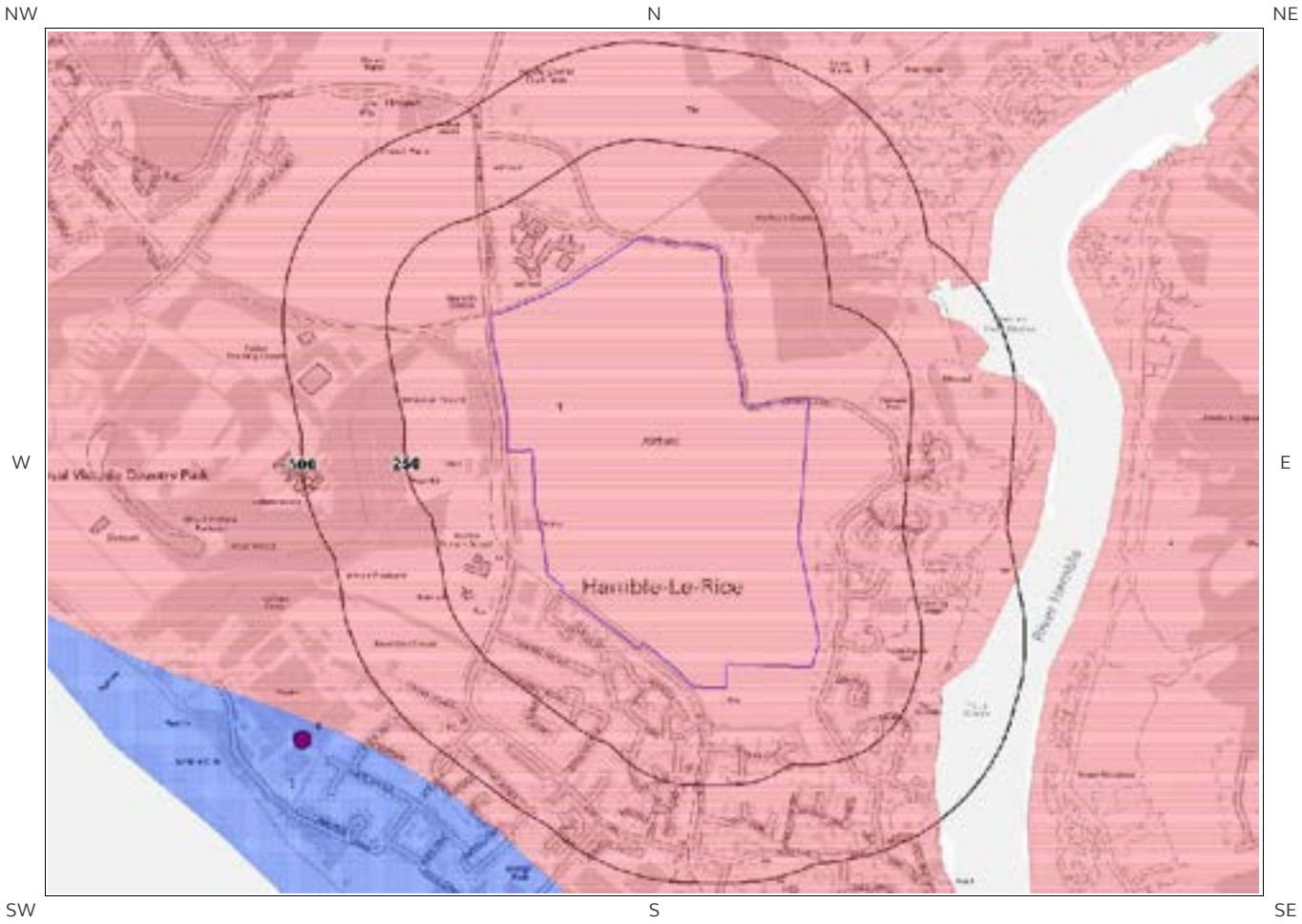
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

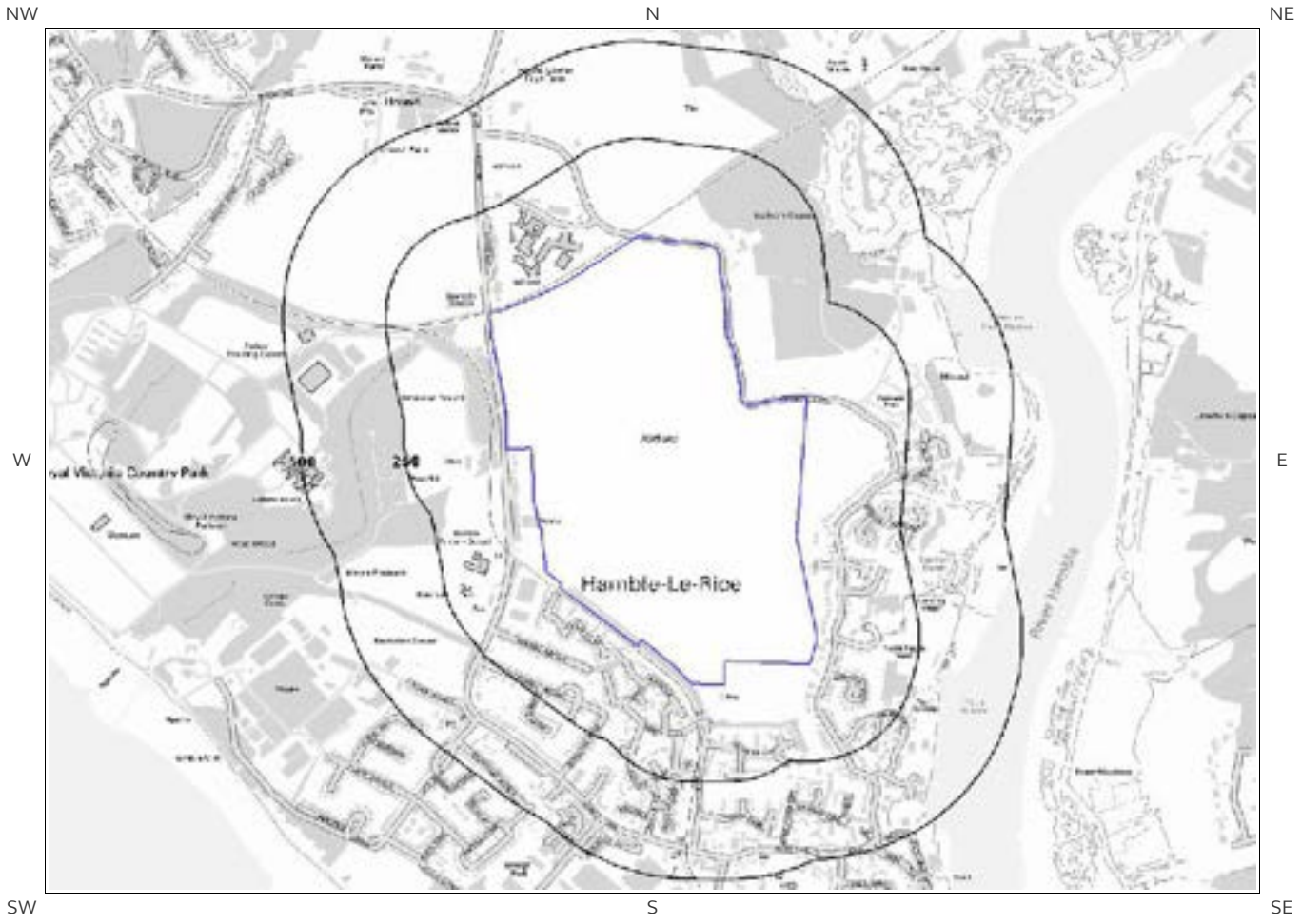
6a. Aquifer Within Superficial Geology

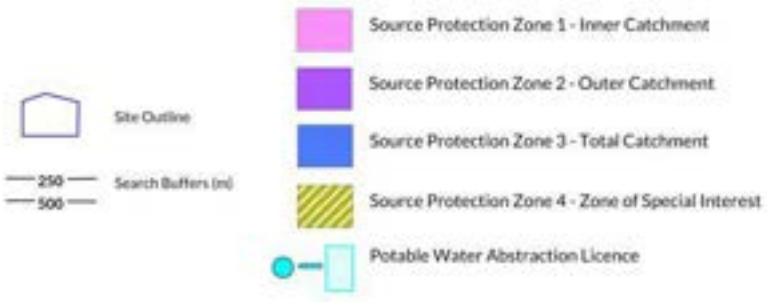


6b. Aquifer Within Bedrock Geology and Abstraction Licenses

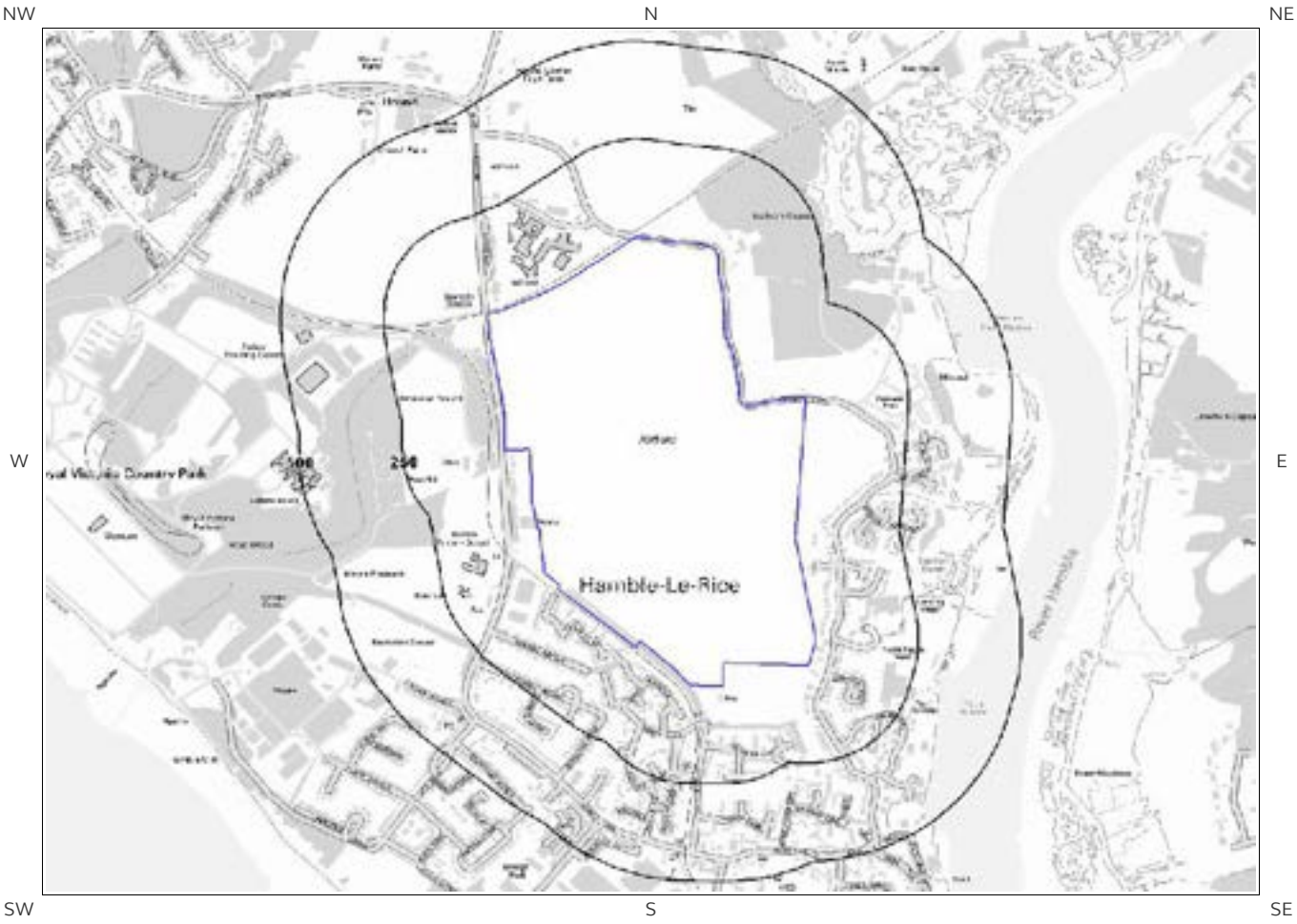


6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses

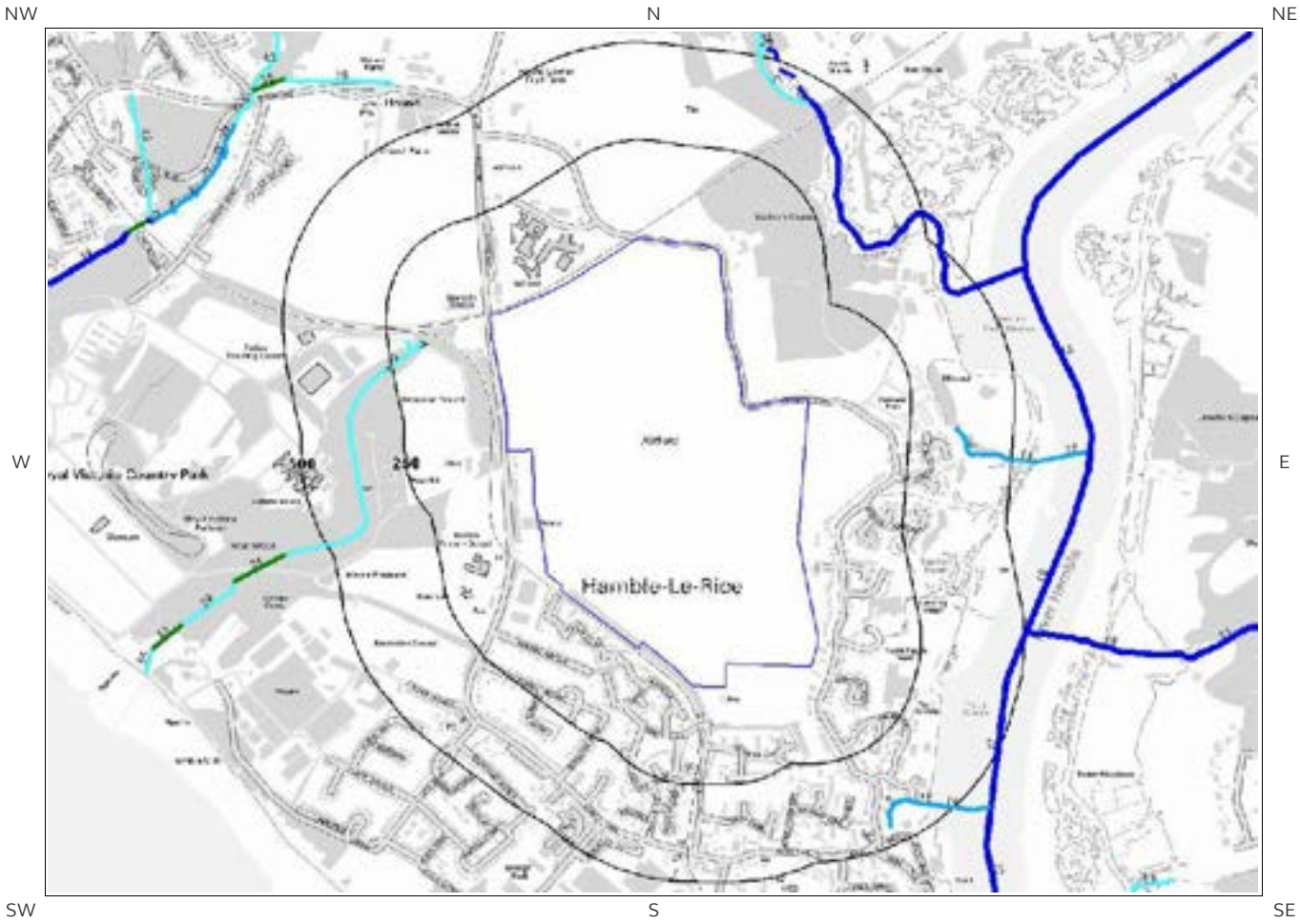




6d. Hydrogeology – Source Protection Zones within confined aquifer



6e. Hydrology – Detailed River Network and River Quality



Site Outline

250
500
Search Buffers (m)

Primary River
Secondary River
Tertiary River
Lake/Reservoir
Underground River (inferred)
General Quality Assessment: Biology
General Quality Assessment: Chemistry

Canal
Canal Tunnel
Culvert
Multiple Channel Culvert
Underground River (Potential Sewer)
Underground River (local knowledge)

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
9	154	E	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	249	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	351	N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
10	389	N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
4	730	SW	446920 107110	Status: Active Licence No: 11/42/24/1 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: Hamble Airfield Data Type: Point Name: G E Aviation	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 455 Original Application No: - Original Start Date: 23/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2016 Version End Date:
Not shown	1391	E	449500 108300	Status: Active Licence No: 30/043CA Details: Fish Farm/Cress Pond Throughflow Direct Source: Southern Region Groundwater Point: Crableck Lane Nurseries Data Type: Point Name: John Willment Marine Limited	Annual Volume (m^3): 62780 Max Daily Volume (m^3): 172 Original Application No: NPS/WR/025892 Original Start Date: 26/8/1992 Expiry Date: - Issue No: 102 Version Start Date: 9/6/2017 Version End Date:
Not shown	1899	E	450040 107030	Status: Historical Licence No: 11/42/25.9/46 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Rosemary Nurseries - Point B Data Type: Point Name: Hunt	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.4140 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 6/8/1979 Version End Date:
Not shown	1947	E	450090 107040	Status: Historical Licence No: 11/42/25.9/46 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Rosemary Nurseries - Point A Data Type: Point Name: Hunt	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.4140 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 6/8/1979 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1518	N	447170 109800	Status: Active Licence No: 11/42/24/5CA Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Pickwell Farm Impoundment, Old Netley Data Type: Point Name: Draper	Annual Volume (m^3): 13638 Max Daily Volume (m^3): 545.5 Application No: 169/0553 Original Start Date: 24/3/1986 Expiry Date: - Issue No: 100 Version Start Date: 11/6/2009 Version End Date:

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
122	NW	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.

6.9 River Quality

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site? No

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1A	160	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2A	195	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3	195	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4	267	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
5	272	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
6	307	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
7	362	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
8	404	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
9C	422	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
10B	436	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Main River Status: Currently Undefined
11	437	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
12B	440	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Main River Status: Currently Undefined
13B	440	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
14C	443	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Main River Status: Currently Undefined
15	443	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
16	452	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
17	467	E	River Name: River Hamble Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined

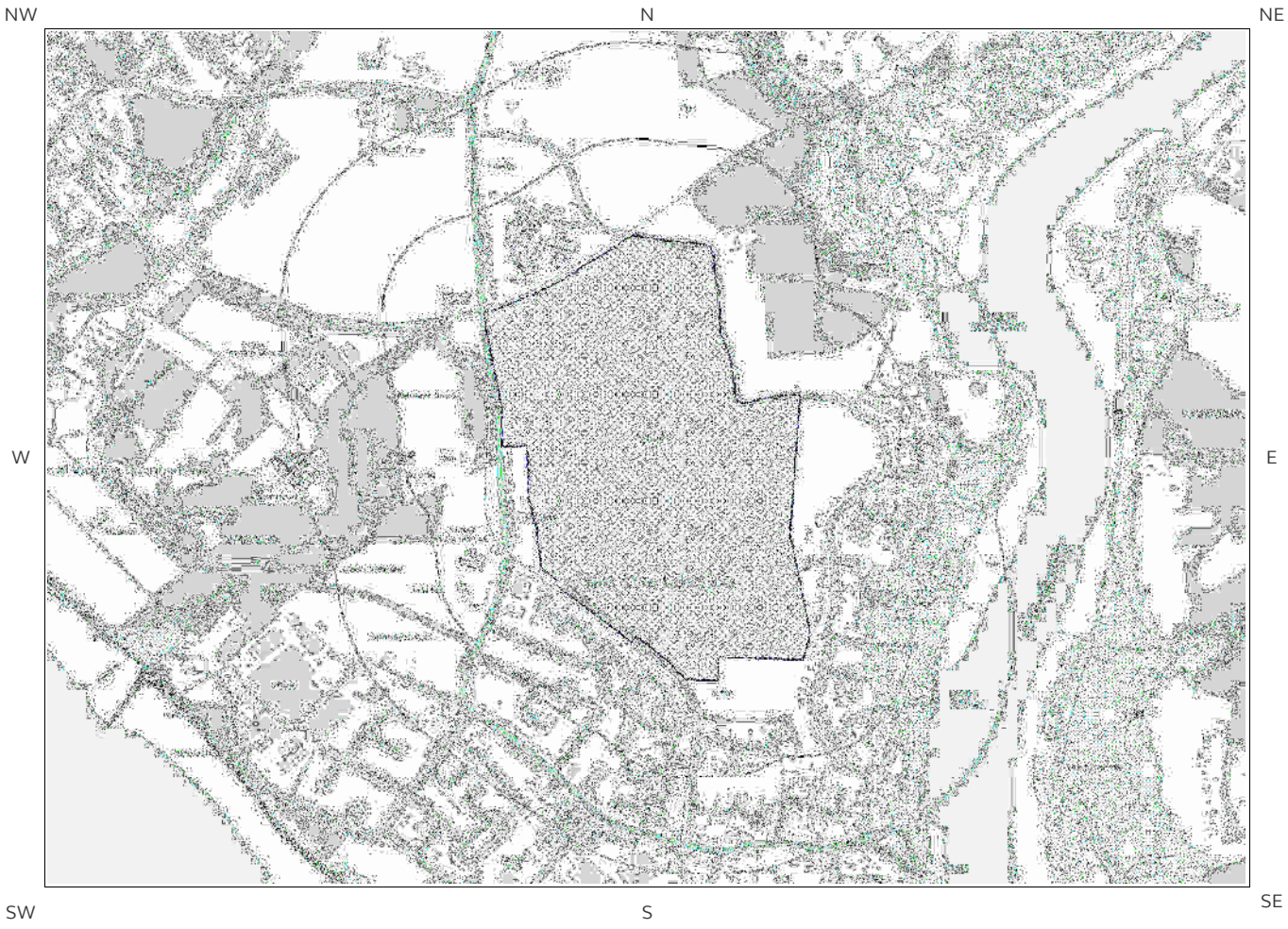
6.11 Surface Water Features

Are there any surface water features within 250m of the study site? Yes

The following surface water records are not represented on mapping:

Distance (m)	Direction
210	E
133	E
167	E
178	W
195	E
199	W
238	E

7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



Site Outline

Search Buffers (m)

Zone 2 Floodplain

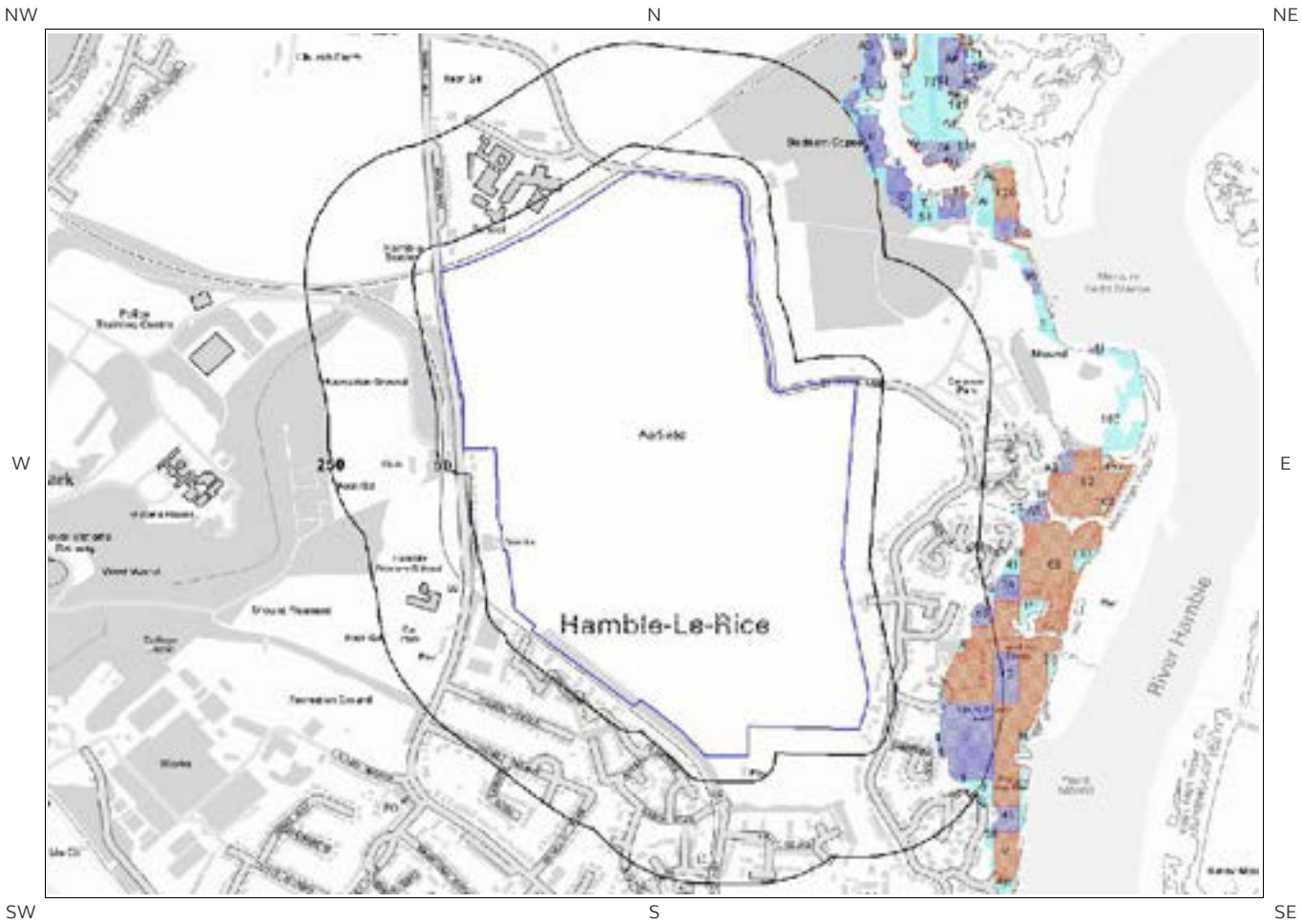
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



Site Outline

Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? Yes

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1C	128	E	24-Nov-2017	Zone 2 - (Fluvial /Tidal Models)
2D	233	E	24-Nov-2017	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 3 floodplain? Yes

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1C	128	E	24-Nov-2017	Zone 3 - (Fluvial Models)
2D	233	E	24-Nov-2017	Zone 3 - (Fluvial Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite? Very Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

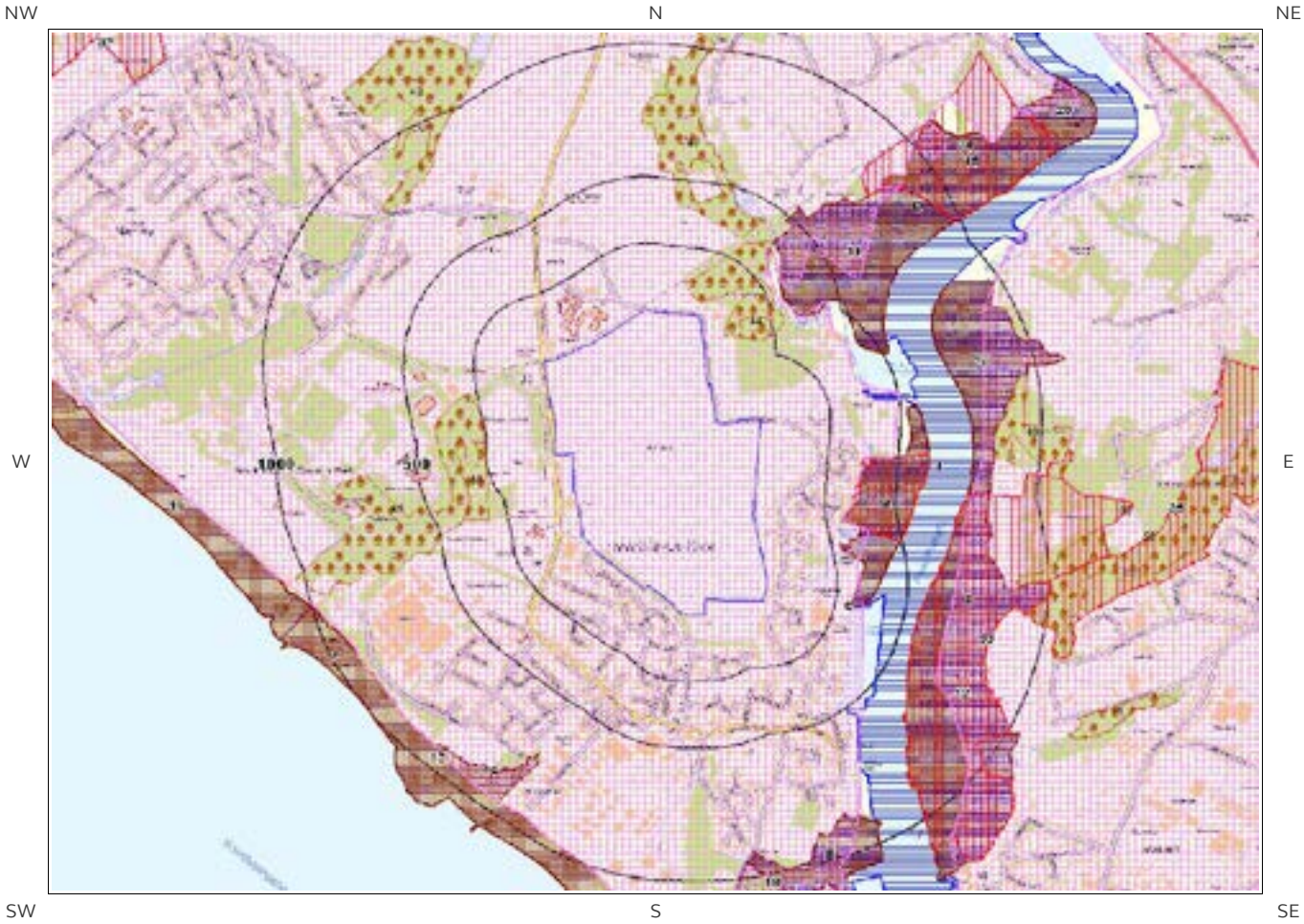
7.8 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result? Low

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

14

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
10A	281	E	Lee-on-the Solent to Itchen Estuary	Natural England
11	304	E	Lincegrove and Hackett's Marshes	Natural England
12	549	E	Lee-on-the Solent to Itchen Estuary	Natural England
13	682	NE	Lee-on-the Solent to Itchen Estuary	Natural England
14	730	SW	Lee-on-the Solent to Itchen Estuary	Natural England
15	807	NE	Lincegrove and Hackett's Marshes	Natural England
16B	850	S	Lee-on-the Solent to Itchen Estuary	Natural England
17	905	SW	Lee-on-the Solent to Itchen Estuary	Natural England
18	943	S	Lee-on-the Solent to Itchen Estuary	Natural England
19	1003	W	Lee-on-the Solent to Itchen Estuary	Natural England
20	1377	NE	Lincegrove and Hackett's Marshes	Natural England
Not shown	1387	S	Lee-on-the Solent to Itchen Estuary	Natural England
Not shown	1445	SE	Lee-on-the Solent to Itchen Estuary	Natural England
Not shown	1764	SE	Lee-on-the Solent to Itchen Estuary	Natural England

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

1

The following Special Area of Conservation (SAC) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SAC Name	Data Source
1	281	E	Solent Maritime	Natural England

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

8

The following Special Protection Area (SPA) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SPA Name	Data Source
2A	281	E	Solent & Southampton Water	Natural England
3C	298	E	Solent & Southampton Water	Natural England
4D	305	E	Solent & Southampton Water	Natural England
5E	550	E	Solent & Southampton Water	Natural England
6F	730	SW	Solent & Southampton Water	Natural England
7B	851	S	Solent & Southampton Water	Natural England
Not shown	1446	SE	Solent & Southampton Water	Natural England
Not shown	1765	SE	Solent & Southampton Water	Natural England

8.5 Records of Ramsar sites within 2000m of the study site:

8

The following Ramsar records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ramsar Site Name	Ramsar Site Status	Data Source
24A	281	E	Solent & Southampton Water	Listed	Natural England
25C	297	E	Solent & Southampton Water	Listed	Natural England
26D	304	E	Solent & Southampton Water	Listed	Natural England
27E	549	E	Solent & Southampton Water	Listed	Natural England
28F	730	SW	Solent & Southampton Water	Listed	Natural England
29B	850	S	Solent & Southampton Water	Listed	Natural England
Not shown	1445	SE	Solent & Southampton Water	Listed	Natural England

ID	Distance (m)	Direction	Ramsar Site Name	Ramsar Site Status	Data Source
Not shown	1764	SE	Solent & Southampton Water	Listed	Natural England

8.6 Records of Ancient Woodland within 2000m of the study site:

10

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
43	53	NE	UNKNOWN	Ancient and Semi-Natural Woodland
44	138	E	UNKNOWN	Ancient Replanted Woodland
45	246	W	UNKNOWN	Ancient and Semi-Natural Woodland
46	254	W	UNKNOWN	Ancient Replanted Woodland
47	332	NE	UNKNOWN	Ancient and Semi-Natural Woodland
48	763	NW	UNKNOWN	Ancient and Semi-Natural Woodland
49	827	E	UNKNOWN	Ancient and Semi-Natural Woodland
50	888	E	UNKNOWN	Ancient and Semi-Natural Woodland
51	1200	SE	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1375	N	UNKNOWN	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

7

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
32A	305	E	Mercury Marshes	Natural England
33	549	E	Hook with Warsash	Natural England
34	762	NE	Hackett's Marsh	Natural England
35	936	E	Holly Hill Woodland Park	Natural England
Not shown	1445	SE	Hook with Warsash	Natural England
37	1763	NW	Westwood Woodland Park	Natural England

ID	Distance (m)	Direction	LNR Name	Data Source
Not shown	1764	SE	Hook with Warsash	Natural England

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

4

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
39	0	On Site	Existing	DEFRA
40	656	E	Existing	DEFRA
Not shown	1609	N	Existing	DEFRA
Not shown	1830	E	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a Groundsure Geo Insight, available from our website. The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell*[*] hazard rating identified on the study site? Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly high plasticity. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a probable increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a probable increase in insurance risk during droughts or where vegetation with high moisture demands is present.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand*[*] hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

* This indicates an automatically generated 50m buffer and site.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing
ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
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info@groundsure.com

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Kingsley Dunham Centre
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Fax: 0115 936 3276.
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Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
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Main switchboard**: 020 7654 8000**

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Ordnance Survey
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Local Authority
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Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
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Tel: 01252 845444

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
https://www.groundsure.com/terms-and-conditions-march-2018

Groundsure
LOCATION INTELLIGENCE

Ground Condition Consultants Ltd

10, WALDEGRAVE CLOSE,
SOUTHAMPTON, SO19 9RY

Groundsure Reference:	GS-4789427
Your Reference:	Hamble
Report Date	8 Mar 2018
Report Delivery Method:	Email - pdf

Geo Insight

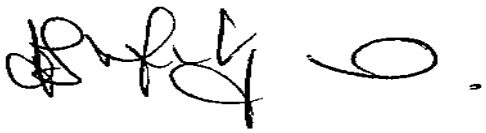
Address: HAMBLE AIRFIELD, HAMBLE-LE-RICE, SO31 4HU

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight