

Flood Investigation Report

Section 19, Flood & Water Management Act (2010)

Elland, Halifax - 8th July 2014 Flood Investigation Technical Note

Background

Calderdale Metropolitan Borough Council (CMBC) as the Lead Local Flood Authority (LLFA) has a responsibility to record and report flood incidents in accordance with Section 19 of the Flood and Water Management (2010) Act:

- (1) On becoming aware of a flood in its area, a LLFA must, to the extent that it considers it 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.

This report summarises the extent, flood mechanism and impact of the flooding in Elland. The report outlines the basic responsibilities of the risk management authorities involved, outlines their response to the flood event and identifies any potential future actions.

Flooding Location

The key infrastructure affected was mainly highways in and around Elland (see Map). However several residential and commercial properties were affected by the rainfall event including a nursery and a hotel car park. Yorkshire Water sewers were overwhelmed in a number of locations and there was a culvert collapse on a small watercourse north of Elland.

No significant rainfall fell in the nearby townships of Brighouse and Halifax.

Flooding Warnings

Flood Guidance Statements, had been issued by The Met Office (Flood Forecasting Centre) over a period of 2 – 3 days prior to the event indicated a Low risk of surface

water flooding prior to the event. A high risk of surface water flooding was given to the North East of England.

No flooding warnings for Main River were issued prior to the rainfall event.

The area had experienced a period of dry, warm weather prior to the event and ground water levels were low.

Risk Management Authorities Immediate Response

As far as can be ascertained Calderdale Metropolitan Borough Council (CMBC) and Yorkshire Water were the only risk management authorities involved in the rainfall event. A summary of the activities CMBC undertook during and immediately after the flood event is summarised below:-

Emergency Planning

No CMBC emergency plans or procedures were implemented during and after the flood event.

Highways (Flood Risk Management)

CMBC received a number of reports via its contact centre, and by observation of colleagues, regarding flooding of private and commercial property and sections of highway in the Elland area. Sandbags were deployed to some of the affected properties.

Resources were deployed to several locations to manage surface water flooding principally to unblock surface water drainage systems.

No care homes were reported to have been affected but one children's centre suffered internal flooding in one area.

Surface water flooding did occur in close proximity to a school and this was dealt with by the Council drainage contractors.

Yorkshire Water

Yorkshire Water has investigated a sewer flooding event in Plains Lane Elland.

Description of the Flooding Incident

A high intensity rainfall event occurred over Elland and across into North Kirklees on the 8th July which lasted approximately 2 hours between 1.30pm and 3.30pm. At approximately 13:15 a very high peak intensity was observed. Its duration was approximately 20 minutes.

The surface water drainage systems on several highways were overwhelmed with rainfall runoff and rainfall ponding in 'low points' on the highway. It is believed that both gully obstruction and simple overloading of drainage systems were responsible.

The Council's Customer Contact Centre received approximately 30 significant reports of surface water flooding during and immediately after the rainfall event. It was reported that approximately four properties suffered internal flooding. Two other properties are currently being investigated. The surface water affecting the properties came from property drainage, sewer and surface water runoff. In addition a commercial property and a nursery were affected by surface water. These are currently subject to on-going investigations.

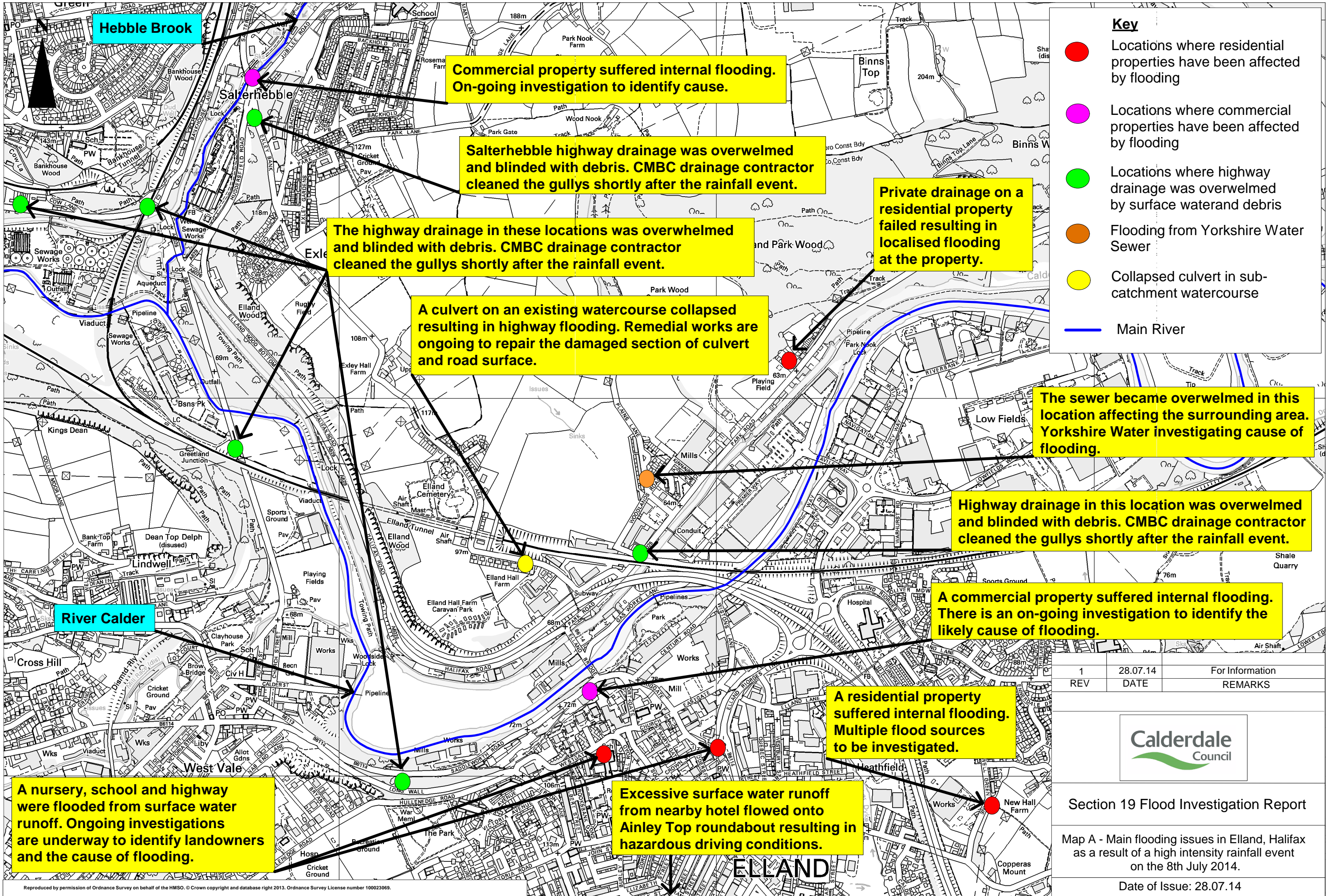
There was disruption to local traffic movements and bus services were temporarily delayed. Normal services were swiftly resolved by the evening of the rainfall event. The 'ponding' of surface water at several low points in the highway around Elland was quickly drained away by CMBC's drainage contractor following the rainfall event.


Post examination of the issues created by the rainfall event has identified that the majority of the highway related problems were as a result of hillside run off transporting debris that became trapped on the highway gully grates, which resulted in the drainage system unable to drain the highway of excess surface water.

Feedback from the CMBC drainage contractors indicates that the gully system generally conveyed flood flows effectively once the surface debris had been removed from the gully grates. It is clear that the main problems were debris settling and blocking gully grates during the rainfall event and simple overloading during the peak intensity.

Conclusions

- 1) A high intensity, localised rainfall event fell in the Elland area over a short duration overwhelming highway drainage systems and causing extensive surface water runoff from the hillsides.
- 2) Several highway surface water drainage systems and properties were affected by the rainfall event in the local area.
- 3) The Council was the only Risk Management Authority involved and its resources coped generally well with the event. No damage requiring capital investment occurred.
- 4) The event highlighted the vulnerability of certain areas of the borough to obstruction of highway gullies and the need to manage these assets more proactively. A plan is already in place to progress this.



1	28.07.14	For Information
REV	DATE	REMARKS
<div> Calderdale Council</div>		
Section 19 Flood Investigation Report		
Map A - Main flooding issues in Elland, Halifax as a result of a high intensity rainfall event on the 8th July 2014.		
Date of Issue: 28.07.14		