

APPENDIX N

SECTION 19 REPORT – WOODBOROUGH – STORM HENK - JANUARY 2024

FOR COMPLETENESS, THIS APPENDIX SHOULD BE READ IN CONJUNCTION WITH THE REPORT OF THE CORPORATE DIRECTOR (PLACE) TO PLACE SELECT COMMITTEE ON 22 JULY 2024: “SECTION 19 REPORTS: STORM HENK FLOODING JANUARY 2024”.

<https://www.nottinghamshire.gov.uk/planning-and-environment/flooding-help-and-advice/the-councils-role>

Introduction

Section 19 of the Flood and Water Management Act 2010 states:

1. On becoming aware of a flood in its area, a Lead Local Flood Authority must, to the extent that it considers it necessary or appropriate, investigate:
 - (a) Which Risk Management Authorities (RMAs) have relevant flood risk management functions.
 - (b) Whether each of those RMAs has exercised, or is proposing to exercise, those functions in response to the flood.
2. Where an authority carries out an investigation under subsection (1) of Section 19 it must:-
 - (a) Publish the results of its investigation.
 - (b) Notify any relevant RMAs.
3. The objective of this report is to investigate which RMAs had relevant flood risk management functions during the flooding in January 2024 and whether the relevant RMAs have exercised, or propose to exercise, their risk management functions (as per section 19(1) of the Flood and Water Management Act (2010).
4. The Risk Management Authorities for this area of Nottinghamshire are Gedling Borough Council (GBC), Nottinghamshire County Council (NCC) as Lead Local Flood Authority (LLFA), Via East Midlands Ltd on behalf of NCC as Highways Authority and the Environment Agency (EA).
5. It should be noted that this duty to investigate does not guarantee that flooding problems will be resolved and cannot force others into action.

Background

6. Woodborough is a village within the Borough of Gedling, Nottinghamshire. It has a population of approximately 1,648 people according to the 2021 census.
7. The Woodborough Brook flows through the village directly adjacent to Main Street. It has two tributaries, one flowing from the west and the other from the southwest. The Woodborough Brook itself is designated as a Main River. The upper catchment of the Brook features clay soils with steep topography and a mainly agricultural land use. These

characteristics influence increased overland flow rates and areas of high hydrological connectivity.

8. On the 2nd of January 2024, during Storm Henk, Woodborough suffered a flood event caused by sustained rainfall over a saturated catchment. On this day, 19mm of rainfall was recorded at the Calverton rain gauge (Figure 1) with a maximum 60 minute intensity of 4.8mm/hr. A peak water level of 1.048m was recorded at the Woodborough Brook Level Gauge at 16:15. Consequently, 24 residential properties and one business were subject to internal flooding with more suffering flooding to gardens and outbuildings.
9. This storm came after a prolonged period of persistent rain and above average rainfall which had saturated the ground, resulting in flooding of roads and properties quicker than they would following a dry period.

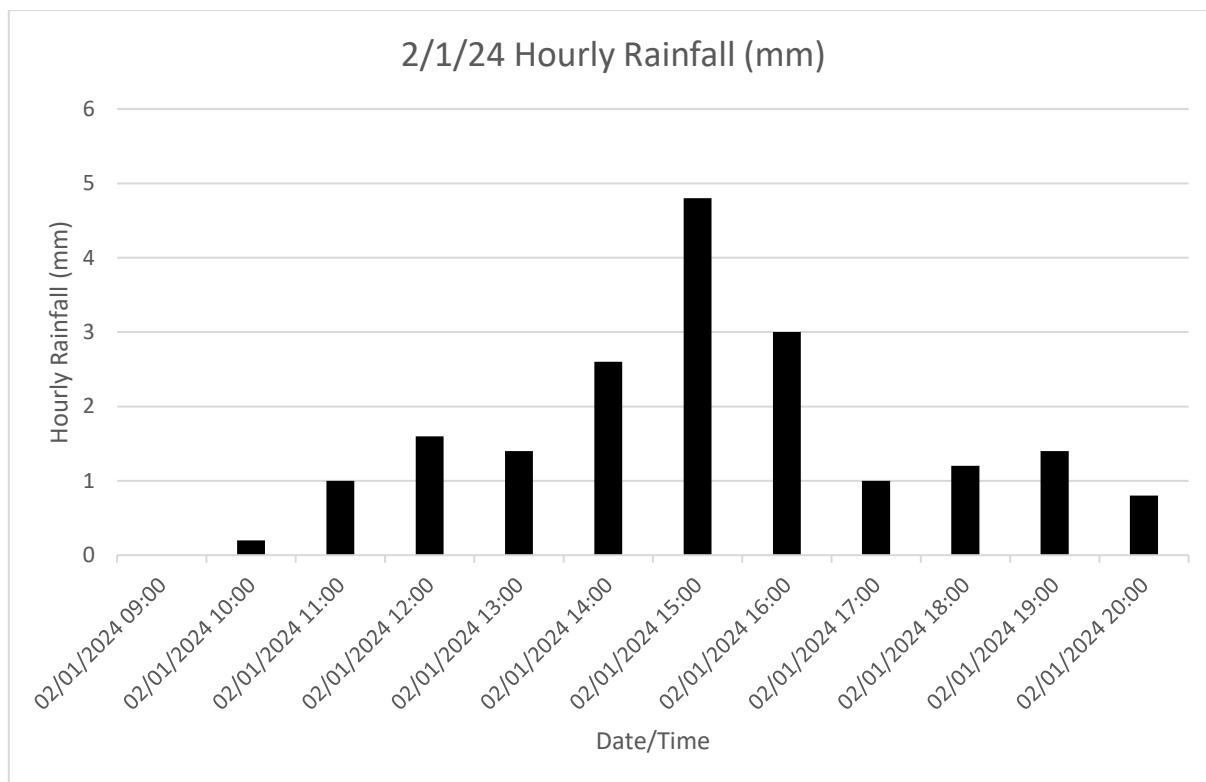


Figure 1. Calverton Hourly Rainfall 2nd January 2024. Data supplied by the Environment Agency.

10. A location map of Woodborough is shown in Figure 2. The areas affected were:
 - Main Street (21 properties)
 - Smalls Croft (1 property)
 - Shelt Hill (2 properties)
 - Pinfold Close (1 property)



Figure 2. Reference Map for flood affected areas across Woodborough. Main Street (1), Smalls Croft (2), Shelt Hill (3), Pinfold Close (4).



Figure 3. Surface Water Flood Risk Mapping - Woodborough. Data Supplied by Environment Agency.

Summary of flooding and its causes

Main Street

11. Areas impacted by flooding on Main Street are shown in Figure 4. In total, 20 residential properties and one business were impacted by flooding.
12. The Woodborough Brook flows along the south side of Main Street and is joined on Main Street by two tributaries originating from the south of the catchment.
13. During Storm Henk, upper catchment runoff influenced by rainfall onto an already saturated catchment caused the watercourse to rise to a level which exceeded the channel capacity. This resulted in water flowing eastward along Main Street which is shown as a surface water flow path in Figure 3. The water entered several properties as it flowed along the road. Some properties along Main Street are built at a lower elevation than the road itself. As a result, water flowing along the highway flowed through property boundaries and into some properties.
14. The flooding along Main Street also cut off many residents in Woodborough who were unable to get out of or into the village for many hours. It should be noted that the Woodborough Flood Action Group have reported that between Storm Babet (October 2023) and Storm Henk (January 2024), water has exceeded channel capacity and flowed along Main Street multiple times which has caused severe disruption for the village.



Figure 4. View of Main Street.

Smalls Croft

15. On Smalls croft, 1 residential property was internally flooded by water from the Woodborough Brook which came out of bank and flowed down Main Street. A location plan is shown in Figure 5. Due to its lower topography, water pooled on Smalls Croft and internally flooded a property.



Figure 5. View of Smalls Croft.

Shelt Hill

16. Two residential properties suffered internal flooding on Shelt Hill (Figure 6). A surface water flowpath is present which flows from the west of Shelt Hill to the East (Figure 3). The water is managed by a drainage ditch system in the field which then flows through a culvert under the road of Shelt Hill. Due to rainfall over a saturated catchment resulting in enhanced overland flow, the culvert was overwhelmed and water pooled on the western side of the road as the road is higher than the properties. This caused internal flooding to properties adjacent to the road.



Figure 6. View of Shelt Hill.

Pinfold Close

17. On Pinfold Close, one residential property was internally flooded by water from the Woodborough Brook when the channel capacity was exceeded and water flowed down Main Street (Figure 7). Due to its lower topography, water pooled in areas of Pinfold Close which then affected the property.



Figure 7. View of Pinfold Close.

Risk Management Authorities and their responsibilities

18. Nottinghamshire County Council.
- a) Lead Local Flood Authority.
 - i. Investigate significant local flooding incidents and publish the results of such investigations.
 - ii. Play a lead role in emergency planning and recovery after a flood event.
 - iii. As the Lead Local Flood Authority, we have a duty to determine which risk management authorities have relevant powers to investigate flood incidents to help understand how they happened, and whether those authorities have or intend to exercise their powers.
 - iv. By working in partnership with communities, Lead Local Flood Authorities can raise awareness of flood risks.
 - v. Lead Local Flood Authorities should encourage local communities to participate in local flood risk management.
 - b) Emergency Planning.
 - i. If a flood happens, all local authorities are 'category one responders' under the Civil Contingencies Act. This means they must have plans in place to respond to emergencies and control or reduce the impact of an emergency.

c) Highway Authority (Via East Midlands Ltd. on behalf of Nottinghamshire County Council).

i. Maintenance of the public highways including highway drainage assets.

19. The Environment Agency.

a) Category one responder under the Civil Contingencies Act. This means they must have plans in place to respond to emergencies and control or reduce the impact of an emergency.

b) Maintenance and management of main rivers and associated flood risk and the issuing of Flood Warnings using the national Flood Warning System.

20. Gedling Borough Council.

a) Category one responder under the Civil Contingencies Act. This means they must have plans in place to respond to emergencies and control or reduce the impact of an emergency.

21. Severn Trent Water.

a) Maintenance of the public sewerage system.

b) As a water and sewerage company, STW manage the risk of flooding from their water supply and sewerage facilities. This includes:

i. Surface water sewers – these carry rainfall and surface water away from properties to watercourses.

ii. Foul water sewers – these carry wastewater away from properties to be treated.

iii. Combined water sewers – these drain both wastewater and surface water from properties along with run off from highways.

iv. Managing the impact of flooding to their networks by ensuring their systems have the appropriate level of resilience to flooding.

v. Engage with RMAs on how water and sewerage company assets impact on local flood risk.

vi. STW are Category 2 responders under the Civil Contingencies act, providing emergency response and supporting the management of flooding events.

Risk Management Authority Responses to Flood

22. The following lists the actions taken by each RMA in response to the flooding both in the immediate aftermath as well as in the longer term:

23. Nottinghamshire County Council.

Officers from across the County Council played a key role in the response to the Major Incident that had significant impacts across the county. The following lists the key actions taken by Nottinghamshire County Council:

a) Initiated its Community Flood Recovery Grant to support individuals affected by internal flooding as a short-term recovery aid.

b) Attended site after flooding occurred to verify scale of internal flooding, offer support, guidance and advice to affected residents and businesses.

- c) Information gathered on site was fed back to relevant RMA's and partners.
- d) Collated flood impact data from other RMA's and partners and published verified data on Resilience Direct.
- e) Visited flood affected residents and businesses to establish sources and mechanisms of flooding and severity of flood impacts.
- f) Chaired and attended Strategic / Tactical / Recovery Coordination Group meetings initiated by the Local Resilience Forum.
- g) Provided 24-hour support through the Emergency Planning team.
- h) Carried out relevant actions requested by Strategic / Tactical / Recovery Coordination Groups.
- i) Initiated and led the Section 19 Flood Investigation, including liaison with relevant RMA's, Elected Members, Parish Councils, community groups, affected residents and businesses.
- j) Leading on procurement and delivery of DEFRA Property Flood Resilience Repair Grant Scheme.
- k) Liaised with and supported existing community flood signage schemes during the flooding.
- l) Delivered sandbags to affected areas and communities.
- m) Closed 69 roads across Nottinghamshire to promote road safety and avoid additional flood damage to at risk areas.
- n) Supported District and Borough partners by sharing resources during the emergency response.
- o) Utilised existing communication channels to update the public, partners and Elected Members with key messages during the event.
- p) Attended a public meeting coordinated by the local Member of Parliament concerning flood risk in Woodborough.

24. Gedling Borough Council.

- a) Took an active role in the Section 19 Investigation.
- b) Deployed sandbags to at risk properties.
- c) Cleared trash screens and drainage grids during the flood event to improve conveyance.
- d) Cleansed roads following the storm event.

25. The Environment Agency.

- a) The Environment Agency warned and informed the community of Woodborough in a timely manner by issuing a Flood Warning for the Woodborough Brook at Woodborough at 19:00 on 1st January 2024.
- b) The Environment Agency also instigated flood patrols to operate their structures in accordance with their incident response procedures and cleared blockages in the area before and after the peak flows.
- c) The Environment Agency attended a multi-agency meeting hosted by MP Mark Spencer with Severn Trent Water, Nottinghamshire County Council and Gedling Borough Council.
- d) The Environment Agency coordinated community information officers to gather information and visit affected communities to understand the impact of flooding on affected communities and collect data. This information is used to validate and improve the Flood Warning Service.

26. Severn Trent Water.

- a) Attended a meeting with residents and the MP following Storm Henk, and were made aware of sewer related issues at the meeting.

- b) Are investigating these issues and whether flood water inundated the sewers causing the sewers to surcharge, manholes to lift and sewage to discharge.
- c) Have been in contact with affected residents post flood event to further investigate sewer flooding issues.

Additional Information and Future Actions

- 27. All the Risk Management Authorities involved in this event are committed to continuing the investigations into the causes of this incident. Those investigations may identify further actions not listed below.
- 28. The Woodborough Flood Action Group have collated information on flooding mechanisms impacts within the village. This was shared with NCC officers and has informed this report. The Flood Action Group has a strong working relationship with RMA's including NCC, the EA, Via EM Ltd. and Severn Trent Water.
- 29. At the time of writing, a natural flood management project is being delivered by NCC within the upper catchment of Woodborough. Delivery of the scheme will continue with an aim to create storage to temporarily attenuate water during flood events and reduce flood risk.
- 30. Investigations by NCC into flooding on Bank Hill and Shelt Hill are ongoing. Meetings with residents have been held to discuss the flooding experienced.
- 31. As the Lead Local Flood Authority, we have witnessed and have experience of how flooding devastates communities. The most vulnerable in the community will be our priority. Nottinghamshire County Council will continue to work closely with partners and communities to identify ways of proactively reducing the risk, likelihood and consequences of future flooding events.
- 32. NCC will continue to support its Flood Warden / Road Closure training programme and community volunteer groups to help ensure they operate as effectively and safely as possible.
- 33. The Flood Risk Management team will look at the suitability of its Property Flood Resilience Programme for communities affected by Storm Henk and will take recommendations through the Cabinet Member later this year for consideration.
- 34. NCC will work with its partners to look at ways of strengthening the enforcement of riparian responsibilities alongside developing our asset inspection process.
- 35. NCC are investigating the connectivity and condition of drainage assets in the Shelt Hill and Bank Hill areas.
- 36. The Environment Agency have carried out CCTV of the culverts and will now review the current condition of the culvert to see if any further actions need to be taken to ensure the continued conveyance of the watercourse through Woodborough.
- 37. As part of a National Programme of debris screen improvements, in East Midlands the Environment Agency is progressing outline design for 12 screen improvements over 24/25. The aim is to progress to detailed design and construction in 2025. The 3 screens in Woodborough, which are referred to as Church Yards Screen and 124 and 128 Main Street are part of our 12 screen improvements. The objective of the programme is to ensure the screens are compliant with current CIRIA guidance. The current screens perform well but operational improvements will make them safer and easier to maintain.

This ensures debris can be safely cleared from the watercourse and prevent blockages within the culverts.