
This publication was withdrawn on 20 October 2022

We have withdrawn this document because these maps have been superseded.

Flood Risk Maps

Risk of Flooding from Surface Water - North West River Basin District

Why have we produced these maps – what can they be used for?

The Flood Risk Regulations require the Environment Agency to publish Flood Risk Maps by December 2013 and review them every six years. A series of Flood Risk Maps have been produced reflecting the different sources of flooding in each River Basin District. These maps will be used by Lead Local Flood Authorities to inform the production of Flood Risk Management Plans required for each Flood Risk Area.

What do the Risk Maps show?

The Risk of Flooding from Surface Water Maps have been generated from the updated Flood Map for Surface Water (uFMfSW) and our National Receptor Dataset (NRD). There are three maps showing what is at risk of flooding (Risk to People, Risk to Economic Activity and Risk to Natural and Historic Environment). We have also tabulated the receptors at risk for each Flood Risk Area and the total for the River Basin District.

This document contains the Risk of Flooding from Surface Water Maps for the Flood Risk Areas within the North West River Basin District as shown in the figure below:



Risk to People maps

These maps shows the number of inhabitants that could be affected by surface water and the potential impact on the services that they use.

People at Risk

The number of people at risk of flooding has been calculated using guidance from the Office for National Statistics General Lifestyle Survey, 2011. The circles on the maps (representing the number of people affected by flooding) are located in the middle of the defined built-up area. Therefore they do not pinpoint exact areas at risk of flooding but instead offer a representation of the overall risk of flooding in that built-up area. (Source: OS MasterMap® Address Layer 2 and OS MasterMap® Topography Layer)

Services

These include schools, hospitals, nursing/care/retirement homes, police stations, fire and ambulance stations, prisons, sewage treatment works and electricity installations. Only those in areas at risk of flooding are shown on the maps.

(Source: OS MasterMap® Address Layer 2 and OS MasterMap® Topography Layer)

Built-Up Areas

These represent urban areas and settlements as defined by the Office for National Statistics (ONS). All built-up areas are shown on the maps for context - reporting is only provided for the number of people in these built-up areas at risk of flooding, rather than the area of land itself.

(Source: Office for National Statistics 2011 Built-Up Areas)

Risk to Economic Activity Maps

These maps show the type of economic activity in the area potentially affected by flooding. All economic activity is shown on the maps - viewed together with the flooding information, it shows what is at risk.

Airports

All principal airports serving the United Kingdom, Europe and beyond are displayed on the maps.

(Source: Ordnance Survey Strategi®)

Railways

Main railway lines are displayed on the maps. (Source: Ordnance Survey Meridian™ 2)

Roads

Motorways, primary and trunk routes are displayed on the maps as classified by the Highways Agency. These are reported in the tables as a single class.

(Source: OS MasterMap® Integrated Transport Network™ (ITN))

Non-Residential Properties

Property points have been classified according to their function and all residential properties excluded.

(Source: OS MasterMap® Address Layer 2 and OS MasterMap® Topography Layer)

Agricultural Land Classification

The Agricultural Land Classification (ALC) of England and Wales is a method for assessing the quality of farmland. Agricultural land is classified into five grades. Grade one is best quality and grade five is poorest quality. These maps show the best and most versatile land - Grades 1, 2 and 3.

(Source: Natural England / Welsh Government)

Risk to Natural and Historic Environment Maps

These maps show protected areas that may be affected in the event of flooding and other sites where the risk of pollution may be increased in the event of flooding. To keep the maps as clear as possible, only internationally designated environmental sites have been displayed on the maps. Other designations have been included in the tables.

Special Areas of Conservation (SACs)

Land designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora. All SACs are shown on the maps regardless of risk.

(Source: Natural England / Natural Resources Wales)

Special Protection Areas (SPAs)

Land classified under directive 79/409 on the Conservation of Wild Birds. All SPAs are shown on the maps regardless of risk. (Source: *Natural England / Natural Resources Wales*)

Ramsar Sites

Land listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. All Ramsar Sites are shown on the maps regardless of risk. (Source: *Natural England / Natural Resources Wales*)

World Heritage Sites

World Heritage Sites are defined in World Heritage Convention as 'places of outstanding universal value from the point of view of art, history, science or natural beauty'. A Heritage World Convention was drawn up and adopted by UNESCO in 1972 to identify cultural and natural properties throughout the world whose protection would be of concern to the international community. All World Heritage Sites are shown on the maps regardless of risk. (Source: *English Heritage / Cadw*)

Bathing Waters

Bathing waters are shown on the maps where they may be adversely affected by heavy rainfall and are within 50m of surface water flood risk. (Source: *Environment Agency*)

Environmental Permitting Regulations (EPR) Installations EPR installations range from refineries to breweries and from intensive pig farms to cement works. Each installation has a permit to limit emissions of pollutants to air, water or land. Only active EPR installations within 50m of surface water flood risk have been included on the maps. (Source: *Environment Agency Pollution Inventory*)

Sites of Special Scientific Interest (SSSIs)

Land notified as an SSSI under the Wildlife and Countryside Act (1981), as amended. (Source: *Natural England / Natural Resources Wales*)

Parks and Gardens

The Register of Parks and Gardens of Special Historic Interest serves to ensure that the features and qualities which make these landscapes of national importance can be safeguarded. Inclusion of a historic park or garden on the Register in itself does not bring additional statutory controls, but the Register is recognised as a 'material consideration' in the planning process. (Source: *English Heritage / Cadw*)

Scheduled Ancient Monuments

Scheduling is a shorthand term used to refer to the legal system for protecting and conserving nationally important archaeological sites in the United Kingdom. Sites identified for scheduling are designated by the Secretary of State as 'scheduled monuments'. Once a site is scheduled, consent must be obtained from the Secretary of State for any works which affect it. (Source: *English Heritage / Cadw*)

Listed Buildings

A listed building is a building which has been placed on the Statutory List of Buildings of Special Architectural or Historic Interest. It is a widely used status, applied to around half a million buildings. There are three grades of listed building. (Source: *English Heritage / Cadw*)

Licensed Abstractions

An abstraction licence allocates an exclusive right to take a certain quantity of water from a source of supply (inland water such as rivers or streams or an underground source). An abstraction licence does not guarantee the quality of the water or that the amount authorised for abstraction will always be available. (Source: *Environment Agency National Abstraction Licensing Database (NALD)*)

Explaining Flood Risk Classifications

The risk categories are consistent across all of the maps.

High risk means that each year, there is a chance of flooding of greater than 1 in 30 (3.3%).

Medium risk means that each year, there is a chance of flooding of between 1 in 100 (1%) and 1 in 30 (3.3%).

Low risk means that each year, there is a chance of flooding of between 1 in 1000 (0.1%) and 1 in 100 (1%).

Reporting Boundaries used on maps and for tabular statistics

River Basin Districts (RBDs)

Under the requirements of the Floods Directive, reporting is at the River Basin District level. There are 11 River Basin Districts that are partly or fully in England and Wales. These River Basin Districts are the same as those used by the Water Framework Directive for the river basin planning process. A river basin is the area of land from which all surface run-off and spring water flows through a sequence of streams, lakes and rivers into the sea at a single river mouth, estuary or delta. It is made up of one or more individual catchments. A River Basin District is made up of one or several river basins, together with associated coastal waters.

Flood Risk Areas (FRAs)

Flood Risk Areas are areas where there is a significant risk of flooding from local sources, such as surface water, ground water and ordinary watercourses. They have been identified using guidance produced by Defra and the Welsh Government.

Further Information

Visit our [web pages](#) to check your flood risk and for information on how to prepare for flooding.

What other maps have been produced?

A series of Flood Risk Maps have been produced for different sources of flooding in each River Basin District. The Flood Risk Regulations require that we produce surface water flood risk maps for Flood Risk Areas. Not every River Basin District includes a Flood Risk Area.

	River Basin Districts	Rivers & sea	Reservoirs	Surface water
1	Anglian	✓	✓	✓
2	Dee	✓	✓	
3	Humber	✓	✓	✓
4	North West	✓	✓	✓
5	Northumbria	✓	✓	
6	Severn	✓	✓	✓
7	Solway Tweed	✓	✓	
8	South East	✓	✓	✓
9	South West	✓	✓	
10	Thames	✓	✓	✓
11	Western Wales	✓	✓	✓



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River Basin Districts

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Agricultural Land Classification

England:

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Wales: Welsh Government © Crown Copyright and database right 2013. Ordnance Survey 100021874.

Special Areas of Conservation, Special Protection Areas and Ramsar

England:

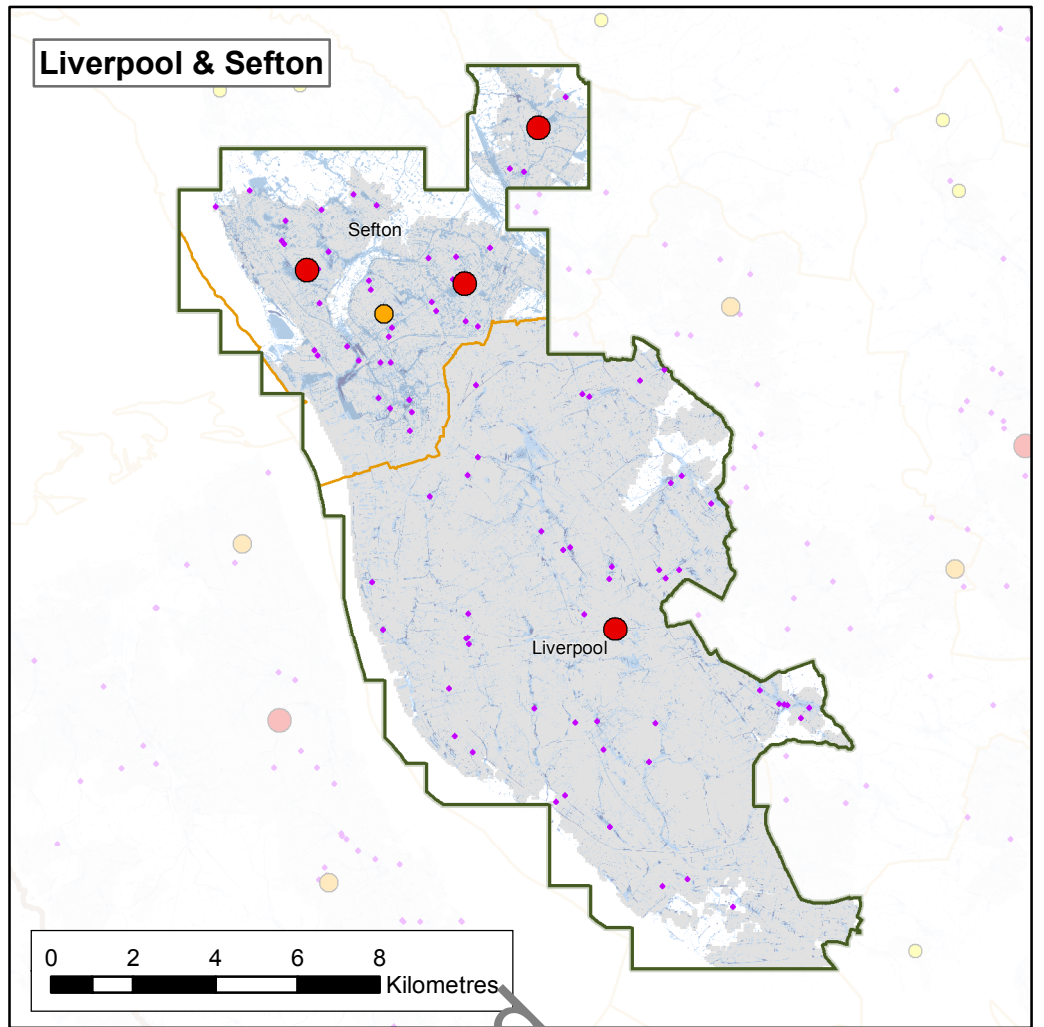
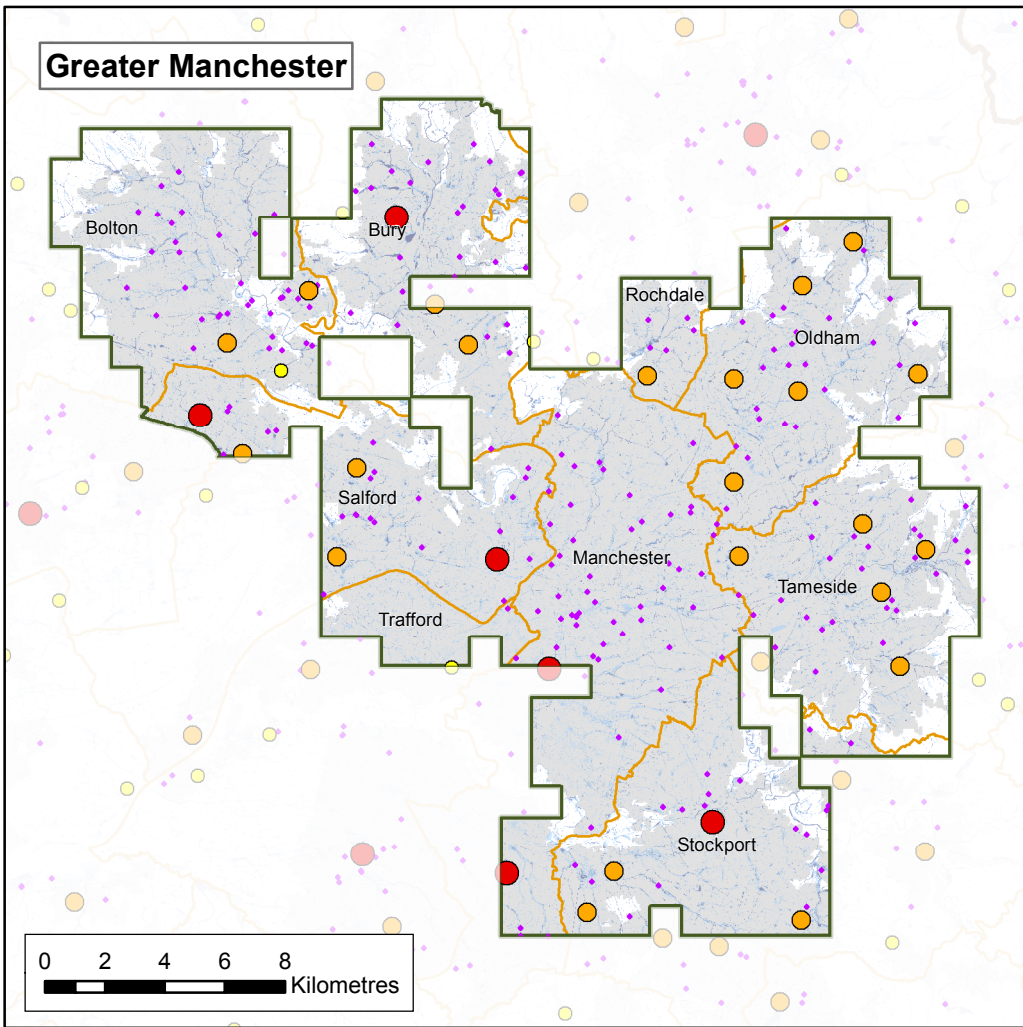
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World Heritage Sites

England: World Heritage Sites are provided solely to indicate the location of the designated area. Title, copyright and all other propriety rights remain vested in English Heritage.

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Surface Water Flood Risk Map

North West River Basin District

Risk to People

Flood Risk Source

Surface Water

- High
- Medium
- Low

People at Risk


- 0 - 1000
- 1001 - 5000
- 5001 +

Reporting Boundaries

- Flood Risk Area
- Flood Risk Area (Neighbouring)
- River Basin District
- River Basin Districts (Neighbouring)
- Lead_Local_Flood_Authority_V7_FINAL

Services at Risk

- Built-up Areas



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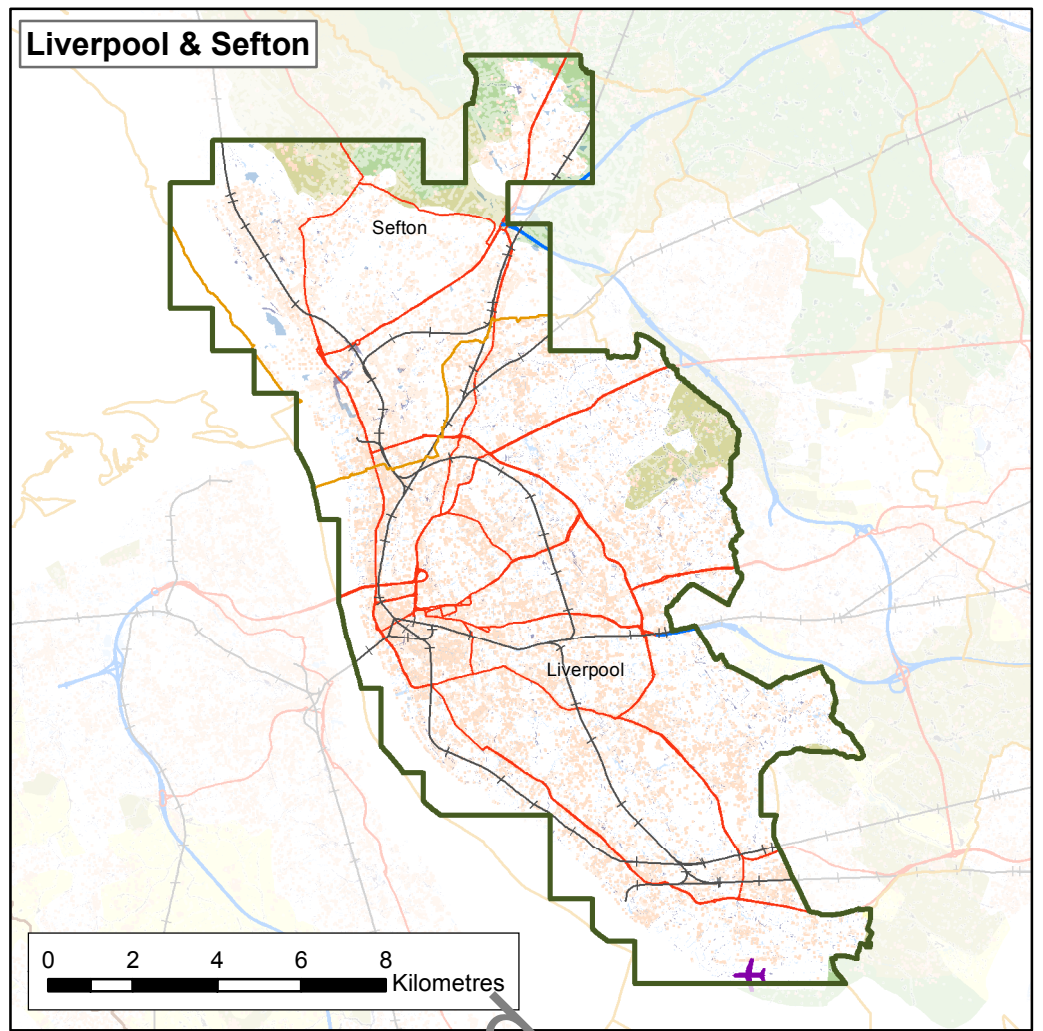
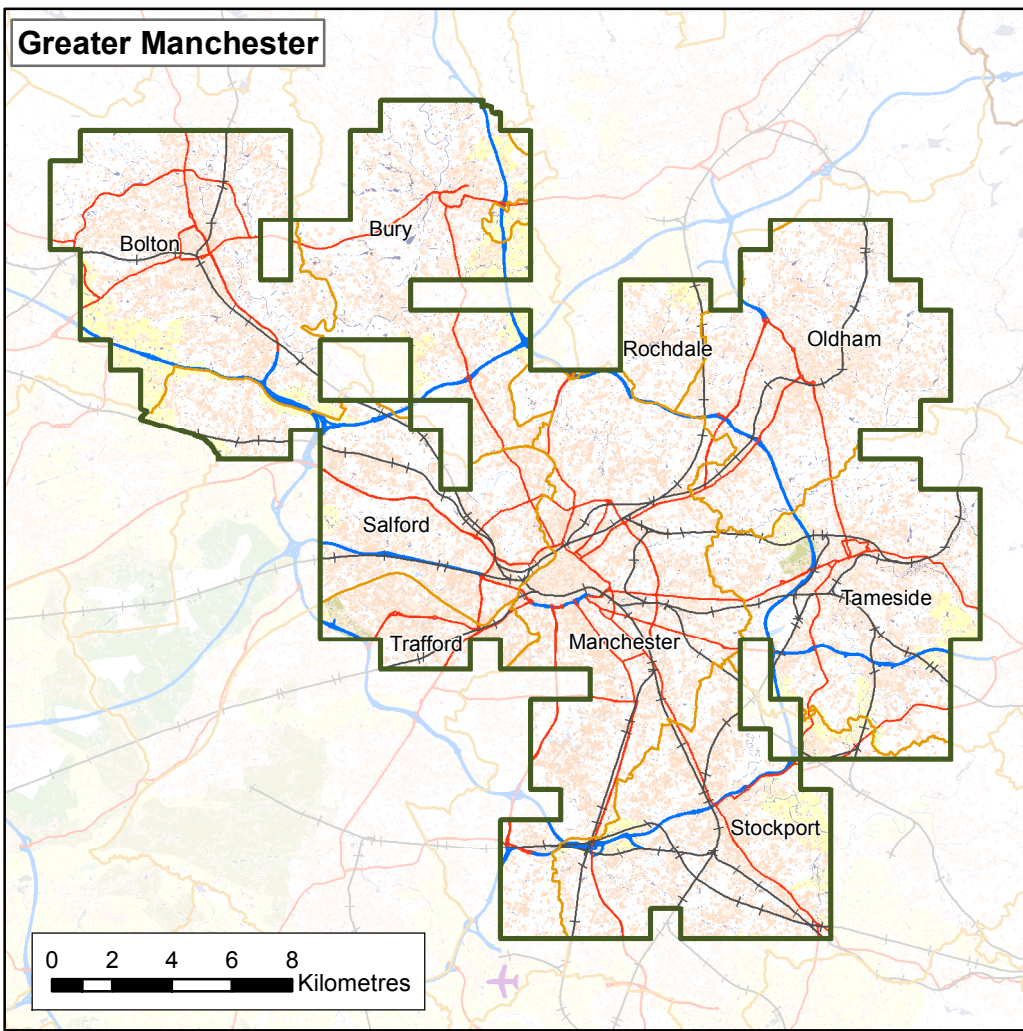
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Tables showing what is at risk of flooding from surface water in the North West River Basin District:

People				
Defined Area	Number of people in defined area	Number of people in defined area at high risk	Number of people in defined area at medium risk	Number of people in defined area at low risk
River Basin District				
North West	7,234,292	35,396	97,650	435,086
Flood Risk Area				
Greater Manchester	1,655,124	5,544	15,125	99,273
Liverpool & Sefton	659,363	2,395	19,775	49,101

Services				
Defined Area	Number of sites in defined area	Number of sites in defined area at high risk	Number of sites in defined area at medium risk	Number of sites in defined area at low risk
River Basin District				
North West	10,442	154	224	905
Flood Risk Area				
Greater Manchester	1,651	22	30	171
Liverpool & Sefton	706		25	57

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 These maps have been superseded



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Surface Water Flood Risk Map

North West River Basin District

Risk to Economic Activity

Flood Risk Source

Surface Water

- High
- Medium
- Low

Economic Activity


- + Airports
- +— Main Line Railways
- Motorway
- Other Primary / Trunk Roads
- Non-residential Properties

Reporting Boundaries

- Flood Risk Area
- Flood Risk Area (Neighbouring)
- River Basin District
- River Basin Districts (Neighbouring)
- Lead Local Flood Authorities

Agricultural Land Classification

- Grade 1
- Grade 2
- Grade 3



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Tables showing what is at risk of flooding from surface water in the North West River Basin District:

Non Residential Properties				
Defined Area	Number of properties in defined area	Number of properties in defined area at high risk	Number of properties in defined area at medium risk	Number of properties in defined area at low risk
River Basin District				
North West	586,767	7,203	11,437	44,928
Flood Risk Area				
Greater Manchester	83,312	892	1,735	8,775
Liverpool & Sefton	34,256	245	1,460	3,339

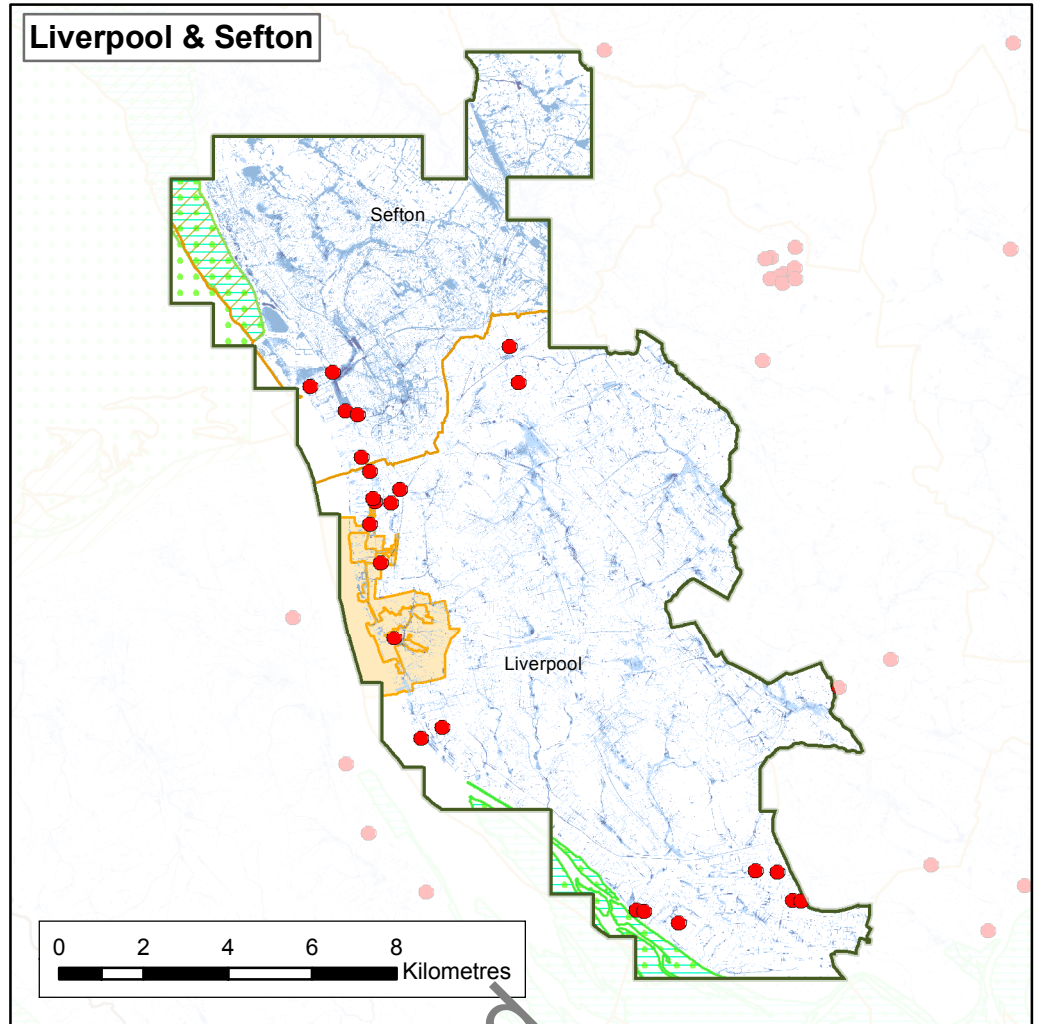
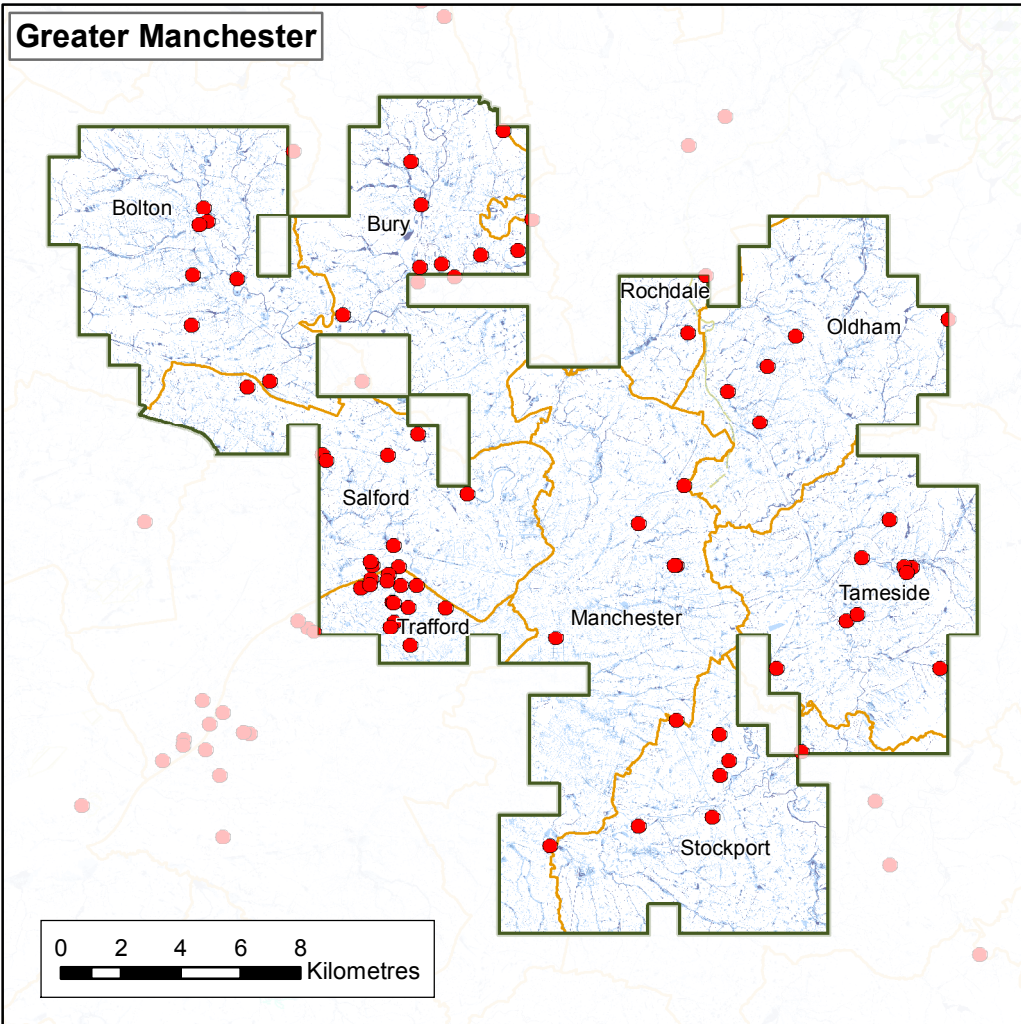
Airports				
Defined Area	Number of airports in defined area	Number of airports in defined area at high risk	Number of airports in defined area at medium risk	Number of airports in defined area at low risk
River Basin District				
North West	3	0	1	0
Flood Risk Area				
Greater Manchester	0	0	0	0
Liverpool & Sefton	1	0	1	0

Roads				
Defined Area	Length of roads (km) in defined area	Length of roads (km) in defined area at high risk	Length of roads (km) in defined area at medium risk	Length of roads (km) in defined area at low risk
River Basin District				
North West	3,824	181	231	659
Flood Risk Area				
Greater Manchester	498	21	42	125
Liverpool & Sefton	193	9	25	48

Railways				
Defined Area	Length of railways (km) in defined area	Length of railways (km) in defined area at high risk	Length of railways (km) in defined area at medium risk	Length of railways (km) in defined area at low risk
River Basin District				
North West	1,590	105	129	227
Flood Risk Area				
Greater Manchester	183	15	20	32
Liverpool & Sefton	77	6	16	13

Agricultural Land (Grades 1, 2 & 3)				
Defined Area	Area of agricultural land (hectares) in defined area	Area of agricultural land (hectares) in defined area at high risk	Area of agricultural land (hectares) in defined area at medium risk	Area of agricultural land (hectares) in defined area at low risk
River Basin District				
North West	437,389	9,377	6,704	24,043
Flood Risk Area				
Greater Manchester	3,965	141	92	312
Liverpool & Sefton	1,400	10	44	98

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**Surface Water
Flood Risk Map**

**North West
River Basin District**

**Risk to the
Natural and Historic
Environment**

Flood Risk Source

Surface Water

- High
- Medium
- Low

Internationally Designated Sites

- Bathing Waters that may be adversely affected by heavy rainfall and are within 50m of flood risk
- EPR (Environmental Permitting Regulations) Installations within 50m of Risk

Reporting Boundaries

- Flood Risk Area
- Flood Risk Area (Neighbouring)
- River Basin District
- River Basin Districts (Neighbouring)
- Lead Local Flood Authorities

Internationally Designated Sites

- Special Areas of Conservation
- Special Protection Areas
- RAMSAR Sites
- World Heritage Sites

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Tables showing what is at risk of flooding from surface water in the North West River Basin District:

Bathing Waters that may be adversely affected by heavy rainfall				
Defined Area	Number of bathing water sites in defined area	Number of bathing water sites in defined area within 50m of high risk	Number of bathing water sites in defined area within 50m of medium risk	Number of bathing water sites in defined area within 50m of low risk
River Basin District				
North West	25	2	1	4
Flood Risk Area				
Greater Manchester	0	0	0	0
Liverpool & Sefton	0	0	0	0

Environmental Permitting Regulations (EPR) Installations				
Defined Area	Number of EPR Installations in defined area	Number of EPR Installations in defined area within 50m of high risk	Number of EPR Installations in defined area within 50m of medium risk	Number of EPR Installations in defined area within 50m of low risk
River Basin District				
North West	477	208	95	123
Flood Risk Area				
Greater Manchester	75	35	23	17
Liverpool & Sefton	25	7	8	10

Special Areas of Conservation (SAC)				
Defined Area	Area of SAC (hectares) in defined area	Area of SAC (hectares) in defined area at high risk	Area of SAC (hectares) in defined area at medium risk	Area of SAC (hectares) in defined area at low risk
River Basin District				
North West	124,227	1,217	823	2,805
Flood Risk Area				
Greater Manchester	11	1	2	3
Liverpool & Sefton	327	0	0	0

Special Protection Areas (SPA)				
Defined Area	Area of SPA (hectares) in defined area	Area of SPA (hectares) in defined area at high risk	Area of SPA (hectares) in defined area at medium risk	Area of SPA (hectares) in defined area at low risk
River Basin District				
North West	130,472	422	334	2,442
Flood Risk Area				
Greater Manchester	0	0	0	0
Liverpool & Sefton	772	0	0	0

Ramsar				
Defined Area	Area of Ramsar (hectares) in defined area	Area of Ramsar (hectares) in defined area at high risk	Area of Ramsar (hectares) in defined area at medium risk	Area of Ramsar (hectares) in defined area at low risk
River Basin District				
North West	64,880	49	216	320
Flood Risk Area				
Greater Manchester	0	0	0	0
Liverpool & Sefton	594	0	0	0

World Heritage Sites (WHS)				
Defined Area	Area of WHS (hectares) in defined area	Area of WHS (hectares) in defined area at high risk	Area of WHS (hectares) in defined area at medium risk	Area of WHS (hectares) in defined area at low risk
River Basin District				
North West	3,976	42	36	148
Flood Risk Area				
Greater Manchester	0	0	0	0
Liverpool & Sefton	681	7	15	57

Sites of Special Scientific Interest (SSSI)				
Defined Area	Area of SSSI (hectares) in defined area	Area of SSSI (hectares) in defined area at high risk	Area of SSSI (hectares) in defined area at medium risk	Area of SSSI (hectares) in defined area at low risk
River Basin District				
North West	157,317	2,169	1,480	5,462
Flood Risk Area				
Greater Manchester	38	3	3	6
Liverpool & Sefton	740	0	7	6

Parks and Gardens				
Defined Area	Area of parks and gardens (hectares) in defined area	Area of parks and gardens (hectares) in defined area at high risk	Area of parks and gardens (hectares) in defined area at medium risk	Area of parks and gardens (hectares) in defined area at low risk
River Basin District				
North West	8,630	180	157	507
Flood Risk Area				
Greater Manchester	505	17	10	30
Liverpool & Sefton	562	10	17	57

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These maps have been superseded

Tables showing what is at risk of flooding from surface water in the North West River Basin District:

Scheduled Ancient Monuments				
Defined Area	Area of scheduled ancient monuments (hectares) in defined area	Area of scheduled ancient monuments (hectares) in defined area at high risk	Area of scheduled ancient monuments (hectares) in defined area at medium risk	Area of scheduled ancient monuments (hectares) in defined area at low risk
River Basin District				
North West	2,111	31	20	84
Flood Risk Area				
Greater Manchester	4	0	0	0
Liverpool & Sefton	3	0	0	0

Listed Buildings				
Defined Area	Number of listed buildings in defined area	Number of listed buildings in defined area at high risk	Number of listed buildings in defined area at medium risk	Number of listed buildings in defined area at low risk
River Basin District				
North West	21,820	583	309	825
Flood Risk Area				
Greater Manchester	1,953	23	29	82
Liverpool & Sefton	1,707	7	41	63

Licenced Abstractions				
Defined Area	Number of licenced abstraction sites in defined area	Number of licenced abstraction sites in defined area at high risk	Number of licenced abstraction sites in defined area at medium risk	Number of licenced abstraction sites in defined area at low risk
River Basin District				
North West	2,173	325	62	221
Flood Risk Area				
Greater Manchester	141	11	0	20
Liverpool & Sefton	77	3	2	11

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