

Normanton, Main Street

Flood Report

To discuss the flood report contact the Flood Risk Management Team by e-mail: flooding@leics.gov.uk or phone 0116 305 0001

DETAILED FLOOD INVESTIGATION

Investigation Ref.:	2012-077
Investigation:	Main Street, Normanton
Date of Flooding:	28 th June 2012
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1 EXECUTIVE SUMMARY

1.1 STATUTORY CONTEXT

Section 19 of the Flood and Water Management Act 2010 (FWMA) states that, on becoming aware of a flood which meets certain predetermined criteria, the Lead Local Flood Authority (LLFA) must undertake a flood investigation in order to determine the relevant flood risk management authorities involved and which flood risk management actions have been (or should be) taken to mitigate future flood risk. Where an authority carries out a formal investigation, it must publish the results.

It was deemed necessary to complete a formal investigation into the flooding incident at Main Street, Normanton on the 28th June 2012. The internal flooding of multiple properties was reported to the LLFA and the source of the flooding was reported to be from numerous sources.

1.2 CAUSE OF FLOODING

The flooding that occurred at Main Street, Normanton is a reflection of the intense rainfall that fell over a short period of time. The inability of existing drainage systems to collect and convey rainwater effectively meant excess surface water flowed over ground following natural contours to low points in the area.

1.3 MAIN FINDING

During intense rainfall, surface water was seen to be gathering on the highway and in low points within the area. The highway system and 'public sewer' were unable to cope with the quantity of water fallen. The surface water also flowed from the highway into properties on Main Street, Normanton.



2 INTRODUCTION

2.1 LEAD LOCAL FLOOD AUTHORITY INVESTIGATION

Section 19 of the FWMA states:

- (1) On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers necessary or appropriate, investigate:
 - (a) which risk management authorities have relevant flood risk management functions, and
 - (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, and
 - (b) notify any relevant risk management authorities

2.2 FLOOD INVESTIGATION CRITERIA

A formal investigation will be carried out if one or more of the following occurs after a flooding event:

- Loss of life or serious injury
- Critical infrastructure flooded or nearly flooded from unknown or multiple sources
- Internal property flooding from unknown or multiple sources

In the following circumstances, discretion may be used to investigate a flooding incident:

- A number of properties have been flooded or nearly flooded
- Other infrastructure flooded
- Repeated instances
- Investigation requested
- Risk to health (foul water)
- Environmental or ecologically important site affected
- Depth/area/velocity of flooding a cause for concern

2.3 RISK MANAGEMENT AUTHORITIES

The following risk management authorities were identified as relevant to the flooding within Melton Borough:

- Leicestershire County Council Lead Local Flood Authority
- Leicestershire County Council Local Highway Authority
- Environment Agency Lincolnshire and Northamptonshire Area
- Melton Borough Council
- Severn Trent Water Ltd
- Anglian Water Ltd

2.4 NON-RISK MANAGEMENT AUTHORITIES

The following agencies are not prescribed as risk management authorities (RMAs). However, they have a significant involvement in flood risk management:

• Leicester, Leicestershire and Rutland Local Resilience Forum

2.5 FLOODING INCIDENT

It was considered appropriate following reports to Leicestershire County Council on 28th June 2012, to complete a formal investigation into the flooding incident at Main Street, Normanton since at least one property was flooded internally, and the source was initially unknown.



3 SITE BACKGROUND

3.1 LOCATION

Main Street, Normanton is situated in the North-East of Leicestershire bordering Nottinghamshire, within the borough of Melton, approximately 16 miles from Melton. The area immediately around Main Street, Normanton is flat with a slight fall to the East.

3.2 DRAINAGE SYSTEMS

There are various watercourses within the area around Normanton consisting of field ditches, roadside ditches and a larger watercourse to the east of the village which eventually takes the majority of surface water from Normanton.

The area is served by a combined public sewer system. The system is maintained by Severn Trent Water as the relevant water and statutory sewerage authority. The pumping station is currently maintained by Anglian Water.

The responsibility for lateral connections onto the main sewer varies and can either be the responsibility of the adjacent landowner or water company (Severn Trent Water). Further guidance on this is contained within the 'Useful Contacts' section of this report.

Highway Drainage within the immediate area is made up of a number of Highway Gullies with the water conveyed via lateral connections to surrounding ditches/dedicated highway and Severn Trent Water systems. The system has evolved over a number of years rather than having been designed for purpose.



4 FLOODING INCIDENT

4.1 **PREVIOUS FLOODING INCIDENTS**

While there are no previous recorded flooding incidents in the area, anecdotal evidence indicates that the village of Normanton has historically flooded from time to time.

4.2 FLOOD INCIDENT

On the 28th June 2012 there was a duration very intense rainfall that followed a number of days and weeks of significant heavy rain. The ground was saturated and a significant amount of green field runoff was experienced within the area. A number of residential properties are believed to have suffered flooding; the floodwater however was not reported to be running at a significant velocity.

The surface water flowed from the surrounding area eventually settling on the highway. The highway gullies were not able to cope with the quantity of water. Surface water eventually drained via the highway systems and ditches within the vicinity.

4.3 RAINFALL ANALYSIS

'estimated June outflows from Great Britain also exceeded the previous maximum by a considerable margin and flood warnings – relating to both fluvial and flash flood risk – were both common and very widespread'

Source; http://nora.nerc.ac.uk/18723/1/hs201206.pdf

Well above average rainfall was experienced in the East Midlands in the summer of 2012. On 28th June 2012, approx. 22.00 mm rainfall was recorded, at a nearby weather station.

Below graph depicts the annual rainfall at the Mountsorrel weather station 2011 - 2013



5 SUMMARY OF IMPACTS AND FINDINGS

5.1 **IMPACTS**

People, property and the highway were affected by the flooding as a result of the significant rainfall. The County Council held a meeting with the Parish Council and spoke to the affected persons to establish and further quantify the physical effects of the flooding incident.

5.2 HIGHWAY DRAINS

Highway Drainage within the immediate area is made up of a number of Highway Gullies with the water conveyed via lateral connections to surrounding ditches, dedicated highway systems and Severn Trent Water systems. The system of draining the road has evolved over a number of years rather than designed for purpose and was unable to cope with the intense rainfall during the flooding event.

5.3 **PUBLIC SEWER**

Within the immediate area of the flooding there is a combined water sewer adopted by Severn Trent Water Ltd. This takes both foul and surface water from the surrounding properties and a proportion of the highway. At the time of flooding waste water flowed to an Anglian Water Ltd pumping station to be pumped to a treatment works. The systems in the area were unable to cope with the intense rainfall during the flooding event.

5.4 EXTENT OF FLOODING

The extent of the flooding is broadly reflective of the low lying areas shown by the updated flood map for surface water (Appendix B) and LIDAR mapping (Appendix C).

Aerial LIDAR uses a laser to measure the distance between a survey aircraft and the ground surface, including buildings and other assets (above ground pipelines, highways, street furniture, power lines, railway tracks). This data is represented in a LIDAR Plan that shows the topography of the town centre.

The Environment Agency's Flood Map for Surface Water shows areas where surface water would be expected to flow or pond.



6 **RESPONSIBILITIES**

6.1 LEAD LOCAL FLOOD AUTHORITY (LCC)

As stated within the introduction section, the County Council as the LLFA has a responsibility to investigate flood incidents under Section 19 of the FWMA.

The LLFA also has a responsibility to maintain a register of assets which have a significant effect on flooding from surface runoff, groundwater or ordinary watercourse, as detailed within Section 21 of the FWMA. The register must contain a record about each structure or feature, including the ownership and state of repair.

Whilst the County Council can suggest possible causes of flooding in Leicestershire and make recommendations to ensure flood risk is mitigated as far as possible, the FWMA does not provide the County Council with the mandate or funding to tackle all identified causes of flooding.

The County Council also has powers to serve notice on individuals, requiring them to maintain the flow of ordinary watercourses in accordance with Section 25 of the Land Drainage Act 1991 (LDA)

6.2 MELTON BOROUGH COUNCIL

MBC has powers under Section 14 of the LDA to undertake flood risk management works on ordinary watercourses (non-Main River), where deemed necessary. Under Section 20 of the LDA, MBC has the powers to (by agreement of any person and at their expense) undertake drainage work which that person is entitled to carry out and maintain.

6.3 ENVIRONMENT AGENCY

The Environment Agency has a strategic overview responsibility under the FWMA as well as permissive powers to carry out maintenance work on Main Rivers under Section 165 of the Water Resources Act (WRA). Main River means all watercourses shown on the statutory Main River maps held by the Environment Agency and the Department of Environment, Food and Rural Affairs, and can include any structure or appliance for controlling or regulating the flow of water into, in or out of the channel.

The Environment Agency has permissive powers to carry out works of maintenance and improvement on these rivers. These powers can be used to undertake works to reduce flood risk where landowners fail to undertake their responsibilities under the WRA.

The Environment Agency can undertake enforcement action where third party asset owners fail to maintain their property/land in appropriate condition. They may consider undertaking maintenance or repair of third party assets in order to safeguard the public interest and where other options are not appropriate.

6.4 HIGHWAY AUTHORITY (LCC)

LCC, in its role as local highway authority, has a duty to maintain the highway under Section 41 of the Highway Act 1980. Section 100 of the Highways Act 1980 also gives the power to prevent water running on to a highway. Further information on the Highways Act 1980 is available via the link identified within the Useful Links section of this report.



6.5 SEVERN TRENT WATER LTD AND ANGLIAN WATER

Water and sewerage companies are responsible for managing the risks of flooding from surface water, foul water or combined sewer systems. Public sewers are designed to protect properties from the risk of flooding in normal wet weather conditions. However, in extreme weather conditions, there is a risk that sewer systems can become overwhelmed and result in sewer flooding.

Since October 2011, under the 'Private Sewer Transfer', Water Companies are required to adopt piped systems on private land that serve more than one curtilage and were connected to a public sewer on or prior to 1st July 2011. Statutory sewerage undertakers have a duty under Section 94 of the Water Industry Act 1991 to provide sewers for the drainage of buildings and associated paved areas within property boundaries.

Water companies are responsible for public sewers and lateral drains. A public sewer is a conduit, normally a pipe that is vested in a water and sewerage company (or predecessor thereof) that drains two or more properties and conveys foul, surface water or combined sewage from one point to another point and discharges via a positive outfall. There is no automatic right of connection for other sources of drainage to the public sewer network. Connection is therefore discretionary, following an application to connect.

6.6 **RIPARIAN LANDOWNERS OF WATERCOURSES**

As detailed within the EA document 'Living on the Edge', riparian landowners have certain rights and responsibilities, including the following:

- They must maintain the bed and banks of their watercourse, and also the trees and shrubs growing on the banks;
- They must clear any debris, even if it did not originate from their land. This debris may be natural or man-made;
- They must keep any structures that they own clear of debris. These structures include culverts, trash screens, weirs and mill gates.

The following link provides further information: http://www.environment-agency.gov.uk/homeandleisure/floods/31626.aspx.

6.7 **RESIDENTS AND TENNANTS**

Local residents and tenants who are aware that they are at risk of flooding should take action to ensure that they and their properties are protected.

Community resilience is important in providing information and support to each other if flooding is anticipated. Actions taken can include signing up to Flood Warning Direct (if available), nominating a community flood warden, producing a community flood plan implementing property level protection and moving valuable items to higher ground, to more permanent measures such as installing floodgates, raising electrical sockets and fitting non-return valves on pipes.



6.8 COMPLIANCE

There is no evidence to suggest that any of the risk management authorities or stakeholders listed above did not comply with either internal policy or any legal duties



7 <u>CONCLUSION</u>

The flooding that occurred on Main Street, Normanton is a result of the intense rainfall events that fell over a short period of time. Existing drainage systems struggled to cope with the volume of water, which effectively meant excess surface water flowed over ground following natural contours to the low points in the area.



8 <u>RECOMENDATIONS</u>

8.1 SEVERN TRENT WATER/ANGLIAN WATER LTD

Severn Trent Water and Anglian Water should continue to monitor their network. A particular item of concern is the pumping station for the combined water sewer which is in the ownership of Anglian Water but is used by the Severn Trent Water System due to changes in catchment areas.

The pumping station is now under the ownership of Severn Trent Water and is programmed to be rebuilt to current design standards. Severn Trent Water is also carrying out a surface water sewer scheme to separate foul and surface water sewers in line with current design standards. This will also increase the capacity of the systems in the local area

8.2 LEAD LOCAL FLOOD AUTHORITY (LLFA)

The LLFA will continue to monitor the locality and revisit when required, and continue to coordinate the management of flood risk and the interaction of RMAs across Leicestershire.

8.3 LOCAL HIGHWAY AUTHORITY (LCC)

The Highway Authority has also carried out works to improve the dedicated highway drainage system through Normanton to increase capacity and comply with current design standards.

The Highway Authority should continue to check the gullies and lateral connections to ensure that they are in good working order.

8.4 THE ENVIRONMENT AGENCY (EA)

The Environment Agency should continue to monitor flooding at a national level. Due to there being no main rivers located in the area there is little responsibility.

8.5 RIPARIAN OWNERS

The riparian owners of the local watercourses should continue to maintain the watercourses within their land. This will ensure a proper flow of water away from the village and help alleviate the flooding.



9 ACRONYMS

EA	Environment Agency
LCC	Leicestershire County Council
MBC	Melton Borough Council
FIR	Flood Investigation Report
FWMA	Flood and Water Management Act 2010
LDA	Land Drainage Act 1991
LLFA	Lead Local Flood Authority
WRA	Water Resources Act 1991
LIDAR	Light Detection and Ranging
STW	Severn Trent Water Ltd
AW	Anglian Water Ltd
FMfSW	Flood Map for Surface Water
RMAs	Risk Management Authorities

10 USEFUL CONTACTS

10.1 ENVIRONMENT AGENCY

General enquiries 03708 506 506 (Mon-Fri, 8am – 6pm) Incident hotline 0800 80 70 60 (free phone, 24hours)

10.2 SEVERN TRENT WATER

Emergencies 0800 783 4444(24hours) Website: www.stwater.co.uk

10.3 LEICESTERSHIRE COUNTY COUNCIL Highways 0116 305 0001 (24hours)

10.4 LEICESTERSHIRE COUNTY COUNCIL Lead local flood authority 0116 305 0001 (Mon-Fri, 9am – 5pm) Email: <u>flooding@leics.gov.uk</u>

- 10.5 **MELTON BOROUGH COUNCIL** Customer Services 01664 502502
- 10.6 USEFUL LINKS

OFWAT Guidance on sewers http://www.ofwat.gov.uk/consumerissues/rightsresponsibilities/sewers/prs_web_sewertransfer

Environment Agency: http://www.environment-agency.gov.uk/homeandleisure/

Harborough District Council Website: http://www.melton.gov.uk/

Leicestershire County Council Flood Risk Team: http://www.leics.gov.uk/flooding

Local Resilience Forum: http://www.localresilienceforum.org.uk/

Land Drainage Act 1991: http://www.legislation.gov.uk/ukpga/1991/59/contents

Water Resources Act 1991: http://www.legislation.gov.uk/ukpga/1991/57/contents

Highways Act 1980: http://www.legislation.gov.uk/ukpga/1980/66



APPENDIX A

SITE LOCATION PLAN



N N N N N N N N N N N N N N	NOTES: 1. The blue circle indicates the approximate location of the flooding Leicestershire County Council ENVIRONMENT AND TRANSPORT DEPARTMENT ON BEHALF OF THE	
	LEICESTERSHIRE COUNTY COUNCIL ENVIRONMENT AND TRANSPORT	
The second secon		
	TITLE: Location Plan, Normanton	
This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Leicestershire County Council. LA100019271. Published 2013.	NORMANTON LANE, NORMANTON	
This is not a definitive record, but is based on the best available information and is given without warranty. If roadside ditches are present	DRAWINGNUMBER 2012-Fng-077-LP Not To Scale	
the normal presumption is that these do not generally form part of the publicly maintainable highway. This plan has been produced in relation to the specified area of enquiry and should not be used for any other purpose, since its accuracy can not be guaranteed.	CREATED BY: Chris Bramley DATE: 27-12-2013	
This map gives an indication of the broad areas likely to be at risk of surface water flooding. It is not suitable for use at an individual property scale due to the method used.	APPROVED BY: Daniel Rawle SIZE: A4 E-MAIL: flooding@leics.gov.uk PHONE: 0116 305 0001 FAX: COUNTY HALL · GLENFIELD · LEICESTER · LE3 8RJ	

APPENDIX B

FLOOD MAP FOR SURFACE WATER (FMfSW)





APPENDIX C

LIDAR Plan





APPENDIX D

SEVERN TRENT WATER PLAN











APPENDIX E

EA STANDARD NOTICE



89 07 SD02, Version 6

Standard notice [not for use with Special Data, Personal Data or unlicensed 3rd party rights]



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