

**FORMAL FLOOD INVESTIGATION REPORT**  
**Carlton Lower School, Bedfordshire**

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**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	<b>Bedford Borough Highways</b>
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 7<sup>th</sup> – 11<sup>th</sup> March 2016 across the region. The soil moisture deficit for the Upper and Lower Ouse on Tuesday 8<sup>th</sup> 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 9<sup>th</sup> March 2016. The amount of rainfall is equal to the average rainfall expected for the whole of March.

Water entered one classroom at the Lower School in Carlton, causing children to be moved to the main hall. The fire services were called to pump water from the classroom and car parking area to the ditch alongside the school field. No other properties flooded within the village.

Previous flood incidents of a similar nature have occurred according to our records.

### **4.0 Likely Cause of Flood Incident**

The surface water culvert running underneath The Causeway carriageway and the area known locally as 'The Gannick' appeared to reach capacity following the intense rainfall. This therefore caused the upstream watercourse to surcharge over the bank into The Causeway carriageway. The water ran along The Causeway, through a residential garden and into the school grounds, causing flooding to the classroom and car park.

This has been investigated fully by the Senior Flood Risk Officer, Flood Investigation Officer and Highways. Different options have been discussed in detail however the option to increase the capacity of the culvert at The Causeway/ The Gannick has been discounted as it could lead to increased flooding issues downstream at The Moor. The entire village has been surveyed and all blocked gullies have been reported through to Highways, who have been out and cleared them. Gully emptying in Carlton has also been put on a high priority list at key locations in the village.

## 5.0 Responsible Risk Management Authority

It has been identified that the responsibility for resolving the flooding issues in Carlton lies with Bedford Borough Council as the watercourses within Carlton are Ordinary Watercourses. No other Risk Management Authority is involved or responsible.

## 6.0 Recommended Action

Table 6.1 highlights the recommended actions by Bedford Borough Council 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
<b>Bedford Borough Council LLFA</b>	To survey the village with the Parish Council to identify drainage issues and likely causes of the flooding.	<b>May 2016 - COMPLETE</b>
<b>Bedford Borough Council Highways</b>	To clear all blocked gullies reported through to the Highways Helpdesk.	<b>May 2016 - COMPLETE</b>
<b>Bedford Borough Council Highways</b>	To put key gullies in Carlton on the high priority list.	<b>May 2016 - COMPLETE</b>
<b>Bedford Borough Council Highways/LLFA</b>	To consider other possible options to reduce the flooding impact in the village.	<b>October 2016 prior to winter flooding season</b>

## 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.

