

Preliminary flood risk assessment: Newcastle City Council

This addendum by Newcastle City Council (2017) updates the council's preliminary flood risk assessment report published in 2011. Read the addendum in conjunction with the preliminary assessment report.

Addendum

The preliminary flood risk assessment (PFRA) and flood risk areas (FRAs) for Newcastle City Council were reviewed during 2017, using all relevant current flood risk data and information.

Changes to the assessment of risk since the preliminary assessment report was published in 2011 are described in the statements in this addendum.

Past flood risk

The PFRA 2011 included a survey of historic flood data based on 29 records covering three major flood events in 2000, 2005 and 2008. It identified that the main cause of flooding was surface water moving overland linked to incapacity of highway drainage and sewers along with the interaction of main rivers and ordinary watercourses.

In 2012 we experienced two major events Thunder Thursday a 1:100 Year Event and the collapse of a culvert at Newburn. Both these events were investigated and provided data.

Summer 2012 13,000 questionnaires to residents were sent out to residents with approx 3,500 responses received. It provided a detailed database that was used to assess the impact of the storm across the City.

Responses were used to identify priority locations for further investigation and development of future schemes and investment.

The primary source of flooding was identified as runoff from roads, followed by manholes and playing fields or grassed areas. There was very little evidence of streams or burns contributing to the flooding. It confirmed that surface water especially when rain falls on saturated ground remains one of the main causes of flooding and the results in the drainage networks being overwhelmed and unmanaged flows run over the surface. Any drainage network has a limited capacity to deal with extreme rain.

In 2012 the Newburn culvert collapse due to flooding highlighted the need for a detailed understanding of major culverts across the City to understand their condition. Three culverts were identified and assessed as being high impact to the City should they collapse.

In November 2013 A Review of Extreme Events in Newcastle 2012 was published. This document identified the need to investigate and develop schemes based on the number of responses to the 2012 Flooding Questionnaire.

Future flood risk

The experience of Thunder Thursday event in June 2012 and particularly the Newburn culvert collapse in May 2012 highlighted the extent of flooding impacts across the City. This has resulted in an improved knowledge of surface water flooding and a better management of assets to assist in reduction of flood risk. In particular the low risk but high impact that

major culvert failures have. The detailed surveys after the 2012 events identified the occurrence of internal flooding to property outside identified overland flow paths.

Blue Green Cities Project identifies some of the economic impacts of the storm.
Highlight the seriousness of the flooding risk from culverts
Newburn Culvert collapse 17/05/2012,
Craghall Dene Culvert - repairs 2014,
Westerhope GC flooding January 2016
Ouseburn Surface Water plan

Flood risk areas (FRAs)

One flood risk area has been identified within the Newcastle City Council administrative boundary for the purposes of the Flood Risk Regulations (2009) second planning cycle.

Other changes

No change other than partnerships have strengthened.

**Newcastle City Council
December 2017**