



## **APPENDIX C**

### **SECTION 19 REPORT – FLOOD IN MANSFIELD ON 10 JUNE 2016**

#### **Introduction**

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

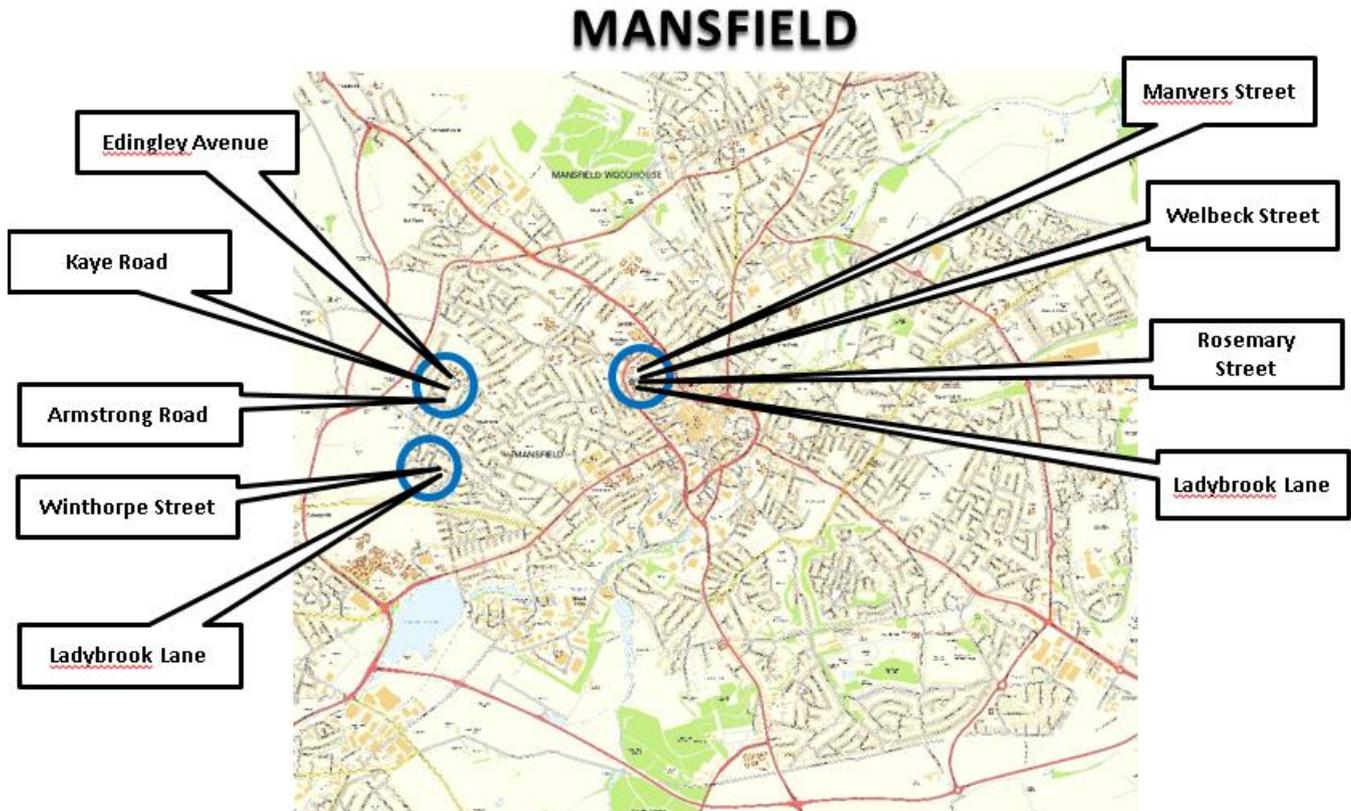
1. On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers it necessary or appropriate, investigate:
  - (a) Which Risk Management Authorities (RMAs) have relevant flood risk management functions.
  - (b) Whether each of those risk management authorities 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) it must:-
  - (a) Publish the results of its investigation.
  - (b) Notify any relevant risk management authorities.
3. The objective of this report is to investigate which RMAs had relevant flood risk management functions during the flooding in July 2013 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 the Environment Agency (Derbyshire, Nottinghamshire and Leicestershire), Mansfield District Council, Nottinghamshire County Council as Lead Local Flood Authority and Highways Authority and Severn Trent Water Ltd. (there is no Internal Drainage Board here).
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. On the 10th June 2016 from mid-day through to mid evening parts of Nottinghamshire were subjected to steady rainfall which included intense periods of heavy rainfall. Mansfield experienced 64mm of rain in a 24 hour period and as a result of this, parts of Mansfield suffered major flooding with 17 properties internally flooded as well as roads and car parks affected.
7. The quickly developing and unusual nature of the weather conditions on the day made forecasting and preparing for the event difficult.

8. Mansfield has been subjected to flooding on a number of other occasions although the previous events are not subject to this report.
9. In response to the flooding events, Fire and Rescue Services, Mansfield District Council, Nottinghamshire County Council and Severn Trent Water Ltd deployed services to provide assistance to the public.

**Summary of flooding and its causes.**



Map 1 – Areas affected by flooding

10. Proactive investigations and remedial work has already begun in some locations by the RMA's to identify issues and clear and repair drainage systems to ensure residents are better protected from flooding.
11. The main identifiable sources of the flood have been identified as well as some other generic factors: -
  - a) Localised areas experienced extreme rainfall. This rainfall could not reasonably be accommodated by the design standards of the various drainage system.
  - b) A significant number of the properties have flooded as they are located where the rainfall naturally concentrates along flow paths or low points (this can be evidenced using the Environment Agency's surface water flood risk mapping systems).
  - c) Private properties have increased impermeable surfaces such as driveways. This has directed water off high ground to areas of flooding quickly.
  - d) Highway gully cleaning may be affected where vehicles are parked over the gully at the time of the cleaning route being made so the gully does not get emptied.

NCC and VIA are actively working closely with local communities who are at most risk to improve accessibility during cleansing operations.

- e) Works to the road layout and wall lines have altered which also influences the route of the flood water.

### **Generic factors**

- 12. The impermeable nature of the ground following a period of rain which saturated the ground is a contributory factor but it should also be noted that there has been a trend over the past decade or so for the front gardens of properties to be converted from gardens to hard standing which in itself adds to the overall level of surface water runoff. Recent changes in planning legislation now requires planning permission to be sought by residents for any future such action unless they are installing permeable surfacing. In addition historic development has contributed to the overall level of surface water runoff as well as interfering with the natural flow routes.

### **Summary of causes of the flood**

- 13. Under normal weather and rainfall conditions, i.e. those that do not exceed the various drainage design standards, the majority of the overall surface water drainage system in Mansfield has the capacity to cope, ensuring water is drained without causing flooding. However the extreme rainfall events of the 10th June 2016 led to surface water runoff that was far in excess of what the systems have been designed to cope with. It is evident from investigating the flood that there is no single cause in terms of a failure of the established drainage systems other than those of a natural and uncontrollable nature namely the amount of rainfall, topography of the catchment and the nature of the ground.

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

- 14. 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. 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. LLFAs also have a new 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, LLFAs can raise awareness of flood risks.
- v. LLFAs should encourage local communities to participate in local flood risk management.

- b) Highway Authority

- i. Maintenance of the public highways.

- c) Mansfield District Council
  - i. Riparian owners of various lengths of watercourses and associated assets in the Mansfield catchment.
- d) Severn Trent Water Ltd.
  - i. Maintenance of the public sewerage system.
- e) Environment Agency
  - i. Responsible for the regulation of main rivers.

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

15. 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:
- a) Nottinghamshire County Council
    - i. Provided emergency response crews to assist in management of flooding event.
    - ii. Initiated and led the S19 Flood Investigation.
    - iii. Highways repaired the carriageway where water damaged the road surface.
  - b) Mansfield District Council
    - i. Initiated Emergency Planning procedures.
    - ii. Provided emergency response crews to assist in management of flooding event.
    - ii. Actively engaged in S19 Flood Investigation.
  - c) Severn Trent Water Ltd.
    - i. Provided emergency response crews to assist in management of flooding event.
    - ii. Actively engaged in S19 Flood Investigation.
    - iii. Investigating hydraulic operation and standards of public sewers known to have surcharged during the event.
    - iv. Repaired the manhole covers damaged due to the surcharging of the sewers.
  - d) Environment Agency
    - i. Actively engaged in S19 Flood Investigation.
    - ii. Undertook rainfall analysis of the June 2016 event to provide the basis of all Flood investigations across the County.
    - iii. Provided all flood risk data to assist in the S19 Flood Investigation.
16. The investigation concludes that all risk management authorities have, and continue to, exercise their respective functions in response to the flood.

### **Future Actions**

17. The following have been identified as ways of promoting clarity of responsibilities and identifying actions that will ultimately reduce the overall risk and consequence of future flooding in Mansfield:
- a) The County Council to work with communities on resilience measures.

- b) The County Council to pursue feasibility and design of further flood alleviation measures and secure funding for implementation where necessary.
- c) The County Council will consult with the community on any future Flood Risk Management proposals.
- d) Severn Trent Water to investigate the hydraulic capacity of their assets.
- e) The identified areas to have an increased regime of maintenance for the surface water systems.

- 18. Working with the communities at risk and educating them on resilience measures and emergency plans will help prepare them for future events.
- 19. Further partnership working between the RMAs will also help in being prepared for any future issues, with clarity of roles and responsibilities shared amongst all parties to ensure an effective response and preparedness for future events.