# **SITE**SOLUTIONS Estate



Report prepared on: Farm with associated land and buildings,, Derringstone, Barnham, Nr Canterbury, Kent

Report Reference: AEL-028-SES-042930

National Grid Reference: 620190,148940

Report prepared for: Specimen

Client Reference: Specimen

Report date: 28th June 2011

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### **Site Context**



#### Report prepared on

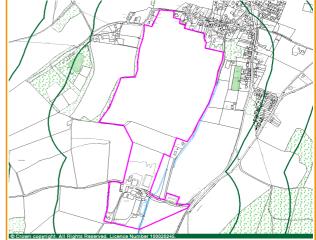
Farm with associated land and buildings,, Derringstone, Barnham, Nr Canterbury, Kent

#### Report reference

AEL-028-SES-042930

#### National grid reference

620190, 148940



Report prepared on	Site Area (m²)	Report Author
Farm with associated land and buildings,, Derringstone, Barnham, Nr Canterbury, Kent (the Site)	366305.21	Jenny Vestey BA (Hons) MSc, AIEMA Telephone: 0845 458 5250
Current Use	Proposed Use	Additional Information Provided
Current Use Farm	Proposed Use Farm	Additional Information Provided

### Liability Assessment

Within the scope of this assessment no Liabilities have been identified. No further action is required.

#### Recommendations

None required.

### **Risk Summary**

Overall on-site risk	Low to Moderate
Overall off-site risk	Low to Moderate
Environmental sensitivity rating	High
Plausible pollutant linkage identified <sup>1</sup>	No

<sup>&</sup>lt;sup>1</sup>The term 'plausible pollutant linkage' is defined within the Risk Analysis Methodology. Please refer to this section for further information.

## **Environmental Hazards**

This report is primarily a desktop assessment of potential soil and groundwater liabilities. We also comment whether the following Environmental Hazards are relevant:

Natural and Mining Related

The following natural or mining related hazards have been identified in the immediate vicinity of the Site:

Risk	Recommendation
Radon between 5 and 10%	Employers are required by the Management of Health and Safety at Work Regulations 1999 to assess risks from radon in workplaces. You may therefore wish to contact the Health Protection Agency for further information regarding radon monitoring.
Radon Protection Measures	If redevelopment or building extensions are proposed, radon protection may be required. As the data provided in this report is not site specific, it would be prudent to order a more detailed radon report from the British Geological Survey (www.bgs.ac.uk/georeports) or contact the local Building Controls Officer to clarify the level of radon protection required (if any) in accordance with Building Research Establishment report BR211.
Ground Instability Hazard	As a potential ground instability hazard was identified, you may wish to consult a local RICS accredited surveyor and/or review any available geotechnical surveys.
Non-Coal Mining	As there is a risk of non-coal related mining in the area, you may wish to consult a local RICS accredited surveyor and/or review any available geotechnical surveys. Further information may be available from the minerals and waste officer at the County Council and the local Building Regulations Officer. British Geological Survey GeoHazard reports (www.bgs.ac.uk/georeports) may also provide more detailed information.
Mining Instability	As the Site lies in an area subject to mining instability, you may wish to consult a local RICS accredited surveyor and/or review any available geotechnical surveys. Further information may be available from the minerals and waste officer at the County Council and the local Building Controls Officer. British Geological Survey GeoHazard reports (www.bgs.ac.uk/georeports) may also provide more detailed information.
Infilled Land	As the Site lies on or within 25m of potentially infilled land, you may wish to consult a local RICS accredited surveyor and/or review any available geotechnical surveys. Further information may be available from the minerals and waste officer at the County Council and the local Building Regulations Officer. British Geological Survey GeoHazard reports (www.bgs.ac.uk/georeports) may also provide more detailed information.

Contact details are provided at the end of this report.

Other Issues

Issue	Recommendation
Telecommunication Base Stations	No telecommunication base stations are located within 250m of the Site.
СОМАН	No Control of Major Accident Hazards (COMAH) sites are located within 500m.
Nitrate Vulnerable Zone	The Site is not located within a Nitrate Vulnerable Zone.
Overhead Transmission Lines	No overhead transmission lines are located on or within 50m of the Site.

#### Flood Risk

This report is primarily a soil and groundwater assessment and does not include a flood risk assessment. However flood risk should be considered as it affects 1-in-5 properties in England and Wales. Argyll is able to provide flood

risk screening reports suitable for commercial property. These are priced from £85 and any order placed in conjunction with this report will receive a 10% 'bundle' discount off the combined report price.

## **Risk Analysis**

### **On-site sources**

The following potentially contaminative historical land uses were identified at the Site from 1:10,000 and 1:10,560 scale maps: railways c.1898 – c.1940 and an area of unknown filled ground (water feature) c.1908. We have been informed by the client that the Site is currently a farm and that it will continue in this use without redevelopment. As a result of the historical and current use of the Site, there is a **low to moderate risk** of contaminants being present.

### Off-site sources

The following potentially contaminative historical land uses were identified in proximity to Site from 1:10,000 and 1:10,560 scale maps: railways c.1898 – c.1938 (10m, north east), quarrying of sand and clay, operation of sand and gravel pits c.1876 (48m, north) and an area of unknown filed ground 48m north c.1973. The historical and current use of the surrounding area is therefore considered to present a **low to moderate risk** of affecting the Site.

### Pathways and receptors

With reference to the Environment Agency Data, the Superficial hydrogeology underlying the Site is classified as Secondary Aquifer - Undifferentiated, Secondary Aquifer - A and Unproductive Strata. Secondary (A) Aquifer's are formed of permeable layers capable of supporting water supplies at a local scale, and in some cases forming an important source of base flow to rivers. Secondary (Undifferentiated) Aquifer's have a variable permeability, yielding varying amounts of groundwater at different locations but not capable of supporting water supplies at a more than a local scale. Unproductive Aquifer's (negligibly permeable) are formed of rock layers or drift deposits with a low permeability that have negligible significance for water supply or river base flow. The Bedrock hydrogeology underlying the Site is classified as a Principal Aquifer (highly permeable). These aquifers are typically formed of layers of rock or drift deposits that have a permeability and provide a high level of water storage. They may support water supply and/or base river flow on a strategic scale. In terms of the overlying soils, these are given a High (class H1) vulnerability classification. This aquifer is partially overlain by low permeability drift deposits, which may afford some protection to the underlying groundwater resources. According to the Environment Agency the Site lies within a Zone I Source Protection Zone (SPZ). An SPZ is a protection zone placed around a well or borehole that supplies groundwater of potable quality. There are no abstraction licences located within 500m. The nearest water feature is located on site. Residential properties are located adjacent to the Site and the Site is used for the cultivation of crops. Although no designated eco-receptors were identified on-site, the following were identified within 500m radius of the Site: a Local Nature Reserve 422m west. Overall, the Site is therefore considered to have a high environmental sensitivity.

### Conclusion

Considering the information reviewed during this assessment, no significant source-pathway-receptor relationships have been identified. Accordingly soil and groundwater liabilities are unlikely to occur.

Please refer to risk analysis methodology section for further guidance and definition of terms.

For the overall liability assessment for this site please refer to page 3.

## **Additional Considerations**

Whilst this assessment is primarily a desktop assessment of potential soil and groundwater liabilities, the following potential liability considerations that fall outside the scope of the Risk Analysis Methodology have been identified:

### Site Specific Considerations

Item	Summary	Suggested Action
Asbestos	If the buildings at the Site were constructed or renovated during the period between 1950 and 1999, then the fabric of these buildings may contain asbestos in a variety of forms.	Check the Asbestos Register and Management Plan
Energy Performance Certificate	Under the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007 and the Energy Performance of Buildings (Scotland) Regulations 2008, there is a requirement for all buildings to have an Energy Performance Certificate (EPC) upon their construction, sale or lease (and in some cases when the building is modified).	Check for EPC or conduct energy assessment
Sensitive Land Uses	If areas subject to statutory designations are located either on or in proximity to the Site, there may be land management implications or restrictions to planned developments. You are located inside/within 500m of AAOB (Kent Downs), Local Nature Reserve (Jumping Downs).	Contact local planning authority or speak with planning consultant

### Generic Guidance

Additional sources of information may be available for the Site. These sources could include previous environmental reports (including audits, contaminated land investigation and remediation reports), valuation reports (including property observation checklists), a Land Quality Record, and property deeds. Argyll Environmental would be pleased to review any reports that are available and revise this report accordingly. This may entail additional fees depending upon the volume and complexity of information available. Please contact us for further information.

## **Risk Analysis Methodology**

The Site Solutions Estate report has been designed to assist in making informed decisions during property transactions. The Report is a desktop assessment of direct liabilities (Liabilities) which could affect the owner /occupier of the Site and arise under Part 2A of the Environmental Protection Act 1990 and/or equivalent requirements under planning regime and/or the Water Resources Act 1991<sup>2</sup>(Relevant Legislation). If a risk is identified, then a number of options for finding out more about the risk, managing it or transferring it are proposed.

The assessment of environmental liability under the Relevant Legislation is based upon the principle of determining the presence of a plausible source-pathway-receptor relationship. A 'source' is a source of contamination, a 'pathway' is a medium through which the contamination can mobilise and 'a receptor' is a person or entity that could be detrimentally affected by the contamination. If all three are identified, then a 'plausible source-pathway-receptor relationship' may be present. By definition, this is one which Argyll believes could result in significant harm, a significant risk of significant harm or pollution of Controlled Waters.

In our assessment we use the following test to decide if there is a potential liability affecting the Site. For the purpose of this assessment a site where a potential Liability has been identified is defined as follows:

A property which, from the information assessed by Argyll, is considered to have the potential of being affected by contaminative substances present in or under the Site (but excluding potential sources of contamination on or above the land) such that, on the basis of its current or proposed use, there is a reasonable likelihood of a UK regulatory authority, acting in accordance with Relevant Legislation, requiring that remedial measures are taken in order to remedy or mitigate the contaminative substances that are present in or under the land that forms all or part of the Site.

The term Liabilities is defined within the scope of this assessment to mean, remedial works under Part 2A of the Environmental Protection Act 1990 (or where appropriate, equivalent requirements under the planning regime) and/or the Water Resources Act 1991 which may result in direct liability for the site owner/occupier.

The assessment within the Report has been produced and quality checked by a team of qualified environmental professionals. The assessment is based upon a manual review of the data contained within the Data Section of this Report and, if commissioned by the client, of 1:2500 and 1:1250 (where available) scale historical mapping.

### **Ecological Risk Assessment**

The evaluation of ecological risk is becoming an increasingly important input when making risk management decisions. The Environment Agency has designed a generic framework for conducting ecological risk assessment (see Assessing Risk to Ecosystems from Land Contamination, R&D Technical Report P299, EA 2002). This recommends a tiered approach in line with best practice for human health and controlled water risk assessment and defines Relevant Ecological Receptors as any type of receptor set out in Chapters 2 and 3 in Table A, Annex 3, of Defra Circular 012/2006, Environmental Protection Act 1990: Part 2A Contaminated Land.

Argyll assesses Relevant Ecological receptors as part of its assessment process. To do so it uses the Argyll EcoRisk model which was developed and tested in consultation with leading experts and is based on the Environment Agency framework.

<sup>&</sup>lt;sup>2</sup>Water Environment (Controlled Activities)(Scotland) Regulations 2005 where appropriate.

When conducting this assessment Argyll will primarily assess information provided in the Data section of the Report. However, in some cases Argyll may choose to supplement this with freely available public information such as that provided by English Nature.

### Alternatives for Liability Assessment

In this section Argyll will report on any potential soil and groundwater liabilities which it considers are associated with the Site. Our assessment of Liability is based upon the proposed and current use of the Site (as supplied by the client) in line with current Government guidance.

There will be one of three responses:

#### 1 - Within the scope of this assessment no Liabilities have been identified. No further action is required.

This statement indicates that within the scope of this assessment, no issues have been identified that are likely to result in significant cost liabilities under Relevant Legislation.

2 - Within the scope of this assessment no Liabilities have been identified. However, your attention is drawn to the prudent enquiries suggested below.

This statement indicates that within the scope of this assessment, no issues have been identified that are likely to result in significant cost liabilities under Relevant Legislation. However, a client may wish to obtain further information about other issues disclosed in the Report, which could be material.

3 - Potential Liabilities have been identified under Part 2A of the Environmental Protection Act 1990 (or where appropriate, equivalent requirements under the planning regime) and/or the Water Resources Act 1991<sup>3</sup>. To quantify these you may decide to undertake a more detailed assessment through the recommendation(s) set out below.

This statement indicates that within the scope of this assessment, an issue or a number of issues have been identified that are likely to result in significant cost liabilities under Relevant Legislation. In this event, recommendations are made, in order that additional information is collected so that the liabilities may be more accurately assessed.

### Limitations of the Report

The Site Solutions Estate report has been designed to satisfy standard environmental due-diligence enquiries, as recommended by the Law Society. It is a 'remote' investigation and reviews only information provided by the client and from the databases of publicly available information that have been chosen to enable a desk based environmental assessment of the Site. The Report does not include a site investigation, nor does Argyll make specific information requests of the regulatory authorities for any relevant information they may hold. Therefore, Argyll cannot guarantee that all land uses or factors of concern will have been identified by the Report.

The information in the Data Section of the Report is derived from a number of statutory and non-statutory sources. While every effort is made to ensure accuracy, Argyll cannot guarantee the accuracy or completeness of such information or data. Argyll will not accept responsibility for inaccurate data provided by external data providers.

Further information regarding our risk assessment methodology is provided in the Products and Services User Manual which is available free of charge from the client area of our website <u>www.argyllenvironmental.com</u>. For

<sup>&</sup>lt;sup>3</sup>Water Environment (Controlled Activities)(Scotland) Regulations 2005 where appropriate.

further information regarding the datasets reviewed within our assessment, please contact one of our technical team on 0845 458 5250. This report is provided under The Argyll Environmental Terms and Conditions for Data Reports, a copy of which is available on our website.

## **Contents of the Data Section**

Tabular Summary	This section presents a tabular summary of information found for the Site and surrounding area. The data is presented in three buffer zones for ease of reference: data found at the Site, from 1-250m and from 251-500m.
	If a database has been searched the number of records found will be displayed under the relevant search band. If a database is not available or has not been searched, this will be represented by the abbreviation N/A under the relevant search band.
Current Land Use Mapping	This section provides information on current land uses and is divided into three sections, statutory information, waste and current industrial uses. It is preceded by two maps.
Statutory Information	This section presents detailed statutory information for the Site and surrounding area (up to 500m depending upon dataset). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site.
Waste	This section presents detailed information on waste and landfill sites for the Site and surrounding area (up to 500m depending upon dataset). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site.
Current Industrial Land Use	This section presents detailed information on current land use for the Site and surrounding area (0-250m). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site.
Historical Land Use Mapping	The Historical Land Use Map presents 1:10,000 scale and selected 1:2,500 scale (tanks and energy facilities) historical land use information within 250m of the Site boundary.
Historical Land Use	This section presents selected information on historical land use for the Site and surrounding area (0-250m). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site.
Aquifer Designations and Geology	This section is preceded by two maps that present information relating to the aquifer designations beneath the Site. The first of these maps indicates the designation of the Superficial geology. The second map presents the aquifer designation of the solid geology.
	These maps are followed by detailed information in relation to aquifer designations/groundwater vulnerability and geology at the Site and surrounding area (0-500m).
Environmental Sensitivity	This section presents detailed information on the environmental sensitivity of the Site and surrounding area (up to 500m depending upon dataset) and is preceded by two maps. The first shows areas with statutory designations, the second shows source protection zones. The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site.
Natural and Mining Related Hazards	This section contains information on natural and mining related hazards which may affect the Site. These include subsidence, radon and mining.

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## **Tabular Summary**

Statutory Information	On-site	1-250m	251-500m
Local Authority Pollution Prevention and Controls	0	0	N/A
Local Authority Integrated Pollution Prevention and Controls	0	0	N/A
Integrated Pollution Controls	0	0	N/A
Integrated Pollution Prevention And Control	0	0	N/A
Registered Radioactive Substances	0	0	N/A
Discharge Consents	0	1	N/A
Water Industry Act Referrals	0	0	N/A
Control of Major Accident Hazards Sites	0	0	0
Explosive Sites	0	0	0
Notification of Installations Handling Hazardous Substances	0	0	0
Planning Hazardous Substance Consents	0	0	0
Contaminated Land Register Entries and Notices	0	0	N/A
Local Authority Pollution Prevention and Control Enforcements	0	0	N/A
Enforcement and Prohibition Notices	0	0	N/A
Planning Hazardous Substance Enforcements	0	0	0
Substantiated Pollution Incident Register	0	0	0
Prosecutions Relating to Authorised Processes	0	0	N/A
Prosecutions Relating to Controlled Waters	0	0	N/A

Waste	On-site	1-250m	251-500m
BGS Recorded Landfill Sites	0	0	0
Integrated Pollution Control Registered Waste Sites	0	0	N/A
Licensed Waste Management Facilities (Landfill Boundaries)	0	0	N/A
Licensed Waste Management Facilities (Locations)	0	0	0
Local Authority Recorded Landfill Sites	0	0	0
Registered Landfill Sites	0	0	0
Registered Waste Transfer Sites	0	0	N/A
Registered Waste Treatment or Disposal Sites	0	0	N/A
Historical Landfill Sites	0	0	0

Current Land Use	On-site	1-250m	251-500m
Contemporary Trade Directory Entries	0	1	N/A
Fuel Station Entries	0	0	N/A
Telecommunication Base Stations	0	O <sup>4</sup>	N/A
Overhead Transmission Lines	0	0	N/A

Historical Land Use	On-site	1-250m	251-500m
Potentially Contaminative Industrial Uses (Past Land Use)	2	3	N/A

<sup>4</sup>Telecommunication base stations are only searched to a radius of 100m from the Site boundary.

Historical Land Use	On-site	1-250m	251-500m
Historical Tanks And Energy Facilities	0	0	N/A
Former Marshes	0	0	N/A
Potentially Infilled Land (Non-Water)	0	1	N/A
Potentially Infilled Land (Water)	1	4	N/A

Groundwater Vulnerability	On-site	1-250m	251-500m
Superficial Aquifer Designations	7	9	0
Bedrock Aquifer Designations	2	0	0
Groundwater Vulnerability	2	0	N/A
Low Permeability Drift Deposits	2	N/A	N/A
BGS 1:625,000 Solid Geology	1	N/A	N/A

Environmental Sensitivity	On-site	1-250m	251-500m
Areas of Outstanding Natural Beauty	1	0	N/A
Environmentally Sensitive Areas	0	0	N/A
Forest Parks	0	0	N/A
Local Nature Reserves	0	0	1
Marine Nature Reserves	0	0	0
National Nature Reserves	0	0	0
National Parks	0	0	N/A
National Scenic Areas	0	0	N/A
Nitrate Sensitive Areas	0	N/A	N/A
Nitrate Vulnerable Zones	0	N/A	N/A
Ramsar Sites	0	0	0
River Quality	0	0	N/A
River Quality Biology Sampling Points	0	0	N/A
River Quality Chemistry Sampling Points	0	0	N/A
Nearest Surface Water Feature	1	0	N/A
Sites of Special Scientific Interest	0	0	0
Special Areas of Conservation	0	0	0
Special Protection Areas	0	0	0
Water Abstractions	0	0	0
Source Protection Zones	3	0	N/A

Natural and Mining Related Hazards	On-site	1-250m	251-500m
Collapsible Ground Stability Hazards	1	O <sup>5</sup>	N/A
Compressible Ground Stability Hazards	1	0	N/A
Ground Dissolution Stability Hazards	1	1	N/A
Landslide Ground Stability Hazards	1	1	N/A
Running Sand Ground Stability Hazards	1	0	N/A
Shrinking or Swelling Clay Subsidence Hazards	1	1	N/A

<sup>5</sup>Ground stability hazards are only searched to a radius of 50m from the Site boundary.

Natural and Mining Related Hazards	On-site	1-250m	251-500m
Non-Coal Mining Hazards	1	2	N/A
Radon Potential	1	N/A	N/A
Radon Protection Measures	1	N/A	N/A
Brine Compensation Areas	0	N/A	N/A
Coal Mining Affected Areas	0	N/A	N/A
Natural and Mining Cavities	0	0	N/A
Mining Instability	1	0	N/A
BGS Recorded Mineral Sites	0	2	N/A

#### Tabular Summary Explanation

Argyll has carefully selected a range of datasets which are considered appropriate for the intended use of this report. Each dataset is searched to a set radius from the Site boundary and the tabular summary is divided into different search bands accordingly. If a database is searched and information is found, then the number of records available are detailed in the table above. If the database was searched and no data was found, then a zero will be present. If a database was not searched then the abbreviation N/A will be found, indicating this information was not available at the radius searched.

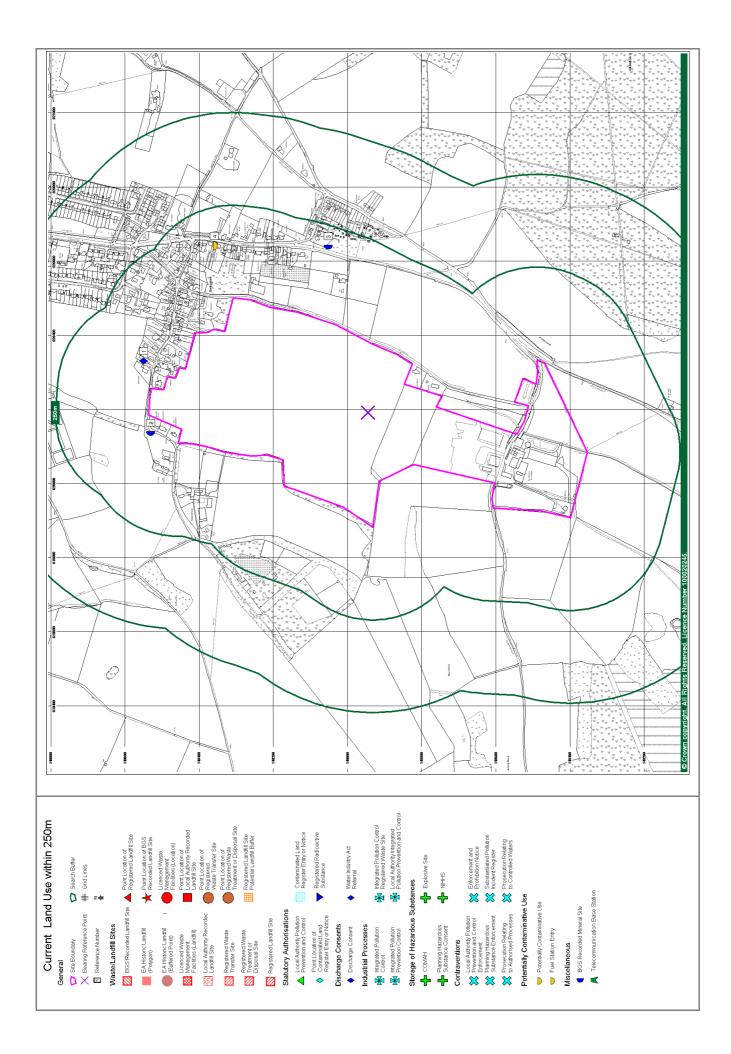
#### Landfill Site Information

Registered landfill site boundaries (where available), are shown on the map as a red diagonal hatched polygon and referred to in the map legend as Registered Landfill Sites. At present no complete national dataset exists for landfill site boundaries, therefore a point grid reference provided by the data supplier is used for some landfill sites. The point grid references supplied provide only an approximate position, and can vary from the site entrance to the centre of the site. A point cannot properly define landfill boundaries therefore Landmark constructs a 250 metre or 100 metre "buffer" zone around the point to warn of the possible presence of landfill. The "buffer" zone is shown on the map as an orange crosshatched area and is referred to in the map legend as Potential Landfill Buffer.

Local Authority landfill data is sourced from individual local authorities that were able to provide information on sites operating prior to the introduction of the Control of Pollution Act (COPA) in 1974. Appropriate authorities are listed under Local Authority Landfill Coverage with an indication of whether or not they were able to make landfill data available. Details of any records identified are disclosed. You should be aware that if the local authority had landfill data but passed it to the relevant Environment Agency office, it does not necessarily mean that local authority landfill data is now included in our other Landfill datasets. In addition if no data has been made available for all or part of the search area, you should be aware that a negative response under 'Local Authority Recorded Landfill Sites' does not necessarily confirm that no local authority landfills exist.

#### Subsidence Hazards

Information on subsidence hazards is provided by the British Geological Survey (BGS). Information present within 250m of the Site is reported under Natural and Mining Related Hazards. Due to the level of detail of this data and the complexities of the real world, the BGS recommends a precautionary approach when using this information and advises taking the worst reading noted for each dataset within the vicinity of a property. Therefore, Argyll reports the presence of a ground stability or non-coal related mining hazard in the Risk Analysis section based on the highest reading found within 50m of the Site boundary.



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## **Statutory Information**

Map Details

1

Distance Direction

### **Authorisations**

No authorised processes have been found.

### Discharges

Discharge Consents

Operator: Mr & Mrs.L.Miles, Property Type: Railways, Location: Railway Hill, Barham Kent, Authority: Environment Agency, Southern Region, Catchment Area: Not Given, Permit Ref: P01271, Permit Version: 1, Effective Date: 28th October 1987, Issued Date: 28th October 1987, Revocation Date: 31st March 1997, Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company, Discharge Environment: Into Land, Receiving Water: Into Land, Status: Lapsed (under Environment Act 1995, Schedule 23), Positional Accuracy: Located by supplier to within 100m.

Ν

77m

### Hazardous Sites

No hazardous sites have been found.

### Contraventions

No contraventions have been found.

## Waste

Map Details

Distance Direction

### Waste/Landfill Sites

Local Authority Landfill Coverage

Canterbury City Council - Has supplied landfill data Kent County Council - Had landfill data but passed it to the relevant environment agency Dover District Council - Has no landfill data to supply

No Waste/Landfill sites have been found.

### **Current Land Use**

Мар	Details
ID	

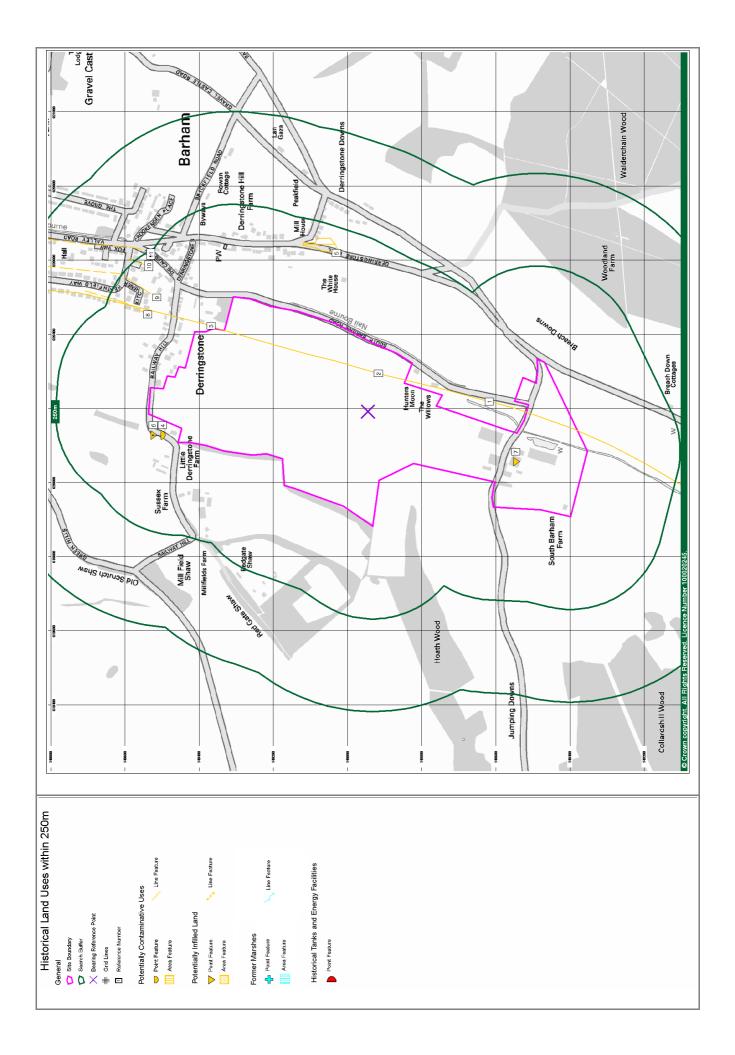
### **Current Potentially Contaminative Uses**

Contemporary Trade Directory Entries

4Picture & Picture Frame Renovating & Restoring, Name: Trevor Gallon150mNEStatus: Inactive, Location: Monkbarns, Derringstone Hill, Barham, Canterbury, Kent,<br/>CT4 6QD, Positional Accuracy: Automatically positioned to the address.150mNE

### **Other Features**

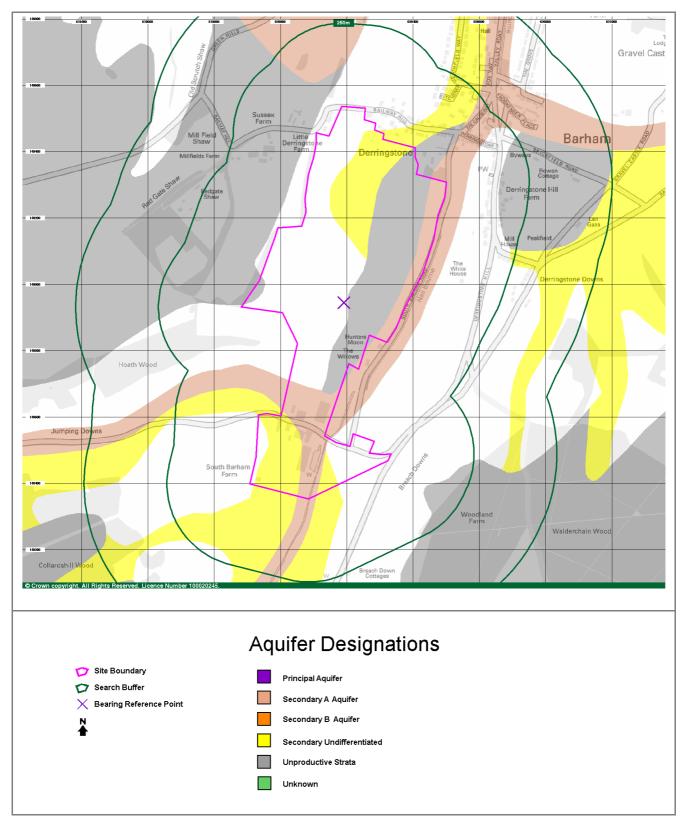
No telecommunication base stations or overhead transmission lines have been found.



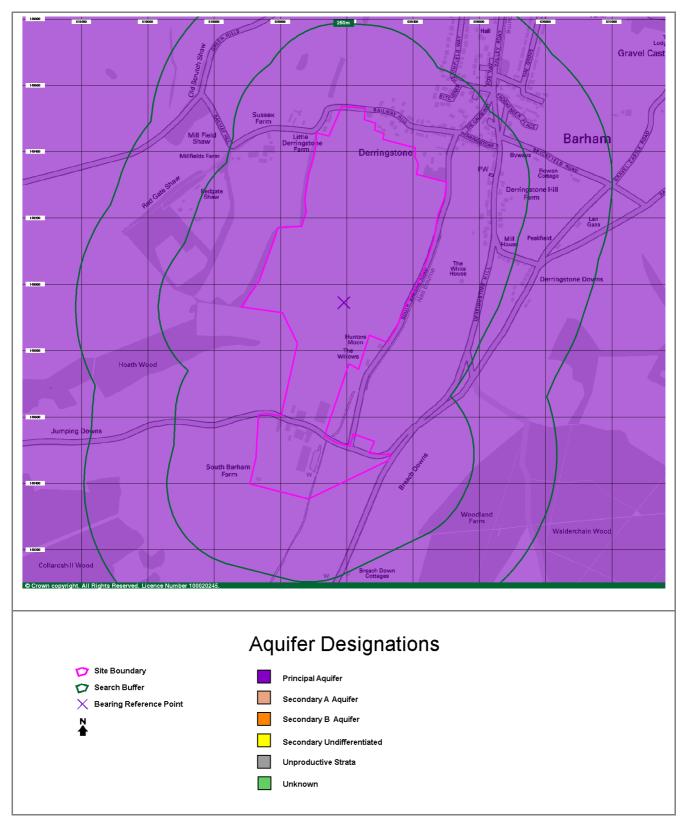
## **Historical Land Use**

Map ID	Details	Distance	Direction
	Historical Potentially Contaminative Uses		
	Potentially Contaminative Industrial Uses (Past Land Use)		
1	Use: Railways, Date of Mapping: 1898-1940.	0m	S
2	Use: Railways, Date of Mapping: 1898-1940.	0m	E
3	Use: Railways, Date of Mapping: 1898-1938.	10m	NE
4	Use: Quarrying of sand & clay, operation of sand & gravel pits, Date of Mapping: 1876.	48m	Ν
5	Use: Quarrying of sand & clay, operation of sand & gravel pits, Date of Mapping: 1876-1940.	176m	E
	Potentially Infilled Land		
	Potentially Infilled Land (Non-Water)		
6	Description: Unknown Filled Ground (Pit, quarry etc), Date of Mapping: 1973.	48m	Ν
	Potentially Infilled Land (Water)		
7	Description: Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1908.	Om	S
8	Description: Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1876.	136m	NE
9	Description: Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1876.	139m	NE
10	Description: Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1876.	217m	NE
11	Description: Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1876.	236m	NE

## **Aquifer Designation (Superficial)**



## **Aquifer Designation (Bedrock)**



## **Groundwater Vulnerability**

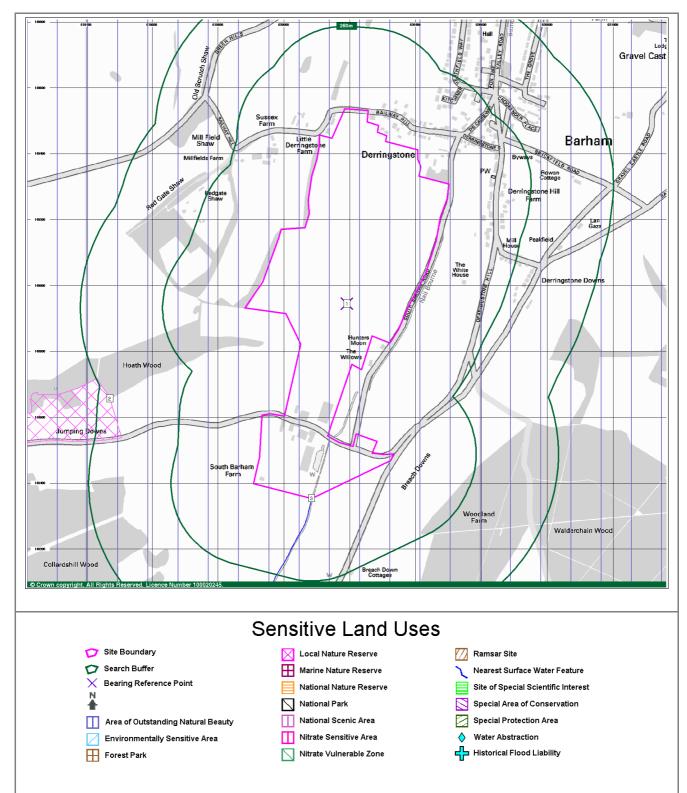
Map Details ID

Distance Direction

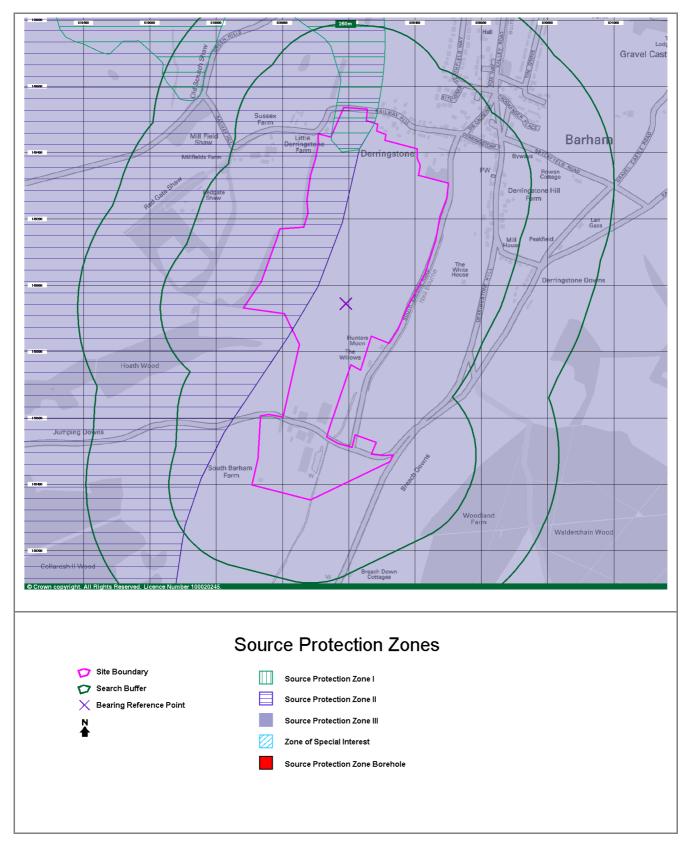
## Hydrogeology

Superficial Aquifer Designations		
Secondary Aquifer - Undifferentiated	0m	S
Secondary Aquifer - Undifferentiated	0m	NE
Secondary Aquifer - A	0m	SE
Secondary Aquifer - Undifferentiated	0m	SW
Unproductive Strata	0m	W
Unproductive Strata	0m	E
Secondary Aquifer - Undifferentiated	0m	SW
Secondary Aquifer - A	1m	SW
Unproductive Strata	18m	NW
Secondary Aquifer - A	100m	Ν
Secondary Aquifer - A	138m	S
Unproductive Strata	139m	SE
Unproductive Strata	159m	NE
Secondary Aquifer - A	222m	Ν
Secondary Aquifer - Undifferentiated	233m	E
Secondary Aquifer - Undifferentiated	245m	S
Bedrock Aquifer Designations		
Principal Aquifer	0m	-
Principal Aquifer	0m	W
Groundwater Vulnerability		
Soil Classification: Soils of High Leaching Potential (H1) - Soils which readily transmit liquid discharges because they are either shallow, or susceptible to rapid by-pass flow directly to rock, gravel or groundwater, Map Scale: 1:100,000, Map Name: Sheet 47 East Kent.	Om	-
Soil Classification: Soils of Intermediate Leaching Potential (I1) - Soils which can possibly transmit a wide range of pollutants, Map Scale: 1:100,000, Map Name: Sheet 47 East Kent.	0m	NW
Geology		
Low Permeability Drift Deposits		
Drift Deposit: Low permeability drift deposits occuring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium, Map Sheet: Sheet 47 East Kent, Scale: 1:100,000.	Om	W
Drift Deposit: Low permeability drift deposits occuring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium, Map Sheet: Sheet 47 East Kent, Scale: 1:100,000.	Om	E
BGS 1:625,000 Solid Geology		
Description: Chalk including Red Chalk.	0m	-
ww.argyllenvironmental.com	Intelligent D	Due Diliger

## **Sensitive Land Uses**



## **Source Protection Zones**



## **Environmentally Sensitive Features**

Map ID	Details	Distance	Direction
	Environmentally Sensitive Features		
	Areas of Outstanding Natural Beauty		
1	Name: Kent Downs, Multiple Area: Y, Area (m <sup>2</sup> ): 878850597.18, Designation Date: 31st July 1968, Source: Natural England.	Om	-
	Local Nature Reserves		
2	Name: Jumping Downs, Multiple Area: N, Area (m <sup>2</sup> ): 55948.2, Source: Natural England, Designation Date: 15th October 2002.	422m	W
	Nearest Surface Water Feature		
3	Surface water feature identified in proximity.	0m	S
	Source Protection Zones		
	Name: Barham, Source: Environment Agency, Head Office, Reference: Su181, Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	Om	NW
	Name: Various, Source: Environment Agency, Head Office, Reference: Not Supplied, Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	Om	-
	Name: Barham, Source: Environment Agency, Head Office, Reference: Su181, Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	Om	Ν

## **Natural and Mining Related Hazards**

Map ID	Details	Distance	Direction
	Subsidence		
	Collapsible Ground Stability Hazards		
	Risk: Moderate, Source: British Geological Survey, National Geoscience Information Service.	Om	E
	Compressible Ground Stability Hazards		
	Risk: Moderate, Source: British Geological Survey, National Geoscience Information Service.	Om	SE
	Ground Dissolution Stability Hazards		
	Risk: High, Source: British Geological Survey, National Geoscience Information Service.	Om	W
	Risk: High, Source: British Geological Survey, National Geoscience Information Service.	11m	NW
	Landslide Ground Stability Hazards		
	Risk: Low, Source: British Geological Survey, National Geoscience Information Service.	0m	S
	Risk: Low, Source: British Geological Survey, National Geoscience Information Service.	11m	NW
	Running Sand Ground Stability Hazards		
	Risk: Low, Source: British Geological Survey, National Geoscience Information Service.	0m	SE
	Shrinking or Swelling Clay Subsidence Hazards		
	Risk: Low, Source: British Geological Survey, National Geoscience Information Service.	0m	W
	Risk: Low, Source: British Geological Survey, National Geoscience Information Service.	21m	NW
	Non-Coal Mining Hazards		
	Risk: Unlikely, Source: British Geological Survey, National Geoscience Information Service.	0m	W
	Risk: Unlikely, Source: British Geological Survey, National Geoscience Information Service.	18m	NW
	Risk: Unlikely, Source: British Geological Survey, National Geoscience Information Service.	127m	SE
	Radon		
	Radon Potential		
	The property is in an intermediate probability radon area, as between 5 and 10% of homes are above the action level, Source: British Geological Survey, National Geoscience Information Service.	Om	-

Radon Protective Measures

Basic, Source: British Geological Survey, National Geoscience Information Service. 0m

### Mining

Brine Compensation Areas None. Coal Mining Affected Areas

www.argyllenvironmental.com AEL-028-SES-042930 In an area which may not be affected by Coal Mining.

#### Mining Instability

Mining Evidence: Inconclusive Coal Mining, Source: Ove Arup & Partners, Boundary Quality: As Supplied.	Om	-
BGS Recorded Mineral Sites		
Site Name: Derringstone Chalk Pit, Site Location: Derringstone, Barham, Canterbury, Kent, Source: British Geological Survey, National Geoscience Information Service, Reference: , Type: Opencast, Status: , Operator: Unknown Operator, Operator Location: Not Supplied, Periodic Type: Cretaceous, Geology: Seaford Chalk Formation, Commodity: Chalk, Positional Accuracy: Located by supplier to within 10m.	42m	Ν
Site Name: Derringstone Hill Chalk Pit, Site Location: Derringstone Hill, Barham, Dover, Kent, Source: British Geological Survey, National Geoscience Information Service, Reference: , Type: Opencast, Status: , Operator: Unknown Operator, Operator Location: Not Supplied, Periodic Type: Cretaceous, Geology: Lewes Nodular Chalk	196m	E

Formation, Commodity: Chalk, Positional Accuracy: Located by supplier to within 10m.

## **Useful Contacts**

Name and Address	Telephone/Fax/Email
Argyll Environmental Limited	Telephone 0845 458 5250
Tower Point 44 North Road Brighton BN1 1YR	Fax 0845 458 5260 info@argyllenviro.com
www.argyllenvironmental.com	
Ensura Limited (for Environmental Insurance) Tower Point 44 North Road Brighton BN1 1YR	Telephone 0845 652 8585 Fax 0845 652 8686 info@ensura.co.uk
www.ensura.co.uk	
Environment Agency National Customer Contact Centre (NCCC) PO Box 544 Templeborough Rotherham S60 1BY	Telephone 08708 506 506
Canterbury City Council Environmental Health Department Council Offices Military Road Canterbury Kent CT1 1YW	Telephone 01227 862 000 Fax: 01227 785 705
www.canterbury.gov.uk	T-lash and 01000 005070
Kent County Council Waste Management Group Block H The Forstal Beddow Way Aylesford Kent ME20 7BT	Telephone 01622 605976
www.kent.gov.uk	
Dover District Council Environmental Health Department Council Offices White Cliffs Business Park Dover Kent CT16 3PQ	Telephone 01304 821199 Fax: 01304 827268
www.dover.gov.uk	
British Geological Survey Enquiry Service British Geological Survey Kingsley Dunham Centre Keyworth Nottingham Nottinghamshire NG12 5GG	Telephone 0115 936 3143 Fax: 0115 936 3276 enquiries@bgs.ac.uk
www.bgs.ac.uk	

#### Name and Address

Natural England Northminster House Northminster Road Peterborough Cambridgeshire PE1 1UA

www.naturalengland.org.uk

Telephone/Fax/Email Telephone 0845 600 3078 Fax: 01733 455103 enquiries@naturalengland.org.uk

Please note that the Environment Agency / SEPA have a charging policy in place for enquiries. When contacting these agencies please mention that this data has been received from the Landmark database, alternatively Argyll Environmental Limited would be pleased to assist with consultation to the above bodies. Please contact us for a quotation.