argyll ENVIRONMENTAL

SiteSolutions Residence

Contaminated Land
FURTHER ACTION

Flooding
FURTHER ACTION

Subsidence & Ground Instability
IDENTIFIED

Radon
NOT IDENTIFIED

Energy & Infrastructure
NOT IDENTIFIED



Report on:

The Bungalow, Marsh Road, Gedney Drove End, Spalding, PE12 9PJ

Report prepared for:
Direct Client

Client Reference:

Report Reference:
AEL-4491-SRE-972263

National Grid Reference:
546468,329164

Report date:
10th June 2019

0845 458 5250
www.argyllenvironmental.com
Intelligent Due Diligence

COPSO ASSOCIATE MEMBER
searchcode
The Property Ombudsman Consumer Redress

Site Location

Report prepared on

The Bungalow, Marsh Road, Gedney Drove End, Spalding, PE12 9PJ

Site Area (m²)

345.47

Current Use

Garden

Proposed Use

Single-Residence Dwelling

Report Author

Tom Leckey
Telephone: 0845 458 5250
E-mail: orders@argyllenviro.com

Additional Information Provided

-





Contaminated Land Risk Summary

Risk	Evaluation
Contaminated Land	Further action

Liability Assessment

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. To quantify these you may decide to undertake a more detailed assessment through the recommendation(s) set out below.

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

Recommendations

There is an elevated risk of contamination at the Site, due to its proximity to an area of landfilling. As the Site is being redeveloped, Planning Conditions will be used as a mechanism to remediate the Site to an acceptable standard.

The Planning Authority will require a phased risk assessment, and must be consulted at each stage. This may begin with a Phase 1 Assessment, but will most likely lead on to a Phase 2 Intrusive Investigation. The Phase 2 will involve a combination of soil, gas and groundwater sampling. Please note, this investigation may well highlight a requirement to remediate.

We would be happy to confirm with the Planning Authority that this approach is acceptable. If you would like a quote for an appropriate phased approach, please contact your report writer on 0845458 5250.

Upgrade to initial Phase 1 Environmental Audit: from £1,150 + VAT *including third-party costs*

Contaminated Land Risk Analysis

Investigation	Commentary
On-site sources	No potentially contaminative historical land uses were identified at the Site from 1:10,000 and 1:10,560 scale maps.
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	The following historical potentially contaminative land uses were identified in proximity to the Site: a sewage works 40m north-east c.1972-2000. Furthermore, the following waste sites were identified which may be able to impact upon the Site: a Historical Landfill Site (14m north west) recorded as accepting household waste.
Argyll's Comment	The historical and current use of the surrounding area is therefore considered to present a **moderate to high risk** of affecting the Site.
Pathways and receptors	With reference to Environment Agency data, the superficial and bedrock hydrogeology underlying the Site are classified as Unproductive Strata (deposits of negligible permeability). According to information provided by the Environment Agency the Site does not lie within a groundwater Source Protection Zone (SPZ). There are no abstraction licences located within 500m. Residential properties are located on Site. The nearest water feature is located 39m west. No designated eco-receptors were identified within a 500m radius of the Site.
Argyll's Comment	Overall, the Site is therefore considered to have a **high environmental sensitivity**.
Additional Sources of Information	The following additional historical map packs were used to produce this report. • Envirocheck Ref: 206972222 centred on 546468, 329164.

Argyll's Conclusion

Considering the information reviewed during this assessment, plausible contaminant linkages have been identified associated with the proposed redevelopment. 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.

Subsidence and Ground Instability

Risk	Evaluation
Subsidence[1] & 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

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

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.

[1]The 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
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

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	This section presents a tabular summary of information found for the Site and surrounding area. The data is presented in three buffer zones for ease of reference: data found at the Site, from 1-250m and from 251-500m. If a database has been searched the number of records found will be displayed under the relevant search band. If a database is not available or has not been searched, this will be represented by the abbreviation N/A under the relevant search band.
Current Land Use Mapping	This section provides information on current land uses and is divided into three sections, statutory information, waste and current industrial uses. It is preceded by a map.
Statutory Information	This section presents detailed statutory information for the Site and surrounding area (up to 500m depending upon dataset). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site. If no data is identified then the section will be omitted.
Waste	This section presents detailed information on waste and landfill sites for the Site and surrounding area (up to 500m depending upon dataset). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site. If no data is identified then the section will be omitted.
Current Industrial Land Use	This section presents detailed information on current land use for the Site and surrounding area (0-250m). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site. If no data is identified then the section will be omitted.
Historical Land Use Mapping	The Historical Land Use Map presents 1:10,000 scale and selected 1:2,500 scale (tanks and energy facilities) historical land use information within 250m of the Site boundary.
Historical Land Use	This section presents selected information on historical land use for the Site and surrounding area (0-250m). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site. If no data is identified then the section will be omitted.
Aquifer Designations and Geology	This section is preceded by two maps that present information relating to the aquifer designations beneath the Site. The first of these maps indicates the designation of the Superficial geology. The second map presents the aquifer designation of the solid geology. These maps are followed by detailed information in relation to aquifer designations/groundwater vulnerability and geology at the Site and surrounding area (0-500m). If no data is identified then the section will be omitted.
Environmental Sensitivity	This section presents detailed information on the environmental sensitivity of the Site and surrounding area (up to 500m depending upon dataset) and is preceded by two maps. The first shows areas with statutory designations, the second shows source protection zones. The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site. If no data is identified then the section will be omitted.
Natural and Mining Related Hazards	This section contains information on natural and mining related hazards which may affect the Site. These include subsidence, radon and mining. If no data is identified then the section will be omitted.
Flooding	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.

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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	1	0

Current Land Use

Current Potentially Contaminative Uses	On-site	1-250m	251-500m
Contemporary Trade Directory Entries	0	1	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	0	N/A
Historical Tanks And Energy Facilities	0	2	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	0	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	0	N/A	N/A
Ramsar Sites	0	0	0
Nearest Surface Water Feature	0	1	N/A
Sites of Special Scientific Interest	0	0	0
Special Areas of Conservation	0	0	0
Special Protection Areas	0	0	0
Water Abstractions	0	0	0
Source Protection Zones	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

[3]Ground 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
Site Boundary
Search Buffer
Bearing Reference Point
Grid Lines
Reference Number
N
Waste/Landfill Sites
RAS Recorded Landfill Site
Point Location of Registered Landfill Site
EA Historic Landfill (Polygon)
Point Location of EBS Recorded Landfill Site
EA Historic Landfill (Bulked Point)
Licensed Waste Management Facilities (Location)
Licensed 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
Registered Landfill Buffer
Potential Landfill Site
Statutory Authorisations
Local Authority Pollution Prevention and Control
Contaminated Land Register Entry or Notice
Point Location of Contaminated Land Register Entry or Notice
Registered Radioactive Substance
Discharge Consents
Discharge Consent
Water Industry Act Referral
Industrial Processes
Integrated Pollution Control Consent
Integrated Pollution Control Registered Waste Site
Integrated Pollution Prevention Control
Local Authority Integrated Pollution Prevention and Control
Storage of Hazardous Substances
COMAH
Explosives Site
Planning Hazardous Substances Consent
NIHHS
Contraventions
Local Authority Pollution Prevention and Control Enforcement
Enforcement and Prohibition Notice
Planning Hazardous Substances Enforcement
Substantiated Pollution Incident Register
Prosecution Relating to Authorised Processes
Prosecution Relating to Controlled Waters
Potentially Contaminative Use
Potentially Contaminative Use
Fuel Station Entry
Miscellaneous
BGS Recorded Mineral Site
Telecommunication Base Station
250m
PW
PW
PIT LANE
1
2
3
4
5
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Statutory Information

Discharges

Discharge Consents

Map ID	Details	Distance	Direction
1	Operator: South Holland D.C., Property Type: Domestic Property (Multiple), Location: Winston Close Gedney Drove End, Spalding, Lincs. Pe12 9ph (Site2244, Pe12 9ph, Authority: Environment Agency, Anglian Region, Catchment Area: Low River Welland (Spalding), Permit Ref: Pr5nf262, Permit Version: 1, Effective Date: 26th June 1964, Issued Date: 26th June 1964, Revocation Date: Not Supplied, Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company, Discharge Environment: Freshwater Stream/River, Receiving Water: Unknown Trib, Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989, Positional Accuracy: Located by supplier to within 100m.	41m	NE
2	Operator: Mr George Peacock, Property Type: Domestic Property (Single), Location: The Willows Pit Lane, Gedney Drove End, Spalding, Lincs, Pe12 9pg, Authority: Environment Agency, Anglian Region, Catchment Area: Low River Nene / South Holland Main, Permit Ref: Pmnf18751, Permit Version: 1, Effective Date: 26th April 2007, Issued Date: 21st May 2007, Revocation Date: Not Supplied, Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company, Discharge Environment: Freshwater Stream/River, Receiving Water: Unnamed Tributary Of River Nee, Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995), Positional Accuracy: Located by supplier to within 10m.	53m	W

Waste

Waste/Landfill Sites

Local Authority Landfill Coverage

Lincolnshire County Council - Had landfill data but passed it to the relevant environment agency

South Holland District Council - Has no landfill data to supply

Historical Landfill Sites

Map ID	Details	Distance	Direction
3	Licence Holder: Not Supplied, Location: Gedney Drove End, Name: Marsh Road, Operator Location: Not Supplied, Boundary Accuracy: As Supplied, Provider Reference: EAHLD00267, First Input Date: Not Supplied, Last Input Date: Not Supplied, Specified Waste Type: Deposited Waste included Household Waste, EA Waste Ref: 0, Regis Ref: Not Supplied, WRC Ref: Not Supplied, BGS Ref: Not Supplied, Other Ref: RD7-61-01/89, SH-61-01/89, 2500/5049	14m	NW

Current Land Use

Current Potentially Contaminative Uses

Contemporary Trade Directory Entries

Map ID	Details	Distance	Direction
4	Leather Garments & Products, Name: Love My Leather, Status: Inactive, Location: Marsh Rd, Gedney Drove End, Spalding, Lincolnshire, PE12 9PJ, Positional Accuracy: Manually positioned within the geographical locality.	118m	SE

Historical Land Uses within 250m
General
Site Boundary
Search Buffer
Bearing Reference Point
Grid Lines
Reference Number
Potentially Contaminative Uses
Point Feature
Line Feature
Area Feature
Potentially Infilled Land
Point Feature
Line Feature
Area Feature
Former Marshes
Point Feature
Line Feature
Area Feature
Historical Tanks and Energy Facilities
Point Feature
PW
PW
PIT LANE
1
2
250m
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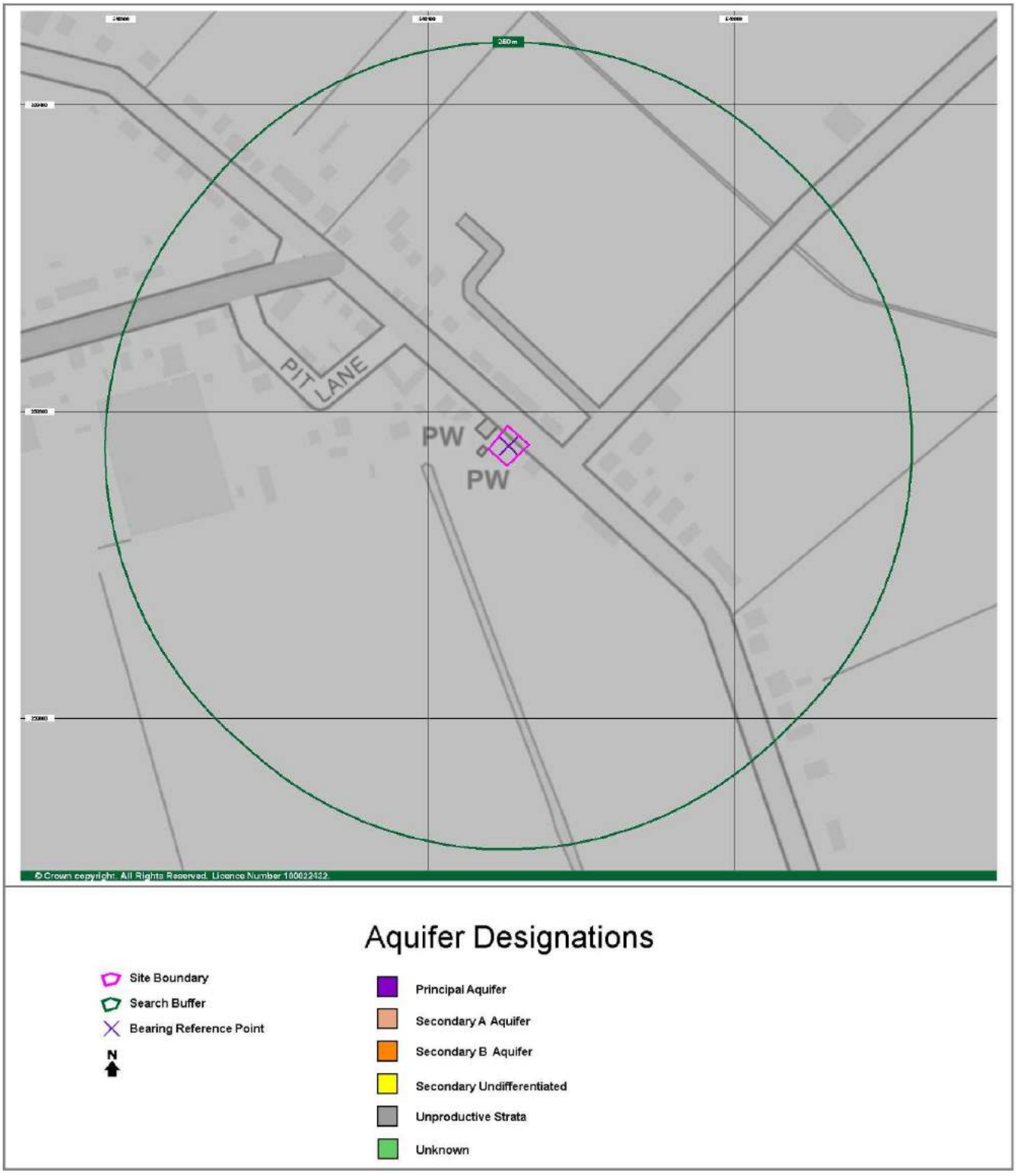
Historical Land Use

Historical Potentially Contaminative Uses

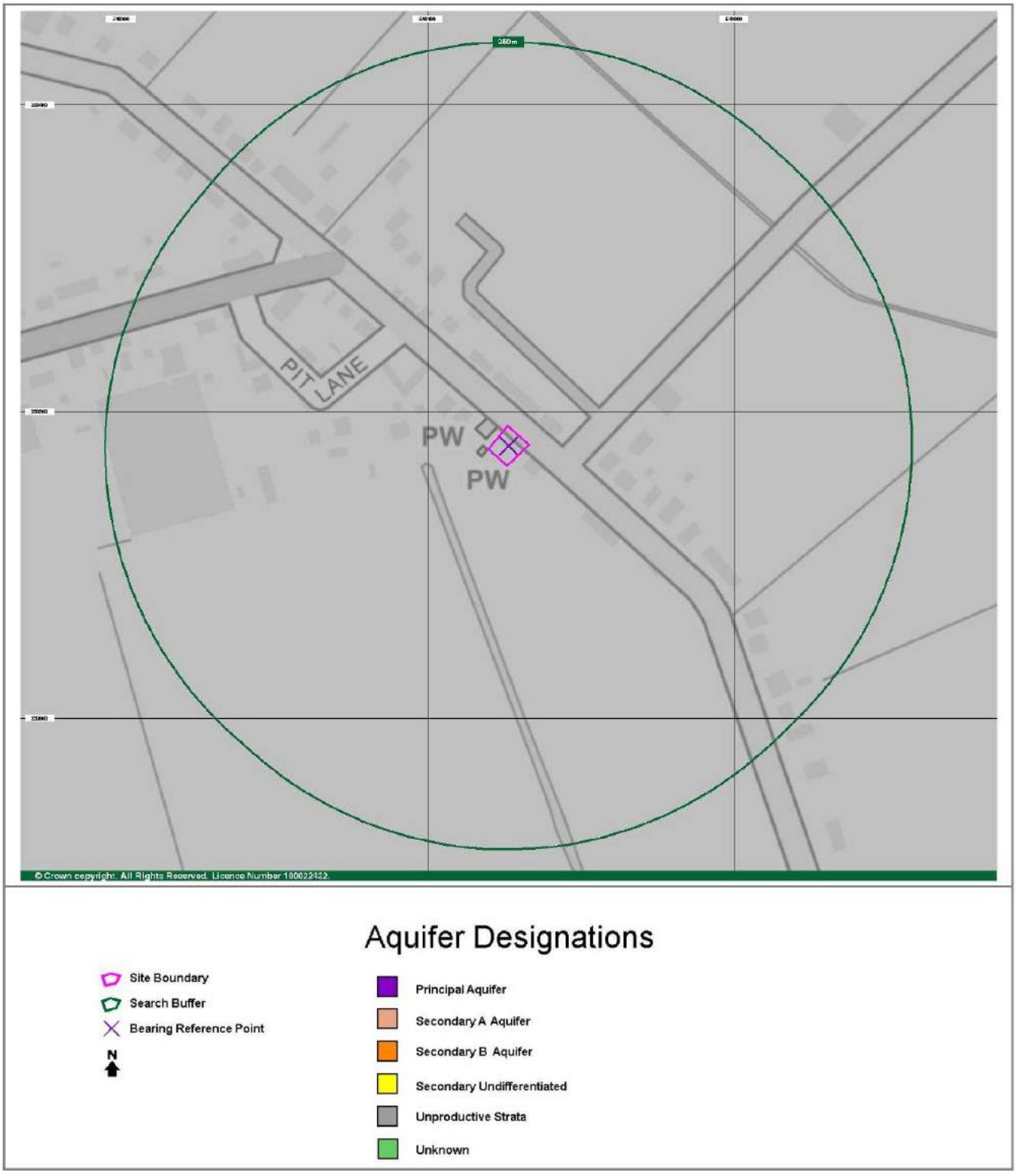
Historical Tanks and Energy Facilities

Map ID	Details	Distance	Direction
1	Potential Tanks, Scale of Mapping: 1:2,500, Date of Mapping: 1972.	174m	NW
2	Electrical Sub Station Facilities, Scale of Mapping: 1:2,500, Date of Mapping: 1972.	245m	NW

Aquifer Designation (Superficial)



Aquifer Designation (Bedrock)



Groundwater Vulnerability

Hydrogeology

Superficial 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	-

Bedrock Aquifer Designations

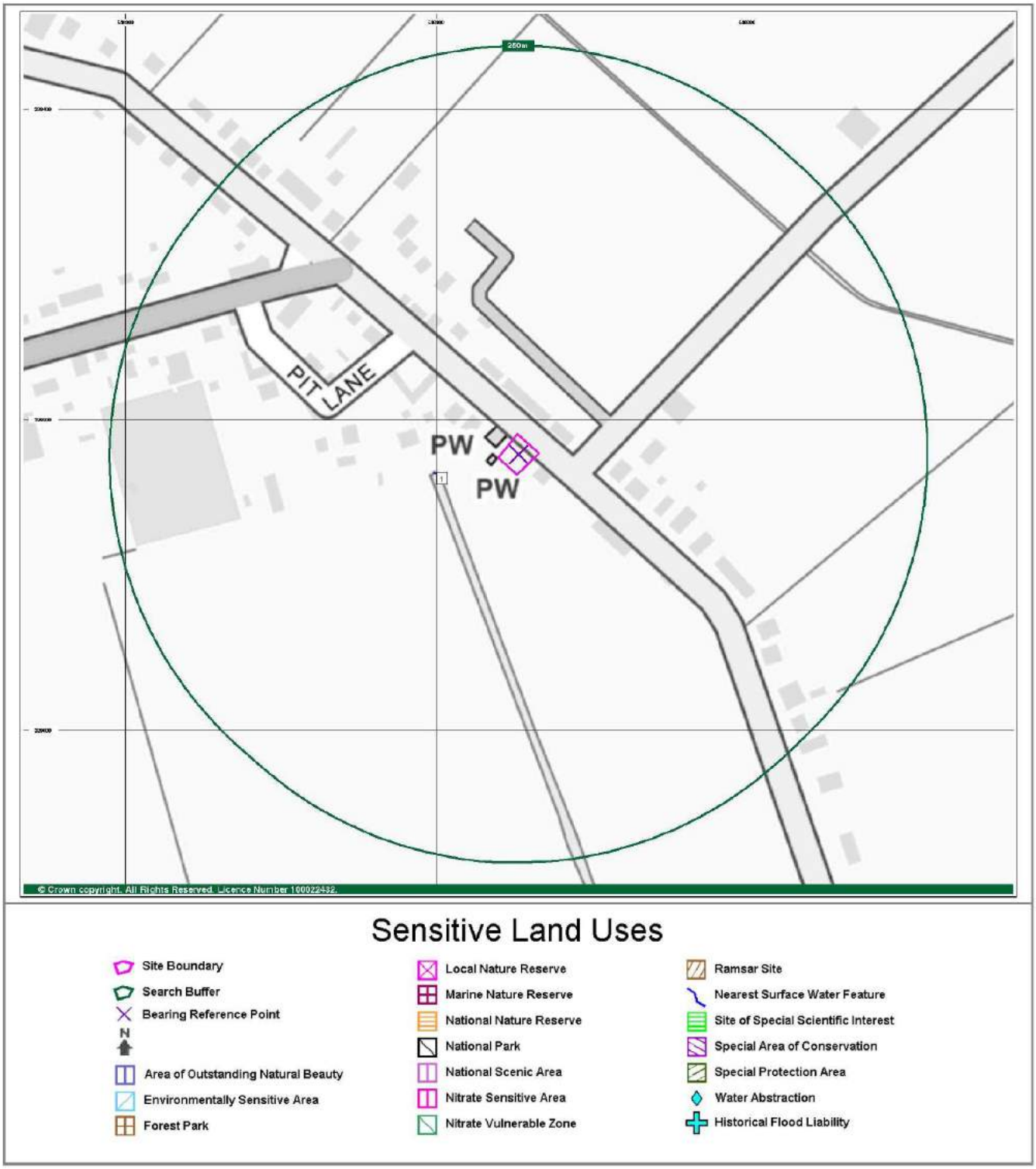
Map ID	Details	Distance	Direction
	Unproductive Strata The rock layers or drift deposits have a low permeability that have negligible significance for water supply or river base flow.	On Site	-

Geology

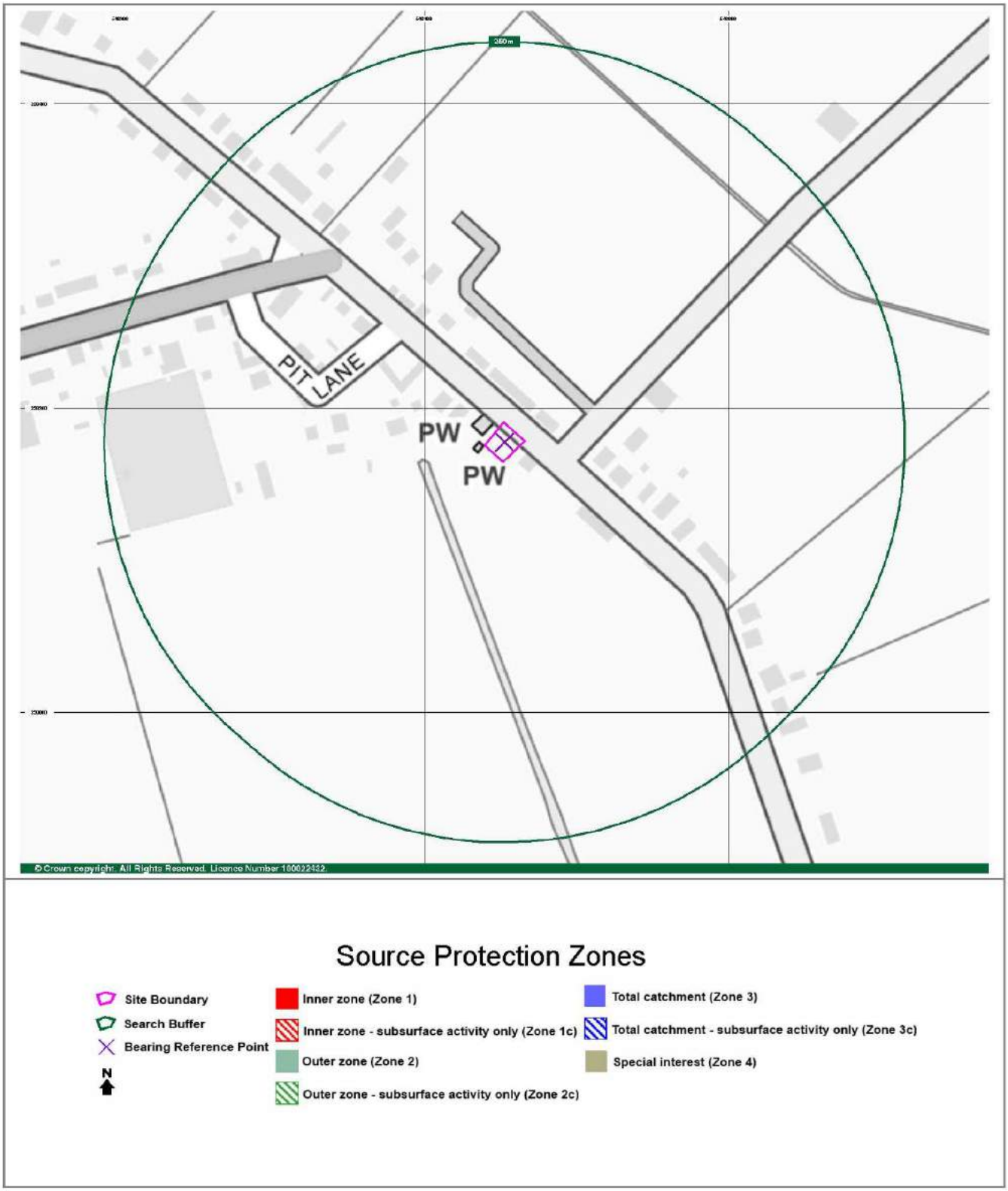
BGS 1:625,000 Solid Geology

Map ID	Details	Distance	Direction
	West Walton Formation, Ampthill Clay Formation And Kimmeridge Clay Formation (Undifferentiated).	On Site	-

Sensitive Land Uses



Source Protection Zones



Environmentally Sensitive Features

Nearest Surface Water Feature

Map ID	Details	Distance	Direction
1	Surface water feature identified in proximity.	39m	W

Natural and Mining Related Hazards

Subsidence

Collapsible Ground Stability Hazards

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

Compressible Ground Stability Hazards

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

Shrinking or Swelling Clay Subsidence Hazards

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

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
Oil and Gas Exploration	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
Wind Energy	Is the property within 4km of existing or proposed wind farms or wind turbines?	No	N/A
Solar Energy	Is the property within 2km of existing or proposed solar farms?	No	N/A
Other Renewable Energy	Is the property within 2km of existing or proposed renewable power plants?	No	N/A

Infrastructure	Enquiry	Result	Distance
High Speed 2	Is the property within 4km of the proposed HS2 rail link?	No	N/A
Crossrail 1	Is the property within 2km of the Crossrail rail link?	No	N/A

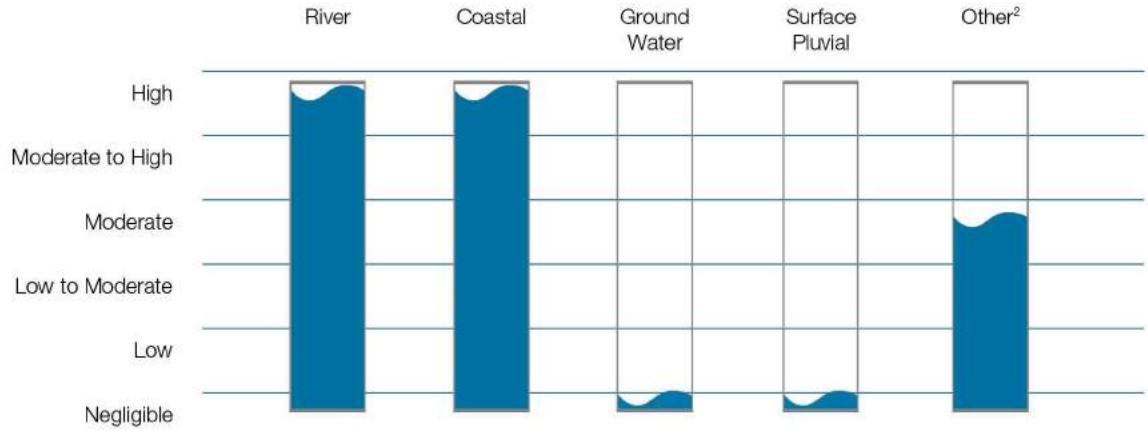
Flood Risk Screening

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

Insurance

As the Site is being redeveloped, a Flood Risk Assessment (FRA) should have been, or will need to be completed and approved to reduce the risk of flooding in line with the National Planning Policy Framework (NPPF). Providing all recommendations outlined in the FRA are adhered to, then insurance should be available and affordable.

Flood Analysis



Argyll's Comment

As the Site is in proximity to the coast and a number of drainage channels, the Site has a high probability of flooding (Flood Zone 3). Whilst we have not identified any flood defences nearby, the Site has a defended risk of low. This indicates there are defences in the wider area, but we cannot confirm at this level of reporting.

A drainage channel borders the west of the Site. Given the proximity to this watercourse, it may pose a risk to the Site during extreme storm events, or if a blockage were to occur.

Please see our recommendations below.

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

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.

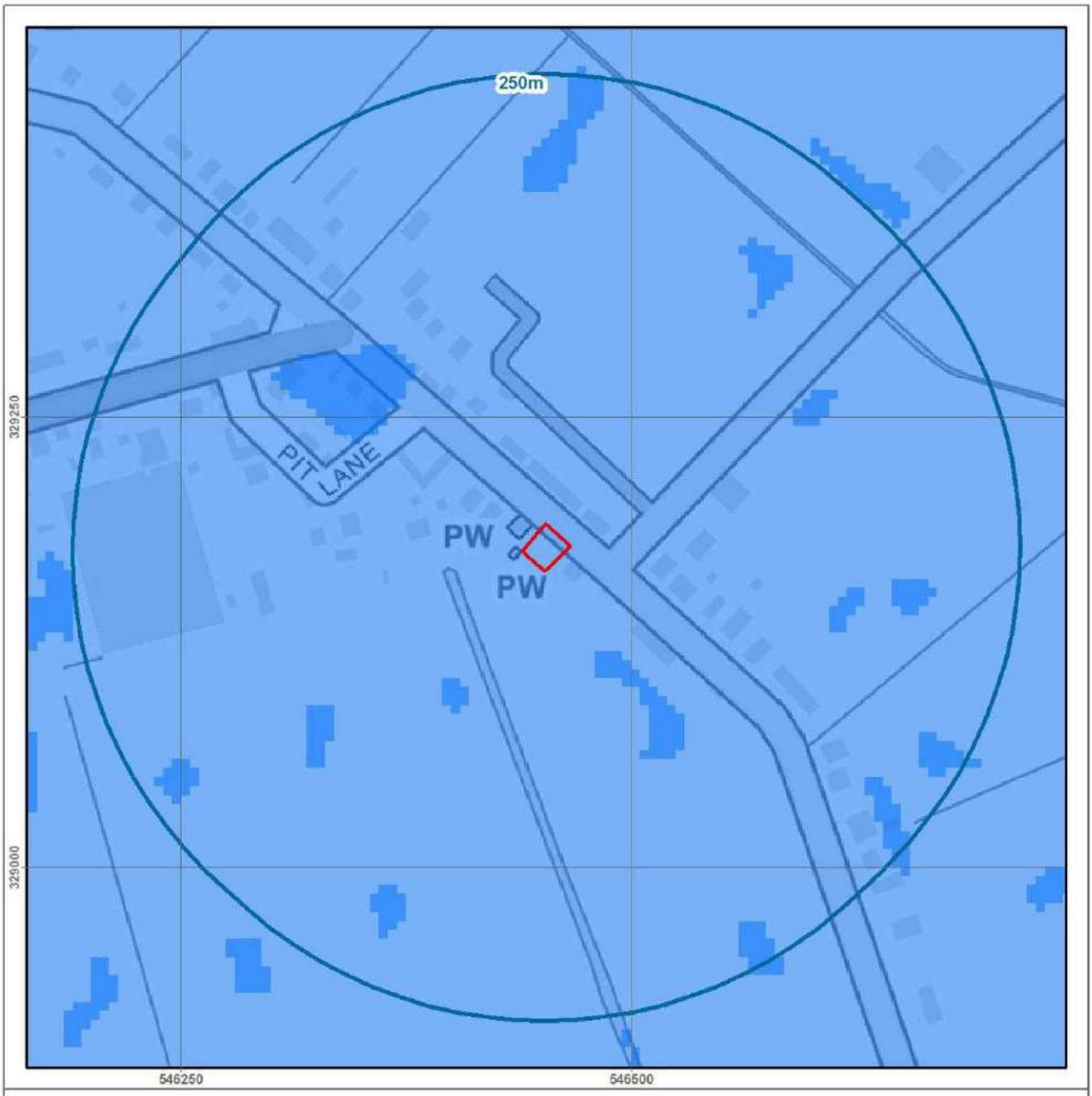
2. You should ask the seller whether flooding has occurred in the area before. If it has, please contact us for advice.

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

Please contact us on 0845 458 5250 if you would like to discuss any aspect of this recommendation.

Upgrade to an FRA: Prices starting from £650.00 + VAT.

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

metres

0 50 100 200

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

Nominal scale at A4 paper size - 1:3,500

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Additional Considerations

Item	Summary
Riparian Ownership	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	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. 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. 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.

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).

If you require a property specific assessment of which measures are suitable, and a more accurate cost appraisal, Argyll will need to complete a FLOODSOLUTIONS Consult Report. This report can be used to increase your understanding of the risk and the potential significance of a flood event, and to inform a flood survey, to ensure the recommended protection measures are suitable. This report can usually be prepared within 15-20 working days, although may take up to 25 depending upon regulatory response times. Please contact us on 0845 458 5250 if you would like further assistance.

Tabular Summary

Current Flood Risk	On-site	1-250m	251-500m
Flooding From Rivers or Sea	1	1	0
Flooding From Rivers or Sea (in an Extreme Flood)	1	1	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	1	2	0
Groundwater Flood Risk	0	0	0
Surface Water Flooding (1:75 year rainfall event)	0	1	1
Surface Water Flooding (1:200 year rainfall event)	0	2	0
Surface Water Flooding (1:1000 year rainfall event)	0	2	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	1	0	0
Site information	**Response**		
Height of Site Above Sea Level	4.10m		
Distance of Site Boundary to Nearest Water Feature	12.4m		

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: Tidal Models, Source: Environment Agency, Head Office, Boundary Accuracy: As Supplied.	On Site	-
Type: Fluvial / Tidal Models, Source: Environment Agency, Head Office, Boundary Accuracy: As Supplied.	0.5m	SW

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: Tidal Models, Source: Environment Agency, Head Office, Boundary Accuracy: As Supplied.	On Site	-
Type: Fluvial / Tidal Models, Source: Environment Agency, Head Office, Boundary Accuracy: As Supplied.	0.1m	SW

The Site (or part of it) is at a high risk of flooding from rivers and the sea, as defined by the regulatory body's Flood Map. The risk of annual flooding is greater than 1% (from rivers) or greater than 0.5% (from the sea). All development proposals would need to be accompanied by a Flood Risk Assessment, in accordance with NPPF. Developments such as emergency services stations, basement dwellings and caravans, mobile homes and park homes for permanent residential use, etc. are not compatible with this level of risk. Significant planning constraints would apply to such developments as residential, care homes, hotels, short-let caravan parks, camping, etc. Parts of the Site may be within an area of land where water has to flow or be stored in times of flood (>5% annual risk of flooding) within which severe planning constraints apply. It is recommended that a FLOODSOLUTIONS Consult Report is undertaken to further define the flood risk issues and potential development constraints.

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.

Risk of Flooding from Rivers and Sea

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

The Site (or part of it) has been defined as being at low flood risk within the regulatory body's risk assessment. This classification relates to the locality as a whole, rather than the individual Site and relates only to the risk of coastal or river flooding.

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	negligible
	What is the risk of surface water flooding at the Site following 1 in 1,000 year rainfall event?	On Site	negligible

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	YES
	Coastal flooding indicators, Higher flood potential from the sea: the first areas to experience the effects of coastal flooding.	On Site	-

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	4.10m
Minimum height of the Site above sea level	On Site	4.10m
Average height of the Site above sea level	On Site	4.10m

The Site is at a relatively low height above sea level. However, this is not in itself indicative of the degree 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	12.4m	NW
Surface water feature	210.9m	NE
Surface water feature	213.3m	NE
Surface water feature	358.9m	N
Surface water feature	408.3m	SE
Surface water feature	446.9m	S
Surface water feature	451.4m	SE
Surface water feature	454.6m	S

The Site is less than 2m above a water feature (as shown on the Ordnance Survey maps). This does not represent a flood risk in itself, but other assessments of risk within this report should be consulted.

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 1st Floor 98 – 99 Queens Road Brighton BN1 3XF www.argyllenvironmental.com	Telephone 0845 458 5250 orders@argyllenviro.com
Ensura Limited (for Environmental Insurance) 1st Floor 98 – 99 Queens Road Brighton BN1 3XF www.ensura.co.uk	Telephone 0845 652 8585 Fax 0845 652 8686 info@ensura.co.uk
Environment Agency National Customer Contact Centre (NCCC) PO Box 544	Telephone 03708 506 506
Lincolnshire County Council 4th Floor www.lincolnshire.gov.uk	Telephone 01522 552222 Fax: 01522 552288 PublicRelations@lincolnshire.gov.uk
South Holland District Council Environmental Services Council Offices www.sholland.gov.uk	Telephone
Environment Agency Head Office Rio House	Telephone 01454 624400 Fax: 01454 624409
British Geological Survey Enquiry Service British Geological Survey www.bgs.ac.uk	Telephone 0115 936 3143 Fax: 0115 936 3276 enquiries@bgs.ac.uk
Landmark Information Group Limited Imperium www.landmark.co.uk	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 1991[4]. (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 England [5]. 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 	**Within the scope of this assessment no Liabilities have been identified. No further action is required.** This statement indicates that within the scope of this assessment, no issues have been identified that are likely to result in significant cost liabilities under Relevant Legislation.	3 or 4
PASSED 	**Within the scope of this assessment no Liabilities have been identified. However, your attention is drawn to the prudent enquiries suggested below.** This statement indicates that within the scope of this assessment, no issues have been identified that are likely to result in significant cost liabilities under Relevant Legislation. However, a client may wish to obtain further information about other issues disclosed in the Report, which could be material.	3 or 4
FURTHER ACTION 	**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[6]. To quantify these you may decide to undertake a more detailed assessment through the recommendation(s) set out below.** This statement indicates that within the scope of this assessment, an issue or a number of issues have been identified that are likely to result in significant cost liabilities under Relevant Legislation. In this event, recommendations are made, in order that additional information is collected so that the liabilities may be more accurately assessed.	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 www.argyllenvironmental.com. For further information regarding the datasets reviewed within our assessment, please contact one of our technical team on 0845 458 5250. This report is provided under The Argyll Environmental Terms and Conditions for Data Reports, a copy of which is available on our website.

[6]Water 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 www.floodre.co.uk/eligibility. 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 www.floodre.co.uk/eligibility.

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 www.knowyourfloodrisk.co.uk/sites/default/files/FloodGuide_ForHomeowners.pdf

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 www.argyllenvironmental.com , or by calling one of our technical team on 0845 458 5250.

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 , or by calling one of our technical team on 0845 458 5250

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.

Important Consumer Protection Information

This search has been produced by Argyll Environmental Ltd, 1st Floor, 98 – 99 Queens Road, Brighton, BN1 3XF. Telephone: 0845 458 5250, e-mail: orders@argyllenviro.com which is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. The PCCB independently monitors how registered search firms maintain compliance with the Code.

The Search Code:

- provides protection for homebuyers, sellers, estate agents, conveyancers and mortgage lenders who rely on the information included in property search reports undertaken by subscribers on residential and commercial property within the United Kingdom
- sets out minimum standards which firms compiling and selling search reports have to meet
- promotes the best practice and quality standards within the industry for the benefit of consumers and property professionals
- enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.

By giving you this information, the search firm is confirming that they keep to the principles of the Code. This provides important protection for you.

The Code's core principles

Firms which subscribe to the Search Code will:

- display the Search Code logo prominently on their search reports
- act with integrity and carry out work with due skill, care and diligence
- at all times maintain adequate and appropriate insurance to protect consumers
- conduct business in an honest, fair and professional manner
- handle complaints speedily and fairly
- ensure that products and services comply with industry registration rules and standards and relevant laws
- monitor their compliance with the Code

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 Code.

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

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
Email: admin@tpos.co.uk

You can get more information about the PCCB from www.propertycodes.org.uk.
PLEASE ASK YOUR SEARCH PROVIDER IF YOU WOULD LIKE A COPY OF THE SEARCH CODE

Complaints procedure

If you want to make a complaint, 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

Telephone: 0845 458 5250
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, E-mail: admin@tpos.co.uk

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

_planningadvice

From: G R MERCHANT <gr.merchant@btconnect.com>
Sent: 07 October 2019 13:45
To: _planningadvice
Subject: H06-1002-19 - NEW APP (S. McAuley & C. Taylor)
Attachments: S25C-919100713000.pdf; 3537-19-01C (MCAULEY).pdf; AEL-4491-SRE-972263.pdf

This message originated from outside your organization

Dear Planning,

Please see attached planning application form, plan and flood risk assessment.

Our client will pay the £462 fee directly to us.

Regards
Hannah

G R Merchant Ltd
01406 490800
www.grmerchantltd.com