

SiteSolutions Combined



Contaminated Land

PASSED ✓



Flooding

PASSED ✓



Argyll's Overview

Contaminated Land : No significant contaminant linkage has been identified. Accordingly soil and groundwater liabilities are unlikely to occur. No further action with respect to contaminated land Liability is required.

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

Environmental Hazards : The following have been identified in the immediate vicinity of the Site: Mining Instability, Coal Mining, and Infilled Land.

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



Report on:

**Former Kings Arms, Joseph Street, Middleton,
Manchester, Lancashire, M24 5SQ**

Report prepared for:

Direct Client

Client Reference:

Report Reference:

AEL-4491-SSC-981314

National Grid Reference:

386612,406277

Report date:

10th October 2019



Site Location

Report prepared on

Former Kings Arms, Joseph Street, Middleton, Manchester,
Lancashire, M24 5SQ

Site Area (m²)

674.95

Current Use

Vacant Land

Proposed Use

Development Of Three Units

Report Author

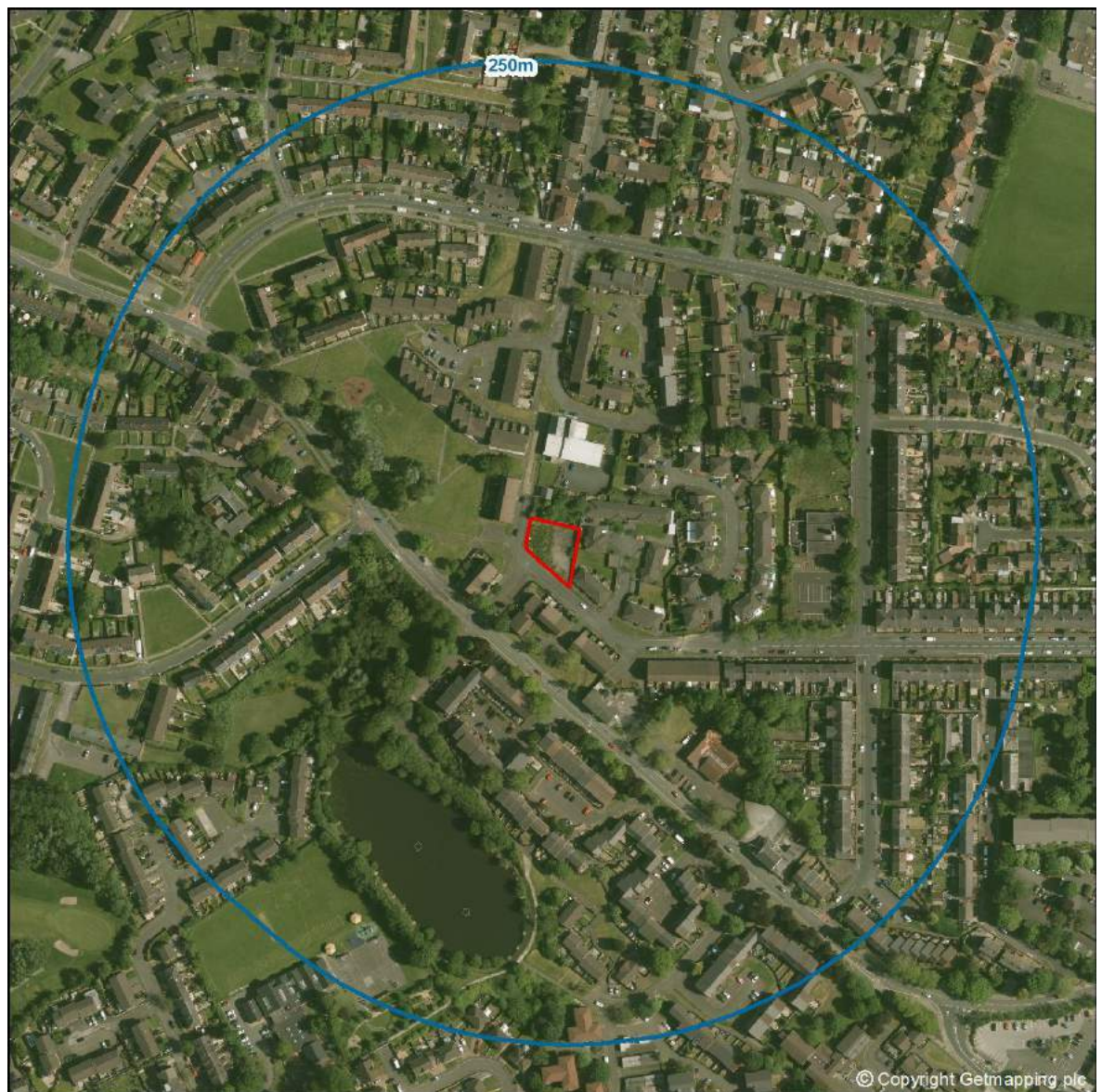
Dillon Fiolet

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Additional Information Provided

Development Proposed





Executive 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.

Risk		Evaluation
	Flooding	 Passed



Consultant's Comment

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

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

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



Contaminated Land Risk Analysis

Investigation	Commentary
 On-site sources	A review of historical maps shows the Site remained undeveloped from the first available map edition dated 1848 until c.1893 when mixed commercial/residential properties were constructed. The east side of the Site was cleared c.1975, leaving only a public house in the west. Minor alterations to the built footprint were observed over time, however no significant land use changes were noted until sometime between 2006 and 2019 when the Site was cleared to form vacant land. We understand the Site is currently vacant land and will be developed for use as three units. Based on the surrounding area, we have assumed that this refers to residential properties. 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	A review of historical maps dating from 1848 shows the following potentially contaminative uses within 100m of the Site: an electricity substation 10m north (c.1955-2019), and a tank 85m north east (c.1983). Finally, recorded landfill sites have been identified within 250m, including: a Historical Landfill Site (169m north east, 194m east and 244m north east). 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	The general area appears to be in mixed commercial/residential use, with residential properties assumed to be proposed on Site. The superficial and bedrock hydrogeology underlying the Site are classified as Secondary (A) Aquifers (deposits with moderate permeability). The Environment Agency states that the Site does not lie within a groundwater Source Protection Zone (SPZ). There are no abstraction licences located within 500m. A pond is located 133m south west. Finally 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	No additional materials have been used in this assessment.



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.



Current Operations

Environmental Damage Regulations 2009 (EDR)

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

Argyll's
Comment



The Site has not been identified as being likely to incur liability under the EDR within the scope of this assessment.

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

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
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 Contaminated Land Risk Analysis Methodology have been identified.

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



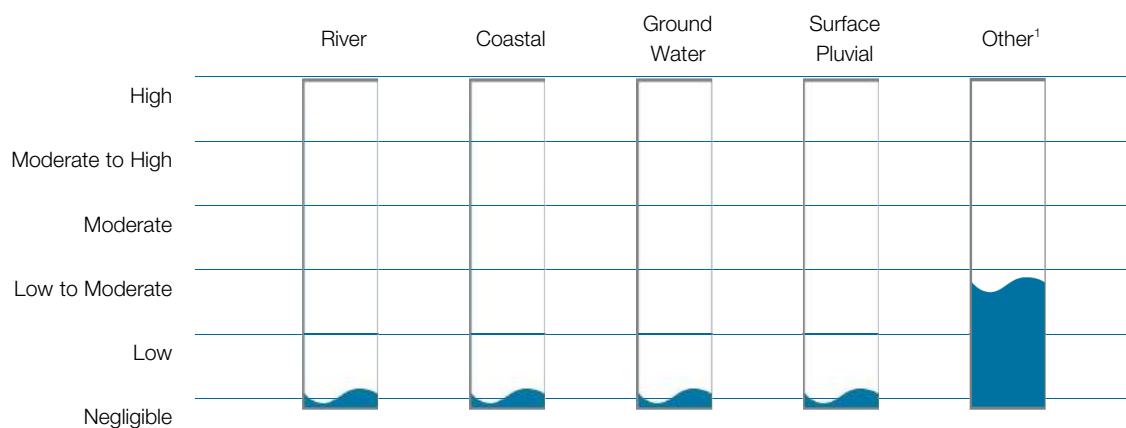
Flood Risk Screening

	Risk	Issue	Evaluation
1	Development	If development is proposed would a detailed Flood Risk Assessment be required?	No
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?	No

Insurance

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

Flood Analysis



Argyll's Comment



No commentary required.

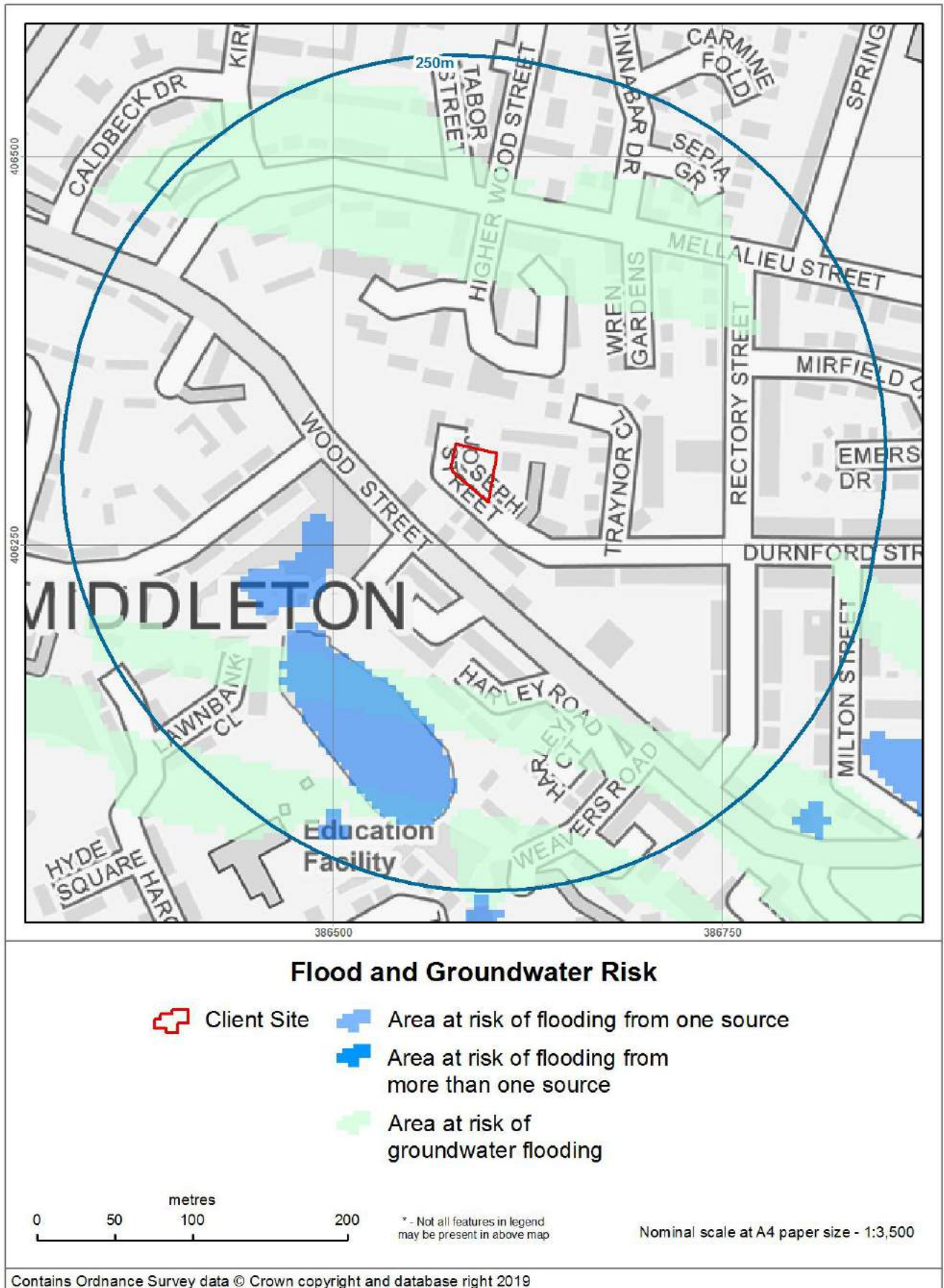


Recommendations

1. 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.

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

Current Flood Risk





Additional Flooding Considerations

Riparian Ownership

Argyll's Comment



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

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

Argyll's Comment



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

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

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

Sewer Flooding

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

Dam and Reservoir Failure

Argyll's Comment



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

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

Flood Risk Management Options

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

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

Guideline Costs for Resistance Measure

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



Environmental Hazards

	Risk	Recommendation
	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.



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 two maps.
Statutory Information	This section presents detailed statutory information for the Site and surrounding area (up to 500m depending upon dataset). The Map ID of each feature is indicated (where applicable) followed by specific information on each feature and its distance and direction from the Site. 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.
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	1
Local Authority Integrated Pollution Prevention and Controls	0	0	0
Integrated Pollution Controls	0	0	0
Integrated Pollution Prevention And Control	0	0	0
Registered Radioactive Substances	0	0	0
Discharges	On-site	1-250m	251-500m
Discharge Consents	0	4	0
Water Industry Act Referrals	0	0	0
Hazardous Sites	On-site	1-250m	251-500m
Control of Major Accident Hazards Sites	0	0	0
Explosive Sites	0	0	0
Notification of Installations Handling Hazardous Substances	0	0	0
Planning Hazardous Substance Consents	0	0	0
Contraventions	On-site	1-250m	251-500m
Contaminated Land Register Entries and Notices	0	0	0
Local Authority Pollution Prevention and Control Enforcements	0	0	0
Enforcement and Prohibition Notices	0	0	0
Planning Hazardous Substance Enforcements	0	0	0
Substantiated Pollution Incident Register	0	0	0
Prosecutions Relating to Authorised Processes	0	0	0
Prosecutions Relating to Controlled Waters	0	0	0

Waste

Waste/Landfill Sites	On-site	1-250m	251-500m
BGS Recorded Landfill Sites	0	0	0
Integrated Pollution Control Registered Waste Sites	0	0	0
Licensed Waste Management Facilities (Landfill Boundaries)	0	0	0
Licensed Waste Management Facilities (Locations)	0	0	0
Local Authority Recorded Landfill Sites	0	0	0 (0) *
Registered Landfill Sites	0	0	0 (0) *
Registered Waste Transfer Sites	0	0	0
Registered Waste Treatment or Disposal Sites	0	0	0
Historical Landfill Sites	0	3	0

Current Land Use

Current Potentially Contaminative Uses	On-site	1-250m	251-500m
Contemporary Trade Directory Entries	0	0	18
Fuel Station Entries	0	0	0
Other Features	On-site	1-250m	251-500m
Overhead Transmission Lines	0	0	0
Gas Pipelines	0	0	0
Gas Feeders	0	0	0

Historical Land Use

Historical Potentially Contaminative Uses	On-site	1-250m	251-500m
Historical Tanks And Energy Facilities	0	5	19
Potentially Infilled Land	On-site	1-250m	251-500m
Former Marshes	0	0	0
Potentially Infilled Land (Non-Water)	0	0	1
Potentially Infilled Land (Water)	0	8	10

Groundwater Vulnerability

Hydrogeology	On-site	1-250m	251-500m
Superficial Aquifer Designations	1	1	0
Bedrock Aquifer Designations	1	0	0
Geology	On-site	1-250m	251-500m
BGS 1:50,000 Bedrock Geology	1	6	4
BGS 1:50,000 Superficial Deposits	1	1	1
BGS 1:50,000 Geological Mapping Coverage	1	0	0
BGS 1:625,000 Solid Geology	1	N/A	N/A
BGS Borehole Logs	0	0	N/A

Environmental Sensitivity

Environmental Sensitivity	On-site	1-250m	251-500m
Areas of Outstanding Natural Beauty	0	0	0
Environmentally Sensitive Areas	0	0	0
Forest Parks	0	0	0
Local Nature Reserves	0	0	0 (1) *
Marine Nature Reserves	0	0	0 (0) *
National Nature Reserves	0	0	0 (0) *
National Parks	0	0	0
National Scenic Areas	0	0	0
Nitrate Sensitive Areas	0	N/A	N/A
Nitrate Vulnerable Zones	1	N/A	N/A
Ramsar Sites	0	0	0 (0) *
River Quality Biology Sampling Points	0	0	0
River Quality Chemistry Sampling Points	0	0	0
Nearest Surface Water Feature	0	1	0
Sites of Special Scientific Interest	0	0	0 (0) *
Special Areas of Conservation	0	0	0 (0) *
Special Protection Areas	0	0	0 (0) *
Water Abstractions	0	0	0 (8)*
Source Protection Zones	0	0	0

Natural and Mining Related Hazards

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

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

Flooding

Current Flood Risk	On-site	1-250m	251-500m
Flooding From Rivers or Sea	0	0	0
Flooding From Rivers or Sea (in an Extreme Flood)	0	0	0
Areas Benefiting from Flood Defences	0	0	0
Flood Storage Areas	0	0	0
Flood Defences	0	0	0
Risk of Flooding from Rivers and Sea	0	0	0
Groundwater Flood Risk	0	2	0
Surface Water Flooding (1:75 year rainfall event)	0	3	0
Surface Water Flooding (1:200 year rainfall event)	0	3	0
Surface Water Flooding (1:1,000 year rainfall event)	0	3	0
Historical Flooding	On-site	1-250m	251-500m
Historical Flood Events	0	0	0
Geological Indicators of Flooding	0	0	1
Other Flood Information	On-site	1-250m	251-500m
MasterMap Water Network	0	0	0
Surface Water Features	0	1	0
Dam or Reservoir Failure	0	0	0
Site Information	Response		
Height of Site Above Sea Level	101.09m		
Distance of Site Boundary to Nearest Water Feature	132.5m		

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.



Statutory Information

Local Authority Pollution Prevention and Controls

Map ID	Details	Distance	Direction
1	Name: Tyro Cleaners Ltd, Location: Middleton Gardens, Middleton, Rochdale, M24, Authority: Rochdale Metropolitan Borough Council, Environmental Health Department, Permit Ref: 118/11, Dated: Not Supplied, Process Type: Local Authority Pollution Prevention and Control, Description: PG6/46 Dry cleaning, Status: Permitted, Positional Accuracy: Located by supplier to within 10m.	497m	SE

Discharges

Discharge Consents

Map ID	Details	Distance	Direction
2	Operator: United Utilities Water Plc (?), Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY), Location: Wood St, Middleton, Greater Manchester, Authority: Environment Agency, North West Region, Catchment Area: Not Supplied, Permit Ref: 016982644, Permit Version: 2, Effective Date: 9th March 2005, Issued Date: 9th March 2005, Revocation Date: 19th May 2005, Discharge Type: Public Sewage: Storm Sewage Overflow, Discharge Environment: Freshwater Stream/River, Receiving Water: River Irk, Status: Consent revoked or revised: New Consent issued (Section 37(1)), Positional Accuracy: Located by supplier to within 10m.	43m	S
3	Operator: United Utilities Water Plc (?), Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY), Location: Wood St, Middleton, Greater Manchester, Authority: Environment Agency, North West Region, Catchment Area: Not Supplied, Permit Ref: 016982644, Permit Version: 3, Effective Date: 20th May 2005, Issued Date: 20th May 2005, Revocation Date: Not Supplied, Discharge Type: Public Sewage: Storm Sewage Overflow, Discharge Environment: Freshwater Stream/River, Receiving Water: River Irk, Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995), Positional Accuracy: Located by supplier to within 10m.	43m	S
4	Operator: United Utilities Water Limited, Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY), Location: Wood St, Middleton, Greater Manchester, Authority: Environment Agency, North West Region, Catchment Area: Not Given, Permit Ref: 016982644, Permit Version: 1, Effective Date: 28th November 1994, Issued Date: Not Supplied, Revocation Date: 8th March 2005, Discharge Type: Public Sewage: Storm Sewage Overflow, Discharge Environment: Freshwater Stream/River, Receiving Water: River Irk, Status: Consent revoked or revised: New Consent issued (Section 37(1)), Positional Accuracy: Located by supplier to within 100m.	43m	S
5	Operator: United Utilities Water Limited, Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY), Location: Wood St, Middleton, Greater Manchester, Authority: Environment Agency, North West Region, Catchment Area: Not Given, Permit Ref: 01ROC0168, Permit Version: 1, Effective Date: 1st January 1995, Issued Date: Not Supplied, Revocation Date: 1st January 1995, Discharge Type: Public Sewage: Storm Sewage Overflow, Discharge Environment: Freshwater Stream/River, Receiving Water: Trib River Irk, Status: Consent revoked or revised: New Consent issued (Section 37(1)), Positional Accuracy: Located by supplier to within 100m.	47m	S

Waste

Waste/Landfill Sites

Local Authority Landfill Coverage

Rochdale Metropolitan Borough Council - Has no landfill data to supply

Licensed Waste Management Facilities (Locations)

Map ID	Details	Distance	Direction
	Licence Number: 103157, Location: 6 Morton Street, Middleton, Manchester, M24 6AN, Operator: Mr Wayne Kenny And Mr Stephen Ramsey, Operator Location: Not Supplied, Authority: Environment Agency - North West Region, South Area, Site Category: Vehicle Depollution Facility <5000 tps, Licence Status: Issued, Issued Date: 28th October 2011, Last Modified: Not Supplied, Expiry Date: Not Supplied, Suspended Date: Not Supplied, Revoked Date: Not Supplied, Surrendered Date: Not Supplied, IPPC Reference: Not Supplied, Positional Accuracy: Located by supplier to within 10m.	737m	E

Historical Landfill Sites

Map ID	Details	Distance	Direction
6	Licence Holder: Not Supplied, Location: Higher Wood Street, Middleton, Manchester, Greater Manchester, Name: Land off Higher Wood Street, Operator Location: Not Supplied, Boundary Accuracy: As Supplied, Provider Reference: EAHLD16012, First Input Date: Not Supplied, Last Input Date: Not Supplied, Specified Waste Type: Not Supplied, EA Waste Ref: 0, Regis Ref: Not Supplied, WRC Ref: Not Supplied, BGS Ref: Not Supplied, Other Ref: D100	169m	NE
7	Licence Holder: Not Supplied, Location: Mirefield Drive, Middleton, Manchester, Greater Manchester, Name: Mirfield Drive, Operator Location: Not Supplied, Boundary Accuracy: As Supplied, Provider Reference: EAHLD16038, First Input Date: Not Supplied, Last Input Date: Not Supplied, Specified Waste Type: Not Supplied, EA Waste Ref: 0, Regis Ref: Not Supplied, WRC Ref: Not Supplied, BGS Ref: Not Supplied, Other Ref: D069	194m	E
8	Licence Holder: Not Supplied, Location: Mellalieu Street, Middleton, Manchester, Greater Manchester, Name: Mellalieu Street Playing Fields, Operator Location: Not Supplied, Boundary Accuracy: As Supplied, Provider Reference: EAHLD16023, First Input Date: Not Supplied, Last Input Date: Not Supplied, Specified Waste Type: Not Supplied, EA Waste Ref: 0, Regis Ref: Not Supplied, WRC Ref: Not Supplied, BGS Ref: Not Supplied, Other Ref: D068	244m	NE

Current Land Use

Current Potentially Contaminative Uses

Contemporary Trade Directory Entries

Map ID	Details	Distance	Direction
10	Cleaning Materials & Equipment, Name: Snowgene Products, Status: Inactive, Location: Whittaker St, Middleton, Manchester, M24 4BL, Positional Accuracy: Manually positioned to the road within the address or location.	364m	SE
11	Fascias and Soffits, Name: North West Fascias & Soffits, Status: Inactive, Location: 25, Durnford Street, Middleton, Manchester, M24 5UD, Positional Accuracy: Automatically positioned to the address.	369m	E
12	Car Body Repairs, Name: Middleton Car Body Centre, Status: Active, Location: Car Body Centre, Whittaker Street, Middleton, M24 4BL, Positional Accuracy: Automatically positioned to the address.	375m	SE

Contemporary Trade Directory Entries

Map ID	Details	Distance	Direction
13	Upholstery Manufacturers, Name: Robert Andrews, Status: Inactive, Location: Crystal House, Sadler Street, Middleton, Manchester, M24 5UJ, Positional Accuracy: Automatically positioned in the proximity of the address.	375m	E
14	Car Body Repairs, Name: Car Body Centre, Status: Inactive, Location: Car Body Centre, Whittaker Street, Middleton, M24 4BL, Positional Accuracy: Automatically positioned to the address.	375m	SE
15	Lingerie & Hosiery Manufacturers & Wholesalers, Name: Headen & Quarmby Manufacturing Ltd, Status: Active, Location: Sadler Street, Middleton, Manchester, M24 5UJ, Positional Accuracy: Automatically positioned in the proximity of the address.	375m	E
16	Lace Manufacturers, Name: Pearl Textiles, Status: Inactive, Location: Crystal House, Sadler Street, Middleton, Manchester, M24 5UJ, Positional Accuracy: Automatically positioned to the address.	387m	SE
17	Freight Forwarders, Name: M B International Transport Services Ltd, Status: Inactive, Location: 33, Beech Street, Middleton, Manchester, M24 4AW, Positional Accuracy: Automatically positioned to the address.	416m	S
18	Windows - Sash, Name: Traditional Timber Sash Windows, Status: Active, Location: 10, Mellalieu Street, Middleton, Manchester, M24 5DN, Positional Accuracy: Automatically positioned to the address.	418m	E
19	Windows - Sash, Name: Traditional Timber, Status: Inactive, Location: 10, Mellalieu Street, Middleton, Manchester, M24 5DN, Positional Accuracy: Automatically positioned to the address.	418m	E
20	Blinds, Awnings & Canopies, Name: A B C Blinds & Carpets, Status: Active, Location: 10c, Wood Street, Middleton, Manchester, Lancashire, M24 5TF, Positional Accuracy: Automatically positioned to the address.	441m	SE
21	Clothing & Fabrics - Manufacturers, Name: S Linen, Status: Inactive, Location: Water Street, Middleton, Manchester, M24 5UG, Positional Accuracy: Automatically positioned to the address.	443m	SE
22	Asphalt & Coated Macadam Laying Contractors, Name: General Mastic Asphalt, Status: Active, Location: 3, Michael Street, Middleton, Manchester, M24 4DX, Positional Accuracy: Automatically positioned to the address.	454m	S
23	Electrical Goods Sales, Manufacturers & Wholesalers, Name: Brighthouse, Status: Active, Location: 24, Middleton Gardens, Middleton, Manchester, M24 4DF, Positional Accuracy: Automatically positioned to the address.	482m	SE
24	Commercial Cleaning Services, Name: Minster Cleaning Services, Status: Inactive, Location: 2-6, Rochdale Road, Middleton, Manchester, M24 6DP, Positional Accuracy: Automatically positioned to the address.	496m	E
25	Commercial Cleaning Services, Name: Minster Cleaning Services, Status: Inactive, Location: 2-6, Rochdale Road, Middleton, Manchester, M24 6DP, Positional Accuracy: Automatically positioned to the address.	496m	E
26	Commercial Cleaning Services, Name: Minster Cleaning Services, Status: Active, Location: 2-6, Rochdale Road, Middleton, Manchester, M24 6DP, Positional Accuracy: Automatically positioned to the address.	496m	E
27	Dry Cleaners, Name: Tyro Cleaners Ltd, Status: Inactive, Location: 8, Middleton Gardens, Middleton, Manchester, M24 4DF, Positional Accuracy: Automatically positioned to the address.	497m	SE

Historical Land Use

Historical Potentially Contaminative Uses

Historical Tanks and Energy Facilities

Map ID	Details	Distance	Direction
	Electrical Sub Station Facilities, Scale of Mapping: 1:2,500, Date of Mapping: 1955.	9m	N
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1955.	10m	N
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1983.	16m	N
	Tanks, Scale of Mapping: 1:1,250, Date of Mapping: 1983.	90m	NE
	Tanks, Scale of Mapping: 1:1,250, Date of Mapping: 1983.	113m	E
	Electrical Sub Station Facilities, Scale of Mapping: 1:2,500, Date of Mapping: 1955.	252m	NW
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1955.	254m	NW
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1983.	280m	S
	Tanks, Scale of Mapping: 1:2,500, Date of Mapping: 1955.	293m	SE
	Tanks, Scale of Mapping: 1:1,250, Date of Mapping: 1955.	294m	SE
	Electrical Sub Station Facilities, Scale of Mapping: 1:2,500, Date of Mapping: 1955.	299m	SE
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1955.	299m	SE
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1983.	318m	E
	Electrical Sub Station Facilities, Scale of Mapping: 1:2,500, Date of Mapping: 1955.	325m	W
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1955.	327m	W
	Potential Tanks, Scale of Mapping: 1:1,250, Date of Mapping: 1978.	367m	SE
	Potential Tanks, Scale of Mapping: 1:1,250, Date of Mapping: 1955.	425m	SE
	Potential Tanks, Scale of Mapping: 1:2,500, Date of Mapping: 1955.	426m	SE
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1955 - 1978.	435m	S
	Electrical Sub Station Facilities, Scale of Mapping: 1:2,500, Date of Mapping: 1955 - 1968.	437m	S
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1978.	444m	SE
	Tanks, Scale of Mapping: 1:1,250, Date of Mapping: 1955.	460m	S
	Tanks, Scale of Mapping: 1:2,500, Date of Mapping: 1955 - 1968.	462m	S
	Electrical Sub Station Facilities, Scale of Mapping: 1:1,250, Date of Mapping: 1978.	470m	SE

Potentially Contaminative Industrial Uses (Past Land Use)

Map ID	Details	Distance	Direction
	Quarrying of sand & clay, operation of sand & gravel pits, Date of Mapping: 1932.	259m	E
	Dyes & pigments [manufacture], Date of Mapping: 1894-1910.	303m	SE
	Quarrying of sand & clay, operation of sand & gravel pits, Date of Mapping: 1848.	413m	W
	Quarrying of sand & clay, operation of sand & gravel pits, Date of Mapping: 1932.	432m	NW
	Factory or works - use not specified, Date of Mapping: 1984.	457m	S
	Factory or works - use not specified, Date of Mapping: 1894-1932.	463m	S

Potentially Infilled Land

Potentially Infilled Land (Non-Water)

Map ID	Details	Distance	Direction
	Unknown Filled Ground (Pit, quarry etc), Date of Mapping: 1984.	413m	W

Potentially Infilled Land (Water)

Map ID	Details	Distance	Direction
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1932.	19m	W
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1932.	37m	E
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	50m	E
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	60m	SW
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	89m	W
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	104m	NW
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	149m	NW
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	232m	SE

Potentially Infilled Land (Water)

Map ID	Details	Distance	Direction
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	263m	E
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	333m	E
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	408m	NE
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	433m	SE
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	435m	NE
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	439m	NW
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	439m	NE
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	445m	NE
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	461m	S
	Unknown Filled Ground (Pond, marsh, river, stream, dock etc), Date of Mapping: 1848.	481m	SE

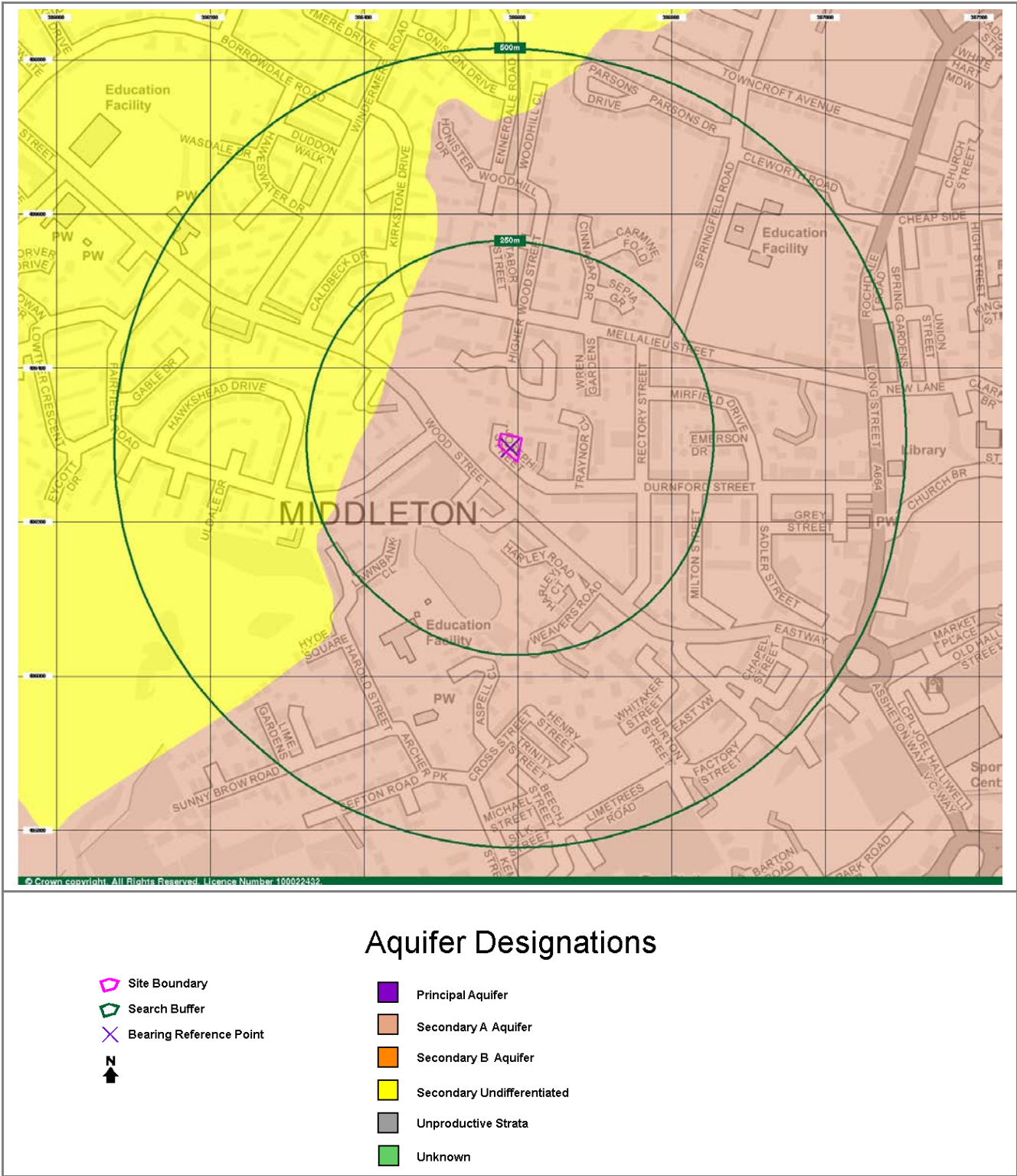
Historical Maps

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

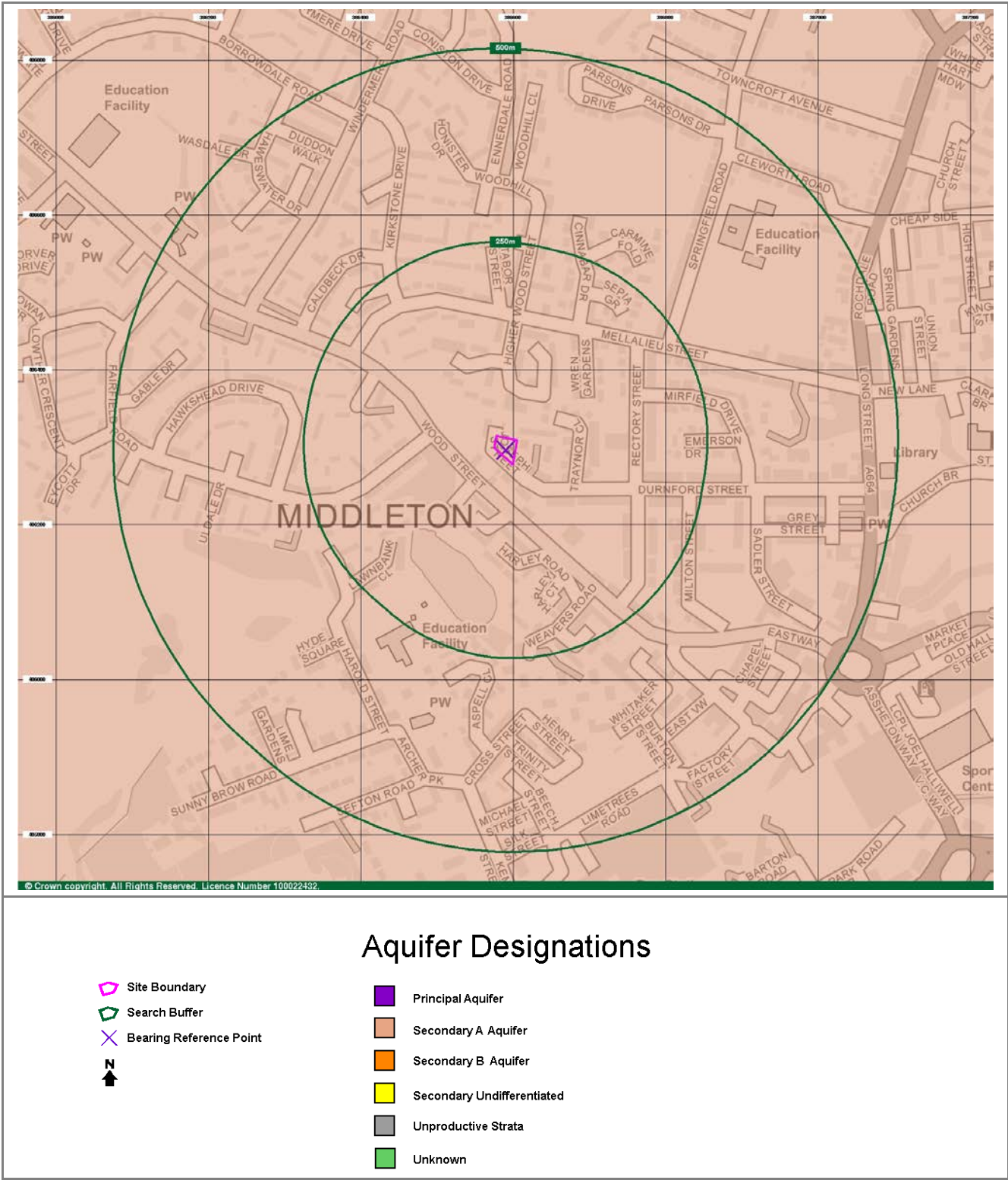
Scale	Map Sheet	Published Date
1:2,500	Lancashire And Furness 096_03	1893
1:2,500	Lancashire And Furness 096_07	1893
1:2,500	Lancashire And Furness 096_03	1909
1:2,500	Lancashire And Furness 096_07	1909
1:2,500	Lancashire And Furness 096_03	1922
1:2,500	Lancashire And Furness 096_07	1932
1:2,500	National Grid SD8605	1955
1:2,500	National Grid SD8606	1955
1:2,500	National Grid SD8605	1968
1:10,560	Lancashire And Furness 096_00	1848
1:10,560	Lancashire And Furness 096_NE	1894
1:10,560	Lancashire And Furness 096_NE	1910
1:10,560	Lancashire And Furness 096_NE	1932
1:10,560	National Grid SD80NE	1956
1:10,560	National Grid SD80NE	1965
1:10,000	National Grid SD80NE	1977
1:10,000	National Grid SD80NE	1984
1:10,000	National Grid SD80NE	2014
1:1,250	National Grid SD8605NE	1955
1:1,250	National Grid SD8605NW	1955
1:1,250	National Grid SD8606NE	1955
1:1,250	National Grid SD8606NW	1955
1:1,250	National Grid SD8606SE	1955
1:1,250	National Grid SD8606SW	1955
1:1,250	National Grid SD8606NE	1960
1:1,250	National Grid SD8606SE	1960
1:1,250	National Grid SD8606SW	1961
1:1,250	National Grid SD8606NW	1962
1:1,250	National Grid SD8605NW	1967
1:1,250	National Grid SD8605NE	1978
1:1,250	National Grid SD8606NE	1968
1:1,250	National Grid SD8606SE	1983
1:1,250	National Grid SD8605NE	1974
1:1,250	National Grid SD8606SW	1974
1:1,250	National Grid SD8605NW	1975
1:1,250	National Grid SD8606NE	1975
1:1,250	National Grid SD8606NW	1975
1:1,250	National Grid SD8606SE	1975
1:1,250	National Grid SD8605NE	1975
1:1,250	National Grid SD8606SW	1975

Scale	Map Sheet	Published Date
1:1,250	National Grid SD8605NE	1975
1:1,250	National Grid SD8605NE	1992
1:1,250	National Grid SD8605NW	1992
1:1,250	National Grid SD8606NE	1992
1:1,250	National Grid SD8606NW	1992
1:1,250	National Grid SD8606SE	1992
1:1,250	National Grid SD8606SW	1992
1:1,250	National Grid SD8606NW	1994
1:1,250	National Grid SD8606SE	1981
1:1,250	National Grid SD8605NE	1983
1:1,250	National Grid SD8606SW	1983
1:1,250	National Grid SD8605NW	1984
1:1,250	National Grid SD8606NE	1984
1:1,250	National Grid SD8606NW	1991
1:1,250	National Grid SD8606SE	1983
1:1,250	National Grid SD8606SW	1986
1:1,250	National Grid SD8605NE	1990
1:1,250	National Grid SD8606NE	1991

Aquifer Designation (Superficial)



Aquifer Designation (Bedrock)



Groundwater Vulnerability

Hydrogeology

Superficial Aquifer Designations

Map ID	Details	Distance	Direction
	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.	On Site	-
	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.	163m	W

Bedrock Aquifer Designations

Map ID	Details	Distance	Direction
	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.	On Site	-

Geology

BGS 1:50,000 Bedrock Geology

Map ID	Details	Distance	Direction
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Mudstone, Siltstone and Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	On Site	-
	LEX Code: RYSA, Rock Name: Royley Sandstone, Rock Type: Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	106m	N
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	119m	S
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Mudstone, Siltstone and Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	150m	S
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Mudstone, Siltstone and Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	186m	E
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	219m	E
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Mudstone, Siltstone and Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	249m	SE
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Mudstone, Siltstone and Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	251m	S
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	268m	SW
	LEX Code: RYSA, Rock Name: Royley Sandstone, Rock Type: Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	389m	N
	LEX Code: PLCM, Rock Name: Pennine Lower Coal Measures Formation, Rock Type: Mudstone, Siltstone and Sandstone, Min Age: Not Supplied, Max Age: Westphalian.	486m	SE

BGS 1:50,000 Superficial Deposits

Map ID	Details	Distance	Direction
	LEX Code: HMGDD, Rock Name: Hummocky (Moundy) Glacial Deposits, Devensian, Rock Type: Sand and Gravel, Min Age: Not Supplied, Max Age: Devensian.	On Site	-
	LEX Code: GFSDD, Rock Name: Glaciofluvial Sheet Deposits, Devensian, Rock Type: Sand and Gravel, Min Age: Not Supplied, Max Age: Devensian.	75m	NE
	LEX Code: HMGDD, Rock Name: Hummocky (Moundy) Glacial Deposits, Devensian, Rock Type: Diamicton, Min Age: Not Supplied, Max Age: Devensian.	482m	E

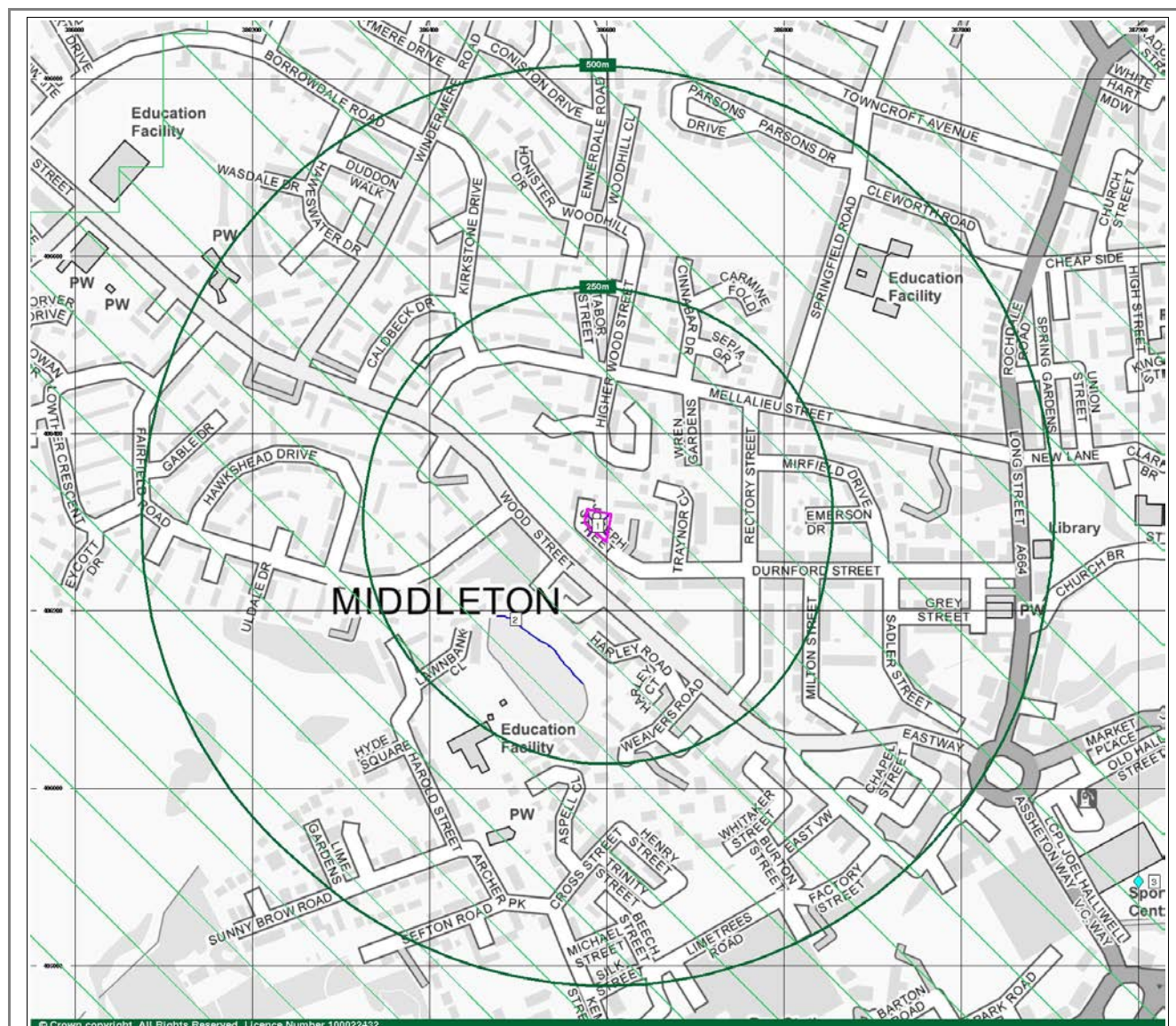
BGS 1:50,000 Geological Mapping Coverage

Map ID	Details	Distance	Direction
	Map Sheet No: 085, Map Name: Manchester, Map Date: 2010, Bedrock Geology: Available, Superficial Geology: Not Available, Artificial Geology: Not Available, Faults: Not Supplied, Landslip: Not Available, Rock Segments: Not Supplied.	On Site	-

BGS 1:625,000 Solid Geology

Map ID	Details	Distance	Direction
	Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated).	On Site	-

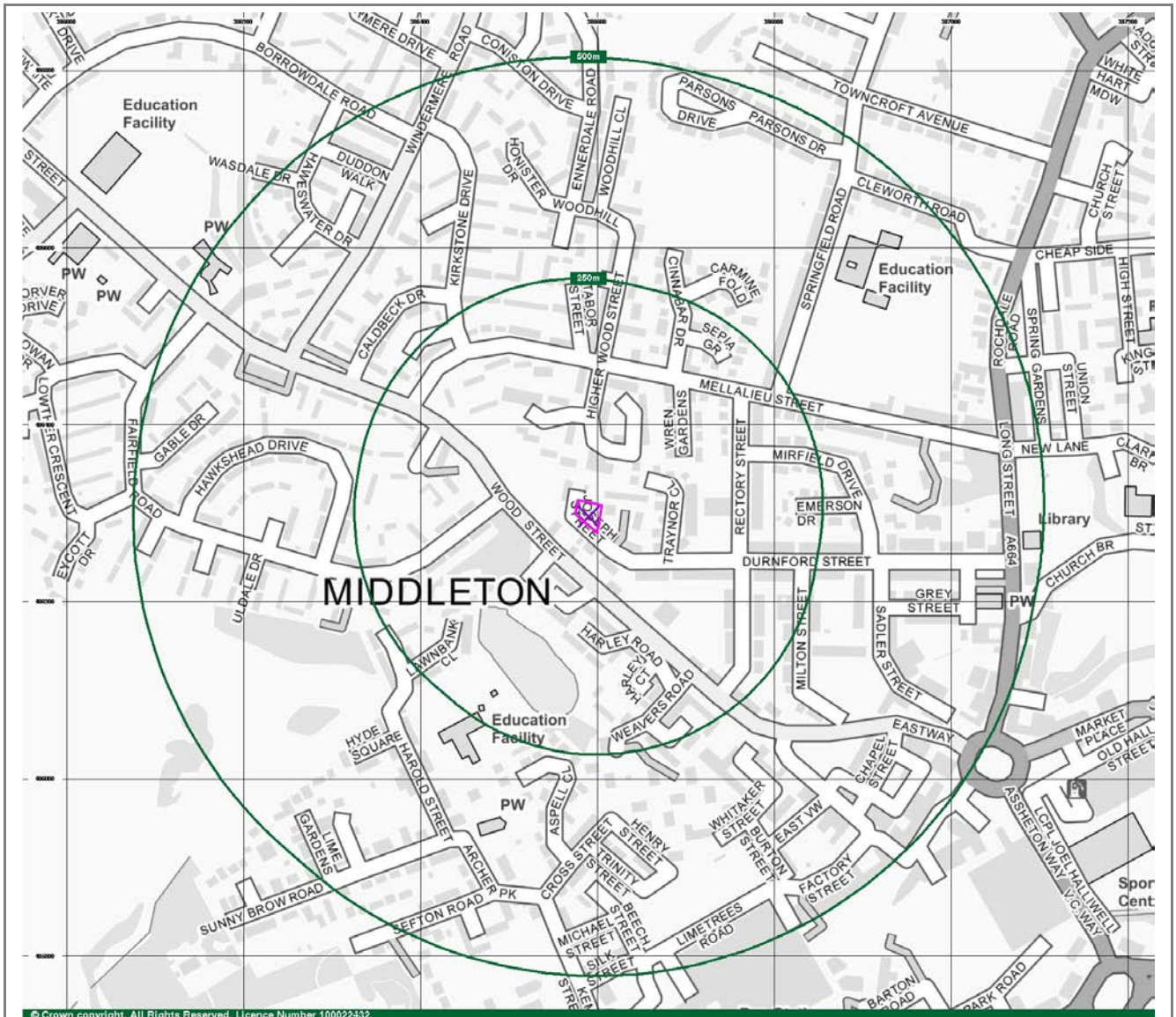
Environmentally Sensitive Features



Sensitive Land Uses

- | | | |
|--|---|---|
|  Site Boundary |  Local Nature Reserve |  Ramsar Site |
|  Search Buffer |  Marine Nature Reserve |  Nearest Surface Water Feature |
|  Bearing Reference Point |  National Nature Reserve |  Site of Special Scientific Interest |
|  North Arrow |  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

Local Nature Reserves

Map ID	Details	Distance	Direction
	Name: Alkington Woods, Multiple Area: N, Area (m ²): 493961.02, Source: Natural England, Designation Date: 1st January 1987.	749m	S

Nitrate Vulnerable Zones

Map ID	Details	Distance	Direction
1	Name: River Irk (Moston Brook To River Irwell) Nvz, Description: Surface Water, Source: Environment Agency, Head Office.	On Site	-

Nearest Surface Water Feature

Map ID	Details	Distance	Direction
2	Surface water feature identified in proximity.	133m	SW

Water Abstractions

Map ID	Details	Distance	Direction
	Operator: Robert McBride Ltd, Licence Number: 2569005035, Permit Version: 100, Location: Reservoir Fed By Surface Drainage At Middleton, Manchester(T, Authority: Environment Agency, North West Region, Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed, Abstraction Type: Water may be abstracted from a single point, Source: Surface, Daily Rate(m ³): 1091, Yearly Rate (m ³): 288671, Premises At Cheetham Street, Authorised Start: 01 January, Authorised End: 31 December, Permit Start Date: 1st April 2007, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 100m.	678m	S
	Operator: Robert McBride Ltd, Licence Number: 2569005035, Permit Version: 100, Location: Reservoir Fed By Surface Drainage At Middleton, Manchester(T, Authority: Environment Agency, North West Region, Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss), Abstraction Type: Water may be abstracted from a single point, Source: Surface, Daily Rate(m ³): Not Supplied, Yearly Rate (m ³): Not Supplied, Premises At Cheetham Street, Authorised Start: 01 January, Authorised End: 31 December, Permit Start Date: 1st April 2007, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 10m.	678m	S
	Operator: Robert McBride Limited; Middleton, Licence Number: 2569005003, Permit Version: Not Supplied, Location: Borehole, Leater Street, Middleton , MANCHESTER, Authority: Environment Agency, North West Region, Abstraction: Manufacturing, Abstraction Type: Not Supplied, Source: Groundwater, Daily Rate(m ³): 109, Yearly Rate (m ³): 27276, Licence Status: Revoked, Authorised Start: Not Supplied, Authorised End: Not Supplied, Permit Start Date: Not Supplied, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 100m.	712m	S
3	Operator: Greater Manchester Council, Licence Number: 2569005056, Permit Version: Not Supplied, Location: River Irk, Middleton, MANCHESTER, Authority: Environment Agency, North West Region, Abstraction: Cooling, Abstraction Type: Not Supplied, Source: Surface, Daily Rate(m ³): 118, Yearly Rate (m ³): 32504, Licence Status: Revoked, Authorised Start: Not Supplied, Authorised End: Not Supplied, Permit Start Date: Not Supplied, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 100m.	713m	SE
	Operator: B M Coatings Limited, Licence Number: 2569005009, Permit Version: Not Supplied, Location: Wince Brook At Premises, Tonge Mill, Oldham Road, MIDDLETON, Authority: Environment Agency, North West Region, Abstraction: Cooling, Abstraction Type: Not Supplied, Source: Surface, Daily Rate(m ³): 14, Yearly Rate (m ³): 655, Licence Status: Lapsed, Authorised Start: Not Supplied, Authorised End: Not Supplied, Permit Start Date: Not Supplied, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 100m.	794m	SE

Water Abstractions

Map ID	Details	Distance	Direction
	Operator: H B Plastics Limited, Licence Number: 2569005051, Permit Version: Not Supplied, Location: River Irk At Townley Mills, MIDDLETON, Lancashire, Authority: Environment Agency, North West Region, Abstraction: Cooling, Abstraction Type: Not Supplied, Source: Surface, Daily Rate(m ³): 36, Yearly Rate (m ³): 5682, Licence Status: Revoked, Authorised Start: Not Supplied, Authorised End: Not Supplied, Permit Start Date: Not Supplied, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 100m.	848m	E
	Operator: North Manchester Golf Club, Licence Number: 2569005055, Permit Version: 100, Location: Reservoir Fed By Surface Drainage At North Manchester Golf Club, Authority: Environment Agency, North West Region, Abstraction: Golf Courses: Spray Irrigation - Direct, Abstraction Type: Water may be abstracted from a single point, Source: Surface, Daily Rate(m ³): 45, Yearly Rate (m ³): 2273, North Manchester Golf Course, Authorised Start: 01 April, Authorised End: 31 October, Permit Start Date: 21st February 1977, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 100m.	903m	SW
	Operator: The New North Manchester Golf Club Ltd, Licence Number: 2569005055, Permit Version: 101, Location: Reservoir Fed By Surface Drainage At North Manchester Golf C, Authority: Environment Agency, North West Region, Abstraction: Golf Courses: Spray Irrigation - Direct, Abstraction Type: Water may be abstracted from a single point, Source: Surface, Daily Rate(m ³): Not Supplied, Yearly Rate (m ³): Not Supplied, North Manchester Golf Course, Authorised Start: 01 April, Authorised End: 31 October, Permit Start Date: 1st April 2008, Permit End Date: Not Supplied, Positional Accuracy: Located by supplier to within 100m.	903m	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: No Hazard, Source: British Geological Survey, National Geoscience Information Service.	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	-

Mining

Coal Mining Affected Areas

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

Mining Instability

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

BGS Recorded Mineral Sites

Map ID	Details	Distance	Direction
9	Site Name: High Barn Sand Pit, Site Location: Middleton, Lancashire, Source: British Geological Survey, National Geoscience Information Service, Reference: 96880, Type: Opencast, Status: Ceased, Operator: Unknown Operator, Operator Location: Not Supplied, Periodic Type: Quaternary, Geology: Till, Devensian, Commodity: Sand, Positional Accuracy: Located by supplier to within 10m.	404m	W

The map displays the town of Middleton with various streets and landmarks. Two concentric blue circles are centered on the town, indicating distances of 250m and 500m. A red square with a white cross symbol marks the 'Client Site' on Wood Street. Other features include 'Education Facility' locations, a 'Library', a 'Bus Station', and a 'PO' (Post Office). The map is overlaid with a grid showing coordinates 406500, 406000, 386500, and 387000.

Environment Agency

- Client Site (Red square with white cross)
- Defended Areas (Yellow shaded area)
- Flood Defences (Blue line with cross-ticks)
- Flood Storage (Blue shaded area)
- Flood Zone 2 (Blue hatched area)
- Flood Zone 3 (Blue dotted area)

0 50 100 200 meters

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

Nominal scale at A4 paper size - 1:7,000

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Current Flood Risk

Flooding from River or Sea (Flood Zone 3)

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

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

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



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

Flood Defences

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



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

Areas Benefiting from Flood Defences

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



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

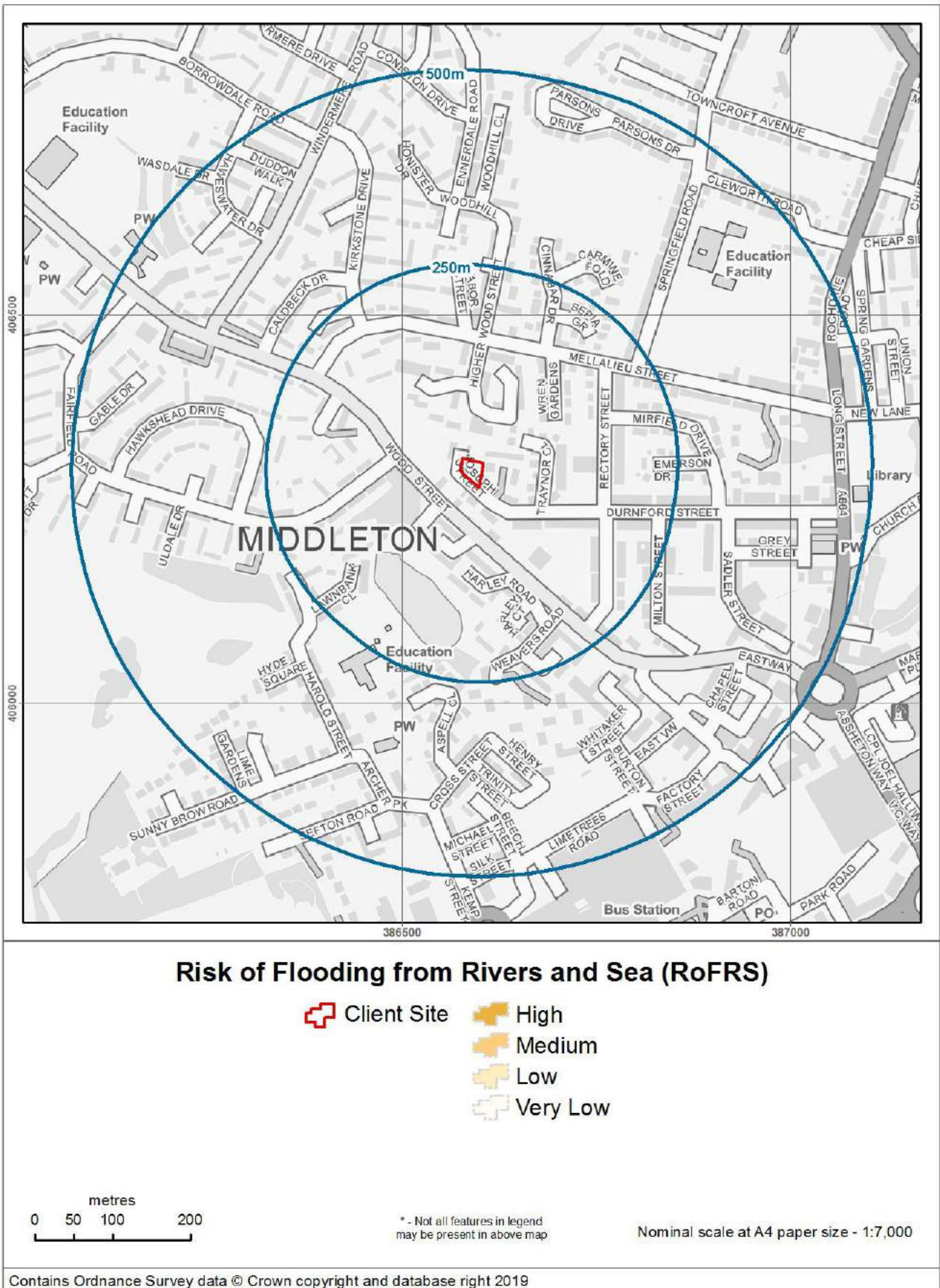
Flood Storage Areas

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



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

The Environment Agency Risk of Flooding from Rivers and Sea



Risk of Flooding from Rivers and Sea

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

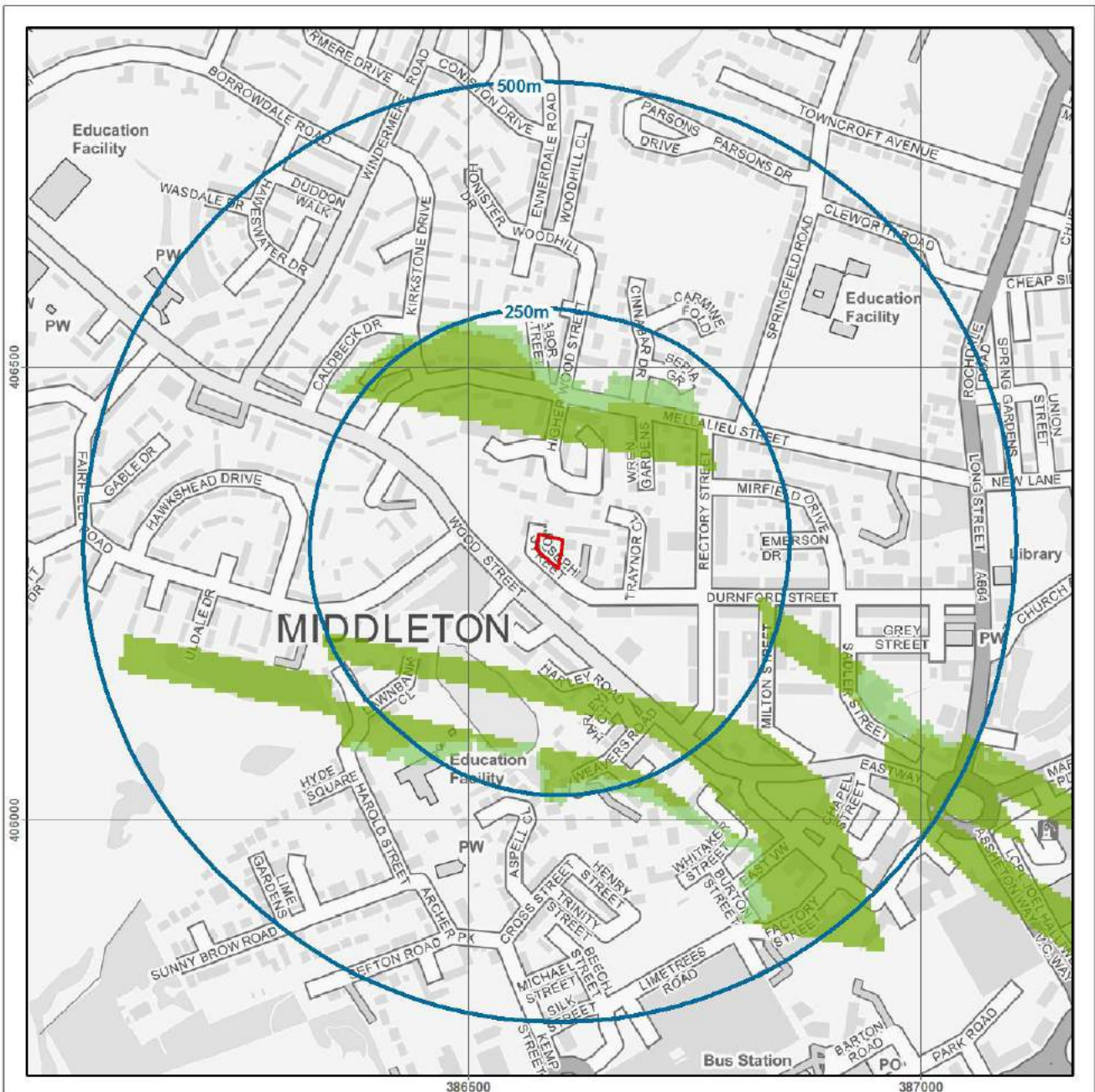


Some areas may be classified as having no result. This occurs where there is no output data from the regulatory body's risk assessment, but the area falls within the extreme flood outline (with a 0.1% or 1 in 1000 chance of flooding in any year).

The Environment Agency Data

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

Groundwater Flooding Risk



Groundwater Flooding Risk Rating

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

metres
0 50 100 200

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

Nominal scale at A4 paper size - 1:7,000

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Groundwater Flooding Risk

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



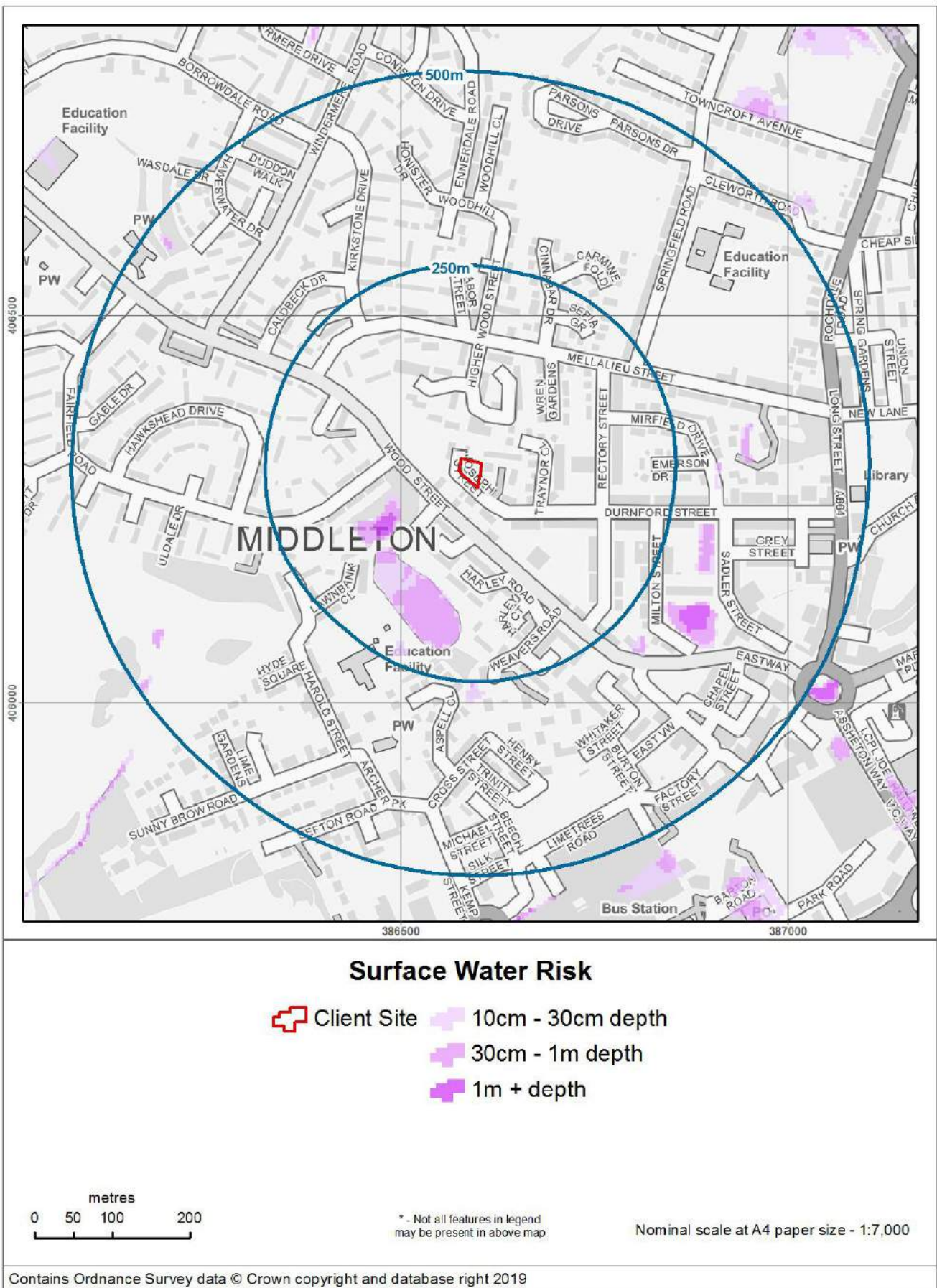
Information from GeoSmart Information Ltd indicates that there is a negligible risk of groundwater flooding in this area and any groundwater flooding incidence will be less frequent than 1 in 100 years return period. No further investigation of risk is deemed necessary unless the proposed site use is 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 (1:200 year rainfall event)



Surface Water Flooding

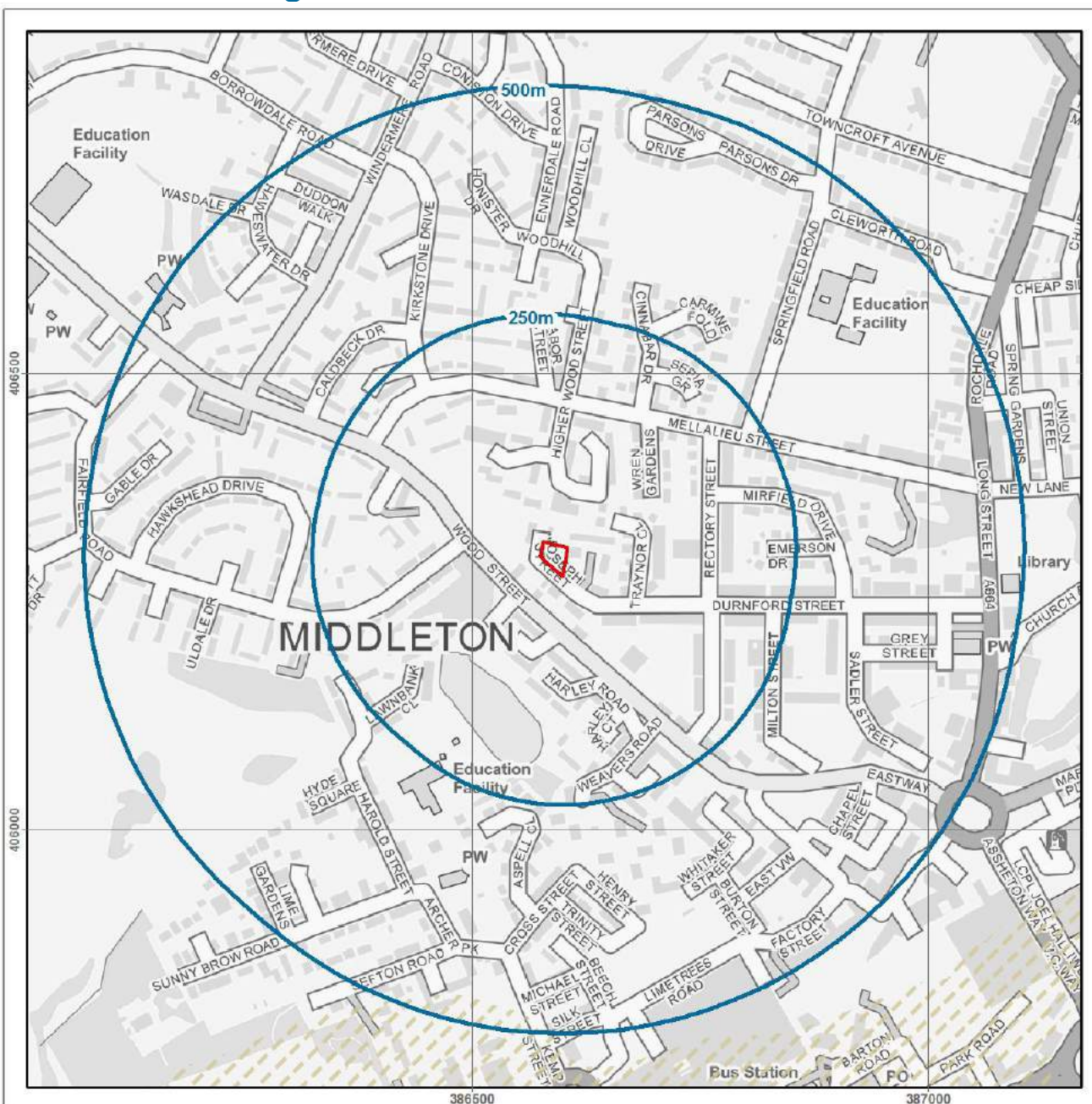
Details	Distance	Reply or Direction
What is the risk of surface water flooding at the Site following a 1 in 75 year rainfall event?	On Site	negligible
What is the risk of surface water flooding at the Site following a 1 in 200 year rainfall event?	On Site	negligible
What is the risk of surface water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



Historical Flooding

-  Client Site
-  Historic Floods
-  Geo Indicators

metres
0 50 100 200

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

Nominal scale at A4 paper size - 1:7,000

Contains Ordnance Survey data © Crown copyright and database right 2019

Historical Flood Events

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



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

The Environment Agency Data

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

Geological Indicators of Flooding

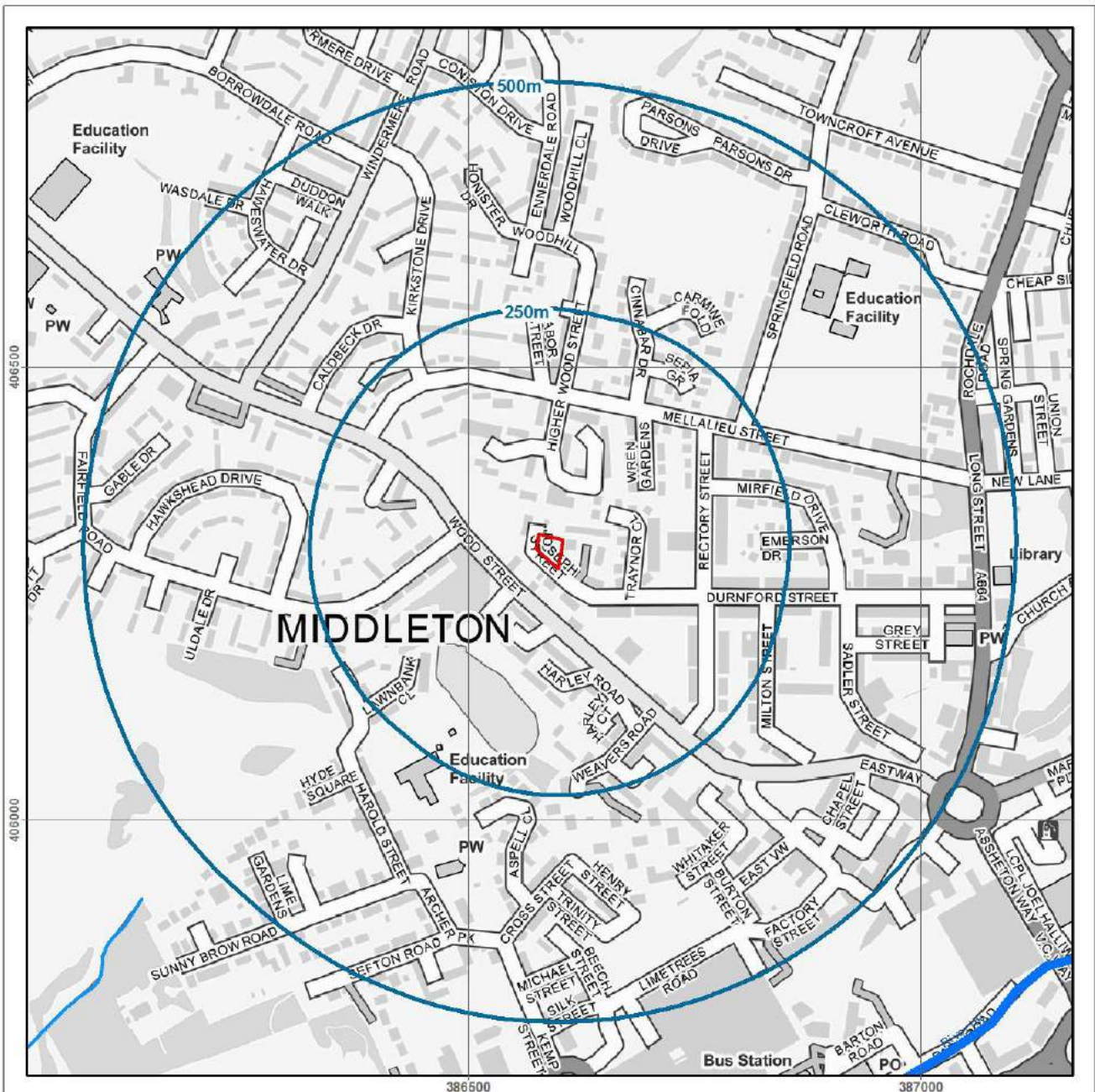
Details	Distance	Reply or Direction
Are there any geological deposits which indicate the Site may have been flooded in the past?	<26m	NO



British Geological Survey Data

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

OS MasterMap Water Network



OS MasterMap Water Network

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

metres
0 50 100 200

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

Nominal scale at A4 paper size - 1:7,000

Contains Ordnance Survey data © Crown copyright and database right 2019

Other Information

OS MasterMap Water Network

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



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

OS Data

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

Height Above Sea Level

Details	Distance	Reply or Direction
Maximum height of the Site above sea level	On Site	101.30m
Minimum height of the Site above sea level	On Site	100.80m
Average height of the Site above sea level	On Site	101.09m



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

Distance to Water Features

Details	Distance	Reply or Direction
Are there any water features within 500m?	<501m	YES
Nearest water feature	132.5m	SW



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.

Useful Contacts

Name and Address	Telephone/Fax/Email
Argyll Environmental Limited 1 st Floor 98 – 99 Queens Road Brighton BN1 3XF www.argyllenvironmental.com	General enquiries 0330 036 6115 orders@argyllenviro.com
Rochdale Metropolitan Borough Council Environmental Health Department P O Box 32 www.rochdale.gov.uk	Telephone 01706 864139 Fax: 01706 864185
Environment Agency National Customer Contact Centre (NCCC) PO Box 544	Telephone 03708 506 506
British Geological Survey Enquiry Service British Geological Survey www.bgs.ac.uk	Telephone 0115 936 3143 Fax: 0115 936 3276 enquiries@bgs.ac.uk
Environment Agency Head Office Rio House	Telephone 01454 624400 Fax: 01454 624409
Natural England County Hall www.naturalengland.org.uk	Telephone 0300 060 3900 enquiries@naturalengland.org.uk
The Coal Authority Property Searches 200 Lichfield Lane	Telephone 0345 762 6848 Fax: 01623 637 338
Environment Agency National Customer Contact Centre (NCCC) PO Box 544 Templeborough Rotherham S60 1BY www.environment-agency.gov.uk	General enquiries 08708 506 506 Floodline 0845 988 1188 enquiries@environment-agency.gov.uk
British Geological Survey Enquiry Service British Geological Survey Kingsley Dunham Centre Keyworth Nottingham NG12 5GG www.bgs.ac.uk	General enquiries 0115 936 3143 Fax 0115 936 3276
(For advice on flood insurance) British Insurance Brokers' Association 8th Floor John Stow House 8 Bevis Marks London EC3A 7JB	Consumer helpline 0870 950 1790
JBA Risk Management - Head Office South Barn Broughton Hall Skipton North Yorkshire BD23 3AE	General enquiries 01756 799 919 Fax 01756 799 449 info@jbarisk.com
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.	

Contamination Land Risk Analysis Methodology

The **SITESOLUTIONS** reports have been designed to assist in making informed decisions during property transactions. This section of the Report is a desktop assessment of direct liabilities (Liabilities) which could affect the owner /occupier of the Site and arise under Part 2A of the Environmental Protection Act 1990 and/or equivalent requirements under the planning regime and/or the Water Resources Act 1991³. (Relevant Legislation). If a risk is identified, then a number of options for finding out more about the risk, managing it or transferring it are proposed.

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

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

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

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

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

Ecological Risk Assessment

The evaluation of ecological risk is becoming an increasingly important input when making risk management decisions. In the Site Solutions Commercial report, Argyll assesses two different drivers for risks and liabilities driven by ecological receptors;

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

The Environment Agency has designed a generic framework for conducting ecological risk assessment (see Assessing Risk to Ecosystems from Land Contamination, R&D Technical Report P299, EA 2002). This recommends a tiered approach in line with best practice for human health and controlled water risk assessment and defines Relevant Ecological Receptors as any of the Relevant Types of Receptor as set out in Table 1 of Defra Statutory Guidance on Contaminated Land dated April 2012.

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

The Environmental Damage (Prevention and Remediation) Regulations 2009, as amended, were introduced on 1 March 2009 to implement the provisions of the European Union's Environmental Liability Directive into law in England⁴. The aim of EDR is to prevent and remedy damage to protected species or natural habitats or a site of special scientific interest, surface water, groundwater, coastal water or to land. 'Environmental damage' has a specific meaning in the Regulations, and must meet key criteria. Existing legislation with provisions for environmental

³ Water Environment (Controlled Activities)(Scotland) Regulations 2005 where appropriate.

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

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

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

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

When conducting either assessment, Argyll will primarily assess information provided in the Data section of the Report. However, in some cases Argyll may choose to supplement this with freely available public information such as that provided by Natural England and/or information provided by the Argyll Europa System.

Liability Assessment

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

There will be one of the following three responses:

Assessment	Liability Statement & explanation	Defra Category*
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 1991⁵. 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.

⁵Water Environment (Controlled Activities)(Scotland) Regulations 2005 where appropriate.

Limitations of the Report

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

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

Further information regarding our risk assessment methodology is provided in the Products and Services User Manual which is available free of charge from the client area of our website www.argyllenvironmental.com. For further information regarding the datasets reviewed within our assessment, please contact one of our technical team on 0330 036 6115. This report is provided under The Argyll Environmental Limited Conditions of Contract for **SITESOLUTIONS** and **FLOODSOLUTIONS** Reports (May 2011), a copy of which is available on our website.

Flood Risk Screening Methodology

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

Executive Summary and Consultants Comment

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

There will be one of the following three responses:

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

Insurance Availability

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

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

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

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

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

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

Development Risk

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

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

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

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

Flood Risk Rating

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

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

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

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

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

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

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

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

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

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

Flood Analysis

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

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

Limitations of the Report

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

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

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

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

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

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

This report is provided under The Argyll Environmental Limited Conditions of Contract for **SITESOLUTIONS** and **FLOODSOLUTIONS** Reports (July 2013), a copy of which is available on our website, www.argyllenvironmental.com 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.



Important Consumer Protection Information

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- 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.

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Firms which subscribe to the Search Code will:

- display the Search Code logo prominently on their search reports
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- 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

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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 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: 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, E-mail: admin@tpos.co.uk

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