

SiteSolutions Residence

-  Contaminated Land
PASSED ✓
-  Flooding
PASSED ✓
-  Subsidence & Ground Instability
IDENTIFIED 
-  Radon
NOT IDENTIFIED ✓
-  Energy & Infrastructure
NOT IDENTIFIED ✓



Report on:

Canfield Moat, High Cross Lane, Little Canfield, CM6 1TD

Report prepared for:

Direct Client

Client Reference:

Report Reference:

AEL-4491-SRE-1013368

National Grid Reference:

559386,220878

Report date:

29th October 2020

0330 036 6115

Intelligent due diligence





Site Location

Report prepared on

Canfield Moat, High Cross Lane, Little Canfield, CM6 1TD

Site Area (m²)

28838.97

Current Use

Residential

Proposed Use

Residential

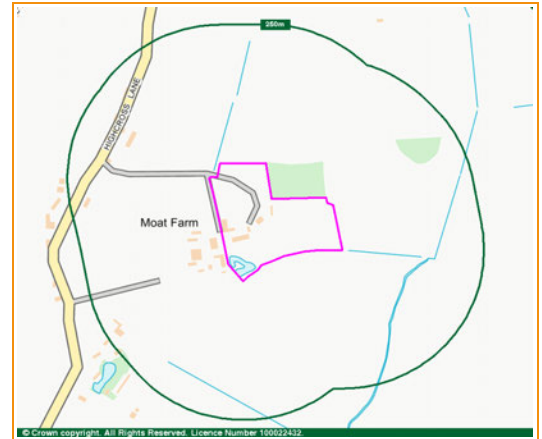
Report Author

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Additional Information Provided





Contaminated Land Risk Summary

Risk	Evaluation
Contaminated Land	 Passed



Liability Assessment

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

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









Recommendations

None required.



Contaminated Land Risk Analysis

Investigation	Commentary
 On-site sources	No potentially contaminative uses of concern have been identified at the Site, following a review of historical mapping dating from c.1876.
Argyll's Comment 	As a result of the historical and current use of the Site, there is a low risk of contaminants being present.
 Off-site sources	<p>A review of historical maps shows the following potentially contaminative uses within 100m of the Site: moat farm adjacent west c.1960-2020.</p> <p>We have identified a Discharge Consent (5m south west) at Moat Farm relating to sewage discharges - final/treated effluent. Effective from 1996 and assumed active.</p>
Argyll's Comment 	The historical and current use of the surrounding area is therefore considered to present a low to moderate risk of affecting the Site.
 Pathways and receptors	<p>The general area appears to be in residential use, with residential properties on Site.</p> <p>The superficial hydrogeology underlying the Site is classified as a Secondary (Undifferentiated) Aquifer (deposits with variable/limited permeability) and the bedrock hydrogeology is classified as an Unproductive Stratum (deposits of negligible permeability).</p> <p>The Site does not lie within a groundwater Source Protection Zone (SPZ).</p> <p>There are five abstraction licences located within 500m. The closest of these is a groundwater abstraction (328m south west) for horticulture and nurseries: spray irrigation - direct use.</p> <p>A moat is located on Site.</p> <p>Finally no designated eco-receptors were identified within a 500m radius of the Site.</p>
Argyll's Comment 	Overall, the Site is therefore considered to have a high environmental sensitivity .
Additional Sources of Information	<p>The following additional historical map packs were used to produce this report.</p> <ul style="list-style-type: none"> • Envirocheck Ref: 266324384 centred on 559386, 220878.



Argyll's Conclusion

Considering the information reviewed during this assessment, no significant contaminant linkages have been identified. Accordingly soil and groundwater liabilities are unlikely to occur.

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



Subsidence and Ground Instability

Risk	Evaluation
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Subsidence¹ & Ground Instability


Identified



Consultant's Comment

Insurance claims have not been identified in the area that could indicate there is a risk of subsidence.

What is the subsidence risk rating based on the claims history of your postcode?	No Claims
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The Site may be susceptible to ground instability from man-made or natural sources.

Could the Site be susceptible to ground instability from natural sources?	Yes
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Could the Site be susceptible to ground instability from man-made/mining activities?	No
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Recommendations

Due consideration should be given to the management of a number of external influencing factors in order to prevent subsidence and thereby reduce the risk. The actions required will be property specific dependent on a number of factors as set out below:



- Are there any trees on the land immediately surrounding the house or on a neighbour's property and are you intending to carry out planting of trees and vegetation? Tree Management Strategies are advised. The trees may be protected by a tree preservation order or be in a conservation area so permission from the local authority must be obtained before any works are undertaken.
- How old is the property? Regular maintenance and inspection of the drainage system is recommended to ensure that there are no apparent blockages, particularly in older properties with salt glazed clayware drainage pipes.
- Are there signs of cracking or historical distortions / misalignments in the structure?

As a potential ground instability hazard was identified, you may wish to consult a local RICS accredited surveyor and/or review any available geotechnical surveys.

¹The Subsidence risk rating is based on the postcode and is not specific to the property.



Other Environmental Hazards

Risk	Recommendation
 Ground Instability Hazard	As a potential ground instability hazard was identified, you may wish to consult a local RICS accredited surveyor and/or review any available geotechnical surveys.
 COMAH	No Control of Major Accident Hazards (COMAH) sites are located within 500m.

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.



Additional Considerations

Item	Summary	Suggested Action
Asbestos	If the buildings at the Site were constructed or renovated during the period between 1950 and 1999, then the fabric of these buildings may contain asbestos in a variety of forms. No legislation is currently in place for residential properties that are privately owned (i.e. have no managed communal areas), however risk from asbestos exposure may remain particularly if renovation or refurbishment work is proposed.	Consider carrying out an Asbestos Survey
Energy Performance Certificate	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
Change of Use Redevelopment	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 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.

Contents of the Data Section

Section	Description
Tabular Summary	<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>
Current Land Use Mapping	<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 a map.</p>
Statutory Information	<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>
Waste	<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>
Current Industrial Land Use	<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>
Historical Land Use Mapping	<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>
Historical Land Use	<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>
Aquifer Designations and Geology	<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>
Environmental Sensitivity	<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>
Natural and Mining Related Hazards	<p>This section contains information on natural and mining related hazards which may affect the Site. These include subsidence, radon and mining.</p> <p>If no data is identified then the section will be omitted.</p>
Flooding	<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	N/A
Local Authority Integrated Pollution Prevention and Controls	0	0	N/A
Integrated Pollution Controls	0	0	N/A
Integrated Pollution Prevention And Control	0	0	N/A
Registered Radioactive Substances	0	0	N/A
Discharges	On-site	1-250m	251-500m
Discharge Consents	0	2	N/A
Water Industry Act Referrals	0	0	N/A
Control of Major Accident Hazards Sites	0	0	0
Explosive Sites	0	0	0
Notification of Installations Handling Hazardous Substances	0	0	0
Planning Hazardous Substance Consents	0	0	0
Contraventions	On-site	1-250m	251-500m
Contaminated Land Register Entries and Notices	0	0	N/A
Local Authority Pollution Prevention and Control Enforcements	0	0	N/A
Enforcement and Prohibition Notices	0	0	N/A
Planning Hazardous Substance Enforcements	0	0	0
Substantiated Pollution Incident Register	0	0	N/A
Prosecutions Relating to Authorised Processes	0	0	N/A
Prosecutions Relating to Controlled Waters	0	0	N/A

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	N/A
Licensed Waste Management Facilities (Landfill Boundaries)	0	0	N/A
Licensed Waste Management Facilities (Locations)	0	0	0
Local Authority Recorded Landfill Sites	0	0	0
Registered Landfill Sites	0	0	0
Registered Waste Transfer Sites	0	0	N/A
Registered Waste Treatment or Disposal Sites	0	0	N/A
Historical Landfill Sites	0	0	0

Current Land Use

Current Potentially Contaminative Uses	On-site	1-250m	251-500m
Contemporary Trade Directory Entries	0	0	N/A
Fuel Station Entries	0	0	N/A
Other Features	On-site	1-250m	251-500m
Overhead Transmission Lines	0	0	N/A

Historical Land Use

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

Groundwater Vulnerability

Hydrogeology	On-site	1-250m	251-500m
Superficial Aquifer Designations	1	1	N/A
Bedrock Aquifer Designations	1	0	N/A
Geology	On-site	1-250m	251-500m
BGS 1:625,000 Solid Geology	1	N/A	N/A

Environmental Sensitivity

Environmental Sensitivity	On-site	1-250m	251-500m
Areas of Outstanding Natural Beauty	0	0	N/A
Environmentally Sensitive Areas	0	0	N/A
Forest Parks	0	0	N/A
Local Nature Reserves	0	0	0
Marine Nature Reserves	0	0	0
National Nature Reserves	0	0	0
National Parks	0	0	N/A
National Scenic Areas	0	0	N/A
Nitrate Sensitive Areas	0	N/A	N/A
Nitrate Vulnerable Zones	1	N/A	N/A
Ramsar Sites	0	0	0
Nearest Surface Water Feature	1	0	N/A
Sites of Special Scientific Interest	0	0	0
Special Areas of Conservation	0	0	0
Special Protection Areas	0	0	0
Water Abstractions	0	0	5
Source Protection Zones	0	0	N/A

Natural and Mining Related Hazards

Subsidence	On-site	1-250m	251-500m
Collapsible Ground Stability Hazards	1	0 ³	N/A
Compressible Ground Stability Hazards	1	0	N/A
Ground Dissolution Stability Hazards	1	0	N/A
Landslide Ground Stability Hazards	1	0	N/A
Running Sand Ground Stability Hazards	1	0	N/A
Shrinking or Swelling Clay Subsidence Hazards	1	0	N/A
Non-Coal Mining Hazards	0	0	N/A
Subsidence Insurance Claims	0	N/A	N/A
Radon	On-site	1-250m	251-500m
Radon Potential	1	N/A	N/A

³Ground stability hazards are only searched to a radius of 50m from the Site boundary.

Natural and Mining Related Hazards

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	0	N/A	N/A
Natural and Mining Cavities	0	0	N/A
Mining Instability	0	0	N/A
BGS Recorded Mineral Sites	0	0	N/A

Energy and Infrastructure

Energy	Response	Distance
Oil and Gas Exploration	No	N/A
Wind Energy	No	N/A
Solar Energy	No	N/A
Other Renewable Energy	No	N/A
Infrastructure	Response	Distance
High Speed 2	No	N/A
Crossrail 1	No	N/A

Tabular Summary Explanation

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

Landfill Site Information

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

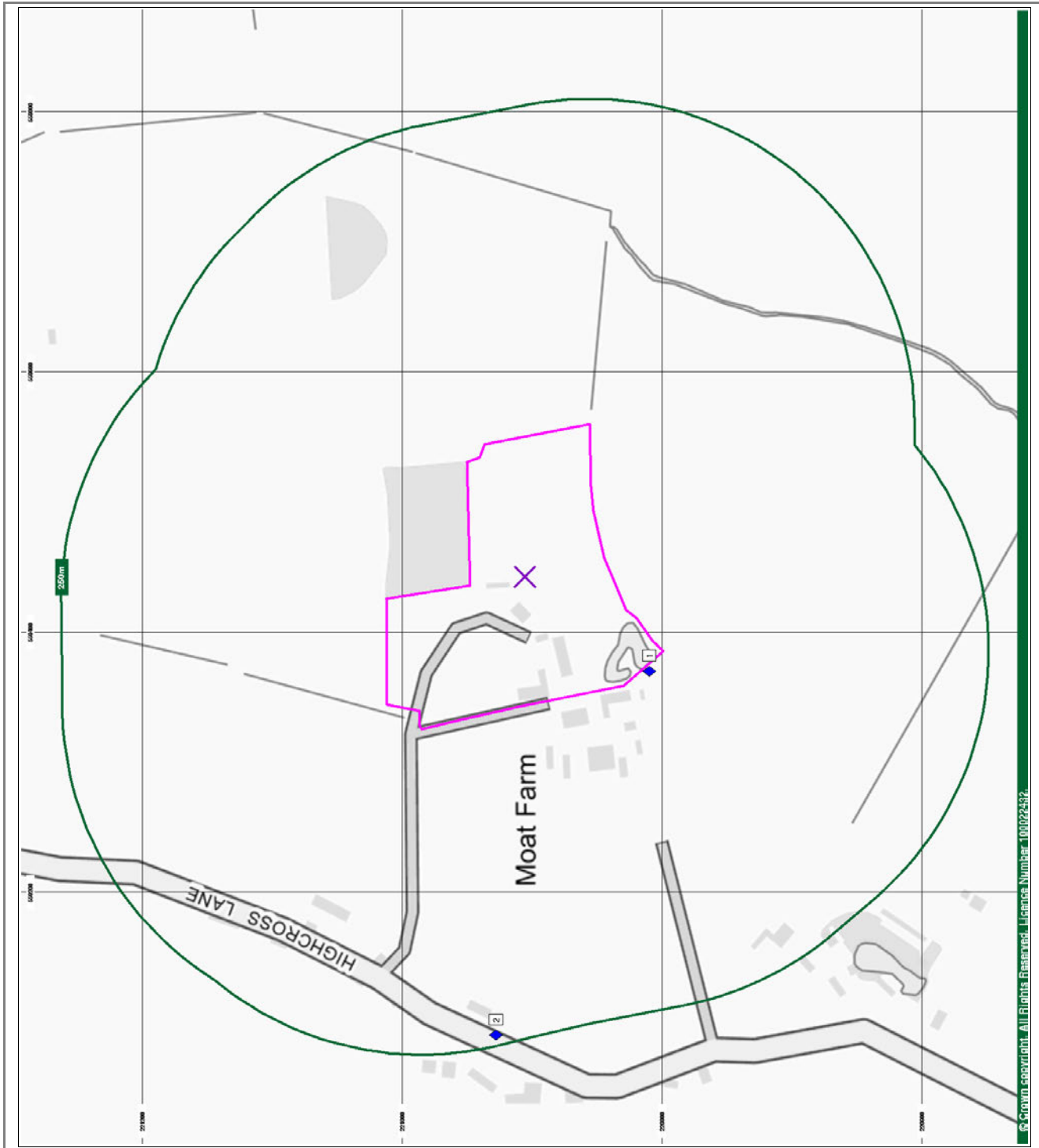
Local Authority landfill data is sourced from individual local authorities that were able to provide information on sites operating prior to the introduction of the Control of Pollution Act (COPA) in 1974. Appropriate authorities are listed under Local Authority Landfill Coverage with an indication of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

Subsidence Hazards

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

Current Land Use within 250m

- | | |
|--|---|
| General | Search Buffer |
| Site Boundary | Grid Lines |
| Bearing Reference Point | North Arrow |
| Reference Number | |
| Waste/Landfill Sites | |
| BCS Recorded Landfill Site | Point Location of Registered Landfill Site |
| EA Historic Landfill (Polygon) | Point Location of BCS Recorded Landfill Site |
| EA Historic Landfill (Buffered Point) | Licence Waste Facilities (Location) |
| Licenced Waste Management Facilities (Landfill) | Point Location of Local Authority Recorded Landfill Site |
| Local Authority Recorded Landfill Site | Point Location of Registered Waste Transfer Site |
| Registered Waste Transfer Site | Point Location of Registered Waste Treatment or Disposal Site |
| Registered Waste Treatment or Disposal Site | Potential Landfill Buffer |
| Registered Landfill Site | |
| Statutory Authorisations | |
| Local Authority Pollution Register Entry or Notice | Contaminated Land Register Entry or Notice |
| Point Location of Contaminated Land Register Entry or Notice | Registered Radioactive Substance |
| Discharge Consents | Water Industry Act Referral |
| Discharge Consent | |
| Industrial Processes | |
| Integrated Pollution Control | Integrated Pollution Control Registered Waste Site |
| Integrated Pollution Prevention and Control | Local Authority Integrated Pollution Prevention and Control |
| Storage of Hazardous Substances | |
| COMAH | Explosive Site |
| Planning Hazardous Substance Consent | NHHS |
| Contraventions | |
| Local Authority Pollution Prevention and Control Enforcement | Enforcement and Prosecution Incident Register |
| Planning Hazardous Substance Enforcement | Prosecution Relating to Authorised Processes to Controlled Waters |
| Potentially Contaminative Use | |
| Potentially Contaminative Use | |
| Fuel Station Entry | |
| Miscellaneous | |
| BCS Recorded Mineral Site | Telecommunication Base Station |

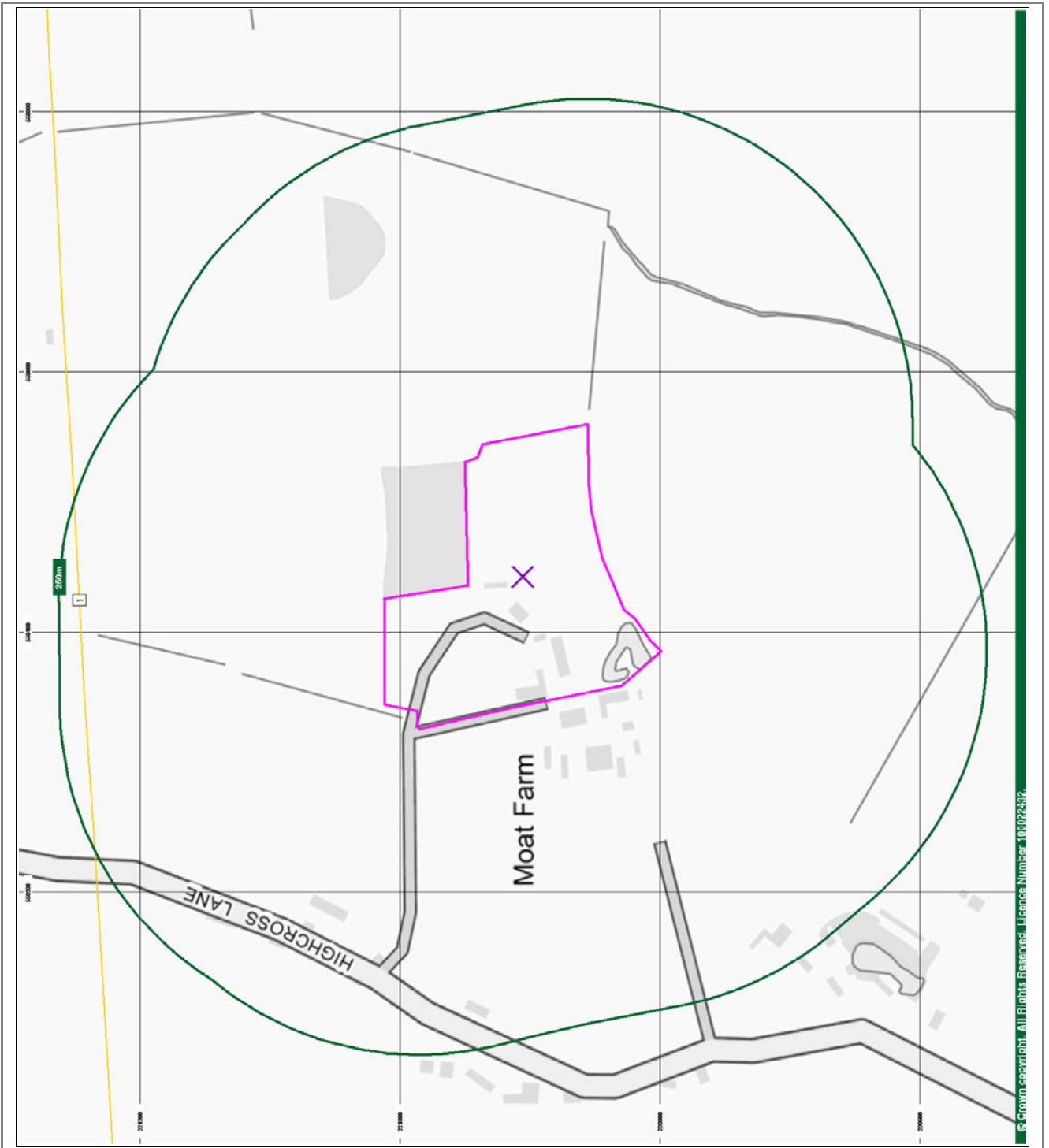


Statutory Information

Discharges

Discharge Consents

Map ID	Details	Distance	Direction
1	Operator: Mr. R. Kemp, Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE), Location: Moat Farm, High Cross Lane West, Great Dunmow, Essex, Authority: Environment Agency, Thames Region, Catchment Area: Not Given, Permit Ref: CNTM.2236, Permit Version: 1, Effective Date: 29th March 1996, Issued Date: 29th March 1996, Revocation Date: Not Supplied, Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company, Discharge Environment: Freshwater Stream/River, Receiving Water: Tributary Ofstrood Hallbrook, Status: New Consent, by Application (Water Resources Act 1991, Section 88), Positional Accuracy: Located by supplier to within 100m.	5m	SW
2	Operator: Mr Michael Donovan, Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE), Location: Peacock House High Cross Lane West Little Canfield Dunmow Essex Cm6 1td, Authority: Environment Agency, Thames Region, Catchment Area: Not Supplied, Permit Ref: Eprp3425gp, Permit Version: 1, Effective Date: 8th May 2012, Issued Date: 8th May 2012, Revocation Date: Not Supplied, Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company, Discharge Environment: Freshwater Stream/River, Receiving Water: Trib Of River Roding, Status: New issued under EPR 2010, Positional Accuracy: Located by supplier to within 10m.	242m	W



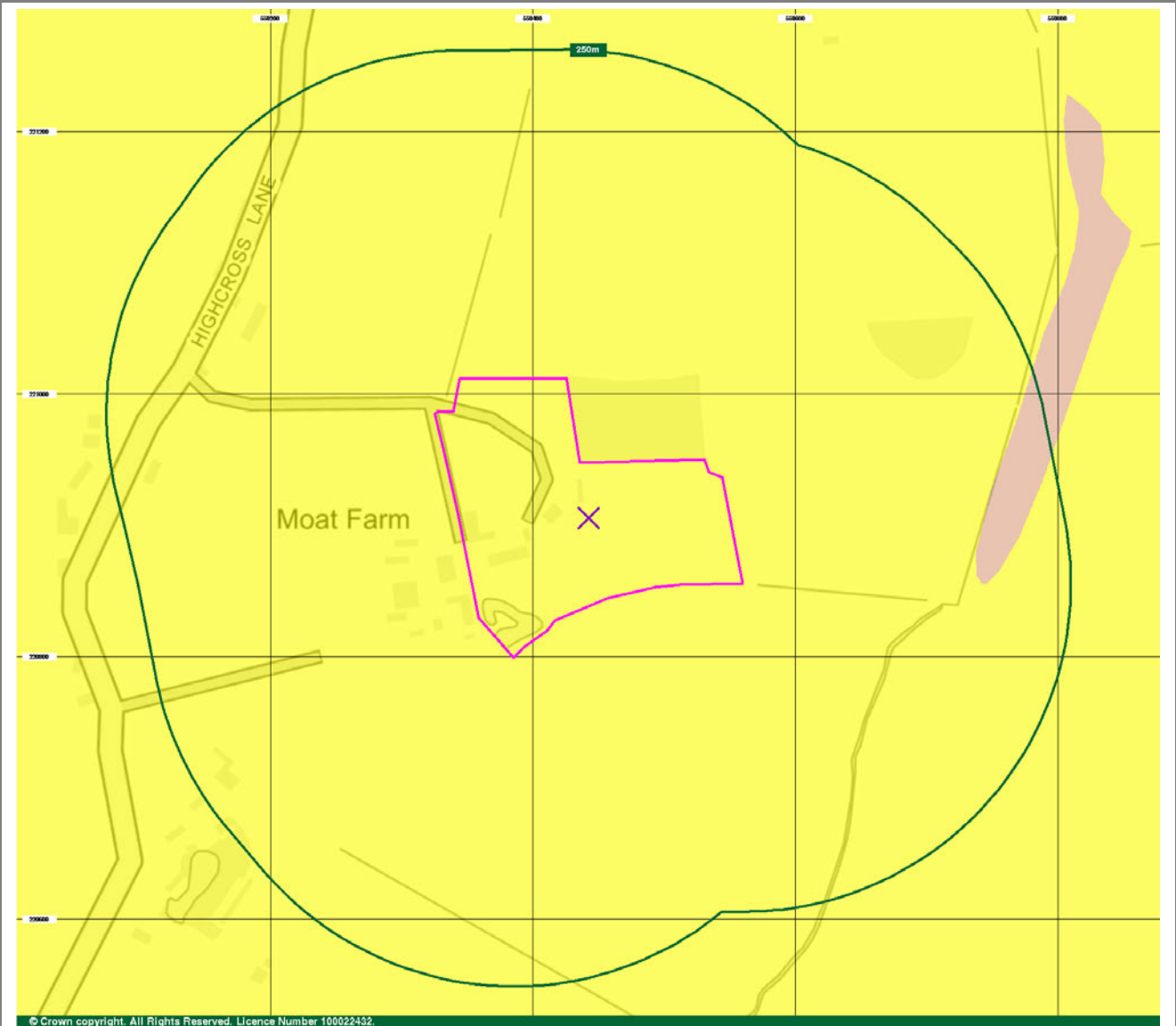
Historical Land Use

Historical Potentially Contaminative Uses

Potentially Contaminative Industrial Uses (Past Land Use)

Map ID	Details	Distance	Direction
1	Railways, Date of Mapping: 1881-1960.	231m	N

Aquifer Designation (Superficial)

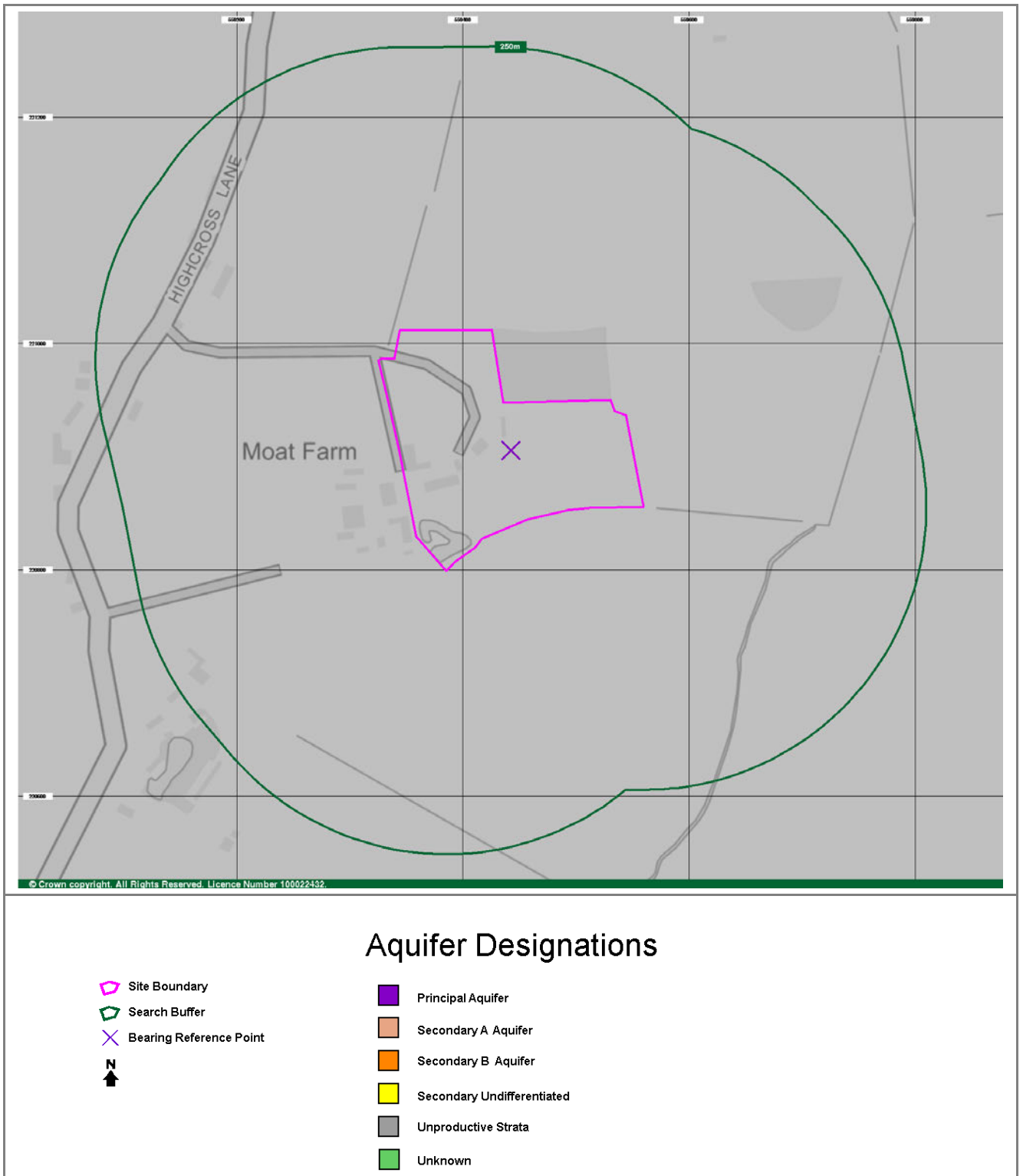


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Aquifer Designations

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

Aquifer Designation (Bedrock)



Groundwater Vulnerability

Hydrogeology

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.	On Site	-
	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.	178m	E

Bedrock Aquifer Designations

Map ID	Details	Distance	Direction
	Unproductive Strata The rock layers or drift deposits have a low permeability that have negligible significance for water supply or river base flow.	On Site	-

Geology

BGS 1:625,000 Solid Geology

Map ID	Details	Distance	Direction
	Thames Group.	On Site	-

Sensitive Land Uses



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



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) | Special interest (Zone 4) |
| N | Outer zone - subsurface activity only (Zone 2c) | |

Environmentally Sensitive Features

Nitrate Vulnerable Zones

Map ID	Details	Distance	Direction
1	Name: Roding (Cripsey Brook To Loxford Water) Nvz, Description: Surface Water, Source: Environment Agency, Head Office.	On Site	-
2	Name: River Chelmer Nvz, Description: Surface Water, Source: Environment Agency, Head Office.	225m	N
3	Name: Sandlings And Chelmsford, Description: Groundwater, Source: Environment Agency, Head Office.	225m	N

Nearest Surface Water Feature

Map ID	Details	Distance	Direction
4	Surface water feature identified in proximity.	On Site	SW

Water Abstractions

Map ID	Details	Distance	Direction
5	Operator: Langthorns Plantery, Licence Number: 08/37/51/0053, Permit Version: 1, Location: Langthorns Nursery, Dunmow - Borehole, Authority: Environment Agency, Thames Region, Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct, Abstraction Type: Water may be abstracted from a single point, Source: Groundwater, Daily Rate(m ³): Not Supplied, Yearly Rate (m ³): Not Supplied, Langthorns Plantery, Little Canfield, Cross Lane West, Near Dunmow, Essex., Authorised Start: 01 March, Authorised End: 31 October, Permit Start Date: 1st April 2008, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 10m.	328m	SW
6	Operator: Langthorns Plantery, Licence Number: 08/37/51/0053/R01, Permit Version: 1, Location: Langthorns Nursery, Dunmow - Borehole, Authority: Environment Agency, Thames Region, Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct, Abstraction Type: Water may be abstracted from a single point, Source: Groundwater, Daily Rate(m ³): Not Supplied, Yearly Rate (m ³): Not Supplied, Langthorns Plantery, Near Dunmow, Authorised Start: 01 March, Authorised End: 31 October, Permit Start Date: 1st April 2016, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 10m.	328m	SW
7	Operator: Langthorns Plantery, Licence Number: 08/37/51/0048, Permit Version: 101, Location: Langthorns Nursery, Dunmow - Borehole, Authority: Environment Agency, Thames Region, Abstraction: General Agriculture: Spray Irrigation - Direct, Abstraction Type: Water may be abstracted from a single point, Source: Groundwater, Daily Rate(m ³): Not Supplied, Yearly Rate (m ³): Not Supplied, Langthorns Nursery, Little Canfield, Dunmow, Essex, Authorised Start: 01 April, Authorised End: 31 October, Permit Start Date: 1st January 2001, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 10m.	337m	SW
8	Operator: Langthorns Plantery, Licence Number: 08/37/51/0053, Permit Version: 1, Location: Langthorns Nursery, Dunmow - Borehole, Authority: Environment Agency, Thames Region, Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct, Abstraction Type: Water may be abstracted from a single point, Source: Groundwater, Daily Rate(m ³): Not Supplied, Yearly Rate (m ³): Not Supplied, Langthorns Plantery, Little Canfield, Cross Lane West, Near Dunmow, Essex., Authorised Start: 01 March, Authorised End: 31 October, Permit Start Date: 1st April 2008, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 10m.	337m	SW
9	Operator: Langthorns Plantery, Licence Number: 08/37/51/0048, Permit Version: 100, Location: Langthorns Nursery, Dunmow - Borehole, Authority: Environment Agency, Thames Region, Abstraction: General Agriculture: Spray Irrigation - Direct, Abstraction Type: Water may be abstracted from a single point, Source: Groundwater, Daily Rate(m ³): 55, Yearly Rate (m ³): 5000, Langthorns Nursery, Little Canfield, Dunmow, Essex, Authorised Start: 01 April, Authorised End: 31 October, Permit Start Date: 1st November 1996, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 100m.	337m	SW

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	-

Compressible Ground Stability Hazards

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

Ground Dissolution Stability Hazards

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

Landslide Ground Stability Hazards

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

Running Sand Ground Stability Hazards

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

Shrinking or Swelling Clay Subsidence Hazards

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

Subsidence Insurance Claims

Map ID	Details	Distance	Direction
	Risk: No Claims, Source: Crawfords & Co.	On Site	-

Radon

Radon Potential

Map ID	Details	Distance	Direction
	The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level)., Source: British Geological Survey, National Geoscience Information Service.	On Site	-

Radon Protective Measures

Map ID	Details	Distance	Direction
	None, Source: British Geological Survey, National Geoscience Information Service.	On Site	-



Energy & Infrastructure Summary

Risk	Evaluation
Energy & Infrastructure	Not Identified



Recommendations

None required.

Energy	Enquiry	Result	Distance
	Is the property within 4km of an area licensed for onshore energy exploration and production?	No	N/A
	Is the property within 4km of a well used for energy exploration or extraction?	No	N/A
	Is the property within 4km of an area that has been offered for licensing for the onshore exploration oil and gas by the Oil and Gas Authority?	No	N/A
	Is the property within 4km of existing or proposed wind farms or wind turbines?	No	N/A
	Is the property within 2km of existing or proposed solar farms?	No	N/A
	Is the property within 2km of existing or proposed renewable power plants?	No	N/A

Infrastructure	Enquiry	Result	Distance
	Is the property within 4km of the proposed HS2 rail link?	No	N/A
	Is the property within 2km of the Crossrail rail link?	No	N/A



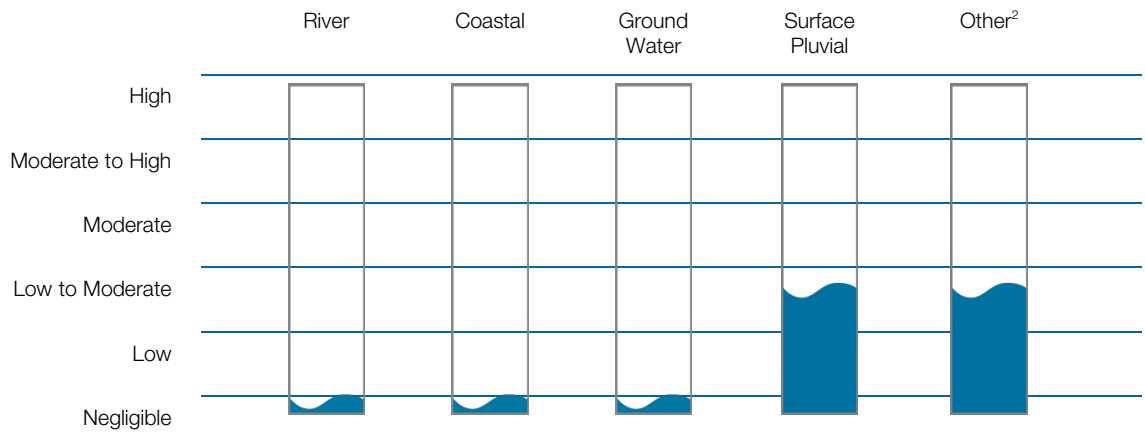
Flood Risk Screening

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?	Low to Moderate
3	Flood Defences Are there existing flood defences that might benefit the Site?	Yes
4	Effect What is the risk of flooding when these defences are operational?	Low to Moderate

Insurance

Insurance Buildings and contents insurance should be available and affordable.

Flood Analysis



Argyll's Comment



A drainage channel is culverted beneath the Site and is above ground 6m north west and 10m south east. While this doesn't present a significant risk, the owner of the property may have maintenance responsibilities.

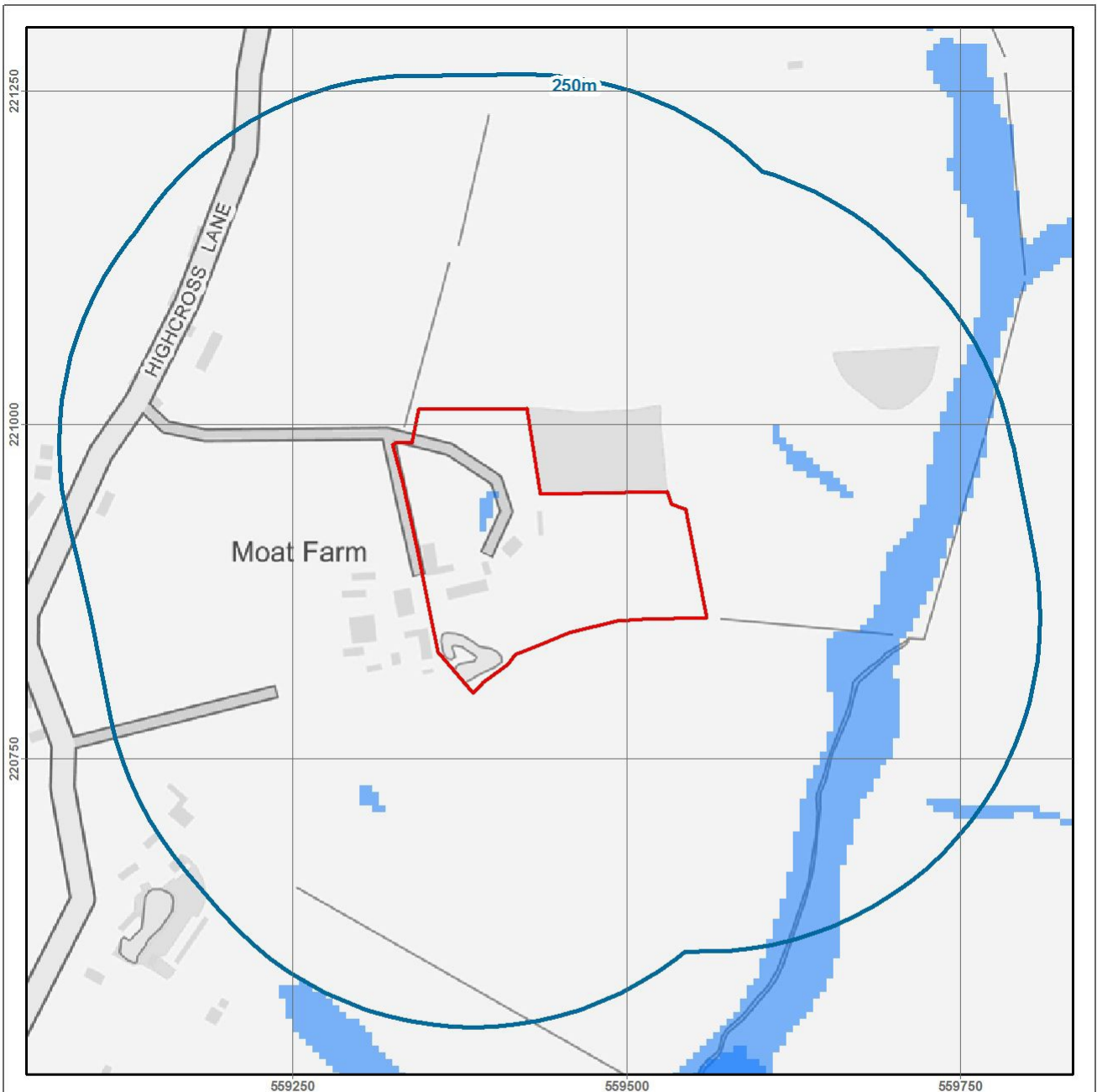


Recommendations





1. Ask the seller whether flooding has occurred in the area before. If it has, please contact us for advice.
2. Establish the availability of buildings and contents insurance before exchanging contracts.

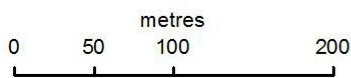
²Other factors influencing flood risk include historic flood events, geological indicators of flooding, proximate surface water features and elevation above sea level.

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 - 1:4,750

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Additional Considerations

Item	Summary
Riparian Ownership	<p>A riparian owner describes anyone who owns a property where there is a watercourse within or adjacent to the boundaries of their property.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Development Control	<p>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.</p> <p>The Environment Agency should also be contacted with regards to development (other than minor development) in Flood Zones 2 and 3.</p>
Sewer Flooding	<p>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. The answer to this question is based on replies given by the relevant water and sewerage provider to specific enquiries. The response provided is based on the information held. Sometimes, the water and sewerage provider is unable to confirm whether the Site has flooded, but provides a response based on all properties connected to a local sewer network (normally up to ten houses). This is due to the way in which the data is collected.</p>

Argyll's
Comment



Whilst this assessment is primarily a flood risk screening report, you may wish to consider the above potential liability considerations that fall outside the scope of the Flood Risk Screening Methodology.

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 Measures

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 ²
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.

Tabular Summary

Current Flood Risk	On-site	1-250m	251-500m
Flooding From Rivers or Sea	0	0	1
Flooding From Rivers or Sea (in an Extreme Flood)	0	0	1
Areas Benefiting from Flood Defences	0	0	0
Flood Storage Areas	0	0	0
Flood Defences	0	1	0
Risk of Flooding from Rivers and Sea	0	0	3
Groundwater Flood Risk	0	0	0
Surface Water Flooding (1:75 year rainfall event)	0	2	0
Surface Water Flooding (1:200 year rainfall event)	1	1	0
Surface Water Flooding (1:1000 year rainfall event)	1	1	0
Dam or Reservoir Failure	0	0	0
Historical Flooding	On-site	1-250m	251-500m
Historical Flood Events	0	0	0
Geological Indicators of Flooding	0	0	0
Site information	Response		
Height of Site Above Sea Level	85.91m		
Distance of Site Boundary to Nearest Water Feature	0m		

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.

Current Flood Risk

Flooding from River or Sea (Flood Zone 3)

Details	Distance	Reply or Direction
Are there any flood plains within 500m?	<501m	YES
Type: Fluvial Models, Source: Environment Agency, Head Office, Boundary Accuracy: As Supplied.	321.7m	S

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

Details	Distance	Reply or Direction
Are there any flood plains (extreme flood) within 500m?	<501m	YES
Type: Fluvial Models, Source: Environment Agency, Head Office, Boundary Accuracy: As Supplied.	321.3m	S



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	YES



The Site is below the base level at a flood defence. There may therefore be a residual risk of flooding should the protection standard of the defences be exceeded (and the defences overtopped) or should the defence line fail. A FLOODSOLUTIONS Consult Report could be undertaken in order to further define these risks.

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.

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 Risk of Flooding from Rivers and Sea 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

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

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	low
What is the risk of surface water flooding at the Site following 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

Historic 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.

Environment Agency Data

Historic Flood Outlines - The EA 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.

Other Flood Information

Height Above Sea Level

Details	Direction	Reply or Direction
Maximum height of the Site above sea level	On Site	89.00m
Minimum height of the Site above sea level	On Site	84.10m
Average height of the Site above sea level	On Site	85.91m



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	Direction	Reply or Direction
Are there any water features within 500m?	<501m	YES
Surface water feature	On Site	-
Surface water feature	120.9m	SE
Surface water feature	270.1m	SW



There is a water feature shown on the Ordnance Survey maps within the Site. This does not represent a flood risk in itself, but its presence has been taken into account in the overall risk assessment in this Report.

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.

Contacts

Name and Address	Telephone/Fax/Email
Argyll Environmental Limited 1 st Floor 98 – 99 Queens Road Brighton BN1 3XF [REDACTED]	Telephone 0330 036 6115 orders@argyllenviro.com
Environment Agency National Customer Contact Centre (NCCC) PO Box 544	Telephone 03708 506 506
Uttlesford District Council Environmental Health Department Council Offices www.uttlesford.gov.uk	Telephone 01799 510581 Fax: 01799 510499
Essex County Council County Hall www.essexcc.gov.uk	Telephone 01245 492211
Environment Agency Head Office Rio House	Telephone 01454 624400 Fax: 01454 624409
British Geological Survey Enquiry Service British Geological Survey [REDACTED]	Telephone 0115 936 3143 Fax: 0115 936 3276 enquiries@bgs.ac.uk
Landmark Information Group Limited Imperium [REDACTED]	Telephone 0844 844 9966 Fax: 0844 844 9951 helpdesk@landmark.co.uk

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

Risk Analysis Methodology

The Site Solutions reports have been designed to assist in making informed decisions during property transactions. The Report is a desktop assessment of direct liabilities (Liabilities) which could affect the owner /occupier of the Site and arise under Part 2A of the Environmental Protection Act 1990 and/or equivalent requirements under the planning regime and/or the Water Resources Act 1991⁴. (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 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 (EDR) 2009.

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 were introduced on 1 March 2009 to implement the provisions of the European Commission's Environmental Liability Directive into law in England⁵. 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 or to land. 'Environmental damage' has a specific meaning in the Regulations, and covers only the most severe cases. Existing legislation with provisions for environmental 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 in the Renewable Energy Zone, which extends approximately 200 miles out to sea.

Argyll does not consider the standard of current operations, but reports the potential for environmental damage based on the location of EDR Receptors around the Site.

⁴ Water Environment (Controlled Activities)(Scotland) Regulations 2005 where appropriate.




⁵ Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009 or Environmental Damage (Prevention and Remediation) (Scotland) Regulations where appropriate.

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*
PASSED 	<p>Within the scope of this assessment no Liabilities have been identified. No further action is required.</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
PASSED 	<p>Within the scope of this assessment no Liabilities have been identified. However, your attention is drawn to the prudent enquiries suggested below.</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
FURTHER ACTION 	<p>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 1991⁶. To quantify these you may decide to undertake a more detailed assessment through the recommendation(s) set out below.</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.

Limitations of the Report

The Site Solutions 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 [REDACTED]. 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 Terms and Conditions for Data Reports, a copy of which is available on our website.

⁶Water Environment (Controlled Activities)(Scotland) Regulations 2005 where appropriate.




Flood Risk Screening Methodology

This section of the report is a desktop flood risk screening, designed to enable property professionals to assess the risk of flooding at residential 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 if any significant flood risks have been identified and whether the level of flood risk identified could affect obtaining insurance.

There will be one of the following three responses:

Assessment	Risk Statement
PASSED 	Low and Low to Moderate - The Site is not considered to be at a significant risk of flooding. Insurance is likely to be available and affordable.
PASSED 	Moderate - The Site is located within an area which is at risk of flooding. In most cases insurance should be available and affordable. However, this will be dependent on site specific factors and we recommend contacting your insurance broker before proceeding with any transaction.
FURTHER ACTION 	Moderate to High and High - The Site is located within an area which is at risk of flooding. Flood insurance for most residential properties should be available and affordable despite this level of flood risk due to the introduction of Flood Re. However, several types of residential property fall outside Flood Re and we cannot determine the eligibility of the property from this assessment. You should therefore check that your property is eligible with your insurer or via the Flood Re website [REDACTED]. For excluded properties, buildings and contents insurance terms are likely to have a higher premium. You should therefore obtain insurance terms before exchange of contracts.

Insurance

The response to the 'Insurance' question on the front page assumes the property is an existing domestic property and makes no allowance for previous claims arising from any type of flooding, nor for non-flood related risks such as subsidence. Based on the data assessed within this report, an indication of whether the property is likely to be insurable for flood risk is provided using the following datasets:

- Environment Agency: Risk of Flooding from Rivers and the Sea
- JBA: Surface Water Risk 1:200

Our opinion does not take into account any historic episodes of flooding or previous insurance claims arising from flooding at the site.

Since April 2016 insurers of residential property are all free to decide whether to offer insurance against flooding, at what price, and on what terms. They will have different attitudes to risk. This means there are no universal guidelines to whether insurance will be available against flood risk or not.

Where an insurer is not willing itself to offer cover, it can arrange for flood insurance cover (for either or both of buildings and contents) to be provided by Flood Re., a government approved scheme which opened for business in April 2016.

Properties will be eligible for Flood Re only if they meet all of the criteria – see details of eligible properties at [REDACTED]

We do not know whether the site falls into any of the excluded categories. Therefore, where we consider there to be a moderate or high risk of flooding to the property, we will recommend that you consult your proposed insurer or broker prior to exchange of contracts, to establish the terms on which flood insurance would be offered.

For some sites, it is possible to reduce the risk of flooding by installing flood protection measures (either flood resistance or flood resilience measures). If these measures are appropriate to the site, and have been installed properly, then an insurer may offer better terms. Further details of such measures can be found on page 4 or at [REDACTED]

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 response to development 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 4 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 hectare) 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 FloodSolutions Residence report has been designed to satisfy basic flood-related environmental due-diligence enquiries for residential 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. The 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 [REDACTED], 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 [REDACTED] 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, 1st Floor, 98 – 99 Queens Road, Brighton, BN1 3XF.
Tel: 0330 036 6115, Email: 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: [REDACTED]

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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

Email: 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
1st Floor
98 - 99 Queens Road
Brighton
BN1 3XF

Tel: 0330 036 6115

Email: 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

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