

Section 19 Flood Investigation

Flooding at St Johns Road, Nuneaton 2023-2024

Warwickshire County Council as Lead Local Flood Authority

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1 EXECUTIVE SUMMARY

A single property on St John's Road, Nuneaton experienced seven instances of internal flooding within a 12-month period. As required by Section 19 of the Flood & Water Management Act 2010, Warwickshire County Council as Lead Local Flood Authority has a duty to investigate flooding where the appropriate thresholds have been met. Our thresholds for investigation are outlined in our local flood risk management strategy and have triggered the requirement for this report.

The Warwickshire County Council Flood Risk Management (FRM) team has investigated the property in question and the surrounding area. This entailed a desk top study and a site visit following the reported flooding. The investigation established that no other properties in the vicinity were affected by flooding during this period, however other areas of Warwickshire have been flooded during the same rainfall events. It was concluded that groundwater flooding is the most likely source of flooding and property flood resilience measures were recommended to the homeowner to mitigate potential future flooding impacts.

2 INTRODUCTION

2.1 The requirement to undertake this report

Section 19 of the Flood & Water Management Act 2010 (FWMA) requires that the Lead Local Flood Authority (LLFA) undertake an investigation (to the extent that it considers it necessary or appropriate) upon becoming aware of flooding in its area.

The role of the LLFA in Warwickshire is carried out by the FRM team at Warwickshire County Council (WCC).

The flood investigation must also determine the risk management authorities (RMAs) that have relevant FRM functions and whether each of those authorities have exercised or is proposing to exercise those functions in response to the flood event. See Appendix B for the responsibilities of the various RMAs involved in this flood event.

WCC's Local Flood Risk Management Strategy (LFRMS) identifies the thresholds that will apply when determining whether an investigation under Section 19 of the FWMA is required. These thresholds are as follows:

1. Flooding that poses a threat to the safety of the public or may directly result in serious injury or death.
2. Five or more residential properties internally flooded.
3. Two or more commercial properties internally flooded.
4. One or more piece of critical infrastructure affected that impact on the wider area.
5. Flooding that places vulnerable individuals or vulnerable communities at risk live e.g. hospitals, care and nursing homes, schools, etc.
6. Where one or more residential properties have flooded internally from the same source on five or more occasions within the last five years.

2.2 Scope of this report

This report does not obligate the LLFA or other risk management authorities into resolving the flooding issues investigated herein, nor is it possible for the LLFA to impose others to undertake any of the recommended actions.

2.3 Disclaimer

This report has been prepared as part of WCC's responsibilities under the FWMA. The findings of the report are based on a subjective assessment of the information available by those undertaking the investigation and therefore may not include all relevant information. As such it should not be considered as a definitive assessment of all factors that may have triggered or contributed to the flood event.

The opinions, conclusions and any recommendations in this report are based on assumptions made by WCC when preparing this report including reliance on information provided by others.

WCC expressly disclaims responsibility for any error in, or omission from, this report arising from or in connection with any of the assumptions being incorrect. The opinions, conclusions and any recommended actions in this report are based on conditions encountered and information reviewed at the time of preparation and WCC expressly disclaims responsibility for any error in, or omission from, this report arising from or in connection with those opinions, conclusions and any recommended actions.

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Nothing in this legal disclaimer will limit any of our liabilities in any way that is not permitted under applicable law or exclude any of our liabilities that may not be excluded under applicable law.

3 WEATHER AND FLOOD INFORMATION

The LLFA has gathered information from the Met Office website and used radar rainfall data from Hydromaster software to assess the weather conditions during the reported flood events.

3.1 21st October 2023

Between the 18th-21th October 2023 the Met Office named the incoming weather system Storm Babet. The Met office did not issue any severe weather warnings for Warwickshire during this time. The Flood Forecasting Centre did advise in the Flood Guidance Statement that there was a low likelihood of significant impacts in Warwickshire. Over the course of this event Ansley Common received between 40-50mm of rainfall.

3.2 15th December 2023

On the 9th and 10th December 2023 the Met Office named two preceding weather systems Elin and Fergus. No weather warnings were issued for Warwickshire, however this region received up to 20mm of rain over this period. Ansley Common received an additional 10mm of rain between 11th and 15th December. The property of interest subsequently flooded on the 15th December 2023.

3.3 2nd January 2024

On the 2nd January the Met Office named the eighth storm of the 2023/2024 season Storm Henk bringing damaging winds and heavy rain to southern and central parts of England and Wales. The Met Office issued an amber warning for wind and a yellow warning for rain in the West Midlands during this period. The Flood Forecasting Centre also advised in the Flood Guidance statement there was a medium likelihood of minor impacts. Ansley Common received 25mm of rain during this event.

3.4 9th and 18th February 2024

There were no named storms during February 2024. There were however weather warnings and yellow Flood Guidance Statements issued for Warwickshire. For example, the Met Office issued yellow rainfall warnings in the West Midlands between 8-9th and 17-18th February. On the 17th February the Flood Guidance Statement advised a medium likelihood of minor flood impacts between 17-18th February. Ansley Common received 17mm of rainfall between 17th-18th February according to radar data.

3.5 12th March 2024

There were no named storms or weather warnings on this date. Warwickshire received some heavy showers at this time. Radar data indicates that Ansley Common received 18mm of rain on 10th March followed by a further 8mm on the 12th March.

3.6 1st October 2024

There were no named storms at this time, however the Flood Guidance Statement was yellow for Warwickshire on 29th September 2024 indicating a high likelihood of minor impacts. A yellow rainfall weather warning was also issued by the Met Office in the West Midlands for the 30th September. Ansley Common received over 20mm of rainfall between 30th September and 1st October 2024.

4 INVESTIGATION SUMMARY

4.1 Location included in the investigation

This report focuses on a single property on St Johns Road that was reportedly flooded seven times within a year. Therefore, this property alone exceeded the threshold to warrant an investigation. During the investigation it was confirmed that no other properties in the vicinity have experienced flooding at any of these times. Whilst other areas of Warwickshire flooded at times that coincide with these instances, these are investigated separately in other Section 19 reports. Figure 1 shows the vicinity of the investigation.

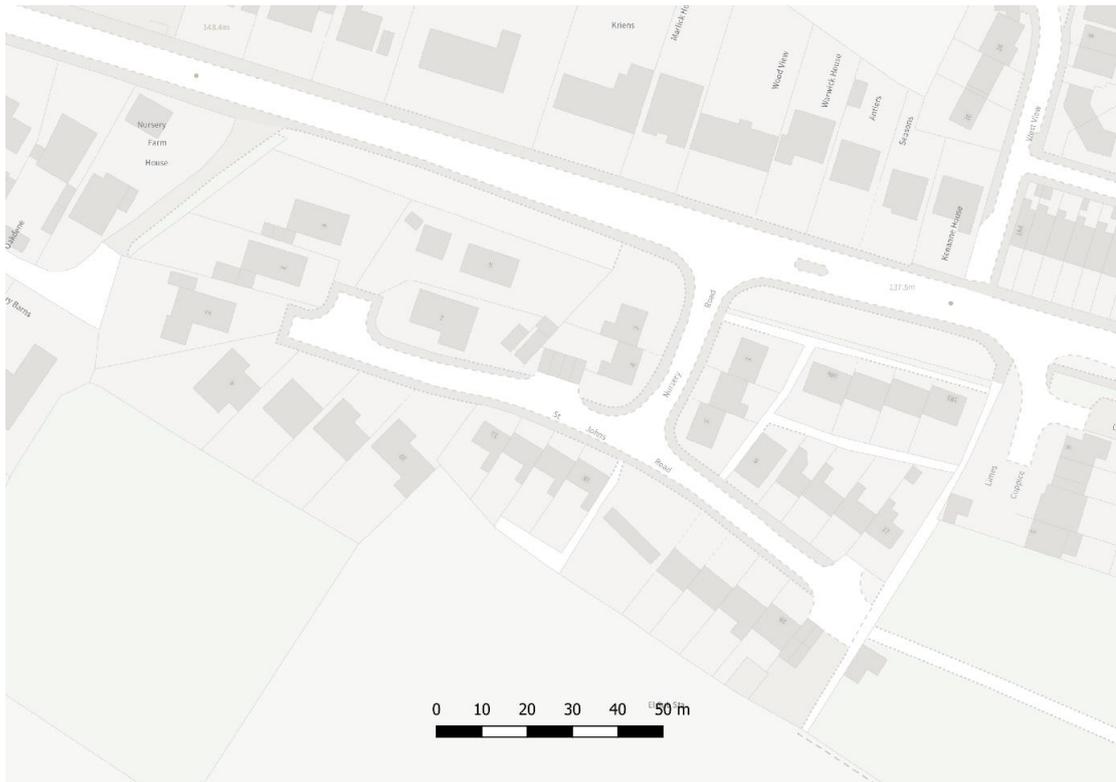


Figure 1: Map showing the investigation area for this report

5 KEY CONCLUSIONS OF THE INVESTIGATION

5.1 Source of flooding

Flooding impacts were recorded elsewhere in the county during the rainfall events described above, some of which are detailed in other Section 19 reports. The site of interest however is not located in a fluvial flood zone nor a surface water flood extent according to national Environment Agency mapping. Accounts and photographs of the flooding that occurred did not indicate an overland surface water flow route. The recorded internal flooding instances do coincide with rainfall events during a notably wet winter compared to long term average data. Flooding was described as rising up from the floor suggesting that groundwater may be the source of flooding. Figure 2 shows the modelled surface water flood risk extents in the vicinity of the investigation.

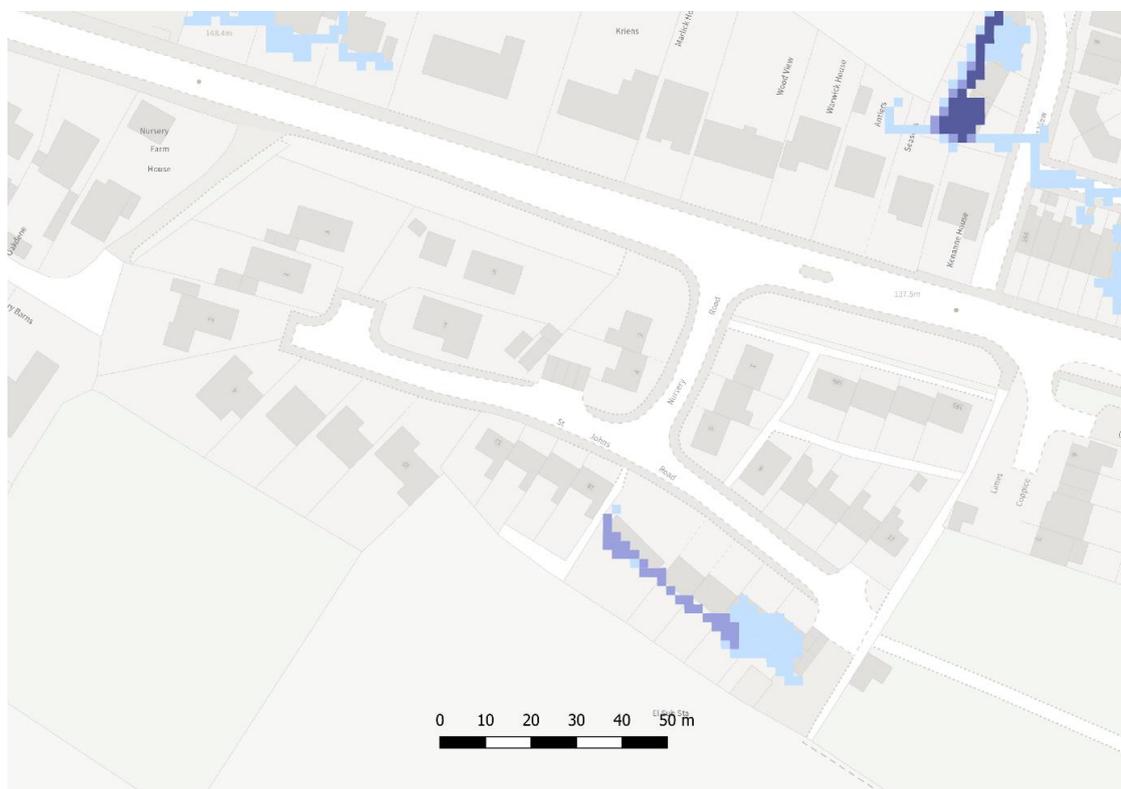


Figure 2: Map showing the modelled surface water flood risk extents near St John's Road.

5.2 Gathering data for the investigation

The Warwickshire FRM team were notified by the homeowner about the flooding occurrences in October 2024. Following this a desktop study was undertaken and a site visit arranged for the 5th November 2024. This allowed FRM Officers to provide advice and better understand the flooding mechanisms.

5.3 Investigation Findings

During the site visit, customer engagement confirmed that only one property had experienced flooding. Pictures were provided showing the flooding impacts and verbal accounts were provided detailing the flooding mechanisms. Residents described the flooding as water coming up through the ground in the living room and conservatory, which is at a lower elevation than the rest of the house. Officers inspected the site and surroundings to assess potential flow routes or ordinary watercourses that could influence flood risk, however none were found.

The desktop study entailed assessing national flood risk mapping data, WCC flood reports and historic maps. Historic maps were inspected to see if there had previously been and watercourses in the vicinity. Whilst the mapping indicated previous field boundaries in the area, it was not conclusive whether any ditches or watercourses were associated with these features.

Local development and approved planning designs were also considered to assess the potential impacts to local drainage (Application number: DOC/2018/0020). However none of the designs suggested flood risk would increase as a result of the proposals and site inspections indicated development in accordance with approved designs. It should be noted that the LLFA is not a statutory consultee on minor planning applications and therefore was not consulted for comment when this application was submitted.

Following the investigation, it was concluded that groundwater flooding was the most likely source of flooding at this site. This was due to the resident's accounts of flooding that occurred describing water coming up through the floor.

5.4 Recommendations

The Flood Recovery Framework (FRF) was triggered on 06 January 2024 in response to the severe flooding events that occurred as a result of Storm Henk between the dates of 2 January 2024 and 12 January 2024. WCC met the eligibility thresholds for scheme support. As such the St John's Road property was also eligible for grant support having flooded during this period.

WCC are currently administering the Defra Property Flood Resilience (PFR) Repair Grant Scheme. Following strict guidelines for grant delivery published by DEFRA, WCC have developed a guidance and application pack that sets out the process that must be followed to provide property and business owners with the grant funding. Following the site flood investigation, the St John's Road property owners were provided with advice as to how to apply for support through this scheme to improve property flood resilience. Up to £5,000 inclusive of Value Added Tax (VAT) is available to make their home more flood resilient. It is understood that this scheme has been taken up by the occupant and works have been undertaken to improve flood resilience.

6 APPENDICES

6.1 Appendix A – Glossary of terms

Return Period	This is a technical measure used to indicate how rare and extreme a given rainfall event is. Generally light showers resulting in small water volumes are quite common whereas heavy or prolonged rainfall events resulting in very large volumes of water are rarer. On this basis, the return period quantifies this by giving the probability of a given rainfall event occurring in any given year. For instance, a 1 in 2year event has a 50% or 1 in 2 chance of occurring in any given year and is therefore quite common and unremarkable. A 1 in 100year return period has a 1% or 1in100 chance of occurring in any year and is therefore rarer and more impactful.
Critical infrastructure	Infrastructure which is considered vital or indispensable to society, the economy, public health or the environment, and where the failure or destruction would have large impact. Examples include hospitals, communications, electricity sub-stations, water treatment works, transport infrastructure and reservoirs.
Department for Environment, Food and Rural Affairs (Defra)	The government department responsible for policy and regulations on environmental, food and rural issues. This includes all aspects of flood risk management.
Environment Agency (EA)	See Appendix D.
External flooding	Flooding of areas of property that are not under the definition of internal flooding. Examples include gardens, driveways, parking areas and outbuildings such as sheds and garages.
Flood Risk Management (FRM)	FRM aims to reduce the likelihood and/or the impact of floods. This typically includes the following elements: prevention, protection, preparedness, response and recovery. In the context of this report, FRM also refers to the team at WCC which undertakes the LLFA role.
Exceedance flows	Excess surface water flow that occurs when the capacity of the drainage system is exceeded.
Flood and Water Management Act 2010 (FWMA)	Legislation which came into effect in April 2010. The Act takes forward a number of recommendations from the Pitt Review into the 2007 floods and placed new responsibilities on the Environment Agency, local authorities and property developers (amongst others) to manage the risk of flooding.
Internal flooding	Flooding of habitable living or business areas of a property. This does not include gardens and outbuildings such as sheds, garages etc. and not normally basements and porches.

Lead Local Flood Authority (LLFA)	See Appendix B.
Main River	Watercourses designated as 'main' are generally the larger arterial watercourses, as shown on the Statutory Main Rivers Map. The Environment Agency has permissive powers, but not a duty, to carry out maintenance, improvement or construction work on designated main rivers.
Ordinary watercourse	A watercourse that is not a designated Main River. On ordinary watercourses the LLFA have permissive powers, but not a duty, to carry out maintenance, improvement or construction work.
Pluvial or surface water flooding	Caused by rainfall exceeding the capacity of the ground or drainage system and occurs due to water ponding on or flowing over the ground surface before it reaches a drain or watercourse.
Property Flood Resilience (PFR) measures	Measures that are designed to keep flood water out of properties and businesses, and could include flood barriers and doors, non-return valves and airbrick covers. Sometimes also known as Property Level Resilience (PLR).
Riparian landowners	Someone who owns land or property adjacent to a watercourse. Under common law, a riparian owner has a duty to maintain the watercourse and allow flow to pass through freely.
Risk management authority (RMA)	An authority which is defined as such in the Flood & Water Management Act 2010. Such authorities have powers that they can use to carry out their flood and coastal erosion risk management responsibilities. See Appendix I for a summary of these responsibilities.
Risk of Flooding from Surface Water map (RoFSW)	National-scale long-term risk mapping on gov.uk website showing the areas of England at risk of flooding from surface water. Extent, velocity and depth information is available for a range of flood probabilities.
Section 19 Flood Investigation	An investigation of a flood event by the Lead Local Flood Authority under Section 19 of the Flood and Water Management Act 2010.
Severn Trent Water (STW)	See Appendix B.
Warwickshire County Council (WCC)	See Appendix B.

6.2 Appendix B – Risk Management Authorities

Risk Management Authorities (RMAs) have defined roles and responsibilities with regards to flood risk management, as defined within the Flood and Water Management Act 2010.

All RMAs under the Flood and Water Management Act (2010) have a responsibility to cooperate and coordinate with regards to their flood risk management functions, including raising awareness of flood risk and the sharing of information.

The section below outlines the key roles and responsibilities of the RMAs relevant to this Section 19 flood investigation.

6.2.1 *Environment Agency*

The Environment Agency (EA) is responsible for taking a strategic overview of the management of all sources of flooding and coastal erosion in England and Wales. They have prepared strategic plans which set out how to manage risk, provide evidence (for example, their online flood maps), and provide advice to the Government.

They provide support to the other RMAs through the development of risk management skills and provide a framework to support local delivery. The EA also has operational responsibility for managing the risk of coastal erosion and flooding from main rivers, reservoirs and the sea. Main Rivers are defined through an agreed map which is updated annually. These tend to be the larger rivers in the country.

The EA are category 1 responders regarding flood risk (Civil Contingencies Act 2004). They are required to warn and inform of flood risk.

6.2.2 *Water and sewerage companies*

Severn Trent Water (STW) holds responsibility for managing risks of flooding from water supply and sewerage within the majority of Warwickshire. Thames Water have a small area of responsibility in the south of the county.

Water and sewerage companies (WaSCs) as category 2 responders to national emergencies placing on them duties to share information with other responders in an appropriate manner. They are also responsible for managing risks associated with assets or processes that may cause or be affected by flooding.

Relevant actions include the inspection, maintenance, repair and any works to their water and sewerage assets which typically includes pipes, manholes, attenuation tanks or other infrastructure such as pumping stations.

6.2.3 *Warwickshire County Council as Lead Local Flood Authority*

Lead Local Flood Authorities (LLFA) have the lead operational role in managing the risk of flooding from surface water and groundwater.

Flood risk management functions include (but are not limited to); the provision of a Local Flood Risk Management Strategy (LFRMS) and Surface Water Management Plan, designation and maintenance of a register of structures or features that have a significant effect on flood risk, consenting and enforcement works on Ordinary Watercourses, undertaking works to mitigate surface water and groundwater flooding and undertaking Section 19 investigations.

The LLFA are a statutory consultee on major planning applications for surface water drainage. By working with developers and local planning authorities, the LLFA role is to ensure that runoff arising from major development sites is appropriately managed to avoid increasing flood risk.

As a Category 1 Responder under the Civil Contingencies Act the LLFA as a local authority plays a leading role in emergency planning and recovery after a flood event and has plans in place to respond to emergencies, and control or reduce their impact.

6.2.4 Warwickshire County Council as Highway Authority

WCC also has responsibilities as a Highways Authority which may relate to flooding. Highway authorities are responsible for providing and managing highway drainage which may include provision of roadside drains/ditches and must ensure that road projects do not increase flood risk.

The Highways Authority has a duty under the Highways Act 1980 to maintain existing highways drainage. They also have powers to improve drainage systems but no duty to do so.

Highway drainage systems are designed to take highway surface water. Highway drainage systems are not designed as “storm drains”, and do not have the capacity for the level of rainfall from an extreme flash flood.

6.2.5 District and Borough Councils

District and Borough Councils can carry out flood risk management works on ordinary watercourses. Through the planning processes, they control development in their area, ensuring that flood risks are effectively managed. This includes the development of plans and strategies to limit or mitigate development in flood risk areas.

Within Warwickshire there are 5 district/borough councils: Stratford-on-Avon District Council, Warwick District Council, Rugby Borough Council, Nuneaton and Bedworth Borough Council, North Warwickshire Borough Council.

6.2.6 Landowners

Landowners have riparian responsibilities under the Flood and Water Management Act (2010) to maintain and undertake any necessary works on assets on their land (with consent from the relevant RMA) which may have an effect on flood risk including watercourses and drainage assets.

Further information on riparian responsibilities is available on www.gov.uk/guidance/owningawatercourse