

Flood Risk Maps

Risk of Flooding from Reservoirs - Severn River Basin District

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

Under the Flood Risk Regulations Natural Resources Wales have worked in partnership with the Environment Agency to publish Flood Risk Maps. These will be reviewed every six years. A series of Flood Risk Maps have been produced reflecting the different sources of flooding in each River Basin District. These will be used by Natural Resources Wales and the Environment Agency to inform the production of Flood Risk Management Plans.

What do the Risk Maps show?

The Risk of Flooding from Rivers and Sea Maps have been generated from the National Flood Risk Assessment (NaFRA) 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 Management Catchment and the total for the River Basin District.

This document contains the Risk of Flooding from Reservoirs Maps for the Severn River Basin District as shown in the figure below:



Risk to People Map

This map shows the number of inhabitants that could be affected by flooding 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 map (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 map.

(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 map 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 Map

This map shows the type of economic activity in the area potentially affected by flooding. All economic activity is shown on the map - 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 map.

(Source: Ordnance Survey Strategi®)

Railways

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

Roads

Motorways, primary and trunk routes are displayed on the map, 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. The map shows the best and most versatile land - Grades 1, 2 and 3.

(Source: Natural England / Welsh Government)

Risk to Natural and Historic Environment Map

This map shows 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 map as clear as possible, only internationally designated environmental sites have been displayed on the map. 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 map 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 map 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 map 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 map regardless of risk. (Source: *English Heritage / Cadw*)

Bathing Waters

Bathing waters are shown on the map 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 map. (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)*)

Reporting Boundaries used on maps and for tabular statistics

The figures quoted for the River Basin District may not be the same as the total of all the Management Catchments. This is because River Basin Districts also include adjacent transitional and coastal waters.

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 comprises one or more individual catchments. A River Basin District is made up of one or several river basins, together with associated coastal waters.

Management Catchments

A catchment is an area with several, often interconnected, water bodies (rivers, lakes, groundwater and coastal waters). Many of the problems facing our water environments are best understood and tackled at a catchment level. There are 101 Management Catchments across the 11 River Basin Districts.

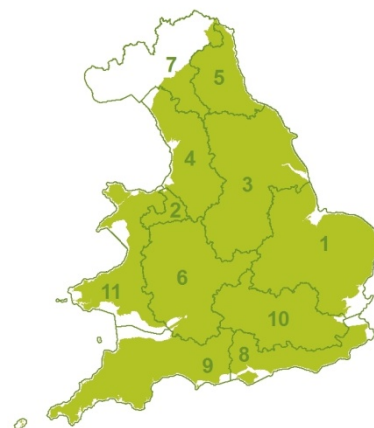
Further Information

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	✓	✓	✓



customer service line
03708 506 506

incident hotline
0800 80 70 60

floodline
0845 988 1188

www.environment-agency.gov.uk

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River Basin Districts and Management Catchment

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Agricultural Land Classification

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Special Areas of Conservation, Special Protection Areas and Ramsar

England:

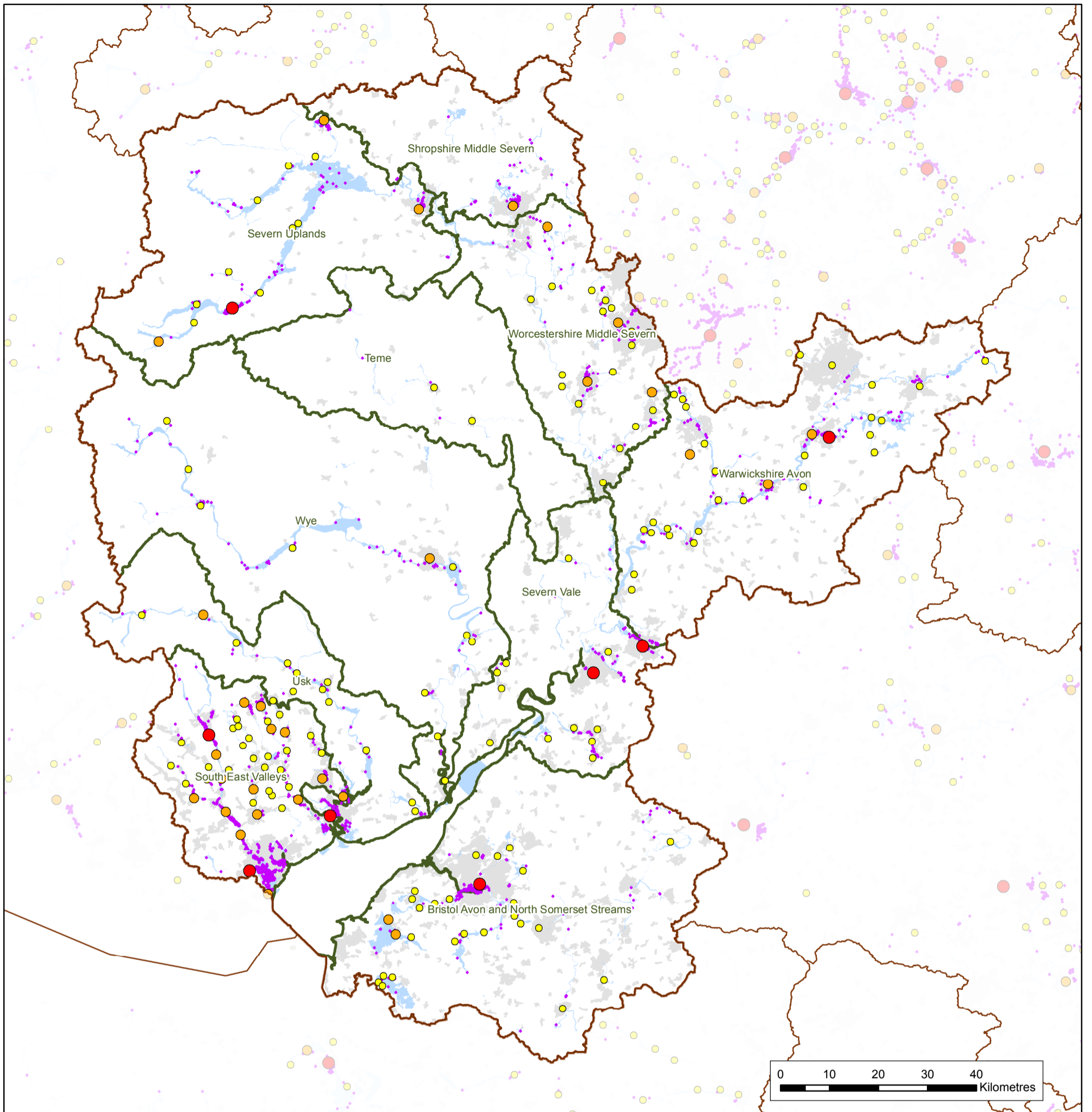
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World Heritage Sites

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Reservoirs Flood Risk Map

Severn River Basin District

Risk to People

Flood Risk Source

Reservoirs

- Maximum extent of flooding



People at Risk

- 0 - 1000
- 1001 - 5000
- 5001 +

Reporting Boundaries

- River Basin District
- River Basin Districts (Neighbouring)
- Management Catchment

- Built-up Areas
- Services at Risk

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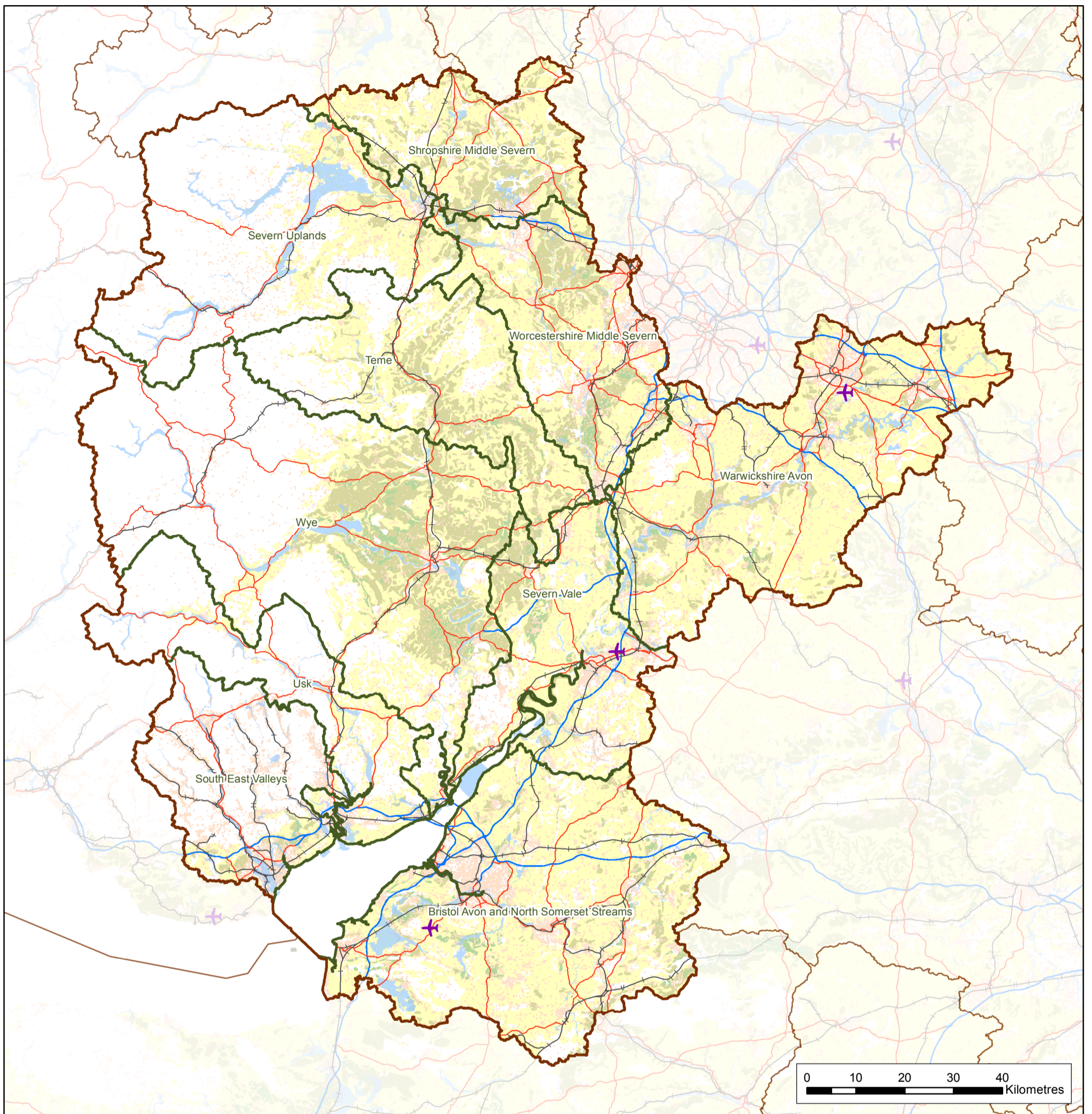
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Tables showing what is at risk of flooding from reservoirs in the Severn River Basin District:

People		
Defined Area	Number of people in defined area	Number of people in defined area at risk
River Basin District		
Severn	5,778,194	262,143
Management Catchment		
Bristol Avon and North Somerset Streams	1,469,573	23,768
Severn Uplands	177,916	19,465
Severn Vale	502,153	16,419
Shropshire Middle Severn	173,989	2,914
South East Valleys	1,046,481	142,394
Teme	93,159	132
Usk	198,342	16,302
Warwickshire Avon	1,020,563	22,356
Worcestershire Middle Severn	834,849	14,182
Wye	261,148	4,209

Services		
Defined Area	Number of sites in defined area	Number of sites in defined area at risk
River Basin District		
Severn	12,926	740
Management Catchment		
Bristol Avon and North Somerset Streams	2,606	80
Severn Uplands	949	100
Severn Vale	1,077	29
Shropshire Middle Severn	782	33
South East Valleys	1,413	223
Teme	552	4
Usk	489	50
Warwickshire Avon	2,211	91
Worcestershire Middle Severn	1,589	84
Wye	1,252	46



Reservoirs Flood Risk Map

Severn River Basin District

Risk to Economic Activity

Flood Risk Source

Reservoirs

Maximum extent of flooding

Economic Activity

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

Reporting Boundaries

- River Basin District
- River Basin Districts (Neighbouring)
- Management Catchment

Agricultural Land Classification

- Grade 1
- Grade 2
- Grade 3



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Tables showing what is at risk of flooding from reservoirs in the Severn River Basin District:

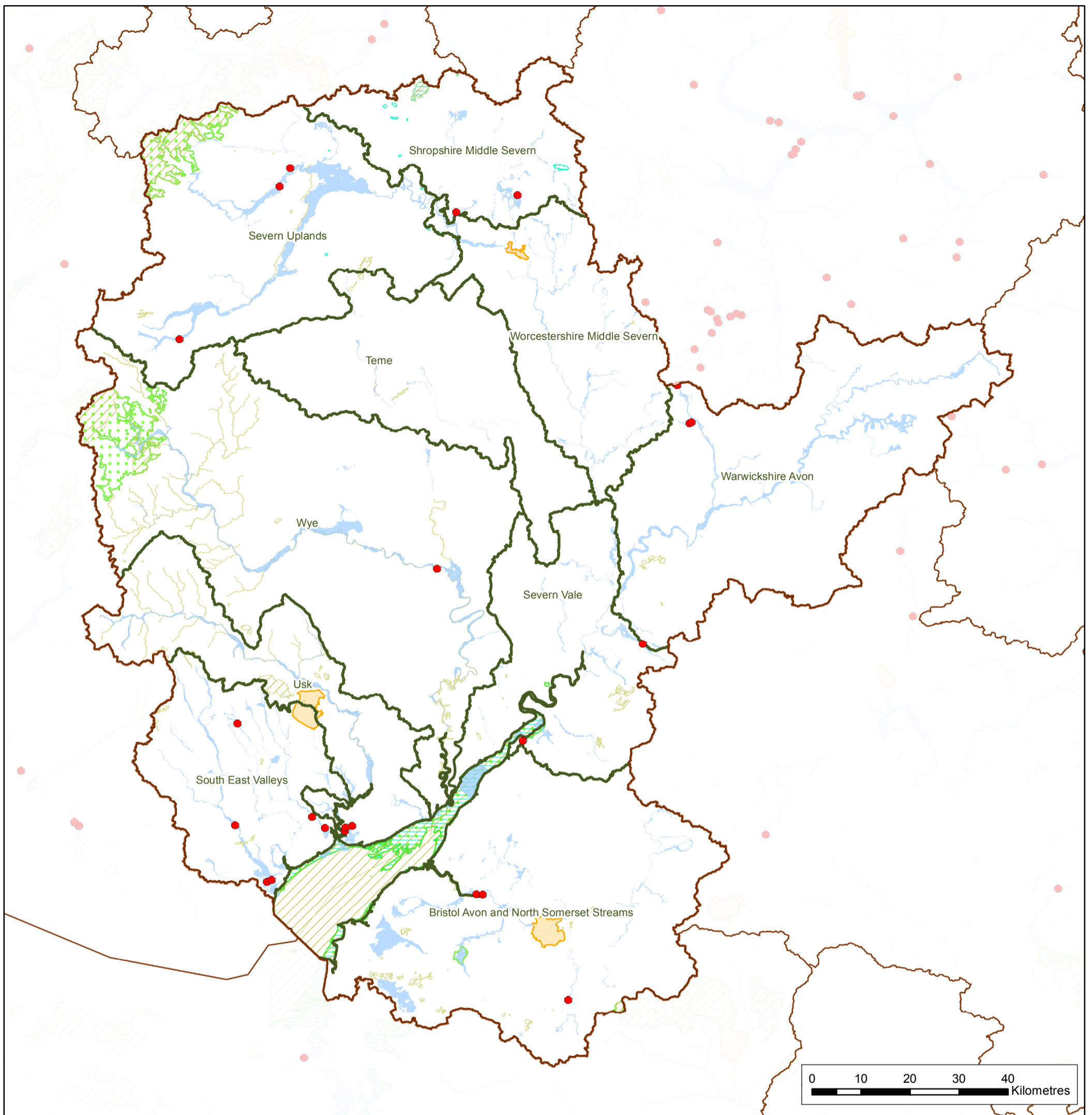
Non Residential Properties		
Defined Area	Number of properties in defined area	Number of properties in defined area at risk
River Basin District		
Severn	779,906	36,890
Management Catchment		
Bristol Avon and North Somerset Streams	175,598	5,829
Severn Uplands	55,817	5,448
Severn Vale	75,796	2,414
Shropshire Middle Severn	36,975	834
South East Valleys	75,691	12,736
Teme	36,441	81
Usk	33,594	2,733
Warwickshire Avon	119,600	3,332
Worcestershire Middle Severn	82,562	1,838
Wye	87,740	1,604

Airports		
Defined Area	Number of airports in defined area	Number of airports in defined area at risk
River Basin District		
Severn	3	0
Management Catchment		
Bristol Avon and North Somerset Streams	1	0
Severn Uplands	0	0
Severn Vale	1	0
Shropshire Middle Severn	0	0
South East Valleys	0	0
Teme	0	0
Usk	0	0
Warwickshire Avon	1	0
Worcestershire Middle Severn	0	0
Wye	0	0

Roads		
Defined Area	Length of roads in defined area (km)	Length of roads in defined area (km) at risk
River Basin District		
Severn	4,128	201
Management Catchment		
Bristol Avon and North Somerset Streams	717	22
Severn Uplands	227	43
Severn Vale	401	26
Shropshire Middle Severn	177	6
South East Valleys	282	23
Teme	95	0
Usk	284	14
Warwickshire Avon	885	29
Worcestershire Middle Severn	514	8
Wye	531	28

Railways		
Defined Area	Length of railways in defined area (km)	Length of railways in defined area (km) at risk
River Basin District		
Severn	1,494	100
Management Catchment		
Bristol Avon and North Somerset Streams	342	18
Severn Uplands	109	21
Severn Vale	118	1
Shropshire Middle Severn	65	0
South East Valleys	233	44
Teme	73	0
Usk	62	5
Warwickshire Avon	246	6
Worcestershire Middle Severn	107	3
Wye	134	2

Agricultural Land (Grade 1, 2 & 3)		
Defined Area	Area of agricultural land (hectares) in defined area	Area of agricultural land (hectares) in defined area at risk
River Basin District		
Severn	1,173,209	35,164
Management Catchment		
Bristol Avon and North Somerset Streams	230,404	6,669
Severn Uplands	58,798	4,659
Severn Vale	106,219	1,983
Shropshire Middle Severn	91,222	1,710
South East Valleys	16,952	658
Teme	104,740	464
Usk	29,212	2,154
Warwickshire Avon	242,716	7,853
Worcestershire Middle Severn	116,094	3,339
Wye	176,471	5,644



Reservoirs Flood Risk Map

Severn River Basin District

Risk to the Natural and Historic Environment

Flood Risk Source

Reservoirs

Maximum extent of flooding

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

River Basin District
 River Basin Districts (Neighbouring)
 Management Catchment

Special Areas of Conservation

Special Protection Areas

RAMSAR Sites

World Heritage Sites

Cyfoeth
Naturiol
Cymru
Natural
Resources
Wales

Environment
Agency

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Tables showing what is at risk of flooding from reservoirs in the Severn 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 risk
River Basin District		
Severn	5	0
Management Catchment		
Bristol Avon and North Somerset Streams	3	0
Severn Uplands	0	0
Severn Vale	0	0
Shropshire Middle Severn	0	0
South East Valleys	0	0
Teme	0	0
Usk	0	0
Warwickshire Avon	0	0
Worcestershire Middle Severn	0	0
Wye	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 risk
River Basin District		
Severn	473	23
Management Catchment		
Bristol Avon and North Somerset Streams	81	3
Severn Uplands	34	3
Severn Vale	36	2
Shropshire Middle Severn	40	2
South East Valleys	50	6
Teme	19	0
Usk	29	3
Warwickshire Avon	51	3
Worcestershire Middle Severn	49	0
Wye	84	1

Special Areas of Conservation (SAC)		
Defined Area	Area of SAC (hectares) in defined area	Area of SAC (hectares) in defined area at risk
River Basin District		
Severn	83,096	6,043
Management Catchment		
Bristol Avon and North Somerset Streams	2,453	1
Severn Uplands	10,838	16
Severn Vale	1,121	19
Shropshire Middle Severn	853	0
South East Valleys	574	2
Teme	293	19
Usk	2,993	592
Warwickshire Avon	374	0
Worcestershire Middle Severn	21	3
Wye	10,357	1,442

Special Protection Areas (SPA)		
Defined Area	Area of SPA (hectares) in defined area	Area of SPA (hectares) in defined area at risk
River Basin District		
Severn	51,050	3,968
Management Catchment		
Bristol Avon and North Somerset Streams	1,610	418
Severn Uplands	11,911	5
Severn Vale	514	48
Shropshire Middle Severn	0	0
South East Valleys	177	2
Teme	0	0
Usk	185	4
Warwickshire Avon	0	0
Worcestershire Middle Severn	0	0
Wye	19,939	215

Ramsar		
Defined Area	Area of Ramsar (hectares) in defined area	Area of Ramsar (hectares) in defined area at risk
River Basin District		
Severn	19,564	3,335
Management Catchment		
Bristol Avon and North Somerset Streams	583	0
Severn Uplands	77	0
Severn Vale	514	48
Shropshire Middle Severn	1,233	0
South East Valleys	177	2
Teme	0	0
Usk	185	4
Warwickshire Avon	0	0
Worcestershire Middle Severn	13	0
Wye	68	4

World Heritage Sites (WHS)		
Defined Area	Area of WHS (hectares) in defined area	Area of WHS (hectares) in defined area at risk
River Basin District		
Severn	6,719	85
Management Catchment		
Bristol Avon and North Somerset Streams	2,868	37
Severn Uplands	0	0
Severn Vale	0	0
Shropshire Middle Severn	0	0
South East Valleys	1,786	6
Teme	0	0
Usk	1,523	0
Warwickshire Avon	0	0
Worcestershire Middle Severn	543	43
Wye	0	0

Tables showing what is at risk of flooding from reservoirs in the Severn River Basin District:

Sites of Special Scientific Interest (SSSI)		
Defined Area	Area of SSSI (hectares) in defined area	Area of SSSI (hectares) in defined area at risk
River Basin District		
Severn	115,048	8,116
Management Catchment		
Bristol Avon and North Somerset Streams	8,091	581
Severn Uplands	15,155	68
Severn Vale	3,940	129
Shropshire Middle Severn	1,759	38
South East Valleys	6,737	165
Teme	4,255	139
Usk	15,888	1,083
Warwickshire Avon	2,430	294
Worcestershire Middle Severn	3,657	159
Wye	35,724	1,716

Parks and Gardens		
Defined Area	Area of parks and gardens (hectares) in defined area	Area of parks and gardens (hectares) in defined area at risk
River Basin District		
Severn	29,153	1,391
Management Catchment		
Bristol Avon and North Somerset Streams	6,912	64
Severn Uplands	1,636	43
Severn Vale	1,728	86
Shropshire Middle Severn	1,500	40
South East Valleys	1,440	291
Teme	2,387	31
Usk	1,331	120
Warwickshire Avon	3,866	373
Worcestershire Middle Severn	3,198	222
Wye	5,152	120

Scheduled Ancient Monuments		
Defined Area	Area of scheduled ancient monuments (hectares) in defined area	Area of scheduled ancient monuments (hectares) in defined area at risk
River Basin District		
Severn	7,219	315
Management Catchment		
Bristol Avon and North Somerset Streams	1,253	35
Severn Uplands	858	66
Severn Vale	555	2
Shropshire Middle Severn	187	1
South East Valleys	459	7
Teme	540	0
Usk	483	41
Warwickshire Avon	1,466	130
Worcestershire Middle Severn	421	26
Wye	977	8

Listed Buildings		
Defined Area	Number of listed buildings in defined area	Number of listed buildings in defined area at risk
River Basin District		
Severn	62,922	3,364
Management Catchment		
Bristol Avon and North Somerset Streams	18,031	483
Severn Uplands	4,325	725
Severn Vale	7,538	248
Shropshire Middle Severn	1,888	39
South East Valleys	2,275	571
Teme	3,602	33
Usk	2,852	320
Warwickshire Avon	10,081	447
Worcestershire Middle Severn	4,728	209
Wye	7,572	265

Tables showing what is at risk of flooding from reservoirs in the Severn River Basin District:

Licensed Abstractions		
Defined Area	Number of licensed abstraction sites in defined area	Number of licensed abstraction sites in defined area at risk
River Basin District		
Severn	4,401	896
Management Catchment		
Bristol Avon and North Somerset Streams	404	59
Severn Uplands	235	62
Severn Vale	315	28
Shropshire Middle Severn	626	88
South East Valleys	206	48
Teme	162	26
Usk	171	26
Warwickshire Avon	929	288
Worcestershire Middle Severn	576	139
Wye	774	132