

## **APPENDIX AL**

### **SECTION 19 REPORT – WOODBOROUGH – STORM BABET, OCTOBER 2023**

#### **Introduction**

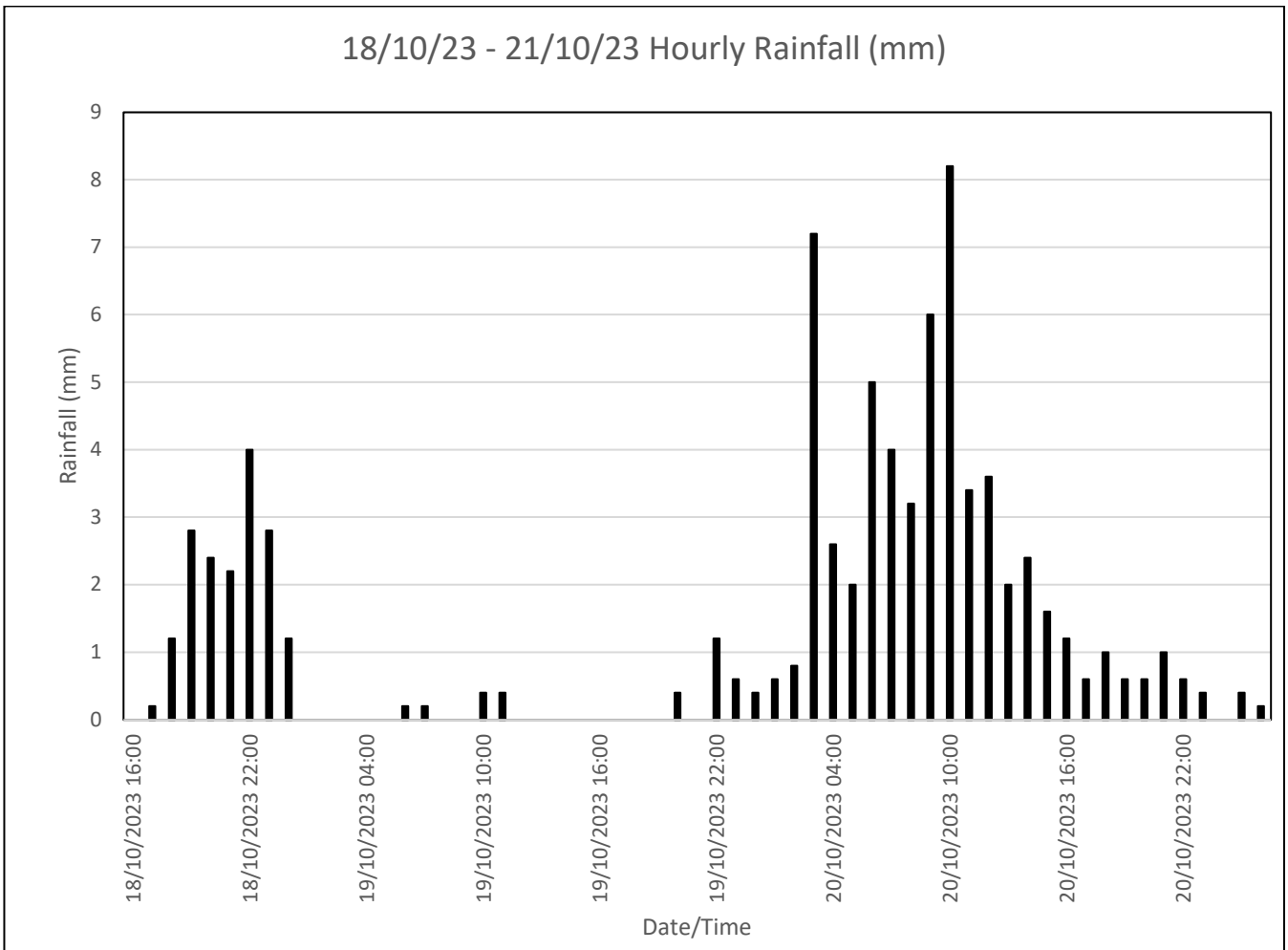
Section 19 of the Flood and Water Management Act 2010 states:

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 October 2023 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 as Highways Authority on behalf of NCC 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 20<sup>th</sup> October, during Storm Babet, Woodborough suffered a flood event caused by sustained heavy rainfall. Between the 18<sup>th</sup> and 20<sup>th</sup> of October, 80mm of rainfall was recorded at the Calverton rain gauge (Figure 1). A peak water level of 1.115m was recorded at the Woodborough Brook Level Gauge at 11:45. Consequently, 49 residential properties were subject to internal flooding with more suffering flooding to gardens and outbuildings.
9. This storm came after a prolonged period of persistent rain which had saturated the ground resulting in flooding of roads and properties quicker than they would following a dry period.

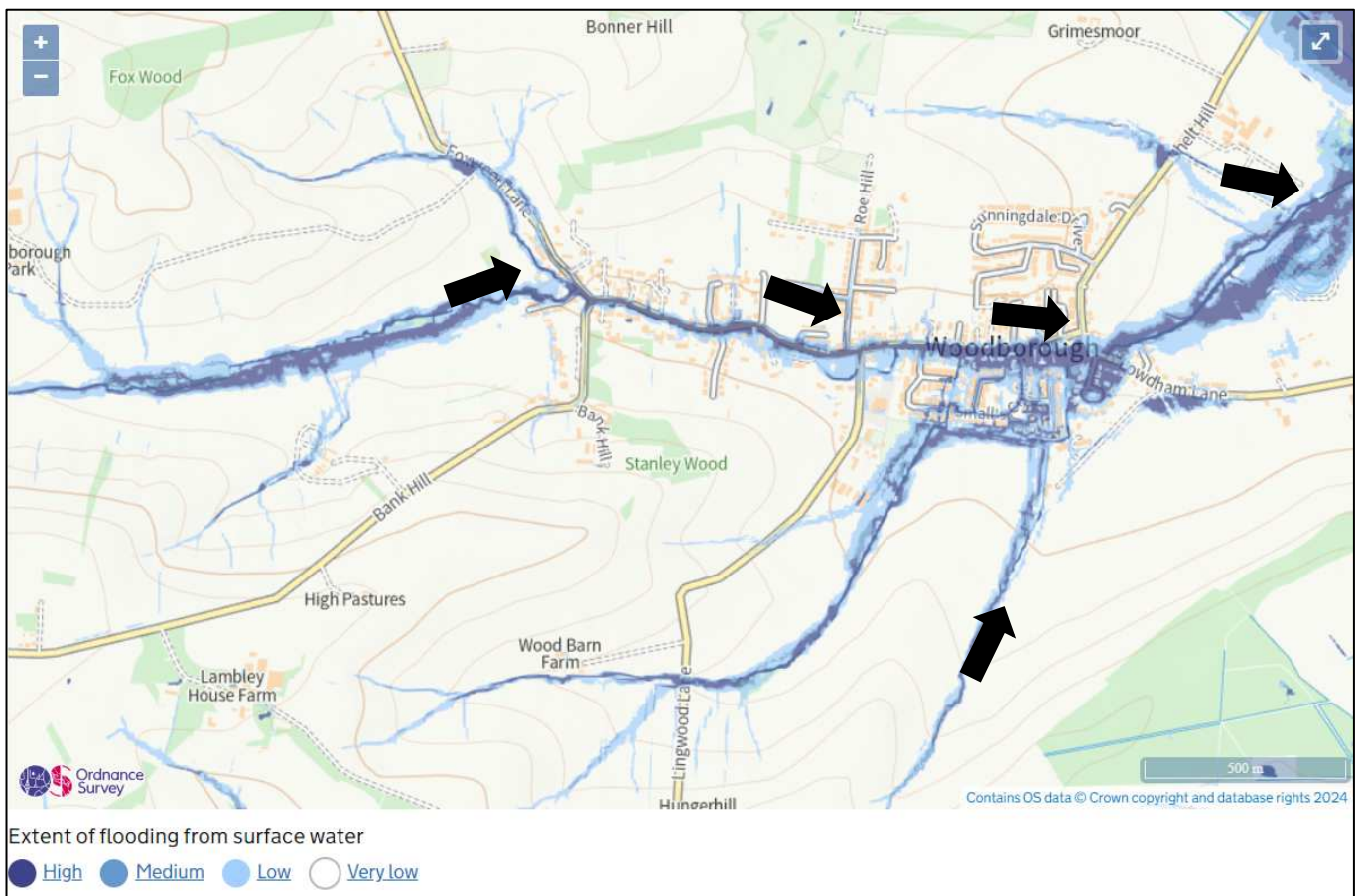


**Figure 1.** Calverton Hourly Rainfall 18<sup>th</sup> October 2023. Data supplied by the Environment Agency.

10. A location map of Woodborough is shown in Figure 2. The areas affected were:
  - Main Street (30 properties)
  - Smalls Croft (11 properties)
  - Pinfold Crescent (2 properties)
  - Shelt Hill (2 properties)
  - Bank Hill (3 properties)
  - Pinfold Close (1 property)



**Figure 2.** Flood affected areas across Woodborough. Main Street (1), Smalls Croft (2), Pinfold Crecent (3), Shelt Hill (4), Bank Hill (5), Pinfold Close (6).



**Figure 3.** Surface Water Flood Risk Mapping for Woodborough. Main Street (1), Smalls Croft (2), Pinfold Crecent (3), Shelt Hill (4), Bank Hill (5), Pinfold Close (6).

## Summary of flooding and its causes

### 11. Main Steet

Areas impacted by flooding on Main Street are shown in Figure 4. In total, 28 residential properties and 2 businesses were impacted by flooding.

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.

During Storm Babet, upper catchment runoff influenced by intense rainfall caused a record water level to be recorded at the Woodborough Brook water level gauge. During the event, the watercourse burst its banks with water then flowing eastward along Main Street which is shown as a surface water flowpath 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.

The flooding along Main Street also cut off many residents in Woodborough who were unable to get out or into the village for many hours.



**Figure 4.** Main Street.

12. Smalls Croft

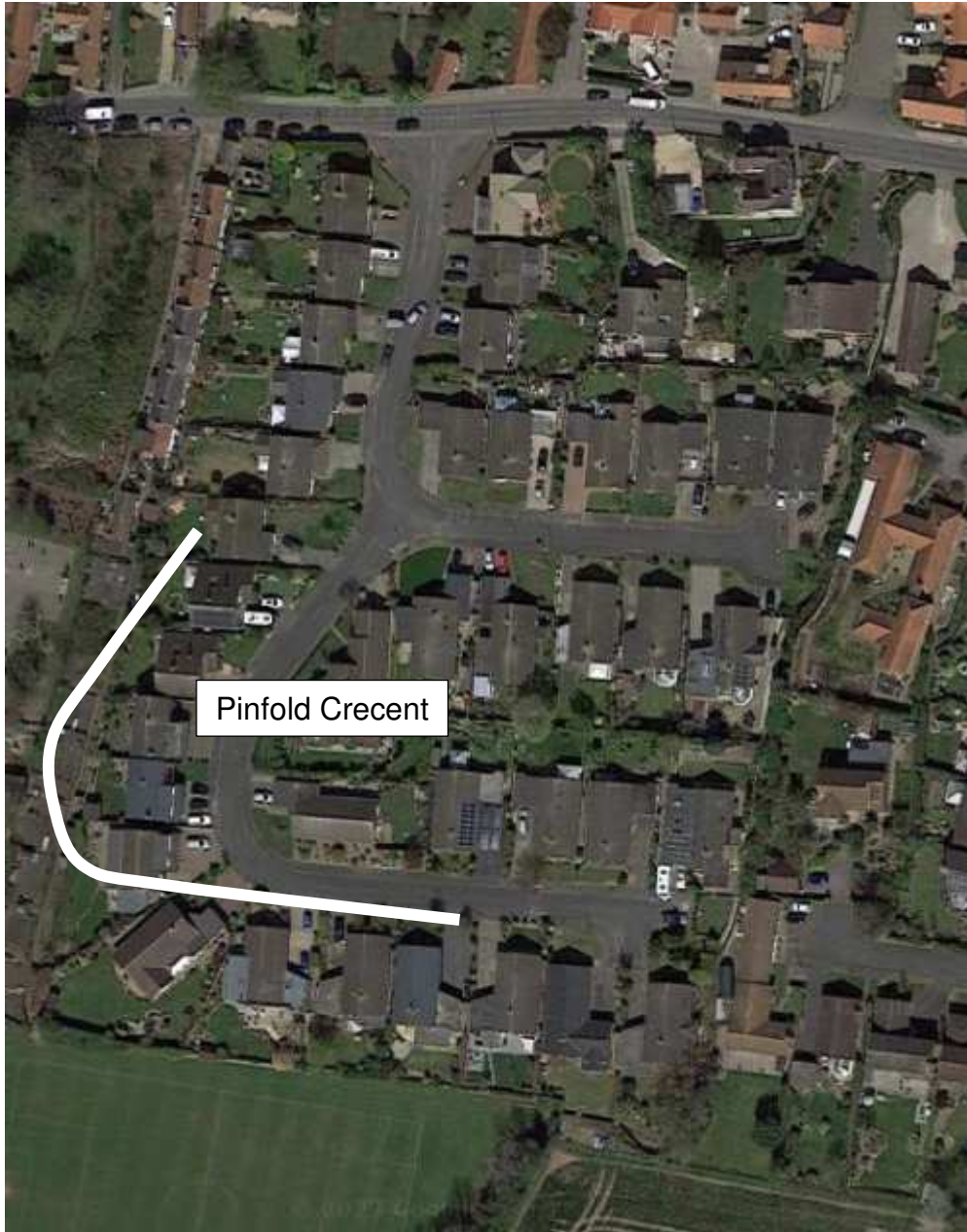
On Smalls croft, 11 residential properties were internally flooded by water from the Woodborough Brook which burst it bank and flowed down Main Street. A location plan is shown in Figure 5. Due to its lower topography, water pooled on Smalls Croft which was observed to be of a depth of roughly 1m in some places.



**Figure 5.** *Smalls Croft.*

13. Pinfold Crescent

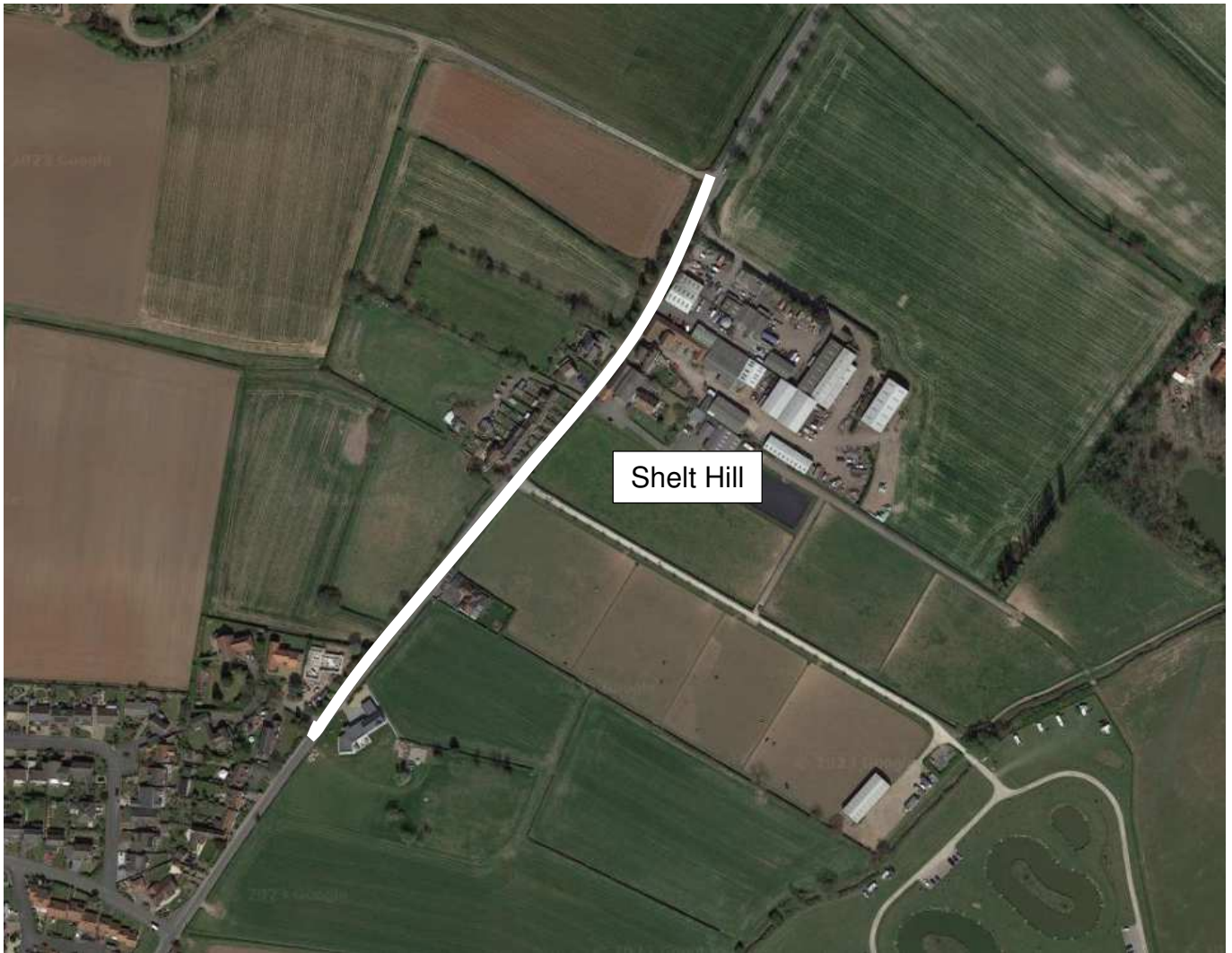
On Pinfold Crescent, two residential properties were internally flooded (Figure 6). A ditch is present to the South of Pinfold Crescent which joins a tributary of the Woodborough Brook. A surface water flowpath is also present which flows across the field from the South. Intense rainfall and significant upper catchment runoff caused the ditch to flood some properties on Pinfold Crescent.



**Figure 6.** *Pinfold Crescent.*

14. Shelt Hill

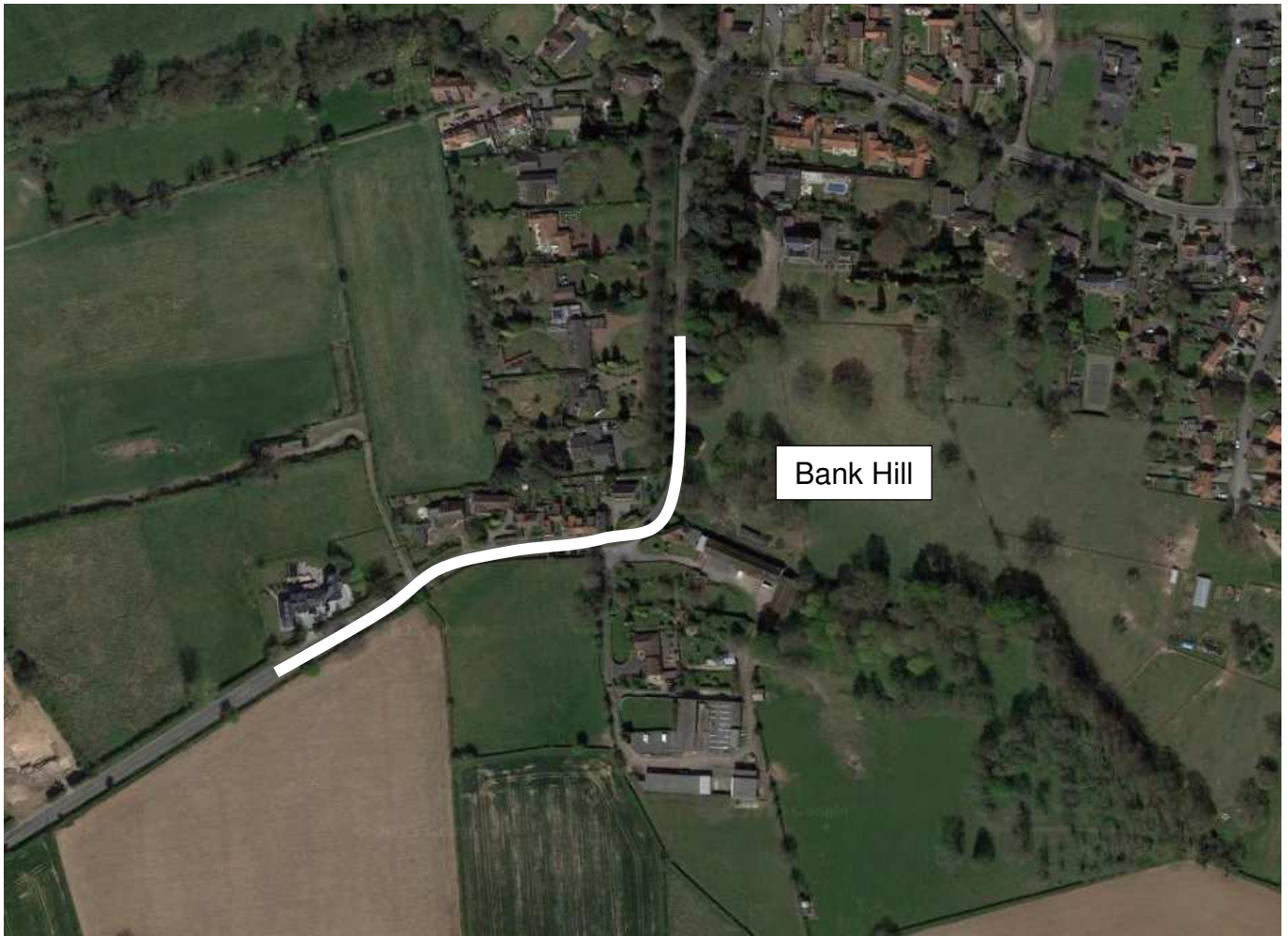
Two residential properties suffered internal flooding on Shelt Hill (Figure 7). A surface water flowpath is present which flows from the west of Shelt Hill to the East (Figure 3). The water is managed by a drainage ditch system in the field which then flows under the road of Shelt Hill. Due to intense rainfall and 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 7.** Shelt Hill.

15. Bank Hill

Three residential properties were flooded on Bank Hill (Figure 8). A drainage ditch on the south of Bank Hill flows into a culvert which was reported to be overwhelmed during Storm Babet. Water then flowed into properties after flowing along the highway.



**Figure 8.** Bank Hill.



16. Pinfold Close

On Pinfold Close, 1 residential property was internally flooded by water from the Woodborough Brook which burst its bank and flowed down Main Street (Figure 9). Due to its lower topography, water pooled in areas of Pinfold Close which then affected the property.



**Figure 9.** Pinfold Close.

## **Risk Management Authorities and their responsibilities**

### 17. 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.

### 18. 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.

### 19. 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.

## **Risk Management Authority Responses to Flood**

20. 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:

### 21. 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, 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 77 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.

## 22. Gedling Borough Council

- a) Delivered 1200 sandbags across Gedling Borough to residents who required them.
- b) Coordinated clean-up activities including cleansing and road sweeping in flood impacted areas.
- c) Took an active role in the Section 19 Investigation.

## 23. Environment Agency

- a) The Environment Agency warned and informed the community of Woodborough and partners in a timely manner by issuing a Flood Alert for River Trent Tributaries in Nottinghamshire on 20/10/2023.
- b) The Environment Agency also instigated flood patrols to operate their structures in accordance with their incident response procedures and clear blockages in the area before and after the peak flows.
- c) The Environment Agency attended a public meeting coordinated by the local Member of Parliament concerning flood risk in Woodborough.
- d) The Environment Agency coordinated community information officers and surveyors to gather information and visit affected communities to understand the impact of flooding on affected communities and collect data.

## Additional Information and Future Actions

24. 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.
25. 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 and Severn Trent Water.
26. At the time of writing, a natural flood management project is being delivered 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.
27. Investigations by NCC into flooding on Bank Hill and Shelt Hill are ongoing. Meetings with residents have been held to discuss the flooding experienced.
28. 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.
29. The Environment Agency will support other Risk Management Authorities to hold community drop-in sessions for those affected to share their experiences and to get help and advice.
30. The Environment Agency will continue to gather data and evidence to help validate the flood warning service.
31. 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.
32. The Flood Risk Management team will look at the suitability of its Property Flood Resilience Programme for communities affected by Storm Babet and will take recommendations through the Cabinet Member later this year for consideration.
33. NCC will work with its partners to look at ways of strengthening the enforcement of riparian responsibilities alongside developing our asset inspection process.