

# SiteSolutions Combined

 Contaminated Land  
**PASSED** ✓

 Flooding  
**PASSED** ✓

 **Argyll's Overview**

**Contaminated Land :** No significant contaminant linkage has been identified. Accordingly soil and groundwater liabilities are unlikely to occur. However, your attention is drawn to prudent measures suggested on page 3.

**Flood Risk :** The Site is not considered to be at a significant risk of flooding and buildings and contents insurance should be available and affordable.

**Environmental Hazards :** The following have been identified in the immediate vicinity of the Site: Radon 5 to 10%, Radon Protection Measures, Ground Instability Hazard, Mining Instability, and Coal Mining.

**Operational Permits :** No authorisations, licences, consents or enforcements have been identified at or within 25m of the Site.



Report on:

**11 Capel Street, Folkestone, CT18 7LZ**

**Report prepared for:**

Asb - Law (Crawley)

**Client Reference:**

CG/551905/29

**Report Reference:**

AEL-0018-FSC-1000887

**National Grid Reference:**

624664,138859

**Report date:**

9th April 2020



## Site Location

**Report prepared on**

11 Capel Street, Folkestone, CT18 7LZ

**Site Area (m<sup>2</sup>)**

142570.

**Current Use**

Bare land

**Proposed Use**

Redevelopment

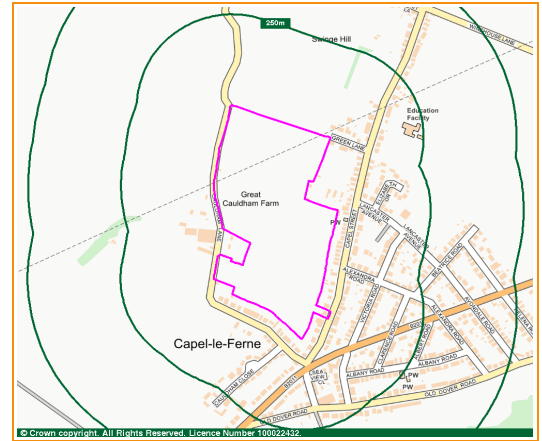
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**Additional Information Provided**







# Executive Summary

Risk	Evaluation
 <p>Contaminated Land</p>	 <p>Passed</p>



## Liability Assessment

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

What is the overall on-site risk?	Low to Moderate
What is the overall off-site risk?	Low to Moderate
What is the environmental sensitivity rating?	High



## Recommendations

The Site has been in agricultural use. While this may have caused very limited contamination, it is unlikely to be determined as “Contaminated Land” by the regulators. But, given the sensitive development, the Local Authority may request limited soil sampling. This will assess whether agricultural processes have caused contamination which could impact future site-users. Please note, this investigation may highlight a requirement for further work.

We would be happy to confirm with the Planning Authority that this approach is acceptable and provide a quote for the work. Please contact your report writer on 03300 366 115 to discuss any aspect of our recommendation.



### Consultant's Comment

The site is not considered to be at significant risk of flooding. No further action is considered necessary. However, it would be prudent to consider the measures outlined in the Recommendations section.

- |   |  |                |
|---|--|----------------|
| 1 | If development is proposed would a detailed Flood Risk Assessment be required?             | Yes (Drainage) |
| 2 | What is the overall risk of flooding, assuming defences fail or are absent or over-topped? | Negligible     |
| 3 | Are there existing flood defences that might benefit the Site?                             | No             |

### Insurance

The flood risk identified is unlikely to affect obtaining buildings and contents insurance.



### Recommendations







1. Under planning policy (NPPF) a Flood Risk Assessment (FRA) will need to accompany any planning application. The FRA should demonstrate how flood risk will be managed so the development will remain safe throughout its lifetime. The scope of the FRA will be dependent on the nature of the risk and sensitivity of the development.
2. You should ask the seller whether flooding has occurred in the area before. If it has, please contact us for advice.
3. Finally, establish the terms of buildings and contents insurance before exchanging contracts.

Please contact us on 03300 366 115 if you would like to discuss any aspect of this recommendation.

**Upgrade to an FRA: Prices starting from £950.00 + VAT.**



# Contaminated Land Risk Analysis

Investigation	Commentary
 <p><b>On-site sources</b></p>	<p>A review of historical maps shows the Site remained predominantly undeveloped as open agricultural land since at least c.1876, with minor ponds in the south-west from this time. A residential property was constructed in the south-east between 1908 and 1937, and the ponds were infilled or levelled during the 1980s. The Channel Tunnel was noted traversing the north of the Site from the 1992 map edition. No further significant changes were noted in subsequent map editions.</p> <p>We understand the Site is currently bare land (in assumed agricultural use) and will be developed for what we have assumed will be a residential end use.</p> <p><b>Argyll's Comment</b>  As a result of the historical and current use of the Site, there is a <b>low to moderate risk</b> of contaminants being present.</p>
 <p><b>Off-site sources</b></p>	<p>A review of historical maps dating from c.1876 shows the following potentially contaminative uses within 100m of the Site: a farmyard from adjacent west c.1876-2020 with agricultural buildings and a tank (the latter feature 70m west c.1937), and minor ponds in the surrounding area levelled or infilled over time.</p> <p><b>Argyll's Comment</b>  The historical and current use of the surrounding area is therefore considered to present a <b>low to moderate risk</b> of affecting the Site.</p>
 <p><b>Pathways and receptors</b></p>	<p>The general area appears to be in agricultural and residential use, with residential properties located in the south-east and more proposed for development on-Site.</p> <p>The superficial hydrogeology underlying the Site is classified as a Secondary (A) Aquifer (deposits with moderate permeability), an Unproductive Stratum (deposits of negligible permeability), and a Secondary (Undifferentiated) Aquifer (deposits with variable/limited permeability). The bedrock hydrogeology is classified as a Principal Aquifer (highly permeable formations).</p> <p>The Site lies within a Zone III 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. A pond is located 18m west.</p> <p>Finally the following designated eco-receptors were identified within 500m: Folkestone Warren (Local Nature Reserve and Site of Special Scientific Interest) located 310m south.</p> <p><b>Argyll's Comment</b>  Overall, the Site is therefore considered to have a <b>high environmental sensitivity</b>.</p>
<p><b>Additional Sources of Information</b></p>	<p>No additional materials have been used in this assessment.</p>



## Argyll's Conclusion

Considering the information reviewed during this assessment, plausible contaminant linkages have been identified associated with the proposed redevelopment. However, we do not consider these likely to be significant. We would draw your attention to the recommendation on Page 3.

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



## Current Operations

### Environmental Damage Regulations 2009 (EDR)

Potential for owner/operation to incur a Liability under the EDR

Argyll's  
Comment



The Site is in close proximity to a potentially sensitive receptor as set out in the EDR. It would therefore be prudent to ensure that operations on the site are audited on a regular basis to minimise the risk of causing environmental damage that could result in liability under the EDR. In addition, the presence of such receptors should be considered as part of any future development or activity. Please refer to the risk analysis methodology section for further guidance and definition of terms.

### Additional Considerations

Item	Summary	Suggested Action
<b>Asbestos (Development)</b>	If buildings at the Site are to be redeveloped or refurbished a Refurbishment or Demolition (RoD) Survey will be required.  In addition, brownfield development sites may have asbestos containing materials (ACM) in top soils and made ground. A soil survey can confirm this.	Contact a UKAS accredited asbestos consultancy.
<b>Energy Performance Certificate</b>	Under the Energy Performance of Buildings (England and Wales) Regulations 2012 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
<b>Sensitive Land Uses</b>	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 an Area of Outstanding Natural Beauty, a Local Nature Reserve, and a Site of Special Scientific Interest.	Contact local planning authority or speak with planning consultant
<b>Change of Use Redevelopment</b>	Proposed changes in land use require permission from the Local Authority and are subject to conditions as part of the statutory planning process.	Contact local planning authority or speak with planning consultant

Argyll's  
Comment



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

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.

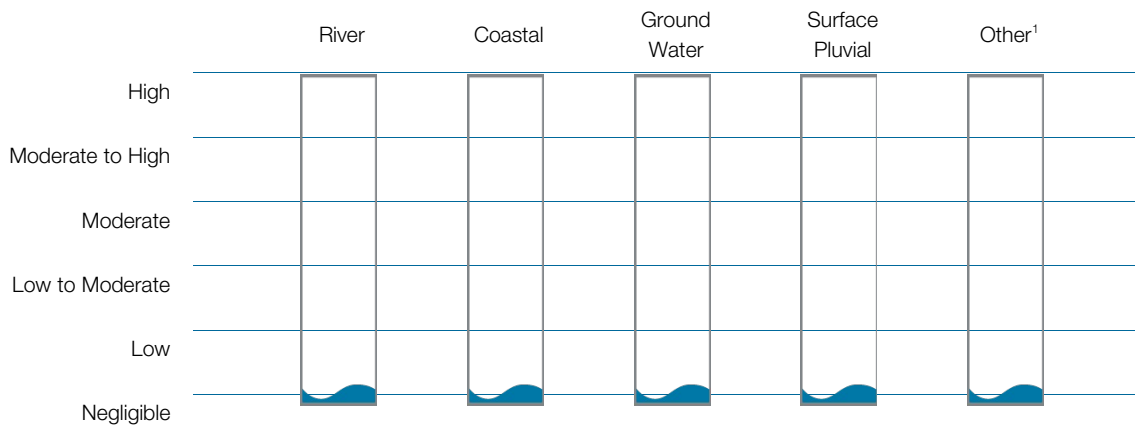


# Flood Risk Screening

	Risk	Issue	Evaluation
1	Development	If development is proposed would a detailed Flood Risk Assessment be required?	Yes (Drainage)
2	Flooding	What is the overall risk of flooding, assuming defences fail or are absent or over-topped?	Negligible
3	Flood Defences	Are there existing flood defences that might benefit the Site?	No

**Insurance** The flood risk identified is unlikely to affect obtaining buildings and contents insurance.

## Flood Analysis



Argyll's Comment



No commentary required.



## Recommendations

1. Under planning policy (NPPF) a Flood Risk Assessment (FRA) will need to accompany any planning application. The FRA should demonstrate how flood risk will be managed so the development will remain safe throughout its lifetime. The scope of the FRA will be dependent on the nature of the risk and sensitivity of the development.

2. You should ask the seller whether flooding has occurred in the area before. If it has, please contact us for advice.

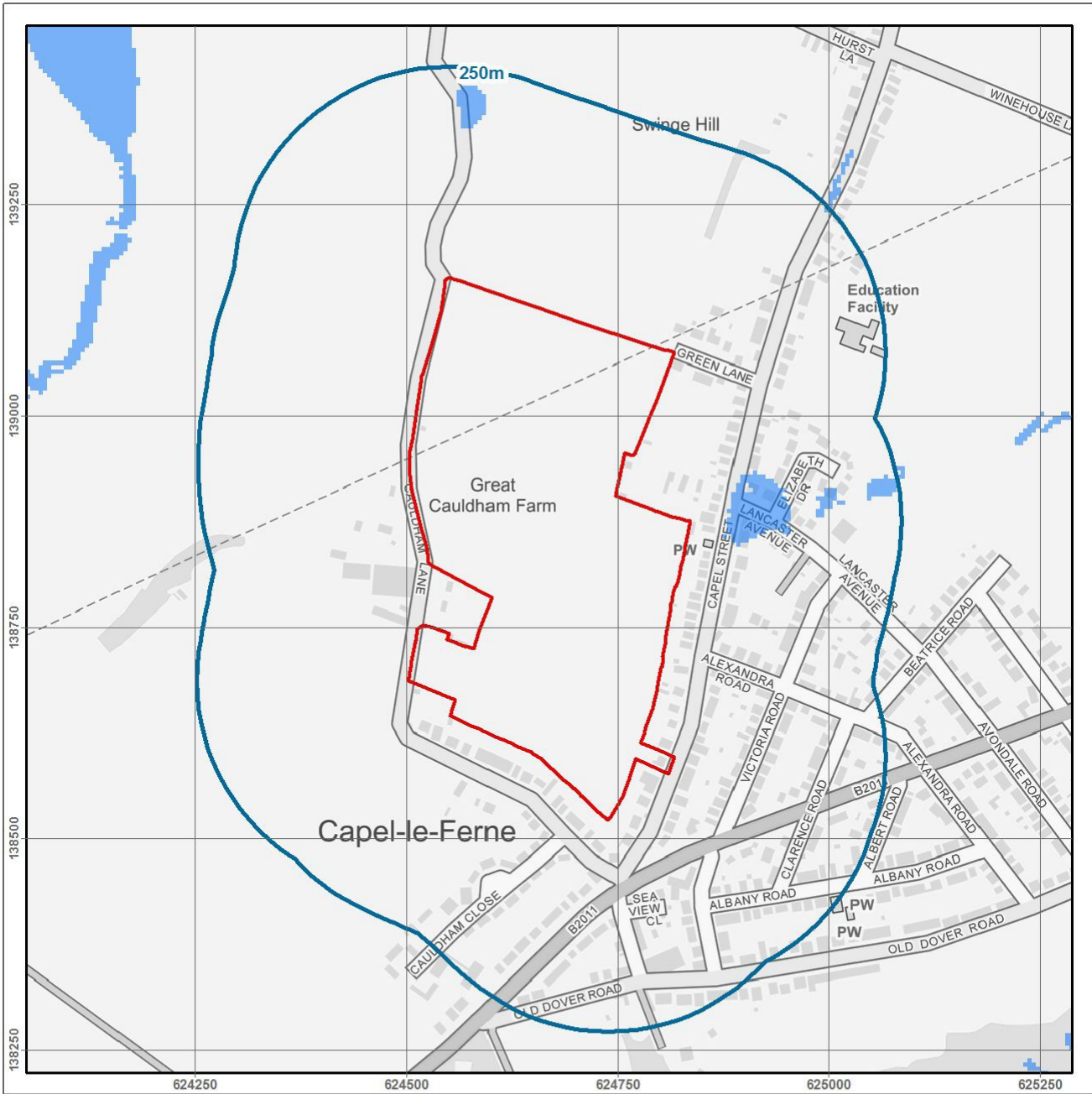
3. Finally, establish the terms of buildings and contents insurance before exchanging contracts.

Please contact us on 03300 366 115 if you would like to discuss any aspect of this recommendation.





**Upgrade to an FRA: Prices starting from £950.00 + VAT.**

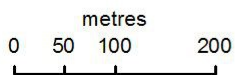
<sup>1</sup>Other factors influencing flood risk include historic flood events, geological indicators of flooding, proximate surface water features and elevation above sea level.

# Current Flood Risk



## Flood and Groundwater Risk

-  Client Site
-  Area at risk of flooding from one source
-  Area at risk of flooding from more than one source
-  Area at risk of groundwater flooding



\* - Not all features in legend may be present in above map

Nominal scale at A4 paper size - 1:7,500

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## Additional Flooding Considerations

### Riparian Ownership

Is there a water feature located within or adjacent to the Site? **No**

### Argyll's Comment



A riparian owner describes anyone who owns a property where there is a watercourse within or adjacent to the boundaries of their property.

Under common law, a riparian owner has rights and responsibilities relating to the stretch of watercourse that falls within or beside the boundaries of their land. Their primary responsibility is to keep the watercourse free of any obstructions that could hinder normal water flow. If the riparian owner fails to carry out their responsibilities, this could result in civil action.

A riparian owner should also check before carrying out any works near to the edge of a river, as such works may be subject to byelaws. If infringed, this could lead to enforcement action by the Environment Agency.

There is a presumption that the boundary between properties abutting a watercourse is the centre line of that watercourse. To confirm whether this is the case, a solicitor should check the deeds or the Index Map.

The Environment Agency has published useful guidance "Living on the edge" for owners of land or property alongside a watercourse. Sometimes, the Environment Agency or other organisations managing flood risk, may have statutory rights of access to properties which adjoin a watercourse. This may be for maintenance, repair or rebuilding of any part of the watercourse or for access to or repair of monitoring equipment.

### Development Control

Is there a water feature located within 250m of the Site? **No**

### Argyll's Comment



Sites which lie close to (but do not adjoin) a watercourse, may be subject to planning controls should redevelopment be considered. The Environment Agency are normally consulted regarding any development within 20m of a Main River and Internal Drainage Boards should be similarly contacted regarding developments close to drainage channels. Navigation authorities are normally consulted regarding any development within 250m of a canal, although this varies on a site by site basis. Please see The Environment Agency website to check if there is a Main River within 20m of your property.

The Environment Agency should also be contacted with regards to development (other than minor development) in Flood Zones 2 and 3.

### Sewer Flooding

In times of extreme rainfall events sewers can overflow and cause local flooding. Ofwat's 'DG5 - At Risk Registers' record properties that have flooded from sewers and are at risk of flooding again, with separate registers for internal and external flooding. The At Risk Registers are maintained by each of the ten water and sewerage companies in England and Wales and details of properties subject to sewer flooding are normally kept for between two and five years. These registers are not necessarily complete as not all episodes of past flooding may be recorded.

### Dam and Reservoir Failure

Could the Site be affected by dam or reservoir failure? **No**

### Argyll's Comment



The answer is based on detailed models provided by JBA Risk Management. These predict the areas liable to flood around approximately 1700 key dams and reservoirs across England and Wales (if that dam or reservoir were to fail).

## Flood Risk Management Options

Flooding can usually be managed by the installation of flood protection measures either on/within the building(s) or across the Site. Flood protection measures can be divided into two categories; flood resistance and flood resilience. Both flood resistance and flood resilience solutions can be integrated with design proposals for new build properties or retro-fitted to existing properties. Specific flood protection packages can often include both resistance and resilience measures. What is suitable will depend on a number of factors including flood source, likely flood depths, property design and age.

Research conducted by CLG Sustainable Buildings Division and The Environment Agency revealed that installing flood resistance measures may be inappropriate where likely flooding will be deep. Certain types of building construction are unable to resist the pressure load placed on the exterior skin of the building by retained flood waters. Generally a flood depth between 0.6m and 1.0m above ground level is used as a benchmark to decide whether to consider flood resilience measures rather than rely on flood resistance measures. This is dependent on the age and construction of the property.

### Guideline Costs for Resistance Measure

Building Feature	Cost Estimate for Baffles (+ VAT)
Standard (900mm) single door	£750
Standard (1800mm) double entrance door	£950
Large roller shutter door (up to 2,745mm span)	£1,420 (inc channel)
Standard garage door	£1,400 - £1,575
Standard window (up to 1,240mm span)	£750
Large window (1,240mm to 2,150mm span)	£550 - £700
Single air brick	£60 / £90
Double air brick	£80 - £230
Building Feature	Cost Estimate for Tanking (+ VAT)
Tanking (of basement, walls or floors)	£25 - £50 per metre <sup>2</sup>
System Component	Cost Estimate for Plumbing (+ VAT)
Simple non-return valve	£35 / £170
Sophisticated non-return valve	£670 / £900

The costs above are for indicative budget purposes only. They are based on installing components of a standard design and colour. If the Site requires bespoke products, these are likely to cost more (for example, if the Site is in a conservation area, different colours may be required). See our recommendation in the executive summary section for next steps.



## Environmental Hazards

	Risk	Recommendation
	COMAH	No Control of Major Accident Hazards (COMAH) sites are located within 500m.

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### Argyll's Comment



This report is primarily a desktop assessment of potential soil and groundwater liabilities. We also comment whether the above Environmental Hazards are relevant. Contact details are provided at the end of this report.



## Contents of the Data Section

Section	Description
<b>Tabular Summary</b>	<p>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.</p> <p>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.</p>
<b>Current Land Use Mapping</b>	<p>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.</p>
<b>Statutory Information</b>	<p>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.</p> <p>If no data is identified then the section will be omitted.</p>
<b>Waste</b>	<p>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.</p> <p>If no data is identified then the section will be omitted.</p>
<b>Current Industrial Land Use</b>	<p>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.</p> <p>If no data is identified then the section will be omitted.</p>
<b>Historical Land Use Mapping</b>	<p>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.</p>
<b>Historical Land Use</b>	<p>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.</p> <p>If no data is identified then the section will be omitted.</p>
<b>Aquifer Designations and Geology</b>	<p>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.</p> <p>These maps are followed by detailed information in relation to aquifer designations/groundwater vulnerability and geology at the Site and surrounding area (0-500m).</p> <p>If no data is identified then the section will be omitted.</p>
<b>Environmental Sensitivity</b>	<p>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.</p> <p>If no data is identified then the section will be omitted.</p>
<b>Natural and Mining Related Hazards</b>	<p>This section contains information on natural and mining related hazards which may affect the Site. These include subsidence, radon and mining.</p>
<b>Flooding</b>	<p>This section contains information on the risks associated with flooding. It includes maps and data associated with river, coastal, groundwater, and surface water flooding, as well as historical flooding and water features.</p>

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# Tabular Summary

## Statutory Information

Authorisations	On-site	1-250m	251-500m
Local Authority Pollution Prevention and Controls	0	0	0
Local Authority Integrated Pollution Prevention and Controls	0	0	0
Integrated Pollution Controls	0	0	0
Integrated Pollution Prevention And Control	0	0	0
Registered Radioactive Substances	0	0	0
Discharges	On-site	1-250m	251-500m
Discharge Consents	0	0	1
Water Industry Act Referrals	0	0	0
Hazardous Sites	On-site	1-250m	251-500m
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
Contraventions	On-site	1-250m	251-500m
Contaminated Land Register Entries and Notices	0	0	0
Local Authority Pollution Prevention and Control Enforcements	0	0	0
Enforcement and Prohibition Notices	0	0	0
Planning Hazardous Substance Enforcements	0	0	0
Substantiated Pollution Incident Register	0	0	0
Prosecutions Relating to Authorised Processes	0	0	0
Prosecutions Relating to Controlled Waters	0	0	0

## Waste

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

## Current Land Use

Current Potentially Contaminative Uses	On-site	1-250m	251-500m
Contemporary Trade Directory Entries	0	7	2
Fuel Station Entries	0	0	0
Other Features	On-site	1-250m	251-500m
Overhead Transmission Lines	0	0	0
Gas Pipelines	0	0	0
Gas Feeders	0	0	0

## Historical Land Use

Historical Potentially Contaminative Uses	On-site	1-250m	251-500m
Historical Tanks And Energy Facilities	0	2	0
Potentially Infilled Land	On-site	1-250m	251-500m
Former Marshes	0	0	0
Potentially Infilled Land (Non-Water)	0	0	0
Potentially Infilled Land (Water)	0	0	1

## Groundwater Vulnerability

Hydrogeology	On-site	1-250m	251-500m
Superficial Aquifer Designations	3	8	9
Bedrock Aquifer Designations	1	1	0
Geology	On-site	1-250m	251-500m
BGS 1:50,000 Bedrock Geology	2	0	2
BGS 1:50,000 Superficial Deposits	3	3	8
BGS 1:50,000 Geological Mapping Coverage	1	0	0
BGS 1:625,000 Solid Geology	1	N/A	N/A
BGS Borehole Logs	1	0	N/A

## Environmental Sensitivity

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

## Natural and Mining Related Hazards

Subsidence	On-site	1-250m	251-500m
Collapsible Ground Stability Hazards	1	1 <sup>2</sup>	N/A
Compressible Ground Stability Hazards	1	1	N/A
Ground Dissolution Stability Hazards	1	1	N/A
Landslide Ground Stability Hazards	1	1	N/A
Running Sand Ground Stability Hazards	1	1	N/A
Shrinking or Swelling Clay Subsidence Hazards	1	1	N/A
Non-Coal Mining Hazards	1	1	N/A
Radon	On-site	1-250m	251-500m
Radon Potential	1	N/A	N/A
Radon Protection Measures	1	N/A	N/A
Mining	On-site	1-250m	251-500m
Brine Compensation Areas	0	N/A	N/A
Coal Mining Affected Areas	1	N/A	N/A
Natural and Mining Cavities	0	1	1
Mining Instability	1	0	N/A
BGS Recorded Mineral Sites	0	0	0

<sup>2</sup>Ground stability hazards are only searched to a radius of 50m from the Site boundary.

## Flooding

Current Flood Risk	On-site	1-250m	251-500m
Flooding From Rivers or Sea	0	0	0
Flooding From Rivers or Sea (in an Extreme Flood)	0	0	0
Areas Benefiting from Flood Defences	0	0	0
Flood Storage Areas	0	0	0
Flood Defences	0	0	0
Risk of Flooding from Rivers and Sea	0	0	0
Groundwater Flood Risk	0	0	0
Surface Water Flooding (1:75 year rainfall event)	0	2	1
Surface Water Flooding (1:200 year rainfall event)	0	2	1
Surface Water Flooding (1:1,000 year rainfall event)	1	2	0
Historical Flooding	On-site	1-250m	251-500m
Historical Flood Events	0	0	0
Geological Indicators of Flooding	0	0	0
Other Flood Information	On-site	1-250m	251-500m
MasterMap Water Network	0	0	0
Surface Water Features	0	0	0
Dam or Reservoir Failure	0	0	0
Site Information	Response		
Height of Site Above Sea Level	155.01m		
Distance of Site Boundary to Nearest Water Feature	Greater than search radius		

### 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.

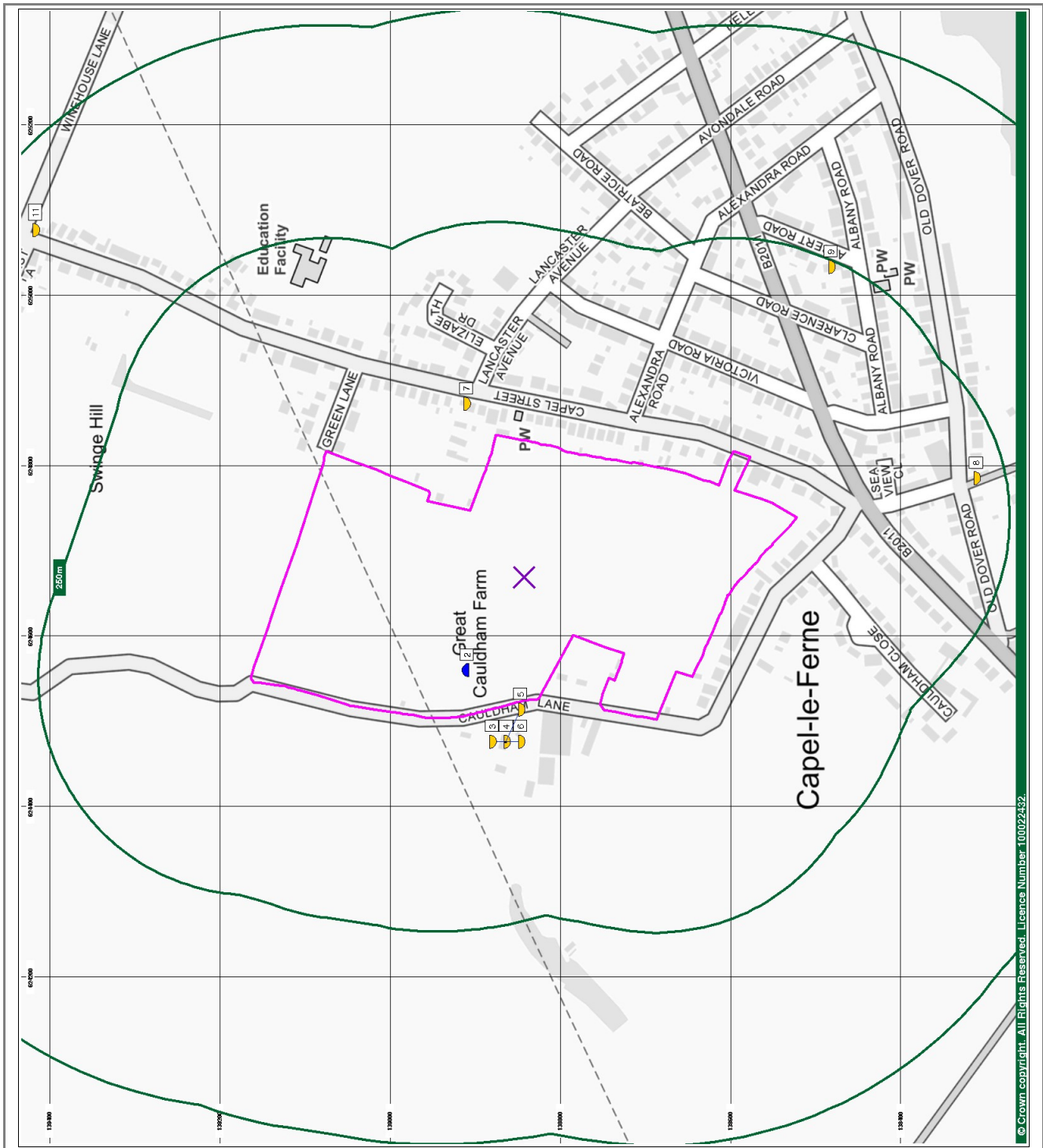
### Landfill Site Information

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

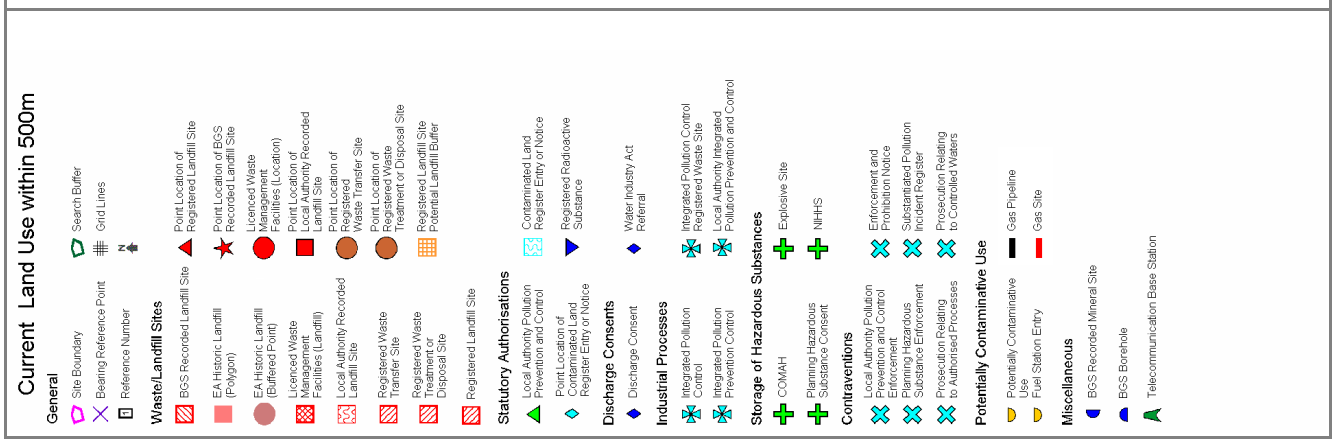
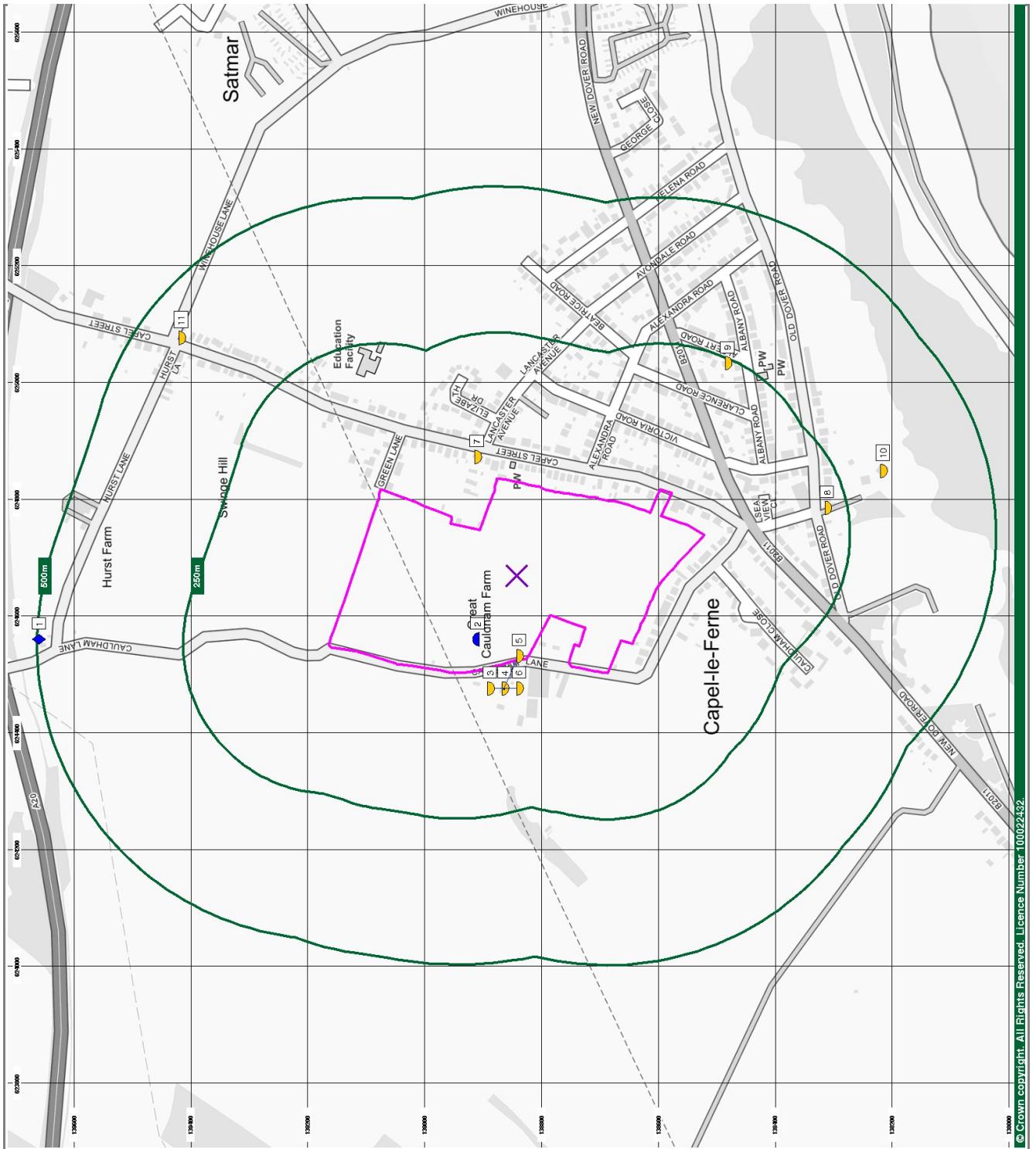
Information on subsidence hazards is provided by the British Geological Survey (BGS). Information present within 250m of the Site is reported under Natural and Mining Related Hazards. Due to the level of detail of this data and the complexities of the real world, the BGS recommends a precautionary approach 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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Current Land Use within 250m	
<b>General</b>	<ul style="list-style-type: none"> <li>Search Buffer</li> <li>Grid Lines</li> <li>Site Boundary</li> <li>Bearing Reference Point</li> <li>Reference Number</li> </ul>
<b>Waste/Landfill Sites</b>	<ul style="list-style-type: none"> <li>BCS Recorded Landfill Site</li> <li>EA Historic Landfill (Polygon)</li> <li>EA Historic Landfill (Buffered Point)</li> <li>Licensed Waste Management Facilities (Landfill)</li> <li>Local Authority Recorded Landfill Site</li> <li>Point Location of Waste Transfer Site</li> <li>Registered Waste Transfer Site</li> <li>Registered Waste Treatment or Disposal Site</li> <li>Registered Landfill Site</li> <li>Potential Landfill Buffer</li> </ul>
<b>Statutory Authorisations</b>	<ul style="list-style-type: none"> <li>Local Authority Pollution Register Entry or Notice</li> <li>Contaminated Land Register Entry or Notice</li> <li>Registered Radioactive Substance</li> <li>Water Industry Act Referral</li> </ul>
<b>Industrial Processes</b>	<ul style="list-style-type: none"> <li>Integrated Pollution Control</li> <li>Integrated Pollution Prevention and Control</li> </ul>
<b>Storage of Hazardous Substances</b>	<ul style="list-style-type: none"> <li>Explosive Site</li> <li>NIHHS</li> </ul>
<b>Contraventions</b>	<ul style="list-style-type: none"> <li>Local Authority Pollution Prevention and Control Enforcement</li> <li>Substantiated Pollution Incident Register</li> <li>Prosecution Relating to Authorised Processes to Controlled Waters</li> </ul>
<b>Potentially Contaminative Use</b>	<ul style="list-style-type: none"> <li>Potentially Contaminative Use</li> <li>Fuel Station Entry</li> <li>Gas Pipeline</li> <li>Gas Site</li> </ul>
<b>Miscellaneous</b>	<ul style="list-style-type: none"> <li>BCS Recorded Mineral Site</li> <li>BGS Borehole</li> <li>Telecommunication Base Station</li> </ul>





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## Statutory Information

### Discharges

#### Discharge Consents

Map ID	Details	Distance	Direction
1	Operator: Mr C Alden, Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE), Location: Land At Swinge Hill Cottage, Cauldham Lane, Capel-Le-Ferne, Dover, Kent, Authority: Environment Agency, Southern Region, Catchment Area: Not Given, Permit Ref: P03717, Permit Version: 1, Effective Date: 1st July 1991, Issued Date: 1st July 1991, Revocation Date: Not Supplied, Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company, Discharge Environment: Land/Soakaway, Receiving Water: Into Land, Status: Post National Rivers Authority Legislation where issue date > 31/08/1989, Positional Accuracy: Located by supplier to within 100m.	498m	N

### Current Land Use

#### Current Potentially Contaminative Uses

##### Contemporary Trade Directory Entries

Map ID	Details	Distance	Direction
3	Brewers, Name: The Brewery Of Angels & Demons Ltd, Status: Inactive, Location: Great Cauldham Farm, Cauldham Lane, Capel-le-Ferne, Folkestone, CT18 7HQ, Positional Accuracy: Automatically positioned to the address.	41m	W
4	Joinery Manufacturers, Name: Kauri Joinery, Status: Inactive, Location: Great Cauldham Farm, Cauldham Lane, Capel-le-Ferne, Folkestone, Kent, CT18 7HQ, Positional Accuracy: Automatically positioned to the address.	41m	W
5	Garage Services, Name: Capel, Status: Inactive, Location: Cauldham Lane, Capel-le-Ferne, Folkestone, Kent, CT18 7HQ, Positional Accuracy: Automatically positioned to the address.	41m	W
6	Joinery Manufacturers, Name: All Dimensional Joinery Ltd, Status: Inactive, Location: Cauldham Farm, Cauldham Lane, Capel-le-Ferne, Folkestone, Kent, CT18 7HQ, Positional Accuracy: Automatically positioned to the address.	41m	W
7	Joinery Manufacturers, Name: D Sinclair, Status: Inactive, Location: 79, Capel Street, Capel-le-Ferne, Folkestone, Kent, CT18 7HF, Positional Accuracy: Automatically positioned to the address.	51m	E
8	Garage Services, Name: Capel, Status: Inactive, Location: 30, Old Dover Road, Capel-le-Ferne, Folkestone, Kent, CT18 7HN, Positional Accuracy: Automatically positioned to the address.	216m	S
9	Boilers - Servicing, Replacements & Repairs, Name: Alan Wardle, Status: Inactive, Location: 1, Albert Road, Capel-le-Ferne, Folkestone, Kent, CT18 7JY, Positional Accuracy: Automatically positioned to the address.	243m	SE
10	Fireplaces & Mantelpieces, Name: Flamewaves Fires, Status: Inactive, Location: Eagles Nest, Old Dover Road, Capel-le-Ferne, Folkestone, Kent, CT18 7HL, Positional Accuracy: Automatically positioned to the address.	325m	S
11	Car Breakers & Dismantlers, Name: Folkestone & Dover Car Breakers, Status: Inactive, Location: 162, Capel Street, Capel-le-Ferne, Folkestone, Kent, CT18 7HA, Positional Accuracy: Automatically positioned to the address.	430m	NE

## Historical Land Use

### Historical Potentially Contaminative Uses

#### Historical Tanks and Energy Facilities

Map ID	Details	Distance	Direction
	Electrical Sub Station Facilities, Scale of Mapping: 1:2,500, Date of Mapping: 1972.	96m	E
	Electrical Sub Station Facilities, Scale of Mapping: 1:2,500, Date of Mapping: 1972.	121m	SE

### Potentially Infilled Land

#### Potentially Infilled Land (Water)

Map ID	Details	Distance	Direction
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1962.	315m	SW

## Historical Maps

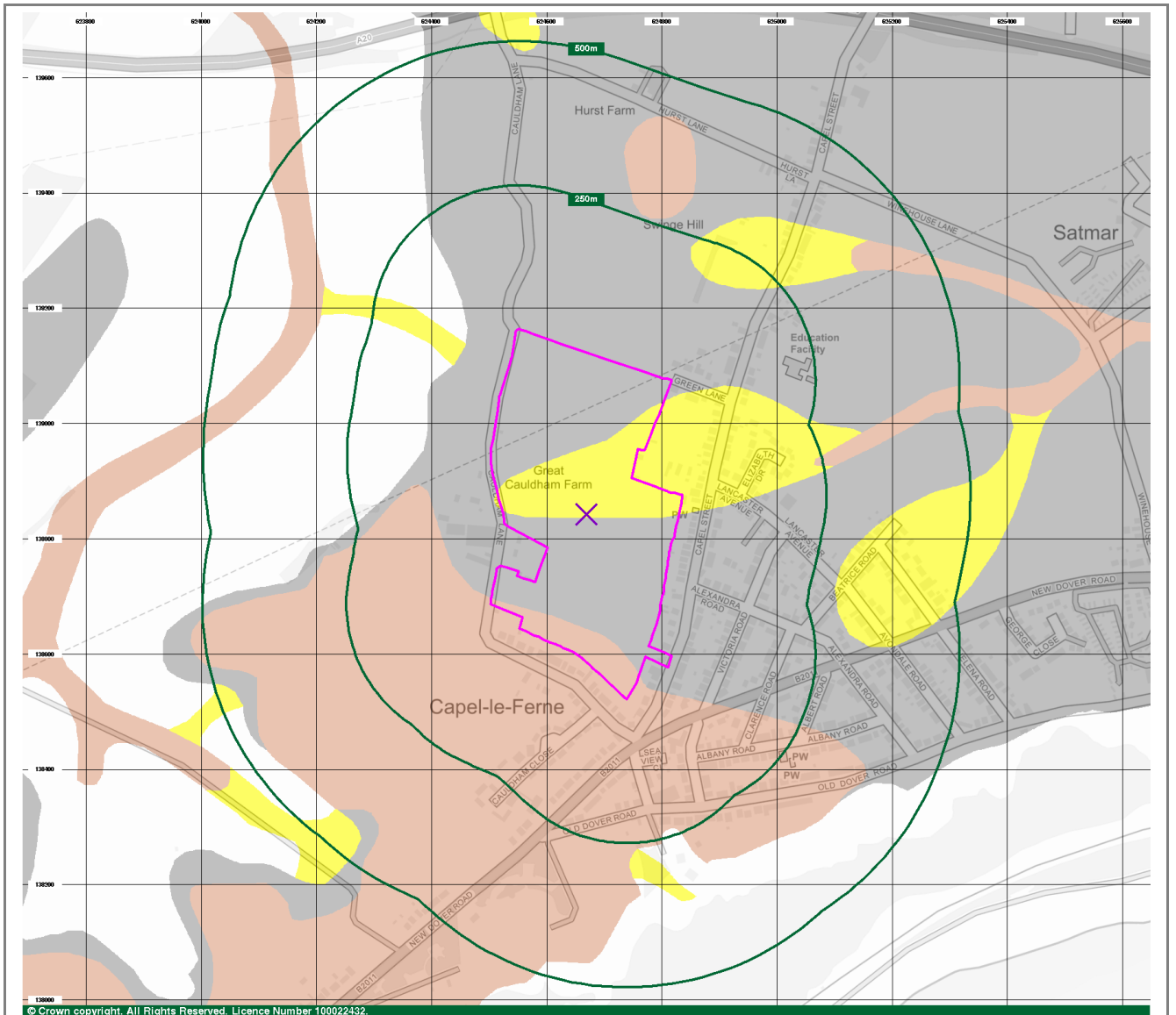
The following maps have been manually reviewed by a consultant and presented in the Risk Analysis section at the front of this report:

Scale	Map Sheet	Published Date
1:2,500	Kent 075_07	1872
1:2,500	Kent 075_03	1876
1:2,500	Kent 075_03	1898
1:2,500	Kent 075_07	1898
1:2,500	Kent 075_03	1907
1:2,500	Kent 075_07	1907
1:2,500	Kent 075_03	1937
1:2,500	Kent 075_07	1937
1:2,500	National Grid TR2438	1972
1:2,500	National Grid TR2439	1972
1:2,500	National Grid TR2538	1972
1:2,500	National Grid TR2539	1972
1:2,500	National Grid TR2438	1973
1:2,500	National Grid TR2439	1973
1:2,500	National Grid TR2539	1973
1:2,500	National Grid TR2438	1992
1:2,500	National Grid TR2439	1992
1:2,500	National Grid TR2538	1993
1:2,500	National Grid TR2438	1993
1:2,500	National Grid TR2439	1993
1:2,500	National Grid TR2538	1993
1:2,500	National Grid TR2539	1993
1:2,500	National Grid TR2539	1993
1:2,500	National Grid TR2439	1994
1:2,500	National Grid TR2539	1994
1:2,500	National Grid TR2438	1979
1:2,500	National Grid TR2538	1987
1:2,500	National Grid TR2438	1982
1:10,560	Kent 067_00	1877
1:10,560	Kent 075_00	1877
1:10,560	Kent 067_SE	1898
1:10,560	Kent 075_NE	1899
1:10,560	Kent 075_NW	1899
1:10,560	Kent 067_SE	1908
1:10,560	Kent 075_NE	1908

Scale	Map Sheet	Published Date
1:10,560	Kent 075_NW	1908
1:10,560	Kent 075_NE	1938
1:10,560	Kent 075_NW	1938
1:10,560	Kent 067_SE	1939
1:10,560	National Grid TR23NE	1961
1:10,560	National Grid TR24SW	1961
1:10,560	National Grid TR23NW	1962
1:10,560	National Grid TR24SE	1962
1:10,000	National Grid TR23NE	1975
1:10,000	National Grid TR23NW	1975
1:10,000	National Grid TR24SE	1976
1:10,000	National Grid TR24SW	1977
1:10,000	National Grid TR24SW	1977
1:10,000	National Grid TR24SE	1987
1:10,000	National Grid TR23NE	1994
1:10,000	National Grid TR23NW	1994
1:10,000	National Grid TR23NE	2014
1:10,000	National Grid TR23NW	2014
1:10,000	National Grid TR24SE	2014
1:10,000	National Grid TR24SW	2014



# Aquifer Designation (Superficial)

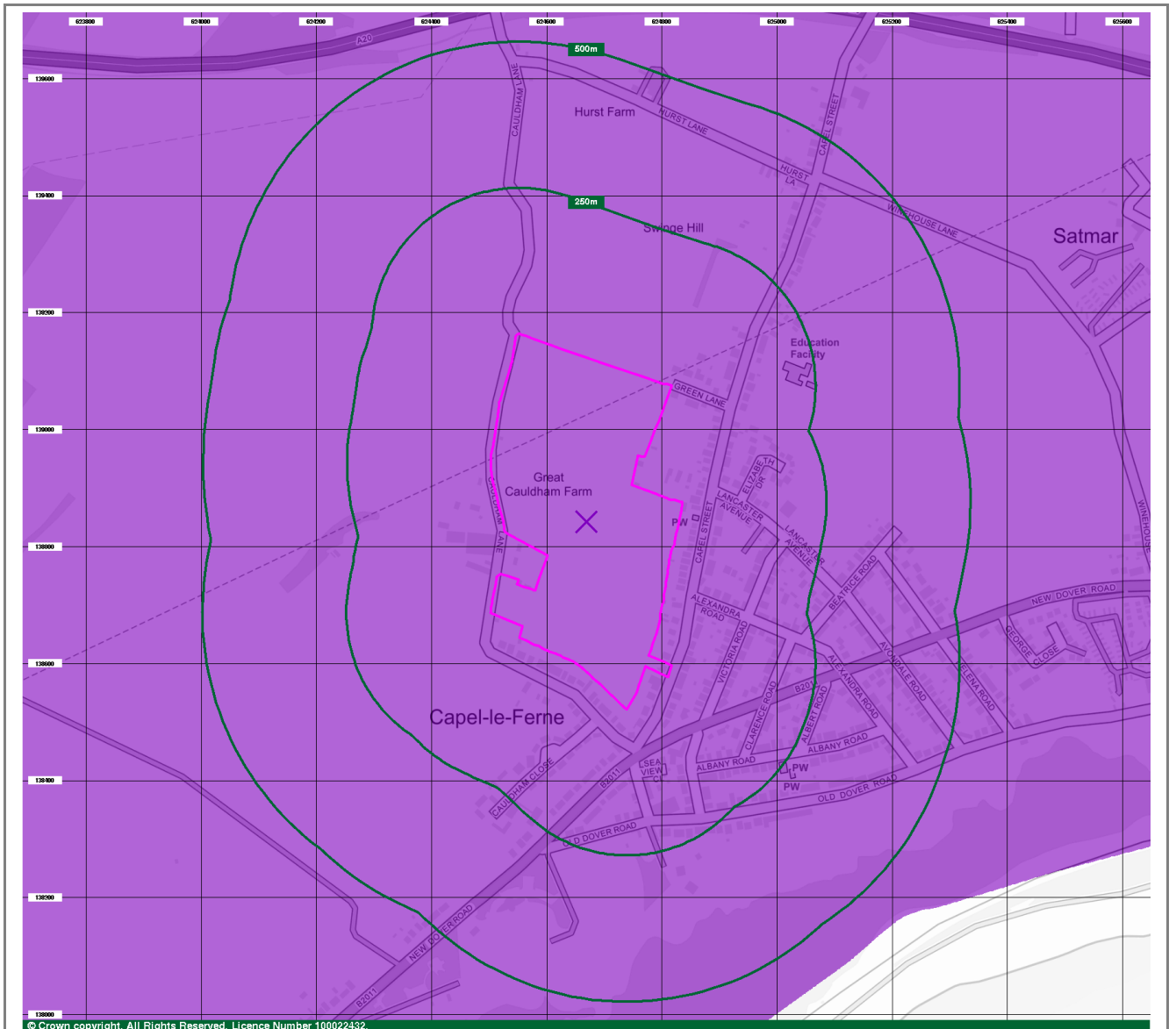


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## Aquifer Designations

-  Site Boundary
-  Search Buffer
-  Bearing Reference Point
-  N
-  Principal Aquifer
-  Secondary A Aquifer
-  Secondary B Aquifer
-  Secondary Undifferentiated
-  Unproductive Strata
-  Unknown

# Aquifer Designation (Bedrock)



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## Aquifer Designations

-  Site Boundary
-  Search Buffer
-  Bearing Reference Point
- 
-  Principal Aquifer
-  Secondary A Aquifer
-  Secondary B Aquifer
-  Secondary Undifferentiated
-  Unproductive Strata
-  Unknown

# Groundwater Vulnerability

## Hydrogeology

### Superficial Aquifer Designations

Map ID	Details	Distance	Direction
	<p>Secondary Aquifer - A</p> <p>These aquifers are formed of moderately permeable layers capable of supporting water supplies at a local scale, and in some cases forming an important source of base flow to rivers.</p>	On Site	S
	<p>Unproductive Strata</p> <p>The rock layers or drift deposits have a low permeability that have negligible significance for water supply or river base flow.</p>	On Site	S
	<p>Secondary Aquifer - Undifferentiated</p> <p>These aquifers 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.</p>	On Site	-
	<p>Secondary Aquifer - Undifferentiated</p> <p>These aquifers 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.</p>	83m	NW
	<p>Unproductive Strata</p> <p>The rock layers or drift deposits have a low permeability that have negligible significance for water supply or river base flow.</p>	164m	E
	<p>Secondary Aquifer - Undifferentiated</p> <p>These aquifers 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.</p>	165m	E
	<p>Unproductive Strata</p> <p>The rock layers or drift deposits have a low permeability that have negligible significance for water supply or river base flow.</p>	183m	NE
	<p>Secondary Aquifer - Undifferentiated</p> <p>These aquifers 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.</p>	184m	NE
	<p>Secondary Aquifer - A</p> <p>These aquifers are formed of moderately permeable layers capable of supporting water supplies at a local scale, and in some cases forming an important source of base flow to rivers.</p>	211m	SE
	<p>Secondary Aquifer - A</p> <p>These aquifers are formed of moderately permeable layers capable of supporting water supplies at a local scale, and in some cases forming an important source of base flow to rivers.</p>	232m	E
	<p>Secondary Aquifer - Undifferentiated</p> <p>These aquifers 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.</p>	244m	NE
	<p>Secondary Aquifer - A</p> <p>These aquifers are formed of moderately permeable layers capable of supporting water supplies at a local scale, and in some cases forming an important source of base flow to rivers.</p>	256m	N
	<p>Secondary Aquifer - Undifferentiated</p> <p>These aquifers 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.</p>	261m	S

## Superficial Aquifer Designations

Map ID	Details	Distance	Direction
	Secondary Aquifer - Undifferentiated These aquifers 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.	292m	E
	Unproductive Strata The rock layers or drift deposits have a low permeability that have negligible significance for water supply or river base flow.	335m	NE
	Secondary Aquifer - A These aquifers are formed of moderately permeable layers capable of supporting water supplies at a local scale, and in some cases forming an important source of base flow to rivers.	339m	NW
	Unproductive Strata The rock layers or drift deposits have a low permeability that have negligible significance for water supply or river base flow.	412m	SW
	Secondary Aquifer - Undifferentiated These aquifers 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.	444m	SW
	Secondary Aquifer - Undifferentiated These aquifers 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.	466m	SW
	Secondary Aquifer - Undifferentiated These aquifers 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.	483m	N

## Bedrock Aquifer Designations

Map ID	Details	Distance	Direction
	Principal Aquifer These aquifers are typically formed of layers of rock or drift deposits that have a high permeability and provide a high level of water storage. They may support water supply and/or base river flow on a strategic scale.	On Site	-
	Principal Aquifer These aquifers are typically formed of layers of rock or drift deposits that have a high permeability and provide a high level of water storage. They may support water supply and/or base river flow on a strategic scale.	164m	E

## Geology

### BGS 1:50,000 Bedrock Geology

Map ID	Details	Distance	Direction
	LEX Code: NPCH, Rock Name: New Pit Chalk Formation, Rock Type: Chalk, Min Age: Not Supplied, Max Age: Turonian.	On Site	E
	LEX Code: LECH, Rock Name: Lewes Nodular Chalk Formation, Rock Type: Chalk, Min Age: Not Supplied, Max Age: Turonian.	On Site	-
	LEX Code: HCK, Rock Name: Holywell Nodular Chalk Formation, Rock Type: Chalk, Min Age: Not Supplied, Max Age: Cenomanian.	313m	NW
	LEX Code: ZZCH, Rock Name: Zig Zag Chalk Formation, Rock Type: Chalk, Min Age: Not Supplied, Max Age: Cenomanian.	387m	SE

### BGS 1:50,000 Superficial Deposits

Map ID	Details	Distance	Direction
	LEX Code: CWF, Rock Name: Clay-with-flints Formation, Rock Type: Sand, Min Age: Not Supplied, Max Age: MIOCENE.	On Site	S
	LEX Code: HEAD, Rock Name: Head, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	On Site	-

### BGS 1:50,000 Superficial Deposits

Map ID	Details	Distance	Direction
	LEX Code: CWF, Rock Name: Clay-with-flints Formation, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: MIOCENE.	On Site	S
	LEX Code: HEAD, Rock Name: Head, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	83m	NW
	LEX Code: HEAD, Rock Name: Head, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	184m	NE
	LEX Code: HEAD, Rock Name: Head, Rock Type: Silt and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	232m	E
	LEX Code: CWF, Rock Name: Clay-with-flints Formation, Rock Type: Sand, Min Age: Not Supplied, Max Age: MIOCENE.	256m	N
	LEX Code: HEAD, Rock Name: Head, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	261m	S
	LEX Code: HEAD, Rock Name: Head, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	292m	E
	LEX Code: HEAD, Rock Name: Head, Rock Type: Silt and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	339m	NW
	LEX Code: CWF, Rock Name: Clay-with-flints Formation, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: MIOCENE.	412m	SW
	LEX Code: HEAD, Rock Name: Head, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	444m	SW
	LEX Code: HEAD, Rock Name: Head, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	466m	SW
	LEX Code: HEAD, Rock Name: Head, Rock Type: Clay, Silt, Sand and Gravel, Min Age: Not Supplied, Max Age: Quaternary.	483m	N

### BGS 1:50,000 Geological Mapping Coverage

Map ID	Details	Distance	Direction
	Map Sheet No: 305, Map Name: Folkestone and Dover, Map Date: 1966, Bedrock Geology: Available, Superficial Geology: Available, Artificial Geology: Not Available, Faults: Not Supplied, Landslip: Available, Rock Segments: Not Supplied.	On Site	-

### BGS 1:625,000 Solid Geology

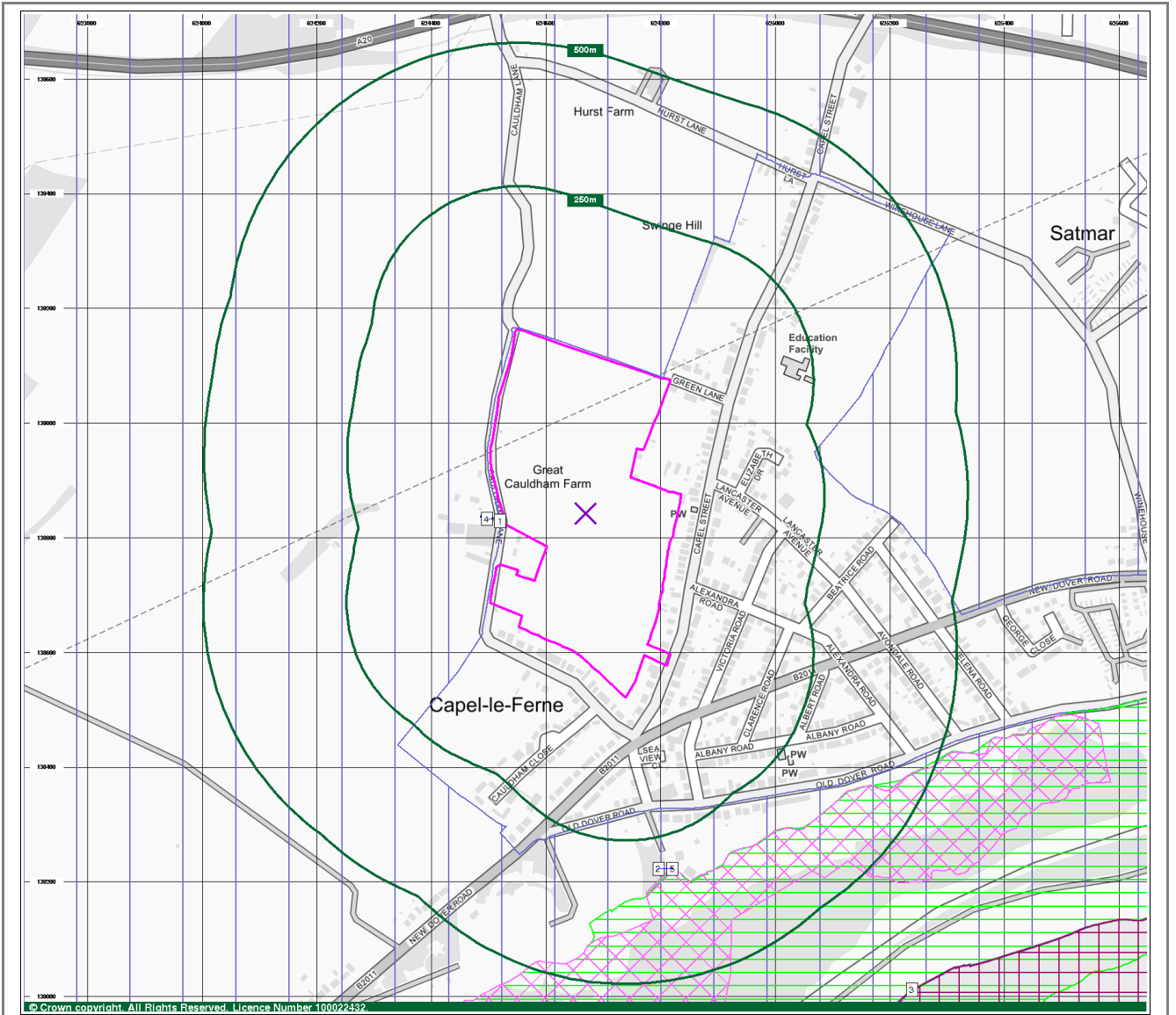
Map ID	Details	Distance	Direction
	White Chalk Subgroup.	On Site	-

### BGS Boreholes

Map ID	Details	Distance	Direction
2	BGS Reference: Tr23nw10, Drilled Length (m): Not Supplied, Borehole Name: Channel Tunnel E6 Capel Le Ferne.	On Site	NW



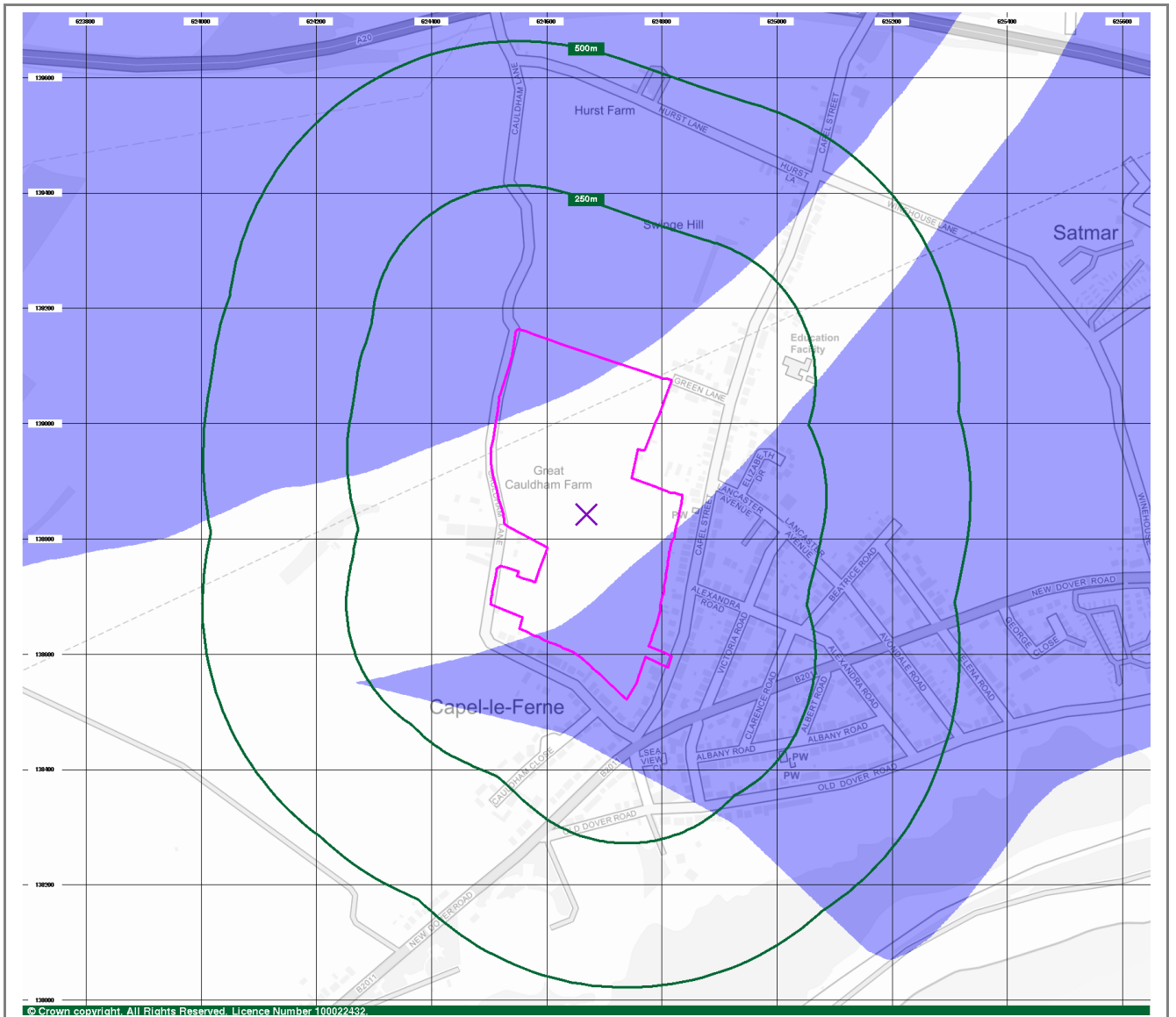
# Environmentally Sensitive Features



## Sensitive Land Uses

- |                                    |                         |                                     |
|------------------------------------|-------------------------|-------------------------------------|
| Site Boundary                      | Local Nature Reserve    | Ramsar Site                         |
| Search Buffer                      | Marine Nature Reserve   | Nearest Surface Water Feature       |
| Bearing Reference Point            | National Nature Reserve | Site of Special Scientific Interest |
| N                                  | National Park           | Special Area of Conservation        |
| Area of Outstanding Natural Beauty | National Scenic Area    | Special Protection Area             |
| Environmentally Sensitive Area     | Nitrate Sensitive Area  | Water Abstraction                   |
| Forest Park                        | Nitrate Vulnerable Zone | Historical Flood Liability          |

# Source Protection Zones



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## Source Protection Zones

- |                         |   |  |
|-------------------------|---|--|
| Site Boundary           | Inner zone (Zone 1)                             | Total catchment (Zone 3)                             |
| Search Buffer           | Inner zone - subsurface activity only (Zone 1c) | Total catchment - subsurface activity only (Zone 3c) |
| Bearing Reference Point | Outer zone (Zone 2)                             | Outer zone - subsurface activity only (Zone 2c)      |
| N                       |   | Special interest (Zone 4)                            |

## Environmentally Sensitive Features

### Areas of Outstanding Natural Beauty

Map ID	Details	Distance	Direction
1	Name: Kent Downs, Multiple Area: Y, Area (m <sup>2</sup> ): 879004390.45, Designation Date: 30th July 1968, Source: Natural England.	2m	W

### Local Nature Reserves

Map ID	Details	Distance	Direction
2	Name: Folkestone Warren, Multiple Area: Y, Area (m <sup>2</sup> ): 836229.21, Source: Natural England, Designation Date: 1st January 1990.	310m	S

### Marine Nature Reserves

Map ID	Details	Distance	Direction
3	Name: Dover To Folkestone, Multiple Area: N, Area (m <sup>2</sup> ): 19525965.41, Source: Natural England, Designation Date: .	708m	SE

### Nearest Surface Water Feature

Map ID	Details	Distance	Direction
4	Surface water feature identified in proximity.	18m	W

### Sites of Special Scientific Interest

Map ID	Details	Distance	Direction
5	Name: Folkestone Warren, Multiple Area: N, Area (m <sup>2</sup> ): 3162949.98, Source: Natural England, Reference: 1003675, Designation Date: 29th July 1987, Date Type: Notified, Designation Details: Geological Conservation Review.	310m	S

### Source Protection Zones

Map ID	Details	Distance	Direction
	Name: , 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.	On Site	SE
	Name: , Source: Environment Agency, Head Office, Reference: Not Supplied, Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	482m	NW

## Natural and Mining Related Hazards

### Subsidence

#### Collapsible Ground Stability Hazards

Map ID	Details	Distance	Direction
	Risk: Very Low, Source: British Geological Survey, National Geoscience Information Service.	On Site	-
	Risk: Very Low, Source: British Geological Survey, National Geoscience Information Service.	164m	E

#### Compressible Ground Stability Hazards

Map ID	Details	Distance	Direction
	Risk: No Hazard, Source: British Geological Survey, National Geoscience Information Service.	On Site	-
	Risk: No Hazard, Source: British Geological Survey, National Geoscience Information Service.	164m	E

## Ground Dissolution Stability Hazards

Map ID	Details	Distance	Direction
	Risk: Moderate, Source: British Geological Survey, National Geoscience Information Service.	On Site	S
	Risk: Moderate, Source: British Geological Survey, National Geoscience Information Service.	183m	NE

## Landslide Ground Stability Hazards

Map ID	Details	Distance	Direction
	Risk: Very Low, Source: British Geological Survey, National Geoscience Information Service.	On Site	-
	Risk: Moderate, Source: British Geological Survey, National Geoscience Information Service.	135m	NW

## Running Sand Ground Stability Hazards

Map ID	Details	Distance	Direction
	Risk: Very Low, Source: British Geological Survey, National Geoscience Information Service.	On Site	S
	Risk: Very Low, Source: British Geological Survey, National Geoscience Information Service.	83m	NW

## Shrinking or Swelling Clay Subsidence Hazards

Map ID	Details	Distance	Direction
	Risk: Low, Source: British Geological Survey, National Geoscience Information Service.	On Site	S
	Risk: Low, Source: British Geological Survey, National Geoscience Information Service.	164m	E

## Non-Coal Mining Hazards

Map ID	Details	Distance	Direction
	Risk: Rare, Source: British Geological Survey, National Geoscience Information Service.	On Site	-
	Risk: Rare, Source: British Geological Survey, National Geoscience Information Service.	164m	E

## Radon

### Radon Potential

Map ID	Details	Distance	Direction
	The property is in an Intermediate probability radon area (5 to 10% of homes are estimated to be at or above the Action Level)., Source: British Geological Survey, National Geoscience Information Service.	On Site	NW

### Radon Protective Measures

Map ID	Details	Distance	Direction
	Basic, Source: British Geological Survey, National Geoscience Information Service.	On Site	NW

## Mining

### Coal Mining Affected Areas

Map ID	Details	Distance	Direction
	In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report..	On Site	-

### Natural and Mining Cavities

Map ID	Details	Distance	Direction
	Cavity Type: Solution Pipe, Origin: , Cavity Number: , Commodity: , Positional Accuracy: .	232m	W
	Cavity Type: Solution Pipe x 3, Origin: , Cavity Number: , Commodity: , Positional Accuracy: .	375m	S

## Mining Instability

Map ID	Details	Distance	Direction
	Mining Evidence: Inconclusive Coal Mining, Source: Ove Arup & Partners, Boundary Quality: As Supplied.	On Site	-



# Flooding from Rivers or Sea



## Environment Agency

-  Client Site
-  Flood Defences
-  Flood Storage
-  Defended Areas
-  Flood Zone 2
-  Flood Zone 3

0 50 100 200  
meters

\* - Not all features in legend may be present in above map

Nominal scale at A4 paper size - 1:10,500

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# Current Flood Risk

## Flooding from River or Sea (Flood Zone 3)

Details	Distance	Reply or Direction
Are there any flood plains within 500m?	<501m	NO

## Flooding from River or Sea in an Extreme Flood (Flood Zone 2)

Details	Distance	Reply or Direction
Are there any flood plains (extreme floods) within 500m?	<501m	NO



The Site is at a low risk of flooding from rivers or the sea, as defined by the regulatory body's Flood Map. If the Site area is greater than one hectare, any planning application for development would need to be accompanied by a Flood Risk Assessment in accordance with NPPF.

## Flood Defences

Details	Distance	Reply or Direction
Are there any flood defences within 500m?	<501m	NO



There are no flood defences within 500m of the Site. There may be a small residual risk of flooding from overtopping or failure of defences more distant from the Site. Reference should be made to the assessment of 'Areas Benefiting from Flood Defences' to ascertain whether the Site could potentially be at risk.

## Areas Benefiting from Flood Defences

Details	Distance	Reply or Direction
Does the Site or any areas within 500m benefit from flood defences?	<501m	NO



The Site is over 500m from an Area Benefiting from a Flood Defence, as defined by the regulatory body. The residual risk that the Site may flood if the protection standard of any flood defences is exceeded, or if the defences fail, is insignificant.

## Flood Storage Areas

Details	Distance	Reply or Direction
Are there any flood storage areas within 500m?	<501m	NO





The Site is over 500m from a Flood Storage Area (FSA) as defined by the regulatory body. These areas store flood water during flood events. It is unlikely that any FSA presents any associated flood risk to the Site.

# The Environment Agency Risk of Flooding from Rivers and Sea



## Risk of Flooding from Rivers and Sea (RoFRS)

-  Client Site
-  High
-  Medium
-  Low
-  Very Low

metres  
0 50 100 200

\* - Not all features in legend may be present in above map

Nominal scale at A4 paper size - 1:10,500

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## Risk of Flooding from Rivers and Sea

Details	Distance	Reply or Direction
What is the flood likelihood category for the Site?	On Site	-



Some areas may be classified as having no result. This occurs where there is no output data from the regulatory body's risk assessment, but the area falls within the extreme flood outline (with a 0.1% or 1 in 1000 chance of flooding in any year).

### The Environment Agency Data

The data in the Property Flood Likelihood Database is sourced from The Environment Agency's National Receptor Dataset (NRD). The information provided includes the flood likelihood category low, moderate, or significant according to the flood likelihood analysis. Some areas may be classified as having no result. This occurs where there is no output data from the analysis, but the area falls within the extreme flood outline (with a 0.1% or 1 in 1000 chance of flooding in any year).



# Groundwater Flooding Risk



## Groundwater Flooding Risk Rating

-  Client Site
-  High Risk
-  Moderate Risk
-  Low Risk



\* - Not all features in legend may be present in above map

Nominal scale at A4 paper size - 1:10,500

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Details	Distance	Reply or Direction
What is the risk of groundwater flooding at the Site?	On Site	-



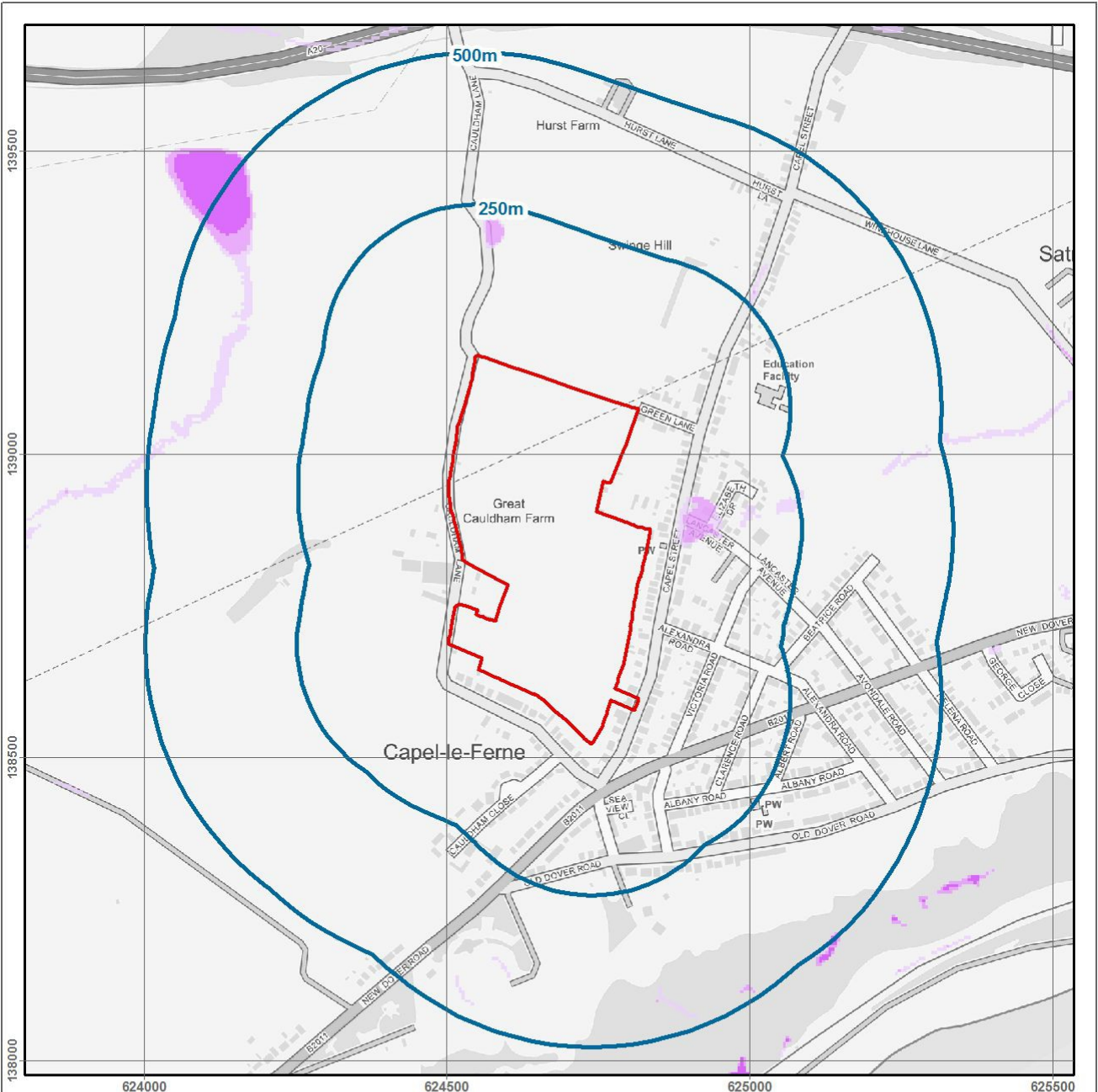
Information from GeoSmart Information Ltd indicates that there is a negligible risk of groundwater flooding in this area and any groundwater flooding incidence will be less frequent than 1 in 100 years return period.No further investigation of risk is deemed necessary unless the proposed site use is unusually sensitive. However, data may be lacking in some areas, so assessment as 'negligible risk' on the basis of the map does not rule out local flooding due to features not currently represented in the national datasets used to generate this version of the map.

**GeoSmart Information Ltd Data**





GeoSmart Information Ltd provides data to Argyll in relation to groundwater flooding. Through research and development, building on their expertise in addressing groundwater flooding issues for The Environment Agency and other clients in the UK, GeoSmart Information Ltd has developed algorithms and calibrated predictions of the risk of groundwater flooding occurring in England and Wales. This differs from other suppliers of data regarding groundwater flooding which only report on the susceptibility of groundwater flooding. Susceptibility merely has to be identified, whereas risk must be quantified. The resulting map is a 5x5m classification of groundwater flooding risk into four categories (Negligible, Low, Moderate and High). GeoSmart Information Ltd's classifications are based on the level of risk, combining severity and uncertainty that a site will suffer groundwater flooding within a return period of about 100 years.

The map is a general purpose indicative screening tool, and is intended to provide a useful initial view for a wide variety of applications. However, it does not provide an alternative to a site specific assessment, and a detailed risk assessment should be used for any site where the impact of groundwater flooding would have significant adverse consequences.

# Surface Water Flooding (1:200 year rainfall event)



## Surface Water Risk

-  Client Site
-  10cm - 30cm depth
-  30cm - 1m depth
-  1m + depth



\* - Not all features in legend may be present in above map

Nominal scale at A4 paper size - 1:10,500

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## Surface Water Flooding

Details	Distance	Reply or Direction
What is the risk of surface water flooding at the Site following a 1 in 75 year rainfall event?	On Site	negligible
What is the risk of surface water flooding at the Site following a 1 in 200 year rainfall event?	On Site	negligible
What is the risk of surface water flooding at the Site following a 1 in 1,000 year rainfall event?	On Site	low



### JBA Risk Management Data

Surface Water Flooding - Information regarding the risk of natural surface water or pluvial flooding. The risk is classified by JBA into four categories, low (equal to 10cm), low to medium (more than 10cm), medium (more than 30cm) and high (more than 1m) which reflect varying depths of potential surface water flooding during a range of rainfall events including 1:75 year, 1:200 year, and 1:1000 year.

# Historical Flooding



## Historical Flooding

- Client Site
- Historic Floods
- Geo Indicators



\* - Not all features in legend may be present in above map

Nominal scale at A4 paper size - 1:10,500

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## Historical Flood Events

Details	Distance	Reply or Direction
Have any historic flood events occurred at the Site or within 500m?	<501m	NO



The regulatory body's records have no indication of past flooding within 500m of the Site. As these records are not comprehensive, it may still be prudent to ask the relevant authorities and the Site owner whether they are aware of any previous flooding at the Site or in the surrounding area.

### The Environment Agency Data

The Environment Agency has collated extensive records (including outlines) of flooding from rivers, the sea, or groundwater which have occurred in England and Wales since c.1950. This information comes from various sources including maps, aerial photographs, and private records. It is not necessarily comprehensive.

## Geological Indicators of Flooding

Details	Distance	Reply or Direction
Are there any geological deposits which indicate the Site may have been flooded in the past?	<26m	NO



### British Geological Survey Data

Geological Indicators of Flooding – The BGS Geological Indicators of Flooding (GIF) data set is a digital map based on the BGS Digital Geological Map of Great Britain at the 1:50,000 scale (DiGMapGB-50). It was produced by characterising Superficial (Drift) Deposits on DiGMapGB-50 in terms of their likely vulnerability to flooding, either from coastal or inland water flow and reflects areas which may have flooded in the recent geological past. This normally relates to flooding which happened many thousands of years ago.



# OS MasterMap Water Network



## OS MasterMap Water Network

- |                         |                         |
|-------------------------|-------------------------|
| Client Site             | Lake or Reservoir       |
| Primary Flow (named)    | Foreshore and Sea       |
| Primary Flow (un-named) | Underground River       |
| Secondary Flow          | Marsh                   |
| Tidal River             | Canal, Lock or Transfer |



\* - Not all features in legend may be present in above map

Nominal scale at A4 paper size - 1:10,500

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## Other Information

### OS MasterMap Water Network

Details	Distance	Reply or Direction
Is there any information from the OS's MasterMap Water Network within 500m?	<501m	NO



No water features have been identified within 250m of the Site.

#### OS Data

OS MasterMap Water Network is a three-dimensional digital representation of the watercourses in Great Britain. It includes rivers, streams, lakes, lochs and canals as a series of watercourse network lines. The network lines (links) are attributed to provide a range of information about the section of watercourse they depict. The OS MasterMap Water Network will significantly enhance systems used to manage waterways, river and the flood risk they pose.

### Height Above Sea Level

Details	Distance	Reply or Direction
Maximum height of the Site above sea level	On Site	165.90m
Minimum height of the Site above sea level	On Site	149.10m
Average height of the Site above sea level	On Site	155.01m



The Site is at a relatively high elevation above sea level. However, this is not in itself indicative of the absence of flood risk and reference should be made to other assessments within this report.

### Distance to Water Features

Details	Distance	Reply or Direction
Are there any water features within 500m?	<501m	NO



There are no water features shown on the Ordnance Survey maps within 500m of the Site.

### Dam or Reservoir Failure

Details	Distance	Reply or Direction
Is there a risk of the Site being affected by the failure of a nearby dam or reservoir?	On Site	NO



Neither the Site nor areas near to it will be likely to flood if a dam or reservoir in the surrounding area failed.

#### JBA Risk Management Data

Dam or Reservoir Failure – JBA has modelled approximately 1700 dams and reservoirs across the UK which are considered to pose the greatest risks to people and property. These models are able to predict the areas likely to flood on all sides of a feature, should an element of it fail e.g. a wall, dam or earth bund.

## Useful Contacts

Name and Address	Telephone/Fax/Email
Argyll Environmental Limited 1 <sup>st</sup> Floor 98 – 99 Queens Road Brighton BN1 3XF <a href="http://www.argyllenvironmental.com">www.argyllenvironmental.com</a>	General enquiries 0330 036 6115 orders@argyllenviro.com
Environment Agency National Customer Contact Centre (NCCC) PO Box 544	Telephone 03708 506 506
Dover District Council Environmental Health Department Council Offices <a href="http://www.dover.gov.uk">www.dover.gov.uk</a>	Telephone 01304 821199 Fax: 01304 827268
Kent County Council Waste Management Group Block H <a href="http://www.kent.gov.uk">www.kent.gov.uk</a>	Telephone 01622 605976
Folkestone and Hythe District Council Environmental Health Department Civic Centre <a href="http://www.folkestone-hythe.gov.uk">www.folkestone-hythe.gov.uk</a>	Telephone 01303 850388 Fax: 01303 245978
British Geological Survey Enquiry Service British Geological Survey <a href="http://www.bgs.ac.uk">www.bgs.ac.uk</a>	Telephone 0115 936 3143 Fax: 0115 936 3276 enquiries@bgs.ac.uk
Environment Agency Head Office Rio House	Telephone 01454 624400 Fax: 01454 624409
Natural England County Hall <a href="http://www.naturalengland.org.uk">www.naturalengland.org.uk</a>	Telephone 0300 060 3900  enquiries@naturalengland.org.uk
The Coal Authority Property Searches 200 Lichfield Lane	Telephone 0345 762 6848 Fax: 01623 637 338
Peter Brett Associates Caversham Bridge House <a href="http://www.pba.co.uk">www.pba.co.uk</a>	Telephone 0118 950 0761 Fax: 0118 959 7498 reading@pba.co.uk
Environment Agency National Customer Contact Centre (NCCC) PO Box 544 Templeborough Rotherham S60 1BY <a href="http://www.environment-agency.gov.uk">www.environment-agency.gov.uk</a>	General enquiries 08708 506 506 Floodline 0845 988 1188 enquiries@environment-agency.gov.uk
British Geological Survey Enquiry Service British Geological Survey Kingsley Dunham Centre Keyworth Nottingham NG12 5GG <a href="http://www.bgs.ac.uk">www.bgs.ac.uk</a>	General enquiries 0115 936 3143 Fax 0115 936 3276
(For advice on flood insurance) British Insurance Brokers' Association 8th Floor John Stow House 8 Bevis Marks London EC3A 7JB	Consumer helpline 0870 950 1790

Name and Address	Telephone/Fax/Email
JBA Risk Management - Head Office South Barn Broughton Hall Skipton North Yorkshire BD23 3AE	General enquiries 01756 799 919 Fax 01756 799 449 info@jbarisk.com

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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.

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# Contamination Land Risk Analysis Methodology

The SITESOLUTIONS reports have been designed to assist in making informed decisions during property transactions. This section of 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 the planning regime and/or the Water Resources Act 1991<sup>3</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 contaminant-pathway-receptor relationship (a contaminant linkage). A 'contaminant' 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 contaminant-pathway-receptor relationship' may be present. By definition, this is one which Argyll believes could result in significant harm, a significant possibility of significant harm or significant pollution or the possibility of significant pollution to 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 Site 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 this section of 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 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. In the Site Solutions Commercial report, Argyll assesses two different drivers for risks and liabilities driven by ecological receptors;

1. The Contaminated Land Regime; and
2. The Environmental Damage Regulations 2009, as amended (EDR).

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 of the Relevant Types of Receptor as set out in Table 1 of Defra Statutory Guidance on Contaminated Land dated April 2012.

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.

The Environmental Damage (Prevention and Remediation) Regulations 2009, as amended, were introduced on 1 March 2009 to implement the provisions of the European Union's Environmental Liability Directive into law in England<sup>4</sup>. The aim of EDR is to prevent and remedy damage to protected species or natural habitats or a site of special scientific interest, surface water, groundwater, coastal water or to land. 'Environmental damage' has a specific meaning in the Regulations, and must meet key criteria. Existing legislation with provisions for environmental

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

<sup>4</sup>Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009 or Environmental Liability (Scotland) Regulations 2009 where appropriate.

liability remains in place. The Regulations apply on land in England and on the seabed around the UK up to the limits set out in the Continental Shelf Act 1964, and to waters out to the Renewable Energy Zone, which extends approximately 200 miles out to sea.

Argyll will apply due consideration to the nature of any activities likely to be occurring on Site and review EDR Receptors surrounding the Site. However, Argyll are unable to consider the standard of current operations or instances where environmental damage arises either intentionally or as a result of negligence on behalf of the Site operator.




The assessment excludes the identification of potential liabilities arising as a result of genetically modified organisms and the transportation or delivery of polluting goods which may occur at locations off Site. In addition, not all EDR Receptors can be identified in this assessment including protected species/natural habitats such as nesting bats, nesting birds or migratory bird routes which are not officially designated.

When conducting either 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 Natural England and/or information provided by the Argyll Europa System.

## 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 the following three responses:

Assessment	Liability Statement & explanation	Defra Category*
<b>PASSED</b> 	<p><b>Within the scope of this assessment no Liabilities have been identified. No further action is required.</b></p> <p>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.</p>	3 or 4
<b>PASSED</b> 	<p><b>Within the scope of this assessment no Liabilities have been identified. However, your attention is drawn to the prudent enquiries suggested below.</b></p> <p>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.</p>	3 or 4
<b>FURTHER ACTION</b> 	<p><b>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>5</sup>. To quantify these you may decide to undertake a more detailed assessment through the recommendation(s) set out below.</b></p> <p>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.</p>	Potentially 1 or 2

\* According to Defra's updated Statutory Guidance on Contaminated Land, Regulators have a four-stage test to decide when land is and is not contaminated. Category 1 and Category 2 sites would encompass land which is capable of being determined as contaminated land, whereas Category 3 and Category 4 sites would encompass land which is not capable of being determined as contaminated land.

<sup>5</sup>Water Environment (Controlled Activities)(Scotland) Regulations 2005 where appropriate.



## Limitations of the Report

The **SITESOLUTIONS** reports have been designed to satisfy standard environmental due-diligence enquiries, as recommended by the Law Society's contaminated land warning card. 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 [www.argyllenvironmental.com](http://www.argyllenvironmental.com). For further information regarding the datasets reviewed within our assessment, please contact one of our technical team on 0330 036 6115. This report is provided under The Argyll Environmental Limited Conditions of Contract for **SITESOLUTIONS** and **FLOODSOLUTIONS** Reports (May 2011), a copy of which is available on our website.




## Flood Risk Screening Methodology

This section of the report is a desktop flood risk screening report, designed to enable property professionals to assess the risk of flooding at commercial sites. It examines three areas; how flood risk affects the availability of insurance for a site; how flood risk affects the potential to redevelop a site; and the overall risk of flooding at a site (taking into account any flood defences present). The report considers current Government guidance including the National Planning Policy Framework (NPPF). The report has been produced and quality-checked by a qualified consultant using the data contained in this report.

## Executive Summary and Consultants Comment

In this section Argyll will summarise in a statement whether any significant flood risks have been identified and whether insurance is likely to be available at Standard Terms.

There will be one of the following three responses:

Assessment	Risk Statement
<b>PASSED</b> 	<b>Low and Low to Moderate - The site is not considered to be at significant risk of flooding. No further action is considered necessary.</b>
<b>PASSED</b> 	<b>Moderate - Data suggest that there are features which may present a flood risk to the site and its occupants during an extreme flood event. However, buildings and contents insurance should easily be available in most cases.</b>
<b>FURTHER ACTION</b> 	<b>Moderate to High and High - This report reveals significant flood risk issues which should be addressed. Further assessment is recommended in order to clarify the risk of flooding at the site and to determine appropriate flood protection measures.</b>

## Insurance Availability

Argyll provides an indication of whether the Site is likely to be insurable for flood risk at standard terms. The answer to Question1 (on page 3) is based on consideration of Risk of Flooding from Rivers and Sea data supplied by The Environment Agency and surface water flooding data supplied by JBA Risk Management. This data is used by a significant proportion of the insurance industry to help determine the suitability of a Site for insurance, although they may access additional information which could affect their assessment.

Under the Association of British Insurers' Revised Statement of Principles on the Provision of Flooding Insurance (July 2008), the general policy of member companies is that flood insurance for domestic properties and small businesses should continue to be available for as many customers as possible until 1<sup>st</sup> July 2013, by which time a longer term solution should be implemented. The premiums charged and other terms will reflect the risk of flooding but insurance will be available:

1. for properties where the flood risk is not significant (generally defined as no worse than 1.33% or 1-in-75 years annual probability of flooding); and
2. to existing domestic property and small business customers at significant risk, providing the Environment Agency has announced plans to reduce that risk within five years, such as improving flood defences. (The commitment to offer cover will extend to the new owner of any applicable property subject to satisfactory information about the new owner).

However, for significant risk areas where no improvements in flood defences are planned, and in all cases other than domestic properties and small businesses, insurers cannot guarantee to provide cover, but will examine the risks on a case-by-case basis. The implementation of the revised Statement of Principles depends on action from the Government and is continually reviewed by insurers. In addition, the revised Statement of Principles does not apply to properties built after 1<sup>st</sup> January 2009. Different guidance applies to these (see Climate Change – Guidance on Insurance Issues for New Developments from [www.abi.org.uk](http://www.abi.org.uk)).

The responses to the question 'Is the Site likely to be insurable at standard terms?' assume the Site is an existing domestic property or small business and makes no allowance for previous claims arising from any type of flooding, nor for non-flood related risks such as subsidence.

Response	Meaning
Yes	The Site is likely to be considered acceptable by insurance companies at standard terms and flood insurance should not be difficult to obtain. No further action required.
No	The Site is not likely to be considered acceptable by insurance companies at standard terms, on the basis of current information. Further work may be required in order to obtain acceptable insurance terms for the flood risk. This could include a more detailed risk assessment or the use of accredited products, flood resilient materials and temporary defences to defend the property.

## Development Risk

Argyll comments on whether a full or partial Flood Risk Assessment (FRA) would be required in accordance with National Planning Policy Framework (NPPF). The answer to Question 1 is indicative only and is based on the size of the Site (as supplied by the client) and the information in the data section of this report.

NPPF sets out Government policy on development and flood risk. Its aims are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas of highest risk. Where new development is exceptionally necessary, NPPF aims to make it safe, without increasing flood risk elsewhere, and, where possible, reducing flood risk overall.

A separate Drainage Impact Assessment may be required in addition to an FRA to demonstrate that development of the Site will not adversely affect flood risk elsewhere.

Response	Meaning
Yes (Full)	If the Site was redeveloped, a full Flood Risk Assessment is likely to be required which should include a Drainage Impact Assessment.
Yes (Drainage)	If the Site was redeveloped, a full Flood Risk Assessment may not be required however, given the size of the Site, a Drainage Impact Assessment may be necessary.
No	If the Site was to be redeveloped, no further flood assessment is likely to be required.

## Flood Risk Rating

Argyll provides an overall flood risk rating based on an assessment of the data provided within this report. It does so by asking two questions:

2. What is the overall risk of flooding, assuming flood defence fail or are absent or overtopped?

The answer to Question 2 provides a worst case scenario assuming there are either no defences in the area, that any defences in the area could fail, primarily as a result of river or coastal flooding, or are overtopped by excessive flood volumes.

3. Are there existing flood defences which might benefit the Site?

The answer to Question 3 is based on the presence of any flood defences in the dataset provided by the Environment Agency within 500m of the Site. It should be noted that a residual risk of flooding may be present if such defences failed. Flood defences do not generally protect the Site against groundwater and surface water flooding.

If defences are present within 250m, a further question is asked:

4. What is the risk of flooding when these defences are operational?

This assesses the risk from flooding, assuming these defences work as intended and neither fail nor are overtopped.

Questions 2 and 3 are answered by one of six standard responses:

Response	Meaning
Negligible	The overall flood risk rating for the Site is assessed to be 'Negligible'. Existing datasets do not indicate any risk at the Site itself, or any feature within the locality of the Site, which would be expected to pose a threat of flooding. It is not considered that any further investigations are necessary in regard to flood risk.
Low	The overall flood risk rating for the Site is assessed to be 'Low'. Although large sites (over 1 ha) would require a Drainage Impact Assessment to accompany any planning application, it is not considered necessary to undertake any other further investigations into the flood risk to the Site.
Low to Moderate	The overall flood risk rating for the Site is assessed to be 'Low to Moderate'. The presence of such features as flood defences, flood storage areas and watercourses within the locality of the Site suggests that there may be a risk of flooding to the Site itself. Further investigations could be undertaken to further assess this risk.
Moderate	The overall flood risk rating for the Site is assessed to be 'Moderate'. Information from existing datasets suggests that there are certain features which may present a risk to the Site and its occupants. Further assessment would normally be suggested as a prudent measure to clarify the risk of flooding at the Site.
Moderate to High	The overall flood risk rating for Site is assessed to be 'Moderate to High'. Information from existing datasets suggests that there are certain features which may present a significant risk to the Site and its occupants. Further assessment is usually recommended in order to clarify the risk of flooding at the Site.
High	The overall flood risk rating for Site is assessed to be 'High', with a consequent risk to life and property. This means that existing datasets reveal significant flood risk issues which need to be addressed. Further assessment is usually recommended in order to clarify the risk of flooding at the Site.

## Flood Analysis

The flood risk gauges provide a more detailed analysis of the risk from each of the four main types of flooding – river, coastal, groundwater and surface water. In addition, a fifth gauge provides an analysis of other factors (i.e. historic flood events, geological deposits which are indicative of past flooding, proximity to surface water features and elevation above sea level) that may affect the overall flood risk. For surface water flooding, only the risk rating generated from the 1:200 year rainfall event data is included in the overall risk assessment. The data on 1:75 year and 1:1,000 year rainfall events is provided for information only. For further information on each of these types of flooding, please refer to the Argyll FloodSolutions User Guide.

This analysis takes into account any existing flood defences that are intended to protect the Site and assumes that these work as designed. The analysis also takes into account the other information contained in those data sections of the report which are relevant to that particular type of flooding. The assessment of the risk as shown in the flood gauge should therefore take priority over the information in the individual data sections of the report.

## Limitations of the Report

The report has been designed to satisfy basic flood-related environmental due-diligence enquiries for commercial properties. It is a desktop review of information provided by the client and from selected private and public databases. It does not include a site investigation, nor are specific information requests made of the regulatory authorities for any relevant information (other than local water and sewerage providers). Therefore, Argyll cannot guarantee that all issues of concern will be identified by this report, or that the data and information supplied to it by third parties is accurate and complete.

This report includes an assessment of surface water flooding which examines the risk of the general drainage network overflowing during periods of extreme rainfall. This report does not make a detailed site-specific assessment of the suitability of the existing drainage on the Site. If this is required, then a site survey should be considered. The assessment of pluvial flooding does not take into account particular local or temporary factors that may cause surface water flooding such as the blockage or failure of structures on or within watercourses, drains,

foul sewers, water mains, canals and other water infrastructure; and any history of drains flooding at the Site or in the locality. Surface water flooding can occur before surface water reaches the general drainage network, for example on hills and inclines.

The Risk of Flooding from Rivers and Sea dataset provided by The Environment Agency does take account of failure of flood defences but does not take into account particular local or temporary factors such as blockage. Environment Agency data does not include flood risk from very small catchments as models of such small scale catchments are not considered to be reliable for UK-wide flood risk assessments. The potential impact of climate change on flood risk to the Site would require further study.

When answering any questions within this report, current applicable legislation is taken into account.

The data used in this report may have inherent limitations and qualifications. Further details are set out in the FloodSolutions User Guide which is available free of charge from our website [www.argyllenvironmental.com](http://www.argyllenvironmental.com), or by calling one of our technical team on 0330 036 6115.

This report is provided under The Argyll Environmental Limited Conditions of Contract for **SITESOLUTIONS** and **FLOODSOLUTIONS** Reports (July 2013), a copy of which is available on our website, [www.argyllenvironmental.com](http://www.argyllenvironmental.com) or by calling one of our technical team on 0330 036 6115.

## Flood Glossary

### **Business Continuity Plan**

A business continuity plan is a strategic plan of action for a business to implement in an emergency (i.e. flood event). This plan ensures a business can continue to operate during emergency situations and reduces the risk of suffering avoidable losses. For example, it may cover such items as emergency accommodation and computer back up off site.

### **Flood Evacuation Plan**

A flood evacuation plan sets out clear steps to ensure the safe evacuation of staff during a flood. It will form part of the Business Continuity Plan.

### **Coastal Flooding**

Coastal flooding is the inundation of land areas along the coast caused by sea water rising above normal tidal conditions. Coastal flooding can arise from a combination of high tides, wind induced tidal surge, storm surge created by low pressure and wave action.

### **Flood Resistance Measures**

These measures are designed to prevent flood water from entering the buildings on Site.

### **Flood Resilience Measures**

These measures are intended to make buildings more resilient to flood damage so that they recover more quickly from flooding. They are not designed to prevent flood water entering the property.

### **Flood Risk Assessment**

A full Flood Risk Assessment (FRA) Report is a bespoke report required under NPPF for any development site within Environment Agency Flood Zones 2 or 3 and/or any development site larger than 1 hectare. These reports are generally prepared following liaison with the Local Planning Authority and the application of the sequential test.

### **Flood Zone 1**

An area of low probability of flooding as defined by the Environment Agency – a flood return period of 1 in 1,000 or more.

### **Flood Zone 2**

An area of medium probability of flooding as defined by the Environment Agency – a flood return period between 1 in 100 to 1 in 1,000 for river flooding and 1 in 200 to 1 in 1,000 for coastal flooding.

### **Flood Zone 3a**

An area of high probability of flooding as defined by the Environment Agency – a flood return period between 1 in 20 to 1 in 100 for river flooding and 1 in 200 for coastal flooding.

**Flood Zone 3b**

This area is a functional floodplain as defined by the Environment Agency. It is an area which is designed to flood – a flood return period of 1 in 20 or less.

**Groundwater Flooding**

Groundwater flooding occurs when ground water levels increase sufficiently for the water table to intersect the ground surface. Groundwater flooding can occur in a variety of geological settings including valleys and in areas underlain by chalk, and in river valleys with thick deposits of alluvium and river gravels.

**NPPF**

This relates to the National Planning Policy Framework and the associated Technical Guidance.

**Pluvial (Surface Water) Flooding**

Pluvial flooding results from rainfall running over ground before entering a watercourse or sewer. It is usually associated with high intensity rainfall events (typically greater than 30mm per hour) but can also occur with lower intensity rainfall or melting snow where the ground is already saturated, frozen, developed (for example in an urban setting) or otherwise has low permeability.

**Return Period**

Return periods are a measure of how likely flooding is to occur. They are commonly expressed as a ratio (for example 1 in 75 or 1:75). This means that this level of flooding is expected once in every 75 years.

**River Flooding**

River flooding mainly happens when the river catchment (that is the area of land that feeds water into the river and the streams that flow into the main river) receives greater than usual amounts of water (for example through rainfall or melting of snow). The amount of runoff depends on the soil type, catchment steepness, drainage characteristics, agriculture and urbanisation as well as the saturation of the catchment. The extra water causes the level of the water in the river to rise above its banks or retaining structures.

## Consumer Protection

### Important Consumer Protection Information

This search has been produced by Argyll Environmental Ltd, 1<sup>st</sup> Floor, 98 – 99 Queens Road, Brighton, BN1 3XF.  
Tel: 0330 036 6115, Email: [orders@argyllenviro.com](mailto:orders@argyllenviro.com).

Argyll Environmental adheres to the Conveyancing Information Executive (CIE) standards.

### The Standards:

- Conveyancing Information Executive Members shall act in a professional and honest manner at all times in line with the Conveyancing Information Executive Standards and carry out the delivery of the Search with integrity and due care and skill.
- Compliance with the Conveyancing Information Executive Standards will be a condition within the Conveyancing Information Executive Member's Terms and Conditions.
- Conveyancing Information Executive Members will promote the benefits of and deliver the Search to the agreed standards and in the best interests of the customer and associated parties.
- The standards can be seen here: <http://www.conveyinfoexec.com>

### Complaints

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Standards.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPO.

#### TPOs Contact Details:

The Property Ombudsman scheme  
Milford House  
43-55 Milford Street  
Salisbury  
Wiltshire SP1 2BP

Tel: 01722 333306  
Fax: 01722 332296  
Web site: [www.tpos.co.uk](http://www.tpos.co.uk)  
Email: [admin@tpos.co.uk](mailto:admin@tpos.co.uk)



## Argyll Environmental Complaints Procedure

If you want to make a complaint to Argyll Environmental, we will:

- Acknowledge it within 5 working days of receipt
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time
- Provide a final response, in writing, at the latest within 40 working days of receipt
- Liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Legal Director  
Argyll Environmental Ltd  
1<sup>st</sup> Floor  
98 - 99 Queens Road  
Brighton  
BN1 3XF

Tel: 0330 036 6115

Email: [orders@argyllenviro.com](mailto:orders@argyllenviro.com)

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs):

Tel: 01722 333306,

Email: [admin@tpos.co.uk](mailto:admin@tpos.co.uk)

We will co-operate fully with the Ombudsman during an investigation and comply with his final decision.