

FORMAL FLOOD INVESTIGATION REPORT
Riseley, Bedfordshire

1.0 Background

The Flood and Water Management Act 2010, establishes unitary and upper tier authorities as Lead Local Flood Authorities (LLFAs). Section 19 of the Act gives LLFAs the duty to investigate a flood event when considered appropriate and to the extent it deems necessary. The LLFA will identify the relevant Risk Management Authority (RMA) and record any actions which have been taken or they are proposing to action in response to the flood event.

When an investigation is carried out under section 19 of the Act, the LLFA will publish the results of the investigation and notify any relevant risk management authorities.

2.0 Risk Management Authority Responsibilities

Table 1.1 shows RMAs responsible for managing the flood risk from different sources that the BBC investigation procedure applies to.

Flood Source	Environment Agency	Lead Local Flood Authority	Drainage Authority	Water Company	Highway Authority
		Bedford Borough Council	Bedford IDB	Anglian Water	Bedford Borough Highways
Main River	✓				
Surface Water		✓			
Surface Water (<i>on or coming off the highway</i>)					✓
Sewer flooding				✓	
Ordinary Watercourse		✓	✓		
Groundwater		✓			
Reservoirs	✓				

Owners of land adjoining, above or with a watercourse running through it are termed 'riparian owners' and have responsibilities to maintain and allow the free flow of water through their land. Further information on riparian owner rights and responsibilities can be found in the Environment Agency publication 'Living on the Edge' [here](#).

3.0 Flood Incident, Extent and Impact:

Heavy rain was forecasted for the 7th – 11th March 2016 across the region. The soil moisture deficit for the Upper and Lower Ouse on Tuesday 8th March was 1mm and 0mm respectively, which meant that the ground was already, saturated.

37.4mm of rainfall was recorded at the Environment Agency's rain gauge at Yelden between 02:00 and 20:30 on Wednesday 9th March 2016. The amount of rainfall is equal to the average rainfall expected for the whole of March (Figure 3.1)

Measurements from the Riseley Brook recorded water levels rapidly rising from 03:00 and peaking at 12:45 on Wednesday 9th March 2016. The water level peaked at 57.19mAOD (metres above Ordnance Datum) (Figure 3.1), over a foot higher than the road flooding in November 2012 which peaked at 56.84mAOD.

The Riseley Flood Group notified the Council initially with information on the rapidly rising brook. The Flood Alert for the River Kym and the Riseley Brook was received at 07:40am and a Flood Warning at 11:22am. A total of 6 residential properties flooded internally along High Street, Riseley. 9 properties had flooded affect gardens, garages etc. and one commercial property was flooded. Both the Lower School and Middle School in Riseley were also affected, however no flooding affected their buildings.

Previous flood incidents of a similar nature have occurred according to our records but more properties have previously flooded.

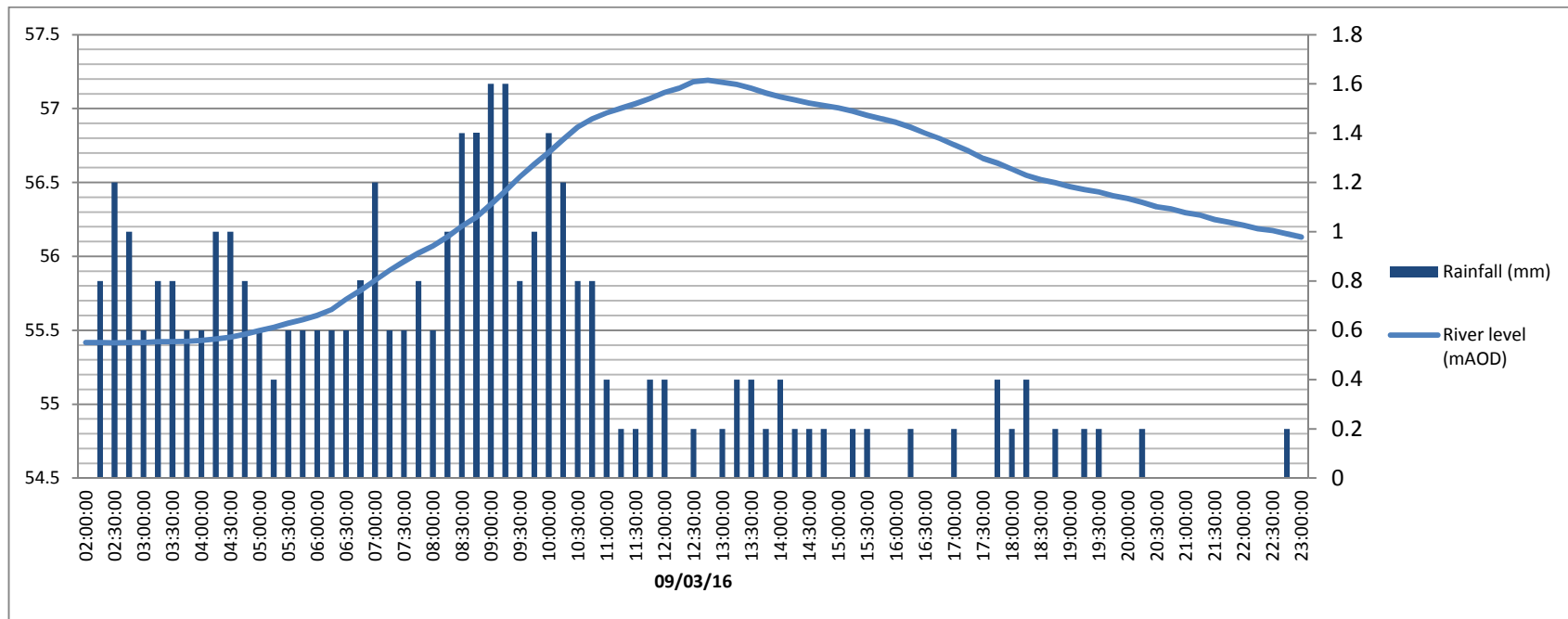


Figure 3.1 Rainfall and River Levels for Yelden and Riseley 09/03/16

4.0 Likely Cause of Flood Incident

The Riseley Brook, which runs through Riseley came out of bank and flooded the High Street. Figure 3.1 shows how quickly river levels came up following the intense rainfall. Surface water also contributed to this flooding where it could not get away through the drainage system. Flooding also occurred along Church Lane, where a drainage ditch which is culverted under the Church Lane, was blocked at the upstream end by a blocked trash grill. This caused water to flow over the road to nearby properties. Drainage ditches running alongside the old Five Bells PH also contributed to the Brook overflowing as water poured off the fields.

This has been investigated fully by the Senior Flood Risk Officer, Flood Investigation Officer, Engineers, Highways and the Environment Agency. It was recommended that following these investigations the water course would be walked to identify areas where maintenance is required to ensure the capacity if the river is kept at its maximum. A survey of the village by Highways, Engineers and Flood Risk Officers has also identified several drainage issues that need rectifying.

5.0 Responsible Risk Management Authority

It has been identified that the responsibility for resolving the flooding issues in Riseley lies with Bedford Borough Council and the Environment Agency as the Riseley Brook is a Main River but the other watercourses that drain into the Riseley Brook are Ordinary Watercourses. Any surface water will also be the responsibility of Bedford Borough Council. No other Risk Management Authority is involved or responsible. The responsibility to maintain the river will lie with riparian landowners along the stretch of the watercourse.

6.0 Recommended Action

Table 6.1 highlights the recommended actions by Bedford Borough Council the Environment Agency for the responsible RMA and a suggested timescale of responses required to confirm that the RMA is aware of the flood incident and is taking appropriate action.

Table 6.1: Recommended actions for the responsible authorities and timescale for a response required.

Responsible Authority	Action	Timescale for response required
Environment Agency	To walk the watercourse and identify those areas where maintenance is required. Request these works to be completed by the necessary Riparian Owner.	August 2016
Bedford Borough Council LLFA	To survey the village with the Engineers to identify drainage issues and likely causes of the flooding.	May 2016 - COMPLETE
Bedford Borough Council Highways	To clear all blocked gullies reported through to the Highways Helpdesk.	May 2016 - COMPLETE
Bedford Borough Council Highways	To put key gullies in Riseley on the high priority list.	May 2016 - COMPLETE
Bedford Borough Council Highways	To unblock the culvert and trash grill at Church Lane and investigate the flooding issues further.	July 2016
Bedford Borough Council	To investigate the blockage and culvert at the far end of the village to	July 2016

Highways	ensure the system is working correctly.	
Bedford Borough Council Highways/LLFA	To consider other possible options to reduce the flooding impact in the village.	October 2016 prior to winter flooding season

7.0 Next Steps

The next steps for the LLFA are to ensure the report is forwarded to the RMAs identified in table 5.1 and that these authorities are aware of their flood risk management responsibilities. The LLFA will follow up with the authorities to determine progress against the recommended actions.