

RESIDENTIAL

HOMEBUYERS

Search Report

Date

15-05-2017

Groundsure Reference

Index-3881141

Address

9, ST. WERBURGH'S ROAD,
MANCHESTER, M21 0TW

Grid Reference

382343 394418

Your Reference

1420204

PROFESSIONAL OPINION

Contaminated Land



PASSED

Groundsure considers there is not a **High Potential Risk*** that the site will be identified as **Contaminated Land****. No further action is required in relation to Contaminated Land.

**High Potential Risk* is the level of risk which results in 1% of reports being In Need of Further Assessment.
** within the meaning set out in Part 2A of the Environmental Protection Act 1990

Natural Ground Subsidence



PASSED

The property or an area within 25m has been assessed to have a **Negligible-Very Low** potential for natural ground subsidence. Please see Section 5.9 for further information.

River, coastal and surface water flooding



MODERATE

The property or an area within 25m has been assessed to be at Moderate risk of flooding. The JBA Insurability Index is Black 1 for this property. Please see the Overview and Guidance section for further information.

Energy



IDENTIFIED

The property has been identified to lie within 5km of one or more energy features. Please see section 7 for further information.



No significant issues identified



Issues have been identified. Further investigation is recommended.



Some issues have been identified which a prudent purchaser may wish to investigate further.

Environmental Overview and Guidance

Recommendations - Flood

Groundsure consider that the area within 25m of the centre of the property has a **Moderate** risk of flooding. Please note this rating is calculated using a weighted assessment of fluvial, coastal and pluvial risk and historic flood events only.

Recommendations

A **Low** risk of tidal/fluvial flooding and a **High** risk of surface water (pluvial) flooding have been identified within 25m of the centre of the property. Please refer to the individual flood assessment sections below for further specific guidance. Alternatively flood resistance measures may assist in reducing the flood risk to the property.

Please be aware that this is an automated assessment based upon the highest flood risk found within 25m of the centre of the property. Therefore a purchaser may wish to check the maps provided within this report to confirm whether the flood risk area lies on or in close proximity to the property. If you would like Groundsure to manually assess the property a £35 + VAT fee may be applicable. Please note this manual assessment does not include a site visit.

JBA Overall Insurability Index

Guidance

The property has been rated as **Black 1** within JBA's Insurability Index. **Black 1** indicates a level of flood hazard such that (subject to terms, applicant's status, individual insurers' approach to risk, exclusions to the Flood Re scheme and any other factors which may be relevant), insurance covering flood risk may be significantly more expensive to obtain, and there is a moderate to high potential for the flood insurance part of any policy to be ceded to Flood Re (if eligible). This rating is calculated by JBA and is based entirely on JBA's modelled river, coastal and pluvial flood risk data. This data is used by a large number of top insurance companies in order to assess flood risk, though individual insurers may also have recourse to further information not used in this assessment such as claim history, and is indicative rather than definitive.

On the 4th April 2016 the Flood Re scheme was implemented. The scheme is designed to provide affordable household insurance for residential properties within the UK, which are perceived to have a high flood risk. Insurance companies are able to cede residential properties they consider to have a flood risk into the Flood Re scheme. Annual premiums and excesses are then capped depending on the council tax band for individual properties.

There are some exclusions to the Flood Re scheme and these include; commercial properties (including buy to let), new homes built after 1st January 2009 and blocks of flats with three or more units. Flood Re is designed to run for 25 years, to allow time for the Government, local authorities, insurers and communities to become better prepared for flooding. After this period, the market is expected to return to risk reflective pricing, and properties with flood risks that have not been mitigated may face significantly increased premiums and/or difficulty in obtaining cover.

The JBA Insurability Index is categorised on a fivefold scale and also includes a statement of the possibility of insurance companies ceding the property into the Flood Re scheme (subject to terms, applicant's status and individual insurers' approach to risk, historical flooding events at the property, exclusions to the Flood Re scheme and any other factors which may be relevant),-

- **Green** indicates a level of flood hazard such that insurance covering flood risk may be obtainable relatively easily as part of a standard household insurance contract. Very low possibility of insurance companies ceding the property into the Flood Re scheme unless the property has flooded in the past.
- **Amber** indicates a level of flood hazard such that insurance covering flood risk may be available but may be subject to increased premiums and non-standard and/or additional terms. Low possibility of insurance companies ceding the property into the Flood Re scheme unless the property has flooded in the past.
- **Red** indicates a level of flood hazard such that standard priced insurance covering flood risk may be more difficult to obtain. Low to moderate possibility of insurance companies ceding the property into the Flood Re scheme unless the property has flooded in the past.
- **Black 1** indicates a level of flood hazard such that standard priced insurance covering flood risk may be significantly more difficult to obtain. Moderate to high possibility of insurance companies ceding the property into the Flood Re scheme, especially if the property has flooded in the past.

- **Black 2** indicates a level of flood hazard such that standard priced insurance covering flood risk may be extremely difficult to obtain. High possibility of insurance companies ceding the property into the Flood Re scheme, especially if the property has flooded in the past.

Please note that due to the methodology employed to produce the dataset, JBA insurability ratings are only suitable for individual residential properties and as such any rating given for commercial property should be considered invalid.

As this index is indicative we recommend a number of insurers are contacted in order to obtain a comparative quote.

Risk of Flooding from Rivers and the Sea (RoFRaS)

As the site lies within or in close proximity to an area with a **Low** risk rating in the RoFRaS database, it is considered by the Environment Agency/Natural Resources Wales to have a chance of flooding of between 1 in 1000 (0.1%) and 1 in 100 (1%) in any given year.

Guidance

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the likelihood of flood defences overtopping or breaching by considering their location type condition and standard of protection. A number of major insurance companies refer to this information within their risk model although they may also utilise additional information such as claims histories which may further influence their decision. Where a High risk of flooding is identified there is a much higher likelihood of increased insurance premiums or the flood risk part of the insurance premium being ceded to Flood Re. Property owners of sites within Low and Medium risk areas are still considered to be at risk of flooding and insurance premiums may be increased as a result. Owners of properties within Low, Medium and High risk areas are advised to sign up to the Environment Agency/Natural Resources Wales's Flood Warning scheme on 0345 988 1188 or at www.environment-agency.gov.uk. Please see Section 5.1 for further details. Additionally a prudent purchaser may wish to consider reducing the impact of flooding at the property by installing flood protection measures at the site if risks have been identified. Such measures may help reduce the effects of flooding at the property if flood defences are absent or are breached and may assist in obtaining insurance for the site. Further information on flood protection measures can be obtained by contacting Groundsure.

Surface Water Flooding

The study site or an area within 25m of the centre of the study site has been assessed to be at a **High** risk of surface water (pluvial) flooding. This indicates that this area would be expected to be affected by surface water flooding in a 1 in 75 year rainfall event to a depth of between 0.1m to 0.3m.

Guidance

Surface Water (pluvial) flooding is defined as flooding caused by rainfall-generated overland flow before the runoff enters a watercourse or sewer. In such events, sewerage and drainage systems and surface watercourses may be entirely overwhelmed.

Surface Water (pluvial) flooding will usually be a result of extreme rainfall events though may also occur when lesser amounts of rain falls on land which has low permeability and/or is already saturated, frozen or developed. In such cases overland flow and 'ponding' in topographical depressions may occur. This data is provided by JBA Risk Management. Please see Section 5.7 for further details.

Historic Flood Events

The site is not recorded to have been subject to historic flooding. However the absence of data does not provide a definitive conclusion that the site has never flooded, only that the Environment Agency/Natural Resources Wales hold no record of any flooding at the site.

Guidance

Over 23,500 separate events are recorded within the Environment Agency/Natural Resources Wales's national database on historic flood events. This data is used to understand where flooding has occurred in the past and provides details as available. Absence of a historic flood event for an area does not mean that the area has never flooded but only that the national Environment Agency/Natural Resources Wales do not currently have records of flooding within the area. Local Environment Agency/Natural Resources Wales offices and Local Authorities may have records of smaller-scale flooding and homeowners are also advised to check their TA6 Property Information form for any records of flooding. A record of a flood footprint in previous years does not mean that an area will flood again and this information does not take account of flood management schemes and improved flood defences. Please see Section 5.6 for further details.

Areas Benefiting from Flood Defences

The property does not lie in or within 25m of an area the Environment Agency/Natural Resources Wales consider to benefit from flood defences. Property-level defences and some older schemes may not be included in the Environment Agency/Natural Resources Wales database of areas considered to benefit from flood defences.

Guidance

These are areas that may benefit from the presence of major defences during a 1% fluvial (river) or 0.5% tidal flood event. These areas would flood if the defence were not present but may not flood because the defence is present.

Proposed Flood Defences

The property does not lie in or within 25m of an area the Environment Agency/Natural Resources Wales consider to benefit from proposed flood defences.

Guidance

Flood defences seek to reduce the risk of flooding and to safeguard life, protect property, sustain economic activity and the natural environment. Flood defences are designed to protect against flood events of a particular magnitude expressed as risk in any one year.

Flooding from Groundwater

There is **limited potential** for groundwater flooding to occur at the study site. Where limited potential for groundwater flooding to occur is indicated this means that although given the geological conditions there may be a groundwater flooding hazard unless other relevant information e.g. records of previous flooding suggests groundwater flooding has occurred before in this area you need take no further action in relation to groundwater flooding hazard.

Guidance

The BGS Susceptibility to Groundwater Flooding hazard dataset identifies areas where geological conditions could enable groundwater flooding to occur and where groundwater may come close to the ground surface. The BGS Susceptibility to Groundwater Flooding hazard dataset identifies areas where geological conditions could enable groundwater flooding to occur and where groundwater may come close to the ground surface.

The susceptibility data is suitable for use for regional or national planning purposes where the groundwater flooding information will be used along with a range of other relevant information to inform land-use planning decisions. It might also be used in conjunction with a large number of other factors e.g. records of previous incidence of groundwater flooding rainfall property type and land drainage information to establish relative but not absolute risk of groundwater flooding at a resolution of greater than a few hundred metres. The susceptibility data should not be used on its own to make planning decisions at any scale and in particular should not be used to inform planning decisions at the site scale. The susceptibility data cannot be used on its own to indicate risk of groundwater flooding.

Flood Storage Areas

The property does not lie in or within 25m of a Flood Storage Area.

Guidance

Flood Storage Areas are considered part of the functional flood plain and are areas where water has to flow or be stored in times of flood.

Flood Risk Framework

The Flood Risk Assessment section is based on datasets covering a variety of different flooding types. No inspection of the property or of the surrounding area has been undertaken by Groundsure or the data providers. The modelling of flood hazards is extremely complex and in creating a national dataset certain assumptions have been made and all such datasets will have limitations. These datasets should be used to give an indication of relative flood risk rather than a definitive answer. Local actions and minor variations such as blocked drains or streams etc. can greatly alter the effect of flooding. A low or negligible modelled flood risk does not guarantee that flooding will not occur. Nor will a high risk mean that flooding definitely will occur. Groundsure's overall flood risk assessment takes account of the cumulative risk as assessed within the Environment Agency/Natural Resources Wales's RoFRaS database in addition to surface water (pluvial) flooding and historic flood events.

Factor

Natural Hazards & Additional Factors

Assessment

Subsection

What is the maximum Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating within 25m of the centre of the property?	Low	5.1
Are there any Areas Benefiting from Flood Defences within 250m?	No	5.2
Are there any flood defences within 250m of the study site?	No	5.3
Are there any Proposed Flood Defences within 250m of the study site?	No	5.4
Are there any Areas Used for Flood Storage within 250m?	No	5.5
Has the site or an area within 25m been subject to past flooding as recorded by the Environment Agency/Natural Resources Wales?	No	5.6
What is the maximum Surface Water flood risk identified within 25m of the centre of the property?	High	5.7
What is the maximum susceptibility to Groundwater Flooding in proximity to the study site?	Limited potential	5.8
Natural Ground Subsidence	Negligible - Very Low	5.9
Radon	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level	5.10
Radon Protective Measures	No radon protective measures are necessary	5.11

Mining

Coal Mining	No	6.1
BGS Non-Coal Mining	Unclassified	6.2
Mining Cavities	No	6.3
Natural Cavities	No	6.4
Historical Mining	No	6.5
Historical Underground Workings	No	6.6

Energy

Existing oil, gas, shale gas or coalbed methane wells	No	7.1
Proposed oil, gas, shale gas or coalbed methane wells	No	7.2
Existing wind farms	No	7.3
Proposed wind power projects	Yes	7.4
Existing solar farms	No	7.5
Proposed solar farms	Yes	7.6
Existing power stations	Yes	7.7
Existing Nuclear Establishments	No	7.8
Proposed Energy and other large Infrastructure Projects	No	7.9

Additional Information

Ofcom Sitefinder Mobile Phone Mast Records	No	8.1
Mobile Phone Mast Planning Records	Yes	8.2
Overhead Electricity Transmission Lines and Pylons	No	8.3

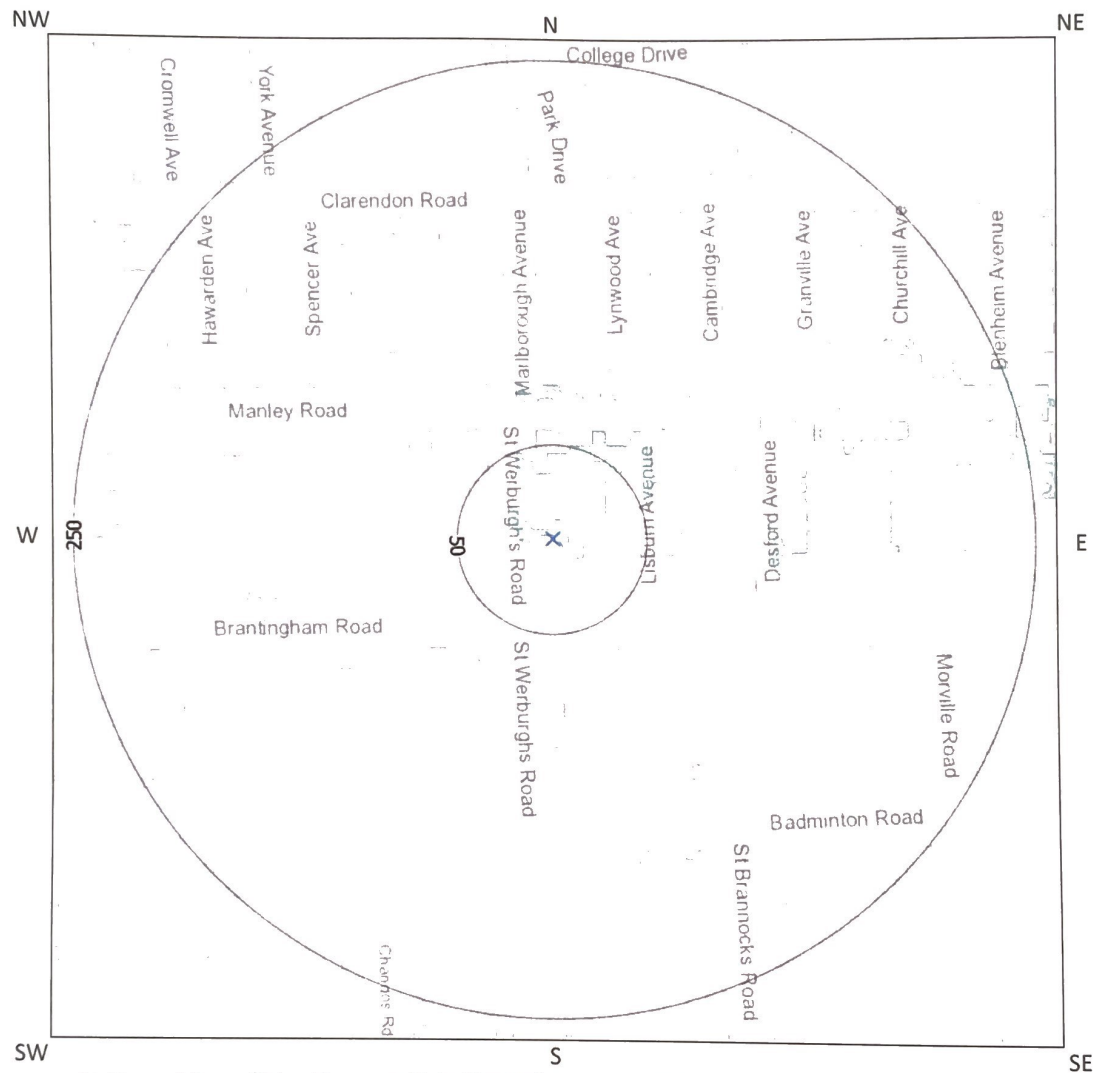
Environment Agency/Natural Resources Wales River and Coastal Flood Map



-  Site Centre
 50
 250 Search Buffers (m)
-  Very Low
 Low
 Medium
 High
-  Proposed Flood Defence Scheme
 Flood Defences
 Areas Benefiting from Flood Defences
 Areas used for Flood Storage

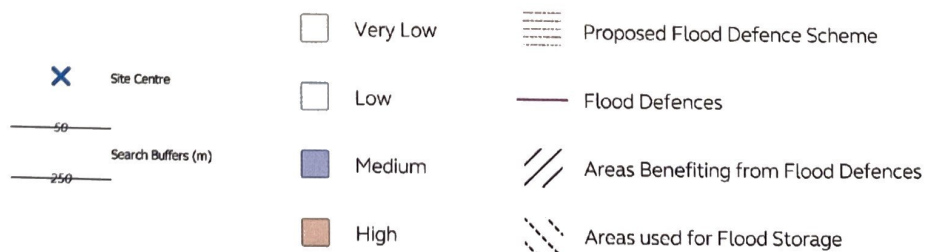
5. Natural Hazards and Additional Factors

Environment Agency/Natural Resources Wales River and Coastal Flood Map

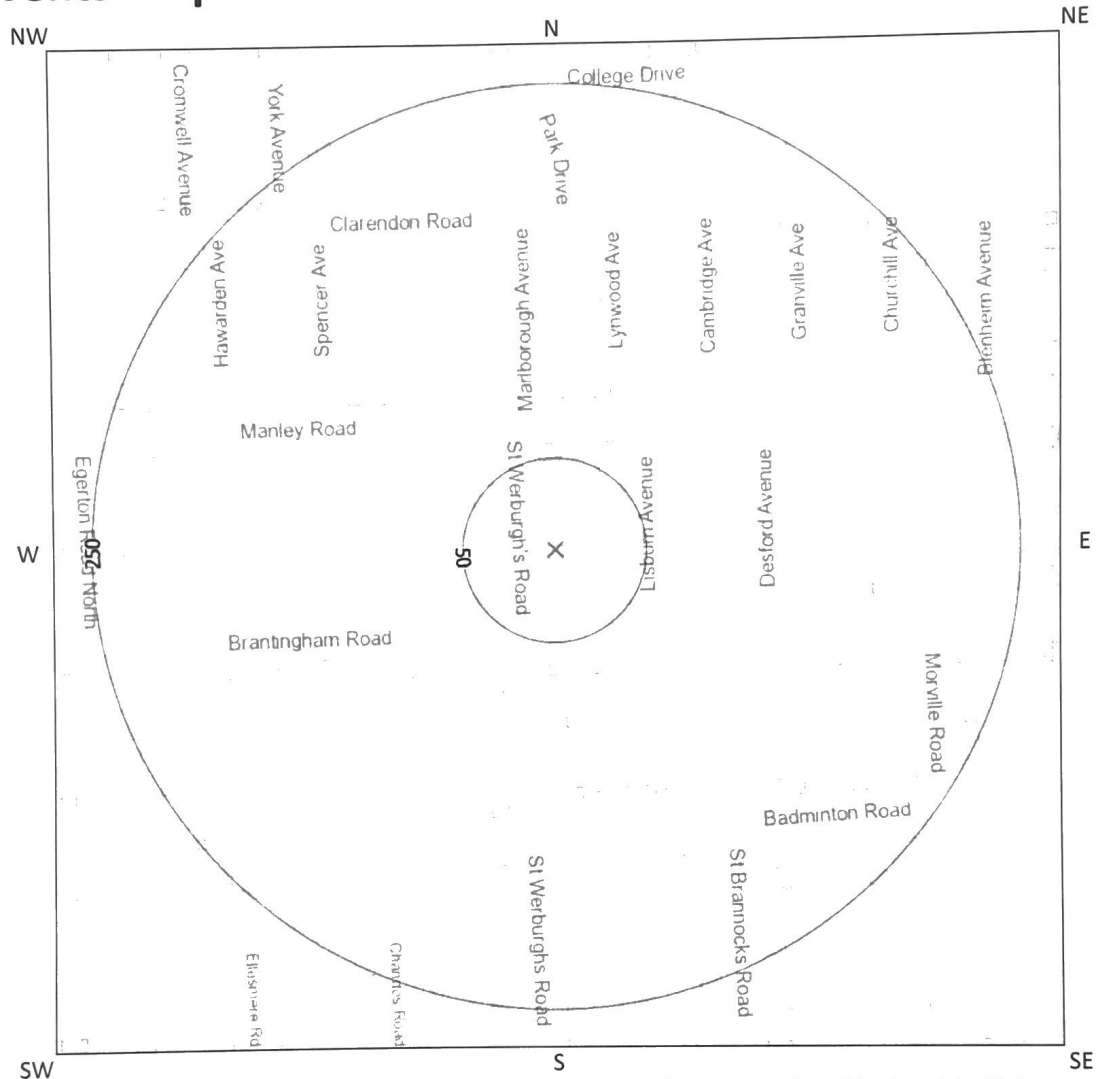


Environment Agency/Natural Resources Wales River and Coastal Flood Map

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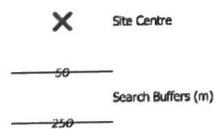


Environment Agency/Natural Resources Wales Recorded Historic Flood Events Map



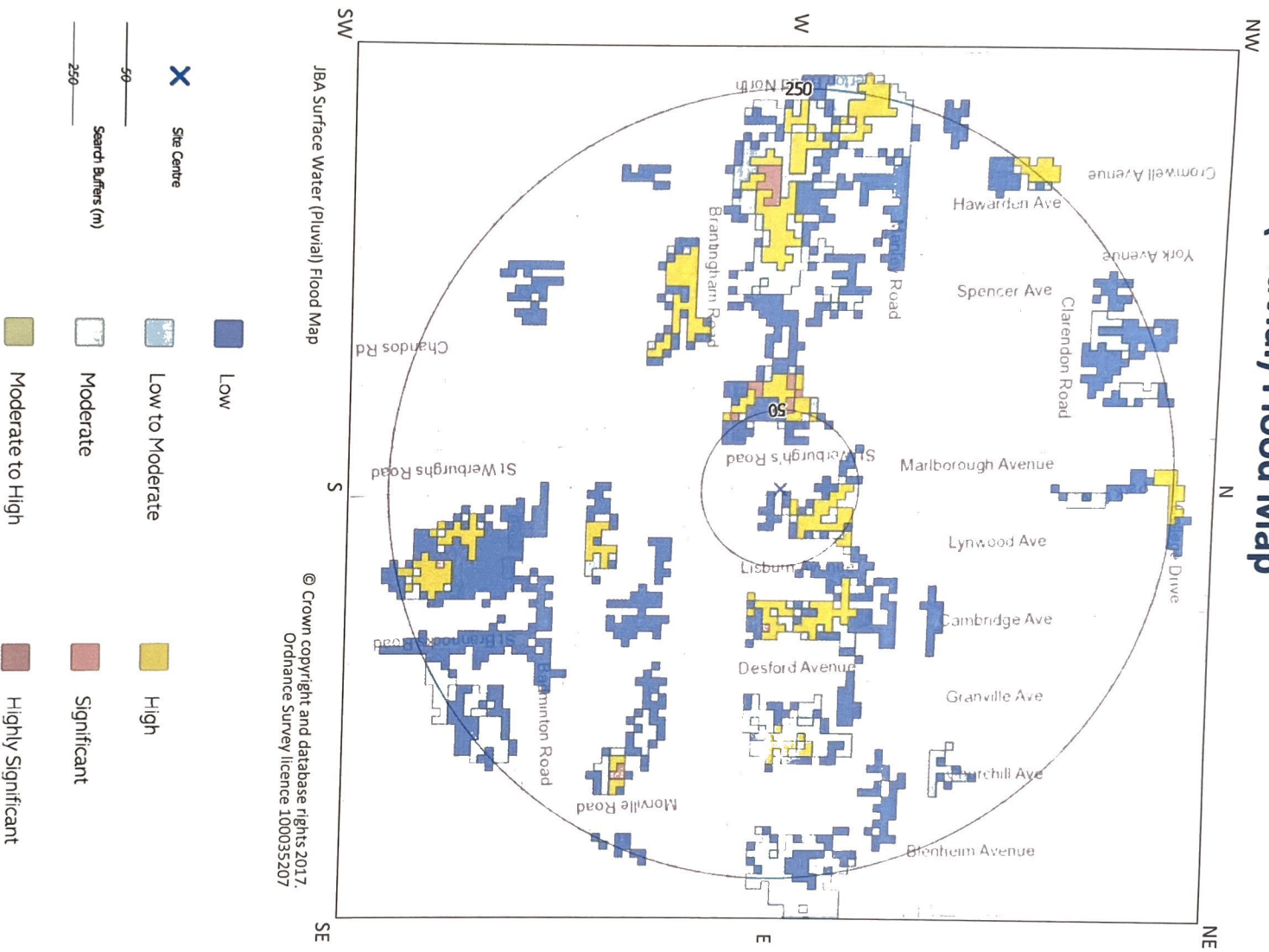
Environment Agency/Natural Resources Wales Recorded
Historic Flood Events Map

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 Historic Flood Events

JBA Surface Water (Pluvial) Flood Map



5.1 Risk of Flooding from Rivers and the Sea (RoFRaS)

What is the risk of flooding at the centre of the study site?

What is the highest risk of flooding within 25m of the centre of the study site?

Very Low

Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid as used by many of the insurance companies. RoFRaS data is based on a 50m grid system, with the flood rating at the centre of the grid calculated and given below. The data considers the probability that the flood defences will overtop or breach, and the distance from the river or the sea.

RoFRaS data for the study site indicates the property or an area within 25m has a Low (greater than 1 in 1000 but less than 1 in 100) chance of flooding in any given year.

The following table shows all RoFRaS data found within 50 metres of the centre of the study site.

Distance (m)	Direction	RoFRaS Flood Risk
2	E	Low

5.2 Areas Benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site?

No

Guidance: These are areas that may benefit from the presence of major defences during a 1% river (fluvial) or 0.5% coastal flood event. These areas would flood if the defence were not present, but may not flood because the defence is present. Details of flood defences and any areas benefiting from these defences can be seen on the Risk of Flooding from Rivers and the Sea Map.

5.3 Flood Defences

Are there any flood defences within 250m of the study site?

No

Guidance: This search consists only of flood defences present in the dataset provided by the Environment Agency/Natural Resources Wales.

5.4 Proposed Flood Defences

Are there any Proposed Flood Defences within 250m of the study site?

No

Guidance: This search consists only of proposed flood defences present in the dataset provided by the Environment Agency/Natural Resources Wales. Please note that proposed flood defence schemes will not influence the current RoFRaS ratings for the site until they have been constructed.

5.5 Areas Used for Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

Database searched and no data found

Flood Storage Areas are considered part of the functional floodplain, and are areas where water has to flow or be stored in times of flood. Technical Guidance to the National Planning Policy Framework states that only water-compatible development and essential infrastructure should be permitted within flood storage areas, and existing development within this area should be relocated to an area with a lower risk of flooding. Any relevant data is represented on the Risk of Flooding from Rivers and the Sea Map.

Notes on RoFRaS data

RoFRaS is an assessment of flood risk for England and Wales produced using local data and expertise. It shows the chance of flooding from rivers or the sea presented in categories taking account of flood defences and the condition those defences are in. The RoFRaS model uses local water level and flood defence data to model flood risk. It has divided England and Wales into 50m X 50m impact cells. Each cell has been assigned a flood risk likelihood from the categories below:

- Less than **1 in 1000 (0.1%)** chance in any given year: **Very Low**
- Less than **1 in 100 (1%)** but greater than or equal to **1 in 1000 (0.1%)** chance in any given year: **Low**
- Less than **1 in 30 (3.3%)** but greater than or equal to **1 in 100 (1%)** chance in any given year: **Medium**
- Greater than or equal to **1 in 30 (3.3%)** chance in any given year: **High**

Notes on Existing Flood Defences

Flood defences seek to reduce the risk of flooding and to safeguard life, protect property, sustain economic activity and the natural environment. Flood defences are designed to protect against flood events of a particular magnitude, expressed as risk in any one year.

Notes on Proposed Flood Defences

'Number of Households to Benefit' illustrates the number of households that move from 'very significant' or 'significant' to 'moderate' or 'low' probability of flood risk bands if the proposed flood scheme is to be implemented

This information is taken from the Environment Agency/Natural Resources Wales's database of Areas to Benefit from New and Reconditioned Flood Defences under the Medium Term Plan (MTP). The dataset contains funding allocation for the first financial year (from April). Funding for the following four financial years is not guaranteed, being only indicative, and will be reviewed annually.

Projects within the Medium Term Plan qualify for inclusion in this dataset if:

- the investment leads to a change in the current standard of protection (change projects);
- the investment is a replacement or refurbishment in order to sustain the current standard of protection (sustain projects);
- the project has an initial construction budget of £100,000 or more; and
- the project is included within the first five years of the MTP.

The data includes all the Environment Agency/Natural Resources Wales's projects over £100K that will change or sustain the standards of flood defence in England and Wales over the next 5 years. It also includes the equivalent schemes for all Local Authority and Internal Drainage Boards. The number of households and areas of land contributing to DEFRA's Outcome Measures (OM) are also attributed i.e. could benefit from major work on flood defences.

These data also contain Intermittence Flood Maintenance Programmes that show the annual maintenance programme of work scheduled to be carried out by the Environment Agency/Natural Resources Wales, Local Authority or Internal Drainage Board on flood defences. Data details routine maintenance as well as intermittent work that has been funded for the coming year. The data contains a start and end coordinate defining the relevant river section where work is planned.

Information Warning

Please note that the maps show the areas where investment is being made to reduce the flood and coastal erosion risk and are not detailed enough to account for individual addresses. Individual properties may not always face the same risk of flooding as the areas that surround them. Also, note that funding figures are indicative and any use or interpretation should account for future updates where annual values may change.

Every possible care is taken to ensure that the maps reflect all the data possessed by the Environment Agency/Natural Resources Wales and that they have applied their expert knowledge to create conclusions that are as reliable as possible. The Environment Agency/Natural Resources Wales consider that they have created the maps as well as they can and so should not be liable if the maps by their nature are not as accurate as might be desired or are misused or misunderstood, despite their warnings. For this reason, they are not able to promise that the maps will always be accurate or completely up to date.

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Notes on RoFRaS data

RoFRaS is an assessment of flood risk for England and Wales produced using local data and expertise. It shows the chance of flooding from rivers or the sea presented in categories taking account of flood defences and the condition those defences are in. The RoFRaS model uses local water level and flood defence data to model flood risk. It has divided England and Wales into 50m X 50m impact cells. Each cell has been assigned a flood risk likelihood from the categories below:

- Less than **1 in 1000 (0.1%)** chance in any given year: **Very Low**
- Less than **1 in 100 (1%)** but greater than or equal to **1 in 1000 (0.1%)** chance in any given year: **Low**
- Less than **1 in 30 (3.3%)** but greater than or equal to **1 in 100 (1%)** chance in any given year: **Medium**
- Greater than or equal to **1 in 30 (3.3%)** chance in any given year: **High**

Notes on Existing Flood Defences

Flood defences seek to reduce the risk of flooding and to safeguard life, protect property, sustain economic activity and the natural environment. Flood defences are designed to protect against flood events of a particular magnitude, expressed as risk in any one year.

Notes on Proposed Flood Defences

'Number of Households to Benefit' illustrates the number of households that move from 'very significant' or 'significant' to 'moderate' or 'low' probability of flood risk bands if the proposed flood scheme is to be implemented

This information is taken from the Environment Agency/Natural Resources Wales's database of Areas to Benefit from New and Reconditioned Flood Defences under the Medium Term Plan (MTP). The dataset contains funding allocation for the first financial year (from April). Funding for the following four financial years is not guaranteed, being only indicative, and will be reviewed annually. Projects within the Medium Term Plan qualify for inclusion in this dataset if:

- the investment leads to a change in the current standard of protection (change projects);
- the investment is a replacement or refurbishment in order to sustain the current standard of protection (sustain projects);
- the project has an initial construction budget of £100,000 or more; and
- the project is included within the first five years of the MTP.

The data includes all the Environment Agency/Natural Resources Wales's projects over £100K that will change or sustain the standards of flood defence in England and Wales over the next 5 years. It also includes the equivalent schemes for all Local Authority and Internal Drainage Boards. The number of households and areas of land contributing to DEFRA's Outcome Measures (OM) are also attributed i.e. could benefit from major work on flood defences.

These data also contain Intermittence Flood Maintenance Programmes that show the annual maintenance programme of work scheduled to be carried out by the Environment Agency/Natural Resources Wales, Local Authority or Internal Drainage Board on flood defences. Data details routine maintenance as well as intermittent work that has been funded for the coming year. The data contains a start and end coordinate defining the relevant river section where work is planned.

Information Warning

Please note that the maps show the areas where investment is being made to reduce the flood and coastal erosion risk and are not detailed enough to account for individual addresses. Individual properties may not always face the same risk of flooding as the areas that surround them. Also, note that funding figures are indicative and any use or interpretation should account for future updates where annual values may change.

Every possible care is taken to ensure that the maps reflect all the data possessed by the Environment Agency/Natural Resources Wales and that they have applied their expert knowledge to create conclusions that are as reliable as possible. The Environment Agency/Natural Resources Wales consider that they have created the maps as well as they can and so should not be liable if the maps by their nature are not as accurate as might be desired or are misused or misunderstood, despite their warnings. For this reason, they are not able to promise that the maps will always be accurate or completely up to date.

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Flood Storage Areas

Flood Storage Areas may also act as flood defences. A flood storage area may also be referred to as a balancing reservoir, storage basin or balancing pond. Its purpose is to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel. It may also delay the timing of a flood peak so that its volume is discharged over a longer time interval. A flood storage area may take the form of a wet or dry reservoir. A wet reservoir is a water storage facility in which storage can be effected by allowing water levels to rise during flood times. A dry reservoir is typically adjacent to a river and comprises an enclosed area that accepts water only at peak times. These areas are also referred to as Zone 3b or 'the functional floodplain' and has a 5% or greater chance of flooding in any given year, or is designed to flood in the event of an extreme (0.1%) flood or another probability which may be agreed between the Local Planning Authority and the Environment Agency/Natural Resources Wales, including water conveyance routes. Development within Flood Storage Areas is severely restricted.

5.6 Historic Flooding Events

Has the site or any area within 250m of the site been subject to historic flooding as recorded by the Environment Agency/Natural Resources Wales?	No
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This database shows the individual footprint of every flood event recorded in the Environment Agency/Natural Resources Wales's national database on historic flood events. Please note this doesn't include records held by individual local offices. This data is used to understand where larger-scale flooding has occurred in the past and provides details as available. Absence of a historic flood event for an area does not mean that the area has never flooded, but only that it doesn't appear in the Environment Agency/Natural Resources Wales national dataset. Equally, a record of a flood footprint in previous years does not mean that an area will flood again, and this information does not take account of flood management schemes and improved flood defences.

Historic flooding events: Database searched and no data found.

5.7 JBA Surface (Pluvial) Water Flooding

What is the risk of pluvial flooding at the centre of the study site?	Negligible
What is the highest risk of pluvial flooding within 25m of the centre of the study site?	High

Guidance: The site or an area in close proximity has been assessed to be at High risk of surface water (pluvial) flooding. This indicates that this area would be expected to be affected by surface water flooding in a 1 in 75 year rainfall event to a depth of between 0.1m to 0.3m.

Distance (m)	Direction	Risk
3	NE	Low
4	SE	Low
10	NE	High
12	E	Low to Moderate
17	NE	Low
18	E	Low to Moderate
18	N	Low
21	NE	High
21	NE	Low to Moderate
22	N	Low
23	E	Low
28	W	Low

Distance (m)	Direction	Risk
32	NE	Low to Moderate
32	NE	Low
35	NE	Low to Moderate
36	SW	Low
37	N	Low to Moderate
38	NE	Low
38	N	Low
38	W	Low to Moderate
42	NE	Low to Moderate
42	N	Low
42	SW	Low to Moderate
43	W	High
43	W	Low
46	W	High
47	NE	Low
47	NW	Low
48	NW	Low
48	W	High
48	W	Significant
49	NE	High
49	SW	Low to Moderate
50	E	Low

Notes on Surface water (Pluvial) Flooding data:

JBA Risk Management surface water flood map identifies areas likely to flood following extreme rainfall events, i.e. land naturally vulnerable to surface water or “pluvial” flooding. This data set was produced by simulating 1 in 75 year, 1 in 200 year and 1 in 1000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though older ones may even flood in a 1 in 5 year rainstorm event.

The model provides the maximum depth of flooding in each 5m “cell” of topographical mapping coverage. The maps include 7 bands indicating areas of increasing natural vulnerability to surface water flooding. These are:

- Less than **0.1m** in a **1 in 1000** year rainfall event: **Negligible**
- Greater than **0.1m** in a **1 in 1000** year rainfall event: **Low**
- Between **0.1m and 0.3m** in a **1 in 200** year rainfall event: **Low to Moderate**
- Between **0.3m and 1m** in a **1 in 200** year rainfall event: **Moderate**
- Greater than **1m** in a **1 in 200** year rainfall event: **Moderate to High**
- Between **0.1m and 0.3m** in a **1 in 75** year rainfall event: **High**
- Between **0.3m to 1m** in a **1 in 75** year rainfall event: **Significant**
- Greater than **1m** in a **1 in 75** year rainfall event: **Highly Significant**

5.8 Groundwater Flooding Susceptibility

What is the susceptibility to Groundwater Flooding in the search area based on the underlying geological conditions?	Limited potential for groundwater flooding
Does this relate to Clearwater Flooding or Superficial Deposits Flooding?	Clearwater Flooding

Guidance: Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded. The BGS Susceptibility to Groundwater Flooding hazard dataset identifies areas where geological conditions could enable groundwater flooding to occur and where groundwater may come close to the ground surface. The susceptibility data is suitable for use for regional or national planning purposes where the groundwater flooding information will be used along with a range of other relevant information to inform land-use planning decisions. It might also be used in conjunction with a large number of other factors, e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information, to establish relative, but not absolute, risk of groundwater flooding at a resolution of greater than a few hundred metres. The susceptibility data should not be used on its own to make planning decisions at any scale, and, in particular, should not be used to inform planning decisions at the site scale. The susceptibility data cannot be used on its own to indicate risk of groundwater flooding.

Notes on Groundwater Flooding

The BGS Susceptibility to Groundwater Flooding hazard dataset identifies areas where geological conditions could enable groundwater flooding to occur and where groundwater may come close to the ground surface.

Groundwater flooding is assessed on a fourfold scale:

- The area is not considered to be prone to groundwater flooding based on rock type.
- There is limited potential for groundwater flooding to occur and further relevant information should be considered to determine this assessment.
- There is potential for groundwater flooding of property situated below the surface such as basements and other below surface infrastructure. Further relevant information should be considered to determine whether groundwater flooding has previously occurred.
- There is potential for groundwater flooding to occur at the surface and groundwater flooding hazard should be considered in all land use planning decisions. Other relevant information should be considered to establish the risk of groundwater flooding to property.

5.9 Natural Ground Subsidence

What is the potential for natural ground subsidence* within the search area?	Negligible - Very Low
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Guidance: The natural ground subsidence rating is obtained through the evaluation of six natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS). These datasets indicate the hazard posed by the occurrence of: Swell-Shrink Clay, Landslide, Compressible Ground, Collapsible Ground, Dissolution of Soluble Rocks and Running Sand. Many factors may contribute to ground subsidence problems. For instance, significant problems can arise in conurbations underlain by clay rich bedrock, such as over clay strata in the South East of England, or South Wales. Whilst surveyors are normally aware of local problem areas, data provided by the BGS can highlight areas where a significant potential for natural ground subsidence exists and which may need particular consideration.

Where negligible - very low potential is indicated, this means that you need take no further action in relation to natural ground subsidence in this area.

*The term "Subsidence" refers to ground movement that could cause damage to foundations in domestic or other properties.

5.10 Radon Affected Areas