
This publication was withdrawn on 20 October 2022

We have withdrawn this document because these maps have been superseded.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 - Humber River Basin District

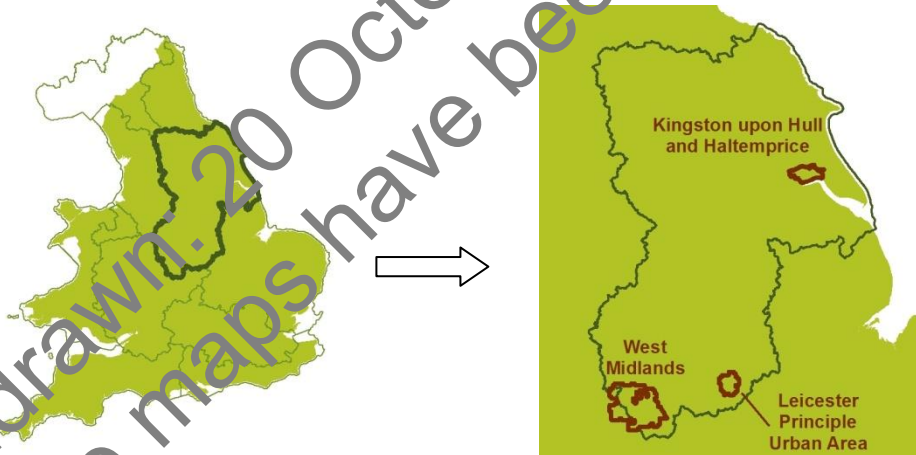
Why have we produced these maps – what can they be used for?

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 Humber River Basin District as shown in the figure below:



The 'West Midlands' Flood Risk Area crosses into the Severn River Basin District, but is reported under the Humber River Basin District in which it predominantly sits.

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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Special Areas of Conservation, Special Protection Areas and Ramsar

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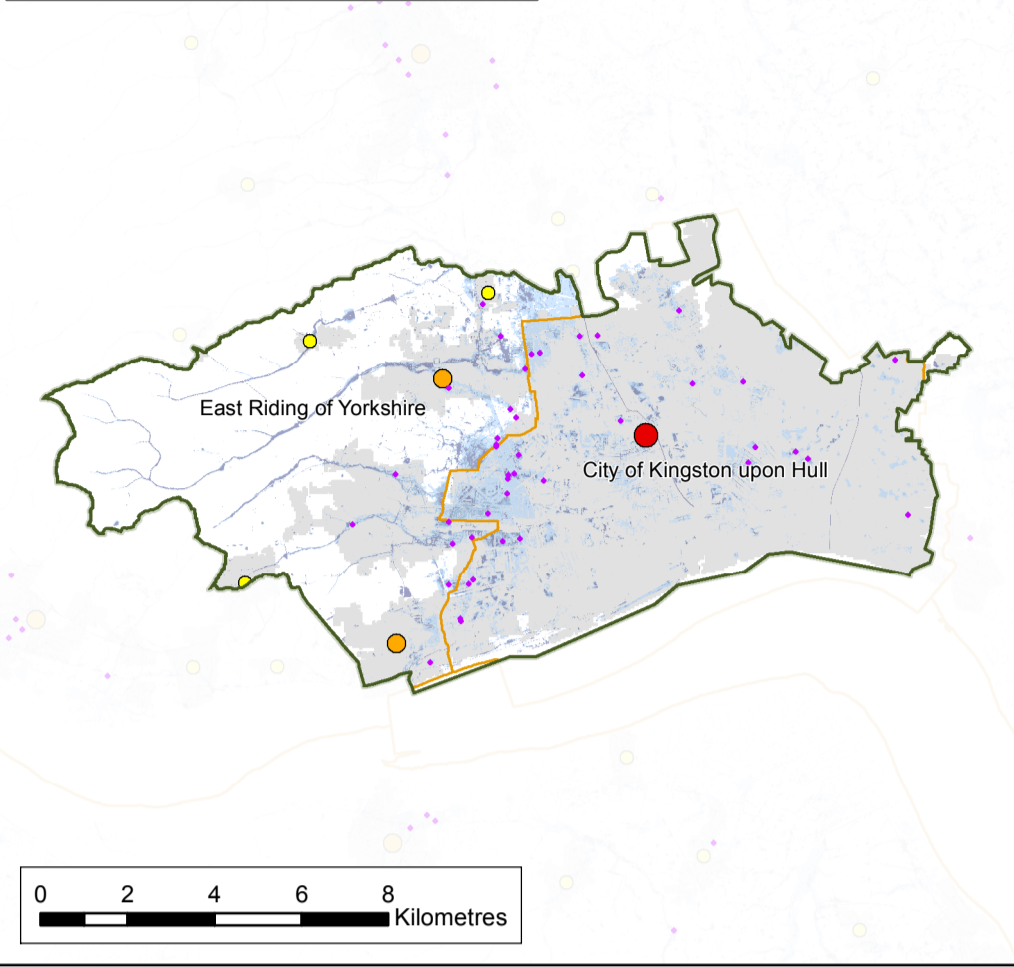
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World Heritage Sites

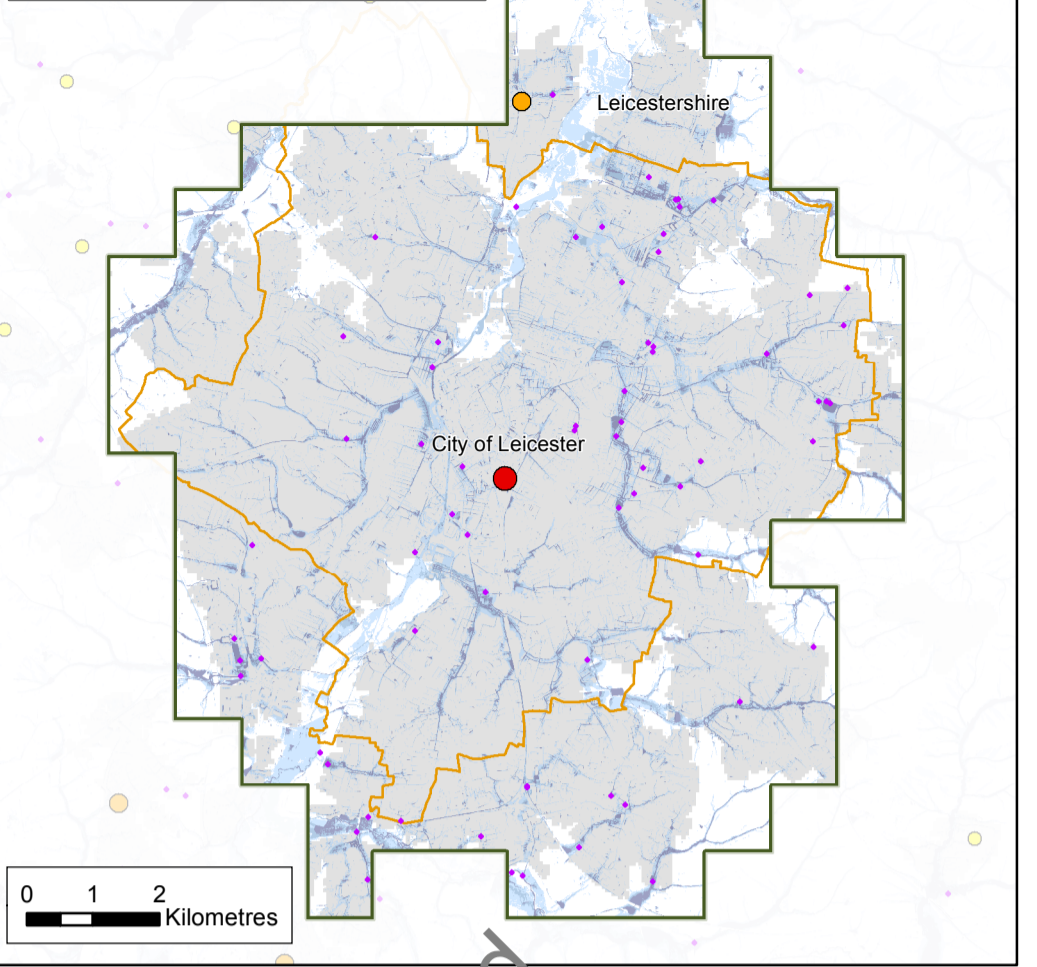
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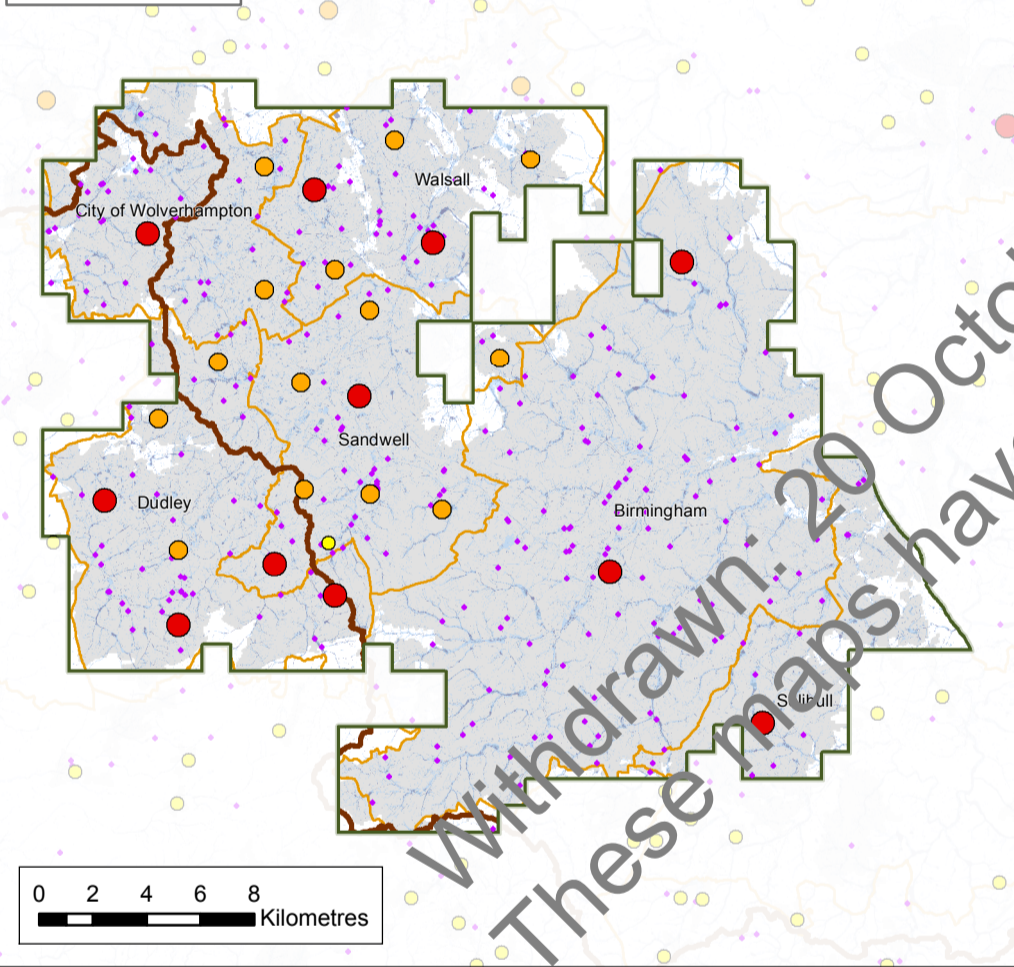
Kingston upon Hull & Haltemprice



Leicester Principal Urban Area



West Midlands



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**Surface Water
Flood Risk Map**

**Humber
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 Authorities

- Services at Risk
- Built-up Areas



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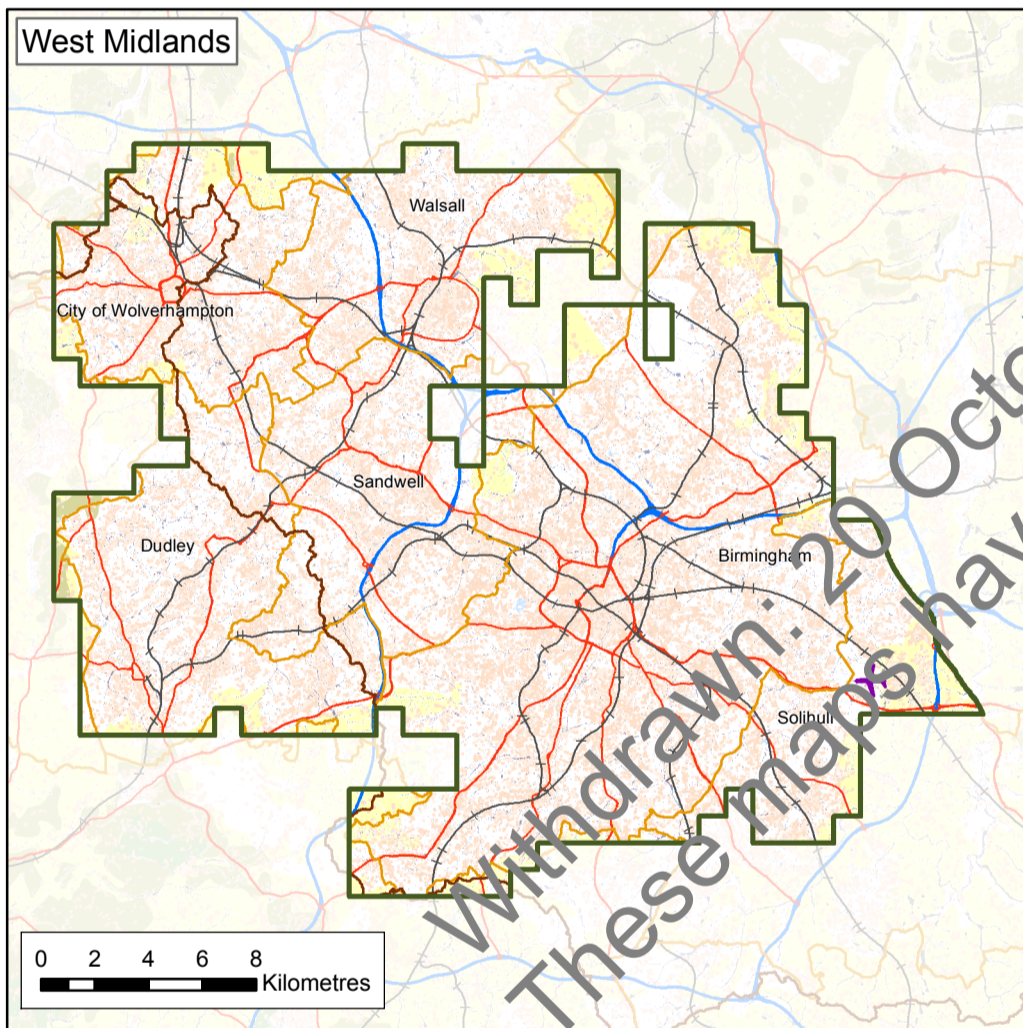
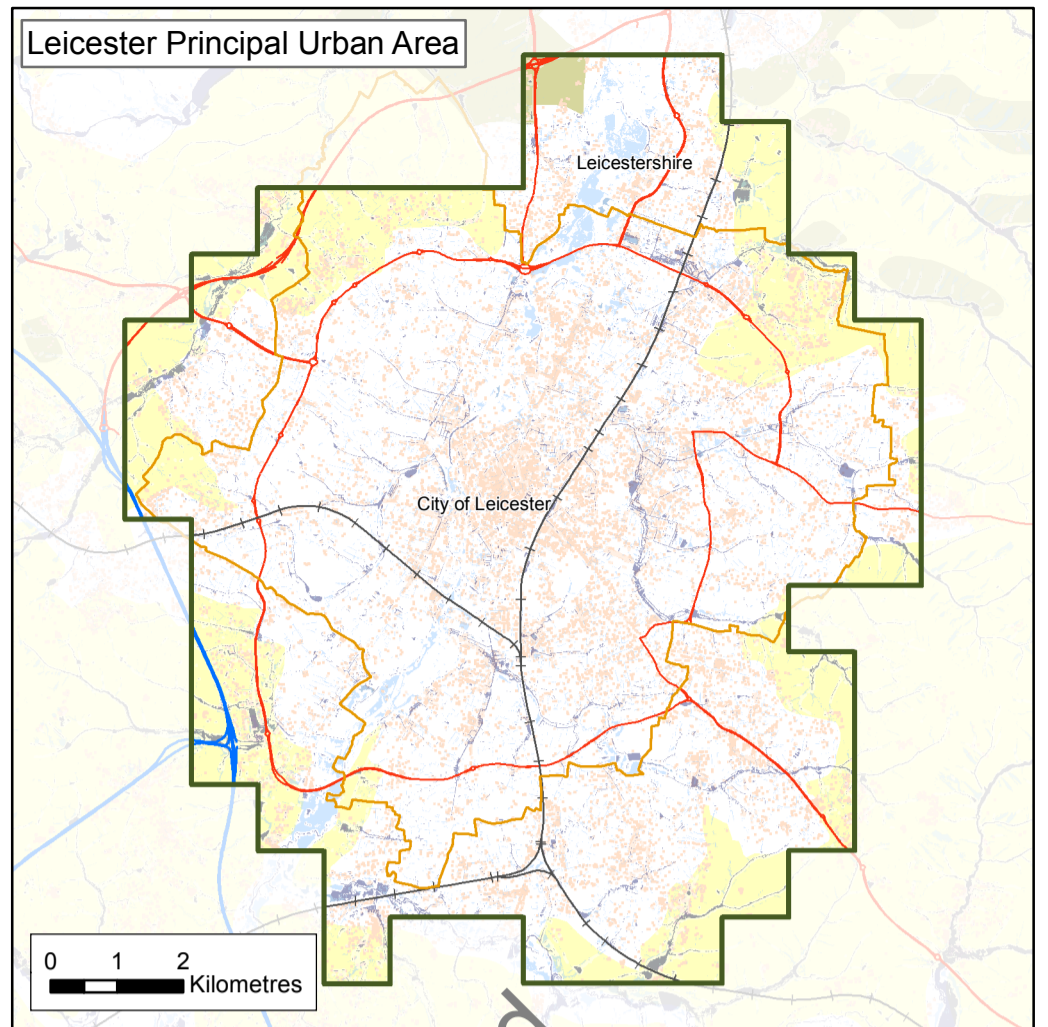
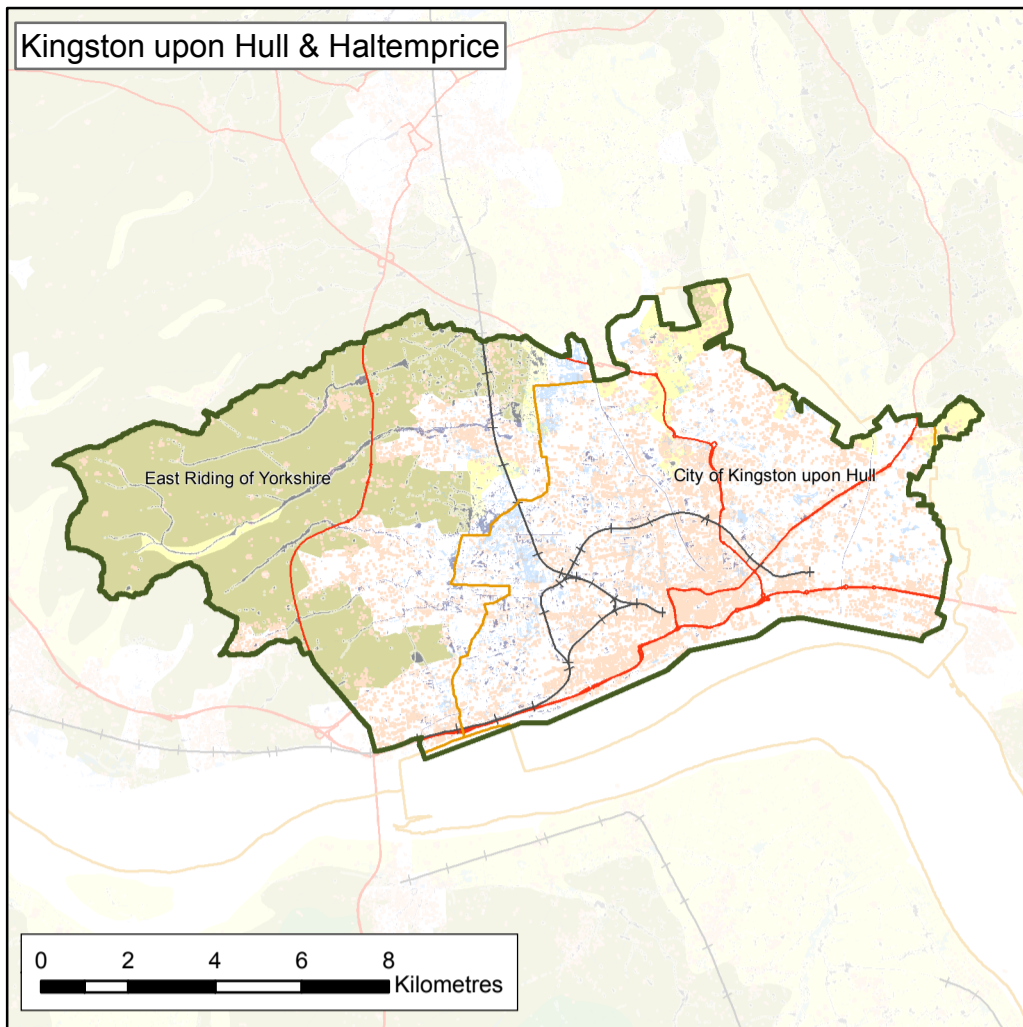
Tables showing what is at risk of flooding from surface water in the Humber River Basin District:

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				
Humber	11,713,119	77,816	158,461	815,760
Flood Risk Area				
Kingston upon Hull & Haltemprice	336,574	2,543	7,017	36,632
Leicester Principal Urban Area	413,332	5,217	9,675	42,371
West Midlands	2,200,326	12,495	36,016	167,712

The figures in the above table are preliminary figures using a high level national methodology for assessing properties that may be in areas at risk from surface water flooding. The methodology does not take into account all local conditions, local topography and below ground domestic lateral and highway drains. This information has not been validated or agreed by Lead Local Flood Authorities.

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				
Humber	19,410	33	362	1,611
Flood Risk Area				
Kingston upon Hull & Haltemprice	368	3	4	38
Leicester Principal Urban Area	446	16	9	47
West Midlands	2,084	25	50	222

Withdrawn: 20 October 2022
 These maps have been superseded



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Surface Water Flood Risk Map

Humber 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 Humber 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				
Humber	1,132,424	14,062	18,828	84,750
Flood Risk Area				
Kingston upon Hull & Haltemprice	19,792	254	292	1,340
Leicester Principal Urban Area	23,412	517	693	3,164
West Midlands	115,722	1,101	2,564	12,244

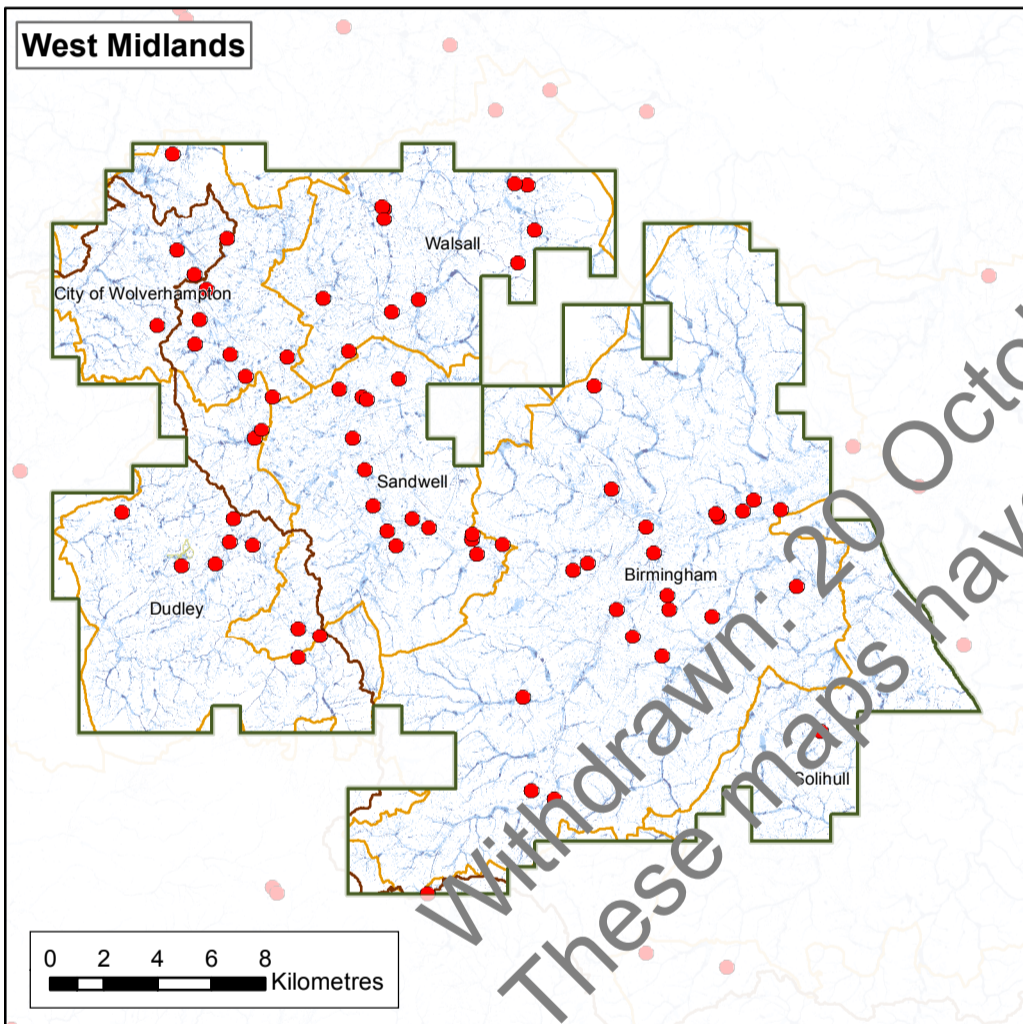
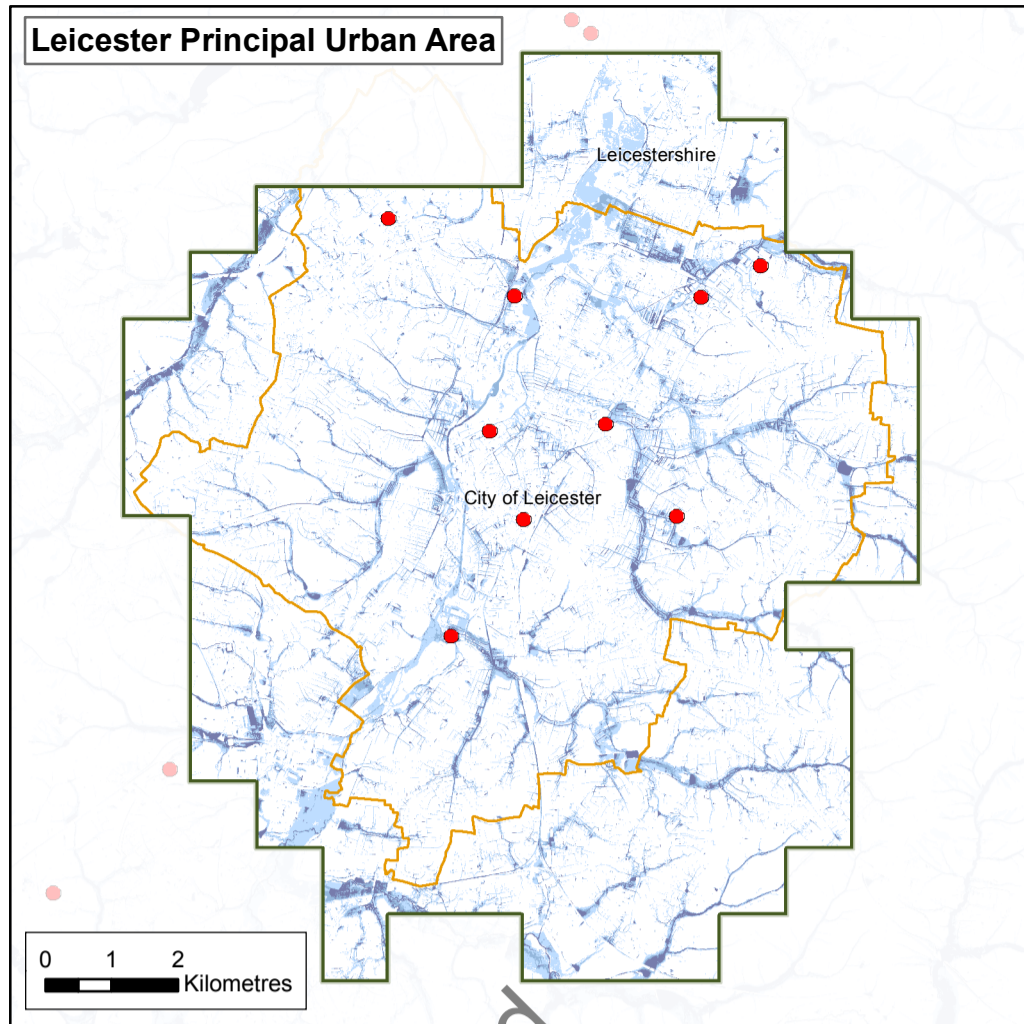
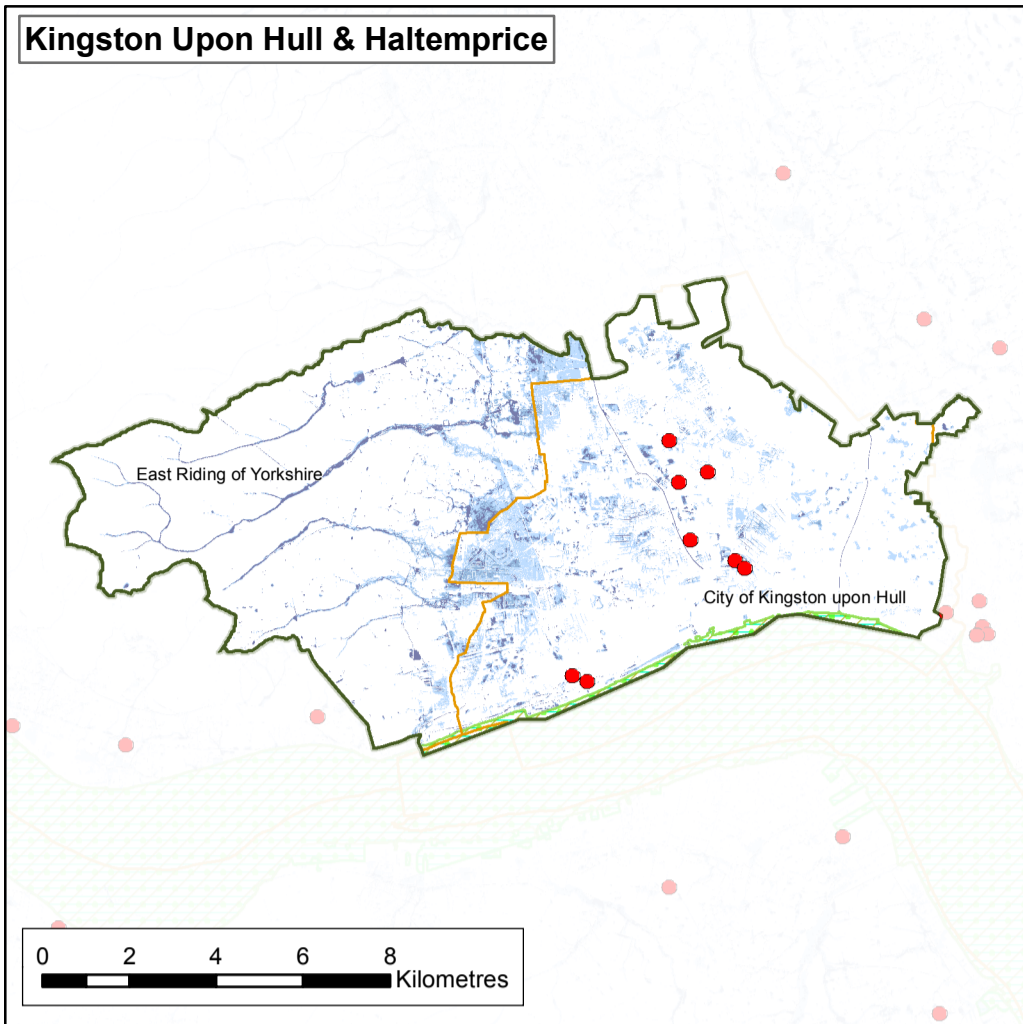
Airports				
Defined Area	Number of airports in defined area	Number of airports in defined area at high risk	Number of airports in defined area at medium risk	Number of airports in defined area at low risk
River Basin District				
Humber	5	0	0	0
Flood Risk Area				
Kingston upon Hull & Haltemprice	0	0	0	0
Leicester Principal Urban Area	0	0	0	0
West Midlands	1	0	0	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				
Humber	6,783	308	377	1,050
Flood Risk Area				
Kingston upon Hull & Haltemprice	70	1	1	3
Leicester Principal Urban Area	92	8	11	19
West Midlands	560	38	63	150

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				
Humber	2,826	137	131	308
Flood Risk Area				
Kingston upon Hull & Haltemprice	25	0	0	0
Leicester Principal Urban Area	25	3	2	4
West Midlands	219	18	27	42

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				
Humber	1,548,525	27,805	24,085	90,331
Flood Risk Area				
Kingston upon Hull & Haltemprice	5,099	140	69	162
Leicester Principal Urban Area	2,799	107	71	234
West Midlands	7,835	126	151	548

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**Surface Water
Flood Risk Map**

**Humber
River Basin District**

**Risk to the
Natural and Historic
Environment**

Flood Risk Source

Surface Water

- High
- Medium
- Low

Internationally Designated

- 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

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

**Environment
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Tables showing what is at risk of flooding from surface water in the Humber 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				
Humber	9	1	3	1
Flood Risk Area				
Kingston upon Hull & Haltemprice	0	0	0	0
Leicester Principal Urban Area	0	0	0	0
West Midlands	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				
Humber	869	271	156	236
Flood Risk Area				
Kingston upon Hull & Haltemprice	14	3	1	4
Leicester Principal Urban Area	9	6	2	1
West Midlands	83	32	25	16

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				
Humber	189,177	1,539	1,062	8,907
Flood Risk Area				
Kingston upon Hull & Haltemprice	200	0	0	0
Leicester Principal Urban Area	0	0	0	0
West Midlands	20	1	0	2

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				
Humber	175,195	1,320	964	8,501
Flood Risk Area				
Kingston upon Hull & Haltemprice	200	0	0	0
Leicester Principal Urban Area	0	0	0	0
West Midlands	0	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				
Humber	37,810	20	2	248
Flood Risk Area				
Kingston upon Hull & Haltemprice	200	0	0	0
Leicester Principal Urban Area	0	0	0	0
West Midlands	0	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				
Humber	6,967	190	119	397
Flood Risk Area				
Kingston upon Hull & Haltemprice	0	0	0	0
Leicester Principal Urban Area	0	0	0	0
West Midlands	0	0	0	0

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				
Humber	213,598	2,405	1,624	10,770
Flood Risk Area				
Kingston upon Hull & Haltemprice	200	0	0	0
Leicester Principal Urban Area	2	0	0	0
West Midlands	785	27	49	100

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				
Humber	28,228	651	356	1,312
Flood Risk Area				
Kingston upon Hull & Haltemprice	66	4	3	14
Leicester Principal Urban Area	98	1	4	6
West Midlands	1,188	41	57	120

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These maps have been superseded

Tables showing what is at risk of flooding from surface water in the Humber 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				
Humber	8,916	163	117	429
Flood Risk Area				
Kingston upon Hull & Haltemprice	19	2	1	1
Leicester Principal Urban Area	30	2	1	4
West Midlands	587	15	23	50

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				
Humber	52,695	1,117	501	1,875
Flood Risk Area				
Kingston upon Hull & Haltemprice	578	4	2	4
Leicester Principal Urban Area	484	9	5	14
West Midlands	2,484	32	56	112

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				
Humber	6,438	1,081	176	66
Flood Risk Area				
Kingston upon Hull & Haltemprice	27	1	0	3
Leicester Principal Urban Area	17	3	0	5
West Midlands	159	12	1	32

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