

A Data sources used in this SFRA

A.1 Historical Flooding

Solihull Metropolitan Borough Council provided recorded flood incidences as point data and recent Section 19 reporting for the area. This information is presented in section 4.3 of the main report.

The Environment Agency's Historic Flood Map, which was downloaded from the DEFRA Data Services Platform in August 2026, is presented in Appendix D: Mapping.

A.2 Fluvial Flooding

A.2.1 Flood Zones 2 and 3a

The 'Fluvial Model Flood Zone 2 and 3a', as shown in Appendix D, show the 1000-year (0.1% AEP) and 100-year (1% AEP) fluvial extents respectively from the detailed model outputs where they are available. These model outputs were obtained from the Environment Agency in August 2026. The provided models are detailed in Table 1

Table 1 - Models and outputs provided by the Environment Agency for the SMBC Level 1 SFRA

Model / Watercourse	Modeller	Model Year	Software	Defended Outputs	Undefended outputs
Coventry Hazard Mapping SFRM2	Halcrow	2011	1D/2D ISIS/TUFLOW	20%,10%,5%,2%,1.33%,1%,0.5%,0.1%	1%,0.1%
Hatchford Brook	Mott Macdonald	2017	1D/2D ISIS/TUFLOW	50%, 20%, 10%, 5%, 3.3%, 2%, 1%, 0.5%, 0.1%	N/A
River Sherbourne	Capita	2019	1D/2D ISIS/TUFLOW	50%, 20%, 10%, 5%, 3.3%, 2%, 1.33%, 1%, 0.5%, 0.1%	N/A
River Cole FMS	AECOM	2023	1D/2D Flood Modeller - TUFLOW	50%, 20%, 10%, 5%, 3.33%, 2%, 1.33%, 1%, 0.5%, 0.1%	1%, 0.1%

The Environment Agency's Flood Map for Planning Flood Zones 2 and 3, which were downloaded from the DEFRA Data Services Platform in August 2026, are also shown in Appendix D. These should be used where detailed model outputs are not available.

A.2.2 Flood Zone 3b (The functional floodplain)

All of the hydraulic models obtained for this SFRA in August 2026, except for the Coventry Hazard Mapping SFRM2 modelling, contain the 3.3% AEP event. Due to the Coventry model extents affecting only a limited and rural part of the study area, it was not deemed necessary to re-run the model to extract the currently unavailable 3.3% AEP event.

For areas not covered by detailed EA models (or where suitable model outputs were not available), the Risk of Flooding from Rivers and Sea 3.3% AEP defended national mapping layer was used as a proxy. Detailed modelling may be required at site-specific FRA stage to determine Flood Zone 3b where there is currently no detailed modelling available.

A.3 Climate Change

Detailed Environment Agency models were obtained under licence for this SFRA in July 2026. The original climate change uplifts that were used as part of the modelling for the River Cole and Hatchford Brook model are within +/- 10% of the latest 2080s Central (+22%), Higher Central; (+30%) and Upper End (+51%) climate change allowance.

Surface water climate change has been assessed using the Environment Agency's national Surface Water Spatial Planning product data, which uses the Upper End climate change allowance and a long-term epoch. Within the Borough this is equal to:

- 3.3% AEP +35% CC
- 1% AEP +40% CC

Please refer to Section 5 of the Level 1 report for information on the approach to climate change in this SFRA.

A.4 Surface water flooding

Mapping of surface water flood risk in the study area has been taken primarily from the Risk of Flooding from Surface Water Spatial Planning dataset published online from the Environment Agency. These were downloaded from DEFRA Data Services Platform in July 2026. The mapping is intended to provide a consistent standard of assessment for surface water flood risk across England and Wales in order to help LLFAs, the Environment Agency and any potential developers to focus their management of surface water flood risk.

The Risk of Flooding from Surface Water dataset is derived primarily from identifying topographical flow paths of existing watercourses or dry valleys that contain some isolated ponding locations in low lying areas. They provide a map which then outlines flood risk

categorised in which annual exceedance probability, 1in30 (3.3% AEP), 1in100 (1% AEP), 1in 1000 (0.1% AEP) land is inundated by surface water.

In some areas of the SMBC area, detailed surface water and in some areas combined fluvial, surface water modelling using InfoWorks ICM modelling has been undertaken to better understand surface water and associated ordinary watercourse flood risk in:

- Hockley Heath
- Meriden
- Park Avenue
- Cheswick Green / Dickens Heath

Where these models exist, outputs have been compared with the national dataset, and it appears they have been used to inform the national mapping. While the Level 1 SFRA is primarily concerned with the overall flood risk across the Borough, when undertaking further assessment developers should take into account the presence of these detailed models to inform any required site-specific modelling or assessment, and the depth, velocity and hazard to people data that they contain.

A.5 Groundwater

Mapping of groundwater flood risk has been based on the JBA Groundwater Emergence Map 5m Resolution. This has been provided by JBA Consulting in August 2026. The Groundwater Emergence Risk Map highlights areas where there is sufficient evidence to suggest that flooding should occur. This map should be interpreted as an initial indicative tool to assess groundwater emergence risk.

A.6 Sewers

Section 4.6 of the Main Report explains sewer flooding. Severn Trent Water is the water company responsible for the management of sewer drainage networks across the SMBC area. Historical Sewer flooding information has not been shared by Severn Trent to inform this SFRA. For further information on sewer flooding across the Borough, developers should consult Severn Trent Water.

Published Drainage and Wastewater Management Plans were used to understand sewer flood risk within the SMBC area.

A.7 Reservoirs

The risk of inundation because of reservoir breach or failure of reservoirs within the SMBC area has been mapped using the extent produced as part of the National Reservoir Flood Mapping (RFM) study, and are shown online on the [Long-Term Risk of Flooding website](#) at the time of the Level 1 SFRA publication.

The Environment Agency provides two flooding scenarios for the reservoir flood maps: a 'dry-day' scenario shows the predicted flooding which would occur if the dam or reservoir fails when rivers are at normal levels. The 'wet-day' scenario shows the predicted worsening of the flooding which would occur if the event occurred when the river is already experiencing an extreme natural flooding event.

Section 4.8.2 of the Main Report presents the reservoirs affecting SMBC's area.

A.8 Flood defences

The Environment Agency supplied the location of all flood defences within SMBC's area outlined in their AIMS database, including information relating to the type of flood defence and their standard of protection. The dataset was downloaded from the DEFRA Data Services Platform in August 2026. Section 6.4 of the Main Report provides information on flood defences and any known schemes completed or in progress if applicable.

A.9 Overview of supplied data

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Appendix A - Data Sources

This appendix provides details on the main data sources used as part of this Strategic Flood Risk Assessment (SFRA), including its purpose, licencing details, when the data was obtained for the SFRA, and where any updated data can be obtained by users of the SFRA.

Data used	Purpose of data	Data source	Date received	Where can data be obtained?	Licence details
Hydraulic models and outputs	Assess fluvial flood risk	Environment Agency	10/07/2026	Request from the Environment Agency via their Flood Map for Planning Service	Environment Agency Conditional Licence
Flood Map for Planning Flood Zones 2 and 3	Assess fluvial flood risk	Environment Agency	15/07/2026	Flood Map for Planning - Flood Zones	Open Government Licence
Flood Map For Planning Flood Zones plus Climate Change	Assess fluvial flood risk	Environment Agency	15/07/2026	Flood Map for Planning - Flood Zones plus Climate Change - data.gov.uk	Open Government Licence
Risk of Flooding from Rivers and Sea - 3.3% AEP Defended	Assess fluvial flood risk	Environment Agency	15/07/2026	Rivers and Sea 3.3% defended flood risk extents - present day	Open Government Licence
OS MasterMap Water Network	Assess fluvial flood risk	Environment Agency (via Solihull MBC)	24/07/2026	Defra Data Services Platform (only available to specified users)	Environment Agency Conditional Licence
Risk of Flooding from Surface Water	Assess surface water flood risk	Environment Agency	10/07/2026	Risk of Flooding from Surface Water	Open Government Licence
JBA's Groundwater Emergence Map	Assess groundwater flood risk	JBA Consulting	15/07/2026	Request from JBA Consulting (subject to licence fee)	JBA Consulting Licence
Groundwater Vulnerability Map	Assess groundwater flood risk	Environment Agency (via Solihull MBC)	24/07/2026	Defra Data Services Platform (only available to specified users)	Environment Agency Conditional Licence
Reservoir inundation mapping - Dry Day scenario	Assess reservoir flood risk	Environment Agency	15/07/2026	Reservoir inundation mapping - Dry Day scenario	Open Government Licence
Reservoir inundation mapping - Wet Day scenario	Assess reservoir flood risk	Environment Agency	15/07/2026	Reservoir inundation mapping - Wet Day scenario	Open Government Licence
Historic canal flooding breaches and overtopping information	Assessing flood risk from canals	Canal and River Trust	15/07/2026	Request from the Canal and River Trust	Canal and River Trust Licence
Historic Surface water flooding	Understand historic flood risk	SMBC	09/07/2026	Request from SMBC	SMBC Data Sharing Agreement
Sewer Flooding Recorded Incidents	Understand historic flood risk	JBA Consulting	N/A	Request from Severn Trent Water	-
List of known locations of historic flooding incidents	Understand historic flood risk	SMBC	09/07/2026	Request from SMBC	-
Historic Flood Map	Understand historic flood risk	Environment Agency	15/07/2026	Historic Flood Map	Open Government Licence
Recorded Flood Outlines	Understand historic flood risk	Environment Agency	15/07/2026	Recorded Flood Outlines	Open Government Licence
Flood defence data from AIMS database	Assessing impact of defences	Environment Agency	29/06/2026	Flood defence data from AIMS database	Open Government Licence
Lead Local Flood Authority Asset Register	Assessing impact of defences	SMBC	09/07/2026	Request from SMBC	SMBC Data Sharing Agreement
Aquifer designation map (bedrock geology)	Understanding the study area	Environment Agency (via Solihull MBC)	24/07/2026	Defra Data Services Platform (only available to specified users)	Environment Agency Conditional Licence
Aquifer designation map (superficial deposits)	Understanding the study area	Environment Agency (via Solihull MBC)	24/07/2026	Defra Data Services Platform (only available to specified users)	Environment Agency Conditional Licence
Environment Agency 1m LiDAR	Understanding the study area	Environment Agency	15/07/2026	LiDAR Composite Digital Terrain Model (DTM) - 1m	Open Government Licence
WFD catchment boundaries for CIA	Understanding the study area	Environment Agency	10/07/2026	WFD River Waterbody Catchments Cycle 2	Open Government Licence
Source Protection Zones (merged)	Understanding the study area	Environment Agency	10/07/2026	Source Protection Zones (merged)	Open Government Licence
Information on site allocations	Assessing the cumulative impacts of development	JBA Consulting	15/07/2026	Request from JBA Consulting	-
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Flood Alert Areas	Flood warning and emergency planning	Environment Agency	15/07/2026	Flood Alert Areas	Open Government Licence
Flood Warning Areas	Flood warning and emergency planning	Environment Agency	15/07/2026	Flood Warning Areas	Open Government Licence