

**2019 FLOODING DRAFT INVESTIGATION REPORT****Report of the Corporate Director for Place Management & Regeneration****1. INTRODUCTION AND PURPOSE OF REPORT**

- 1.1 On the last week of July and first week of August 2019, extreme rainfall events hit parts of north-west England and the south Pennines, with flooding observed across Greater Manchester and Cheshire. The main event day was 31<sup>st</sup> July 2019.
- 1.2 The rainfall event significantly affected the north parts of Cheshire East and Stockport, with the borough receiving approximately a month's rainfall in a few days. Leading up to this Stockport had experienced many weeks of warm dry weather and as a result ground conditions were dry and water levels within the local watercourses were very low. The weekends rain saturated ground and surcharged drainage networks. The volume and intensity of rainfall overloaded the local drainage system, causing surface water flooding throughout large parts of the borough.
- 1.3 The scale of flooding affected homes and areas within 1 in 1000 years prediction zones.
- 1.4 Lyme Park and villages higher in the Mersey Catchment in Cheshire were flooded and this caused drainage networks to overflow into the Poynton Brook and Norbury Brook which flows to the Ladybrook and Micker Brook. Poise Brook and Chorlton Brook were also affected.
- 1.5 This culminated in damage and potential collapse of the spillway at Toddbrook Reservoir in Whaley Bridge on the River Goyt that led to homes being evacuated downstream.
- 1.6 Members will be aware that the flooding incident had an extremely negative impact on many people's lives. Many homes and businesses were subject to major damage, with many people forced out of their homes and businesses shut for several months whilst repairs were undertaken, disrupting their lives and economic wellbeing and causing enormous emotional distress. Those affected are understandably also concerned about flooding reoccurring and the potential longer-term impact on the value of their property and the ability to obtain insurance. Many more people are impacted by the threat of flooding and concern over whether their property will be affected by the next heavy rain episode.
- 1.7 This report presents the various aspects of the flood events in July and specifically incorporates the draft Independent Section 19 Investigation Report in accordance with the Flood & Water Management Act (FWMA) 2010 on the investigation into the flooding events undertaken independently by Mott MacDonald Consulting Engineers.

- 1.8 Completion of the appendices for the S19 draft report have been delayed because of Covid-19 related staff resource issues experienced by the Consultant.
- 1.9 The S19 draft report including appendices will be made available online with an email address for any comments.
- 1.10 It is intended that the S19 draft report is presented at the September Area Committees for comment and that several virtual meetings are organised which residents will be invited to attend. The meetings will include a presentation on the S19 draft report and an opportunity to ask questions or comment on the report. There will also be an opportunity to register for individual discussions with officers after the presentations. The meetings will be held in October.

## **2. INDEPENDENT SECTION 19 FLOOD INVESTIGATION REPORT FOR JULY 2019 EVENT**

- 2.1 The aim of the independent investigation is to provide a factual record of the flooding to meet the requirements of Section 19 of the FWMA.
- 2.2 The draft independent report completed by Mott MacDonald on behalf of the Council on the investigation into the flooding in Stockport in July 2019 is appended in Appendix A and provides an overview of the event and the affected communities and properties.
- 2.3 The investigation was completed in accordance with the requirements of the:
- AGMA Policy for Investigating Flood Incidents;
  - Flood and Water Management Act 2010;
  - Stockport Local Flood Risk Management Strategy.
- 2.4 The investigation includes the following elements:
- Consultation with all relevant Risk Management Authorities (RMA) (and relevant stakeholders);
  - Public Consultation using Local Drop-in Sessions;
  - Properties and infrastructure affected;
  - Possible flood sources and mechanisms;
  - RMA response during and post event to date;
  - Existing and proposed flood risk management activities;
  - High-level hydrological and hydraulic review.
- 2.5 It produces a formal investigation report to document:
- Background information on the location/s affected;
  - A summary of the flood event/s;
  - Consideration of the likely cause/s;
  - An indication of the roles and responsibilities of each RMA (and stakeholders) and action taken or proposed;

- There is a specific focus on the flooding affecting the A555 around Woodford and Hazel Grove;
- Conclusions and Recommendations arising from the investigation.

2.6 The draft report also contains the details provided by the various Risk Management Authorities which are to be consulted and it is acknowledged that further information on the flooding incidents may be available and Members at the Environment and Economy Scrutiny Committee and the Local Area Committees will be asked to comment on this report as will United Utilities (UU) and the Environment Agency (EA) to inform the final report that will ultimately be reviewed and approved by the Cabinet.

### **3. DETAILS OF LOCAL CONDITIONS**

- 3.1 The summer of 2019 in the UK was exceptionally hot and the Meteorological Office reports that Friday 26<sup>th</sup> July 2019 was the hottest ever July day in UK recorded history at 38.7 C in Cambridge. This is similar to temperatures recorded in the summer of 1976, 2003 and 2015.
- 3.2 Meteorologists advise that although heatwaves are extreme weather events, research shows that with climate change they are likely to become more frequent. Met Office projections show that heatwaves with the intensity of last summer's event could occur on average as regularly as every other year by the middle of the century.
- 3.3 After peak heat temperatures, returning closer to normal weather becomes less settled with an increased chance of rain.
- 3.4 On Sunday 28<sup>th</sup> July, Stockport received high levels of rainfall and surface water flooding was reported across the borough. Wednesday 31<sup>st</sup> July was exceptional in that after 4 days of rainfall across the borough this was coupled with high intensity rainfall centring around Poynton and Prestbury higher in the hills of the Poise Brook and Ladybrook catchments.
- 3.5 It is estimated that as a comparison the 1 days rainfall on the 31<sup>st</sup> July was twice the amount received in both the recent previous flood events in June and September 2016.
- 3.6 The amounts and intensity of the rainfall would have exceeded the capacity of all the drainage networks and coupled to that drainage would flow quickly to the watercourses in the natural catchments and both surface water run-off and fluvial flows would have increased exceptionally into the rivers.
- 3.7 On the 31<sup>st</sup> July rain stopped around 21:00 and specific properties downstream in Cheadle Hulme and Cheadle were flooded about 1.5 hours later from the river.
- 3.8 Although registered for flood warnings the Council did not receive flood warning or flood alerts that week from the Environment Agency.

#### **4. INDEPENDENT REPORT – INITIAL FINDINGS**

- 4.1 According to flood records provided by the Council, the Environment Agency and United Utilities, there were 776 flood reports. This is over a hundred more than the September 2016 flood event. For this flood event we recorded the different types of flooding and recorded a total of 329 cases of internal flooding to buildings. This was more than the number of properties flooded across the three flood events in June 2016 combined (295).
- 4.2 Properties affected by flooding were recorded across all areas of Stockport on the 28<sup>th</sup> to 31st July 2019. Most Council Wards areas were affected by this event with more than five properties flooded, with the majority across the heavily urbanised west and south areas of the borough. The Council arranged drop-in sessions according to the significance and highest number of flood reports and these were held in; Asdwood, Bramhall Green, Cheadle, Hazel Grove and Romiley.
- 4.3 There were many flooded areas recorded as surface water flooding and this could be attributed to a combination of the capacity of the drainage systems and the drainage flows to the nearby rivers. Ultimately, it is the capacity of the river flows that impact on the flood risk and flooding.
- 4.4 The major examples of this are in Cheadle around Councillor Lane which on the culverted Main River, Chorlton Brook. Adswood and Queens Road Cheadle Hulme is also developed on culverted tributaries of Chorlton Brook. The area around Highfield Road in Cheadle Hulme is on a culverted watercourse, Turves Brook. Romiley centre is particularly sensitive as the area is drained via a culverted watercourse to the River Goyt.
- 4.5 Key areas in this event were more focused around fluvial flooding (open rivers) including Queens Road and the Demmings mainly Bramhall Green, Bramhall Moor, Cheadle, Cheadle Hulme, Offerton Green and Torkington. These are known hotspots and other areas of flooded were considered as having capacity issues around sewers and drainage that will need further investigation with the respective RMAs.
- 4.6 The A555 was flooded from the previous Sunday and a road closure was in place.
- 4.7 In terms of response and recovery, the report acknowledges that The Council, the Environment Agency and United Utilities as RMAs along with other authorities responded to the July flood event, providing immediate assistance to those flooded and carrying out post event investigations, repairs and support.
- 4.8 In terms of weather warnings, there was a severe warning throughout that period and there is a review of the intensity of rainfall that was not predicted.
- 4.9 In terms of flood warnings, there were flood alerts given for the whole area but no warnings over this period in the areas that were affected. The warnings issued were for the Mersey and Goyt in Stockport.

- 4.10 In terms of post-event responses, there many operations undertaken as part of a multi–agency response.
- 4.11 Following the flood event, United Utilities (UU) investigated and recorded each flood incident and where possible determined the source and cause of flooding and blockages were also cleared if found. In some cases, United Utilities recorded the incident to be associated with non-UU assets, such a private drains (which are the responsibility of the homeowner) and surface water and groundwater sources. UU then shared these issues with the Council as Lead Local Flood Authority (LLFA). UU also assisted customers in clean-up operations and it was notable that UU provided this in areas that were not affected by sewer flooding, but river flooding.
- 4.12 The Environment Agency carried out routine inspections along rivers and where appropriate removed debris. This was assisted by the Council especially at Council owned river/ road bridges.
- 4.13 The Council assisted with welfare visits and arranged skips to assist residents whose homes had been flooded. Inspections and surveys were arranged to assess the conditions of the flooded culverted watercourses and highway drainage. The Council advised owners on remedial actions.
- 4.14 The Council managed a data gathering exercise through door to door approaches to those affected by flooding to assist with the investigation and recording of the issues.
- 4.15 The Council provided financial assistance to residents of those properties impacted by flooding in the form of grant funding and council tax freezes.

## **5. RECOMMENDATIONS FROM THE INDEPENDENT REPORT**

- 5.1 The purpose of this report is to document the flood which affected communities of Stockport in July 2019 and report on the subsequent investigations completed so that the respective RMAs can consider and prioritise appropriate actions. In this way, communities can be clearer on what has happened since the floods, and what each RMA is planning to do to reduce or mitigate the impacts of future flooding within the borough.
- 5.2 The report contains general actions, which apply across the whole borough of Stockport and where appropriate ongoing or planned actions to be taken in specific locations. Due to the widespread nature of the flooding, it is not possible to identify detailed actions for each community which was affected.
- 5.3 At this stage, the actions listed are recommendations only and their delivery is likely to depend on the RMAs securing funding and on other commitments and priorities. Any major works requiring capital investment will be considered through the Defra funding programme. The RMAs will continue to work together to engage with the communities affected and to identify all potential options for each location to holistically reduce flood risk across Stockport.

5.4 Meanwhile, the communities need to be prepared for similar extreme weather events in the future, such as heavy and intense downpours after a quite dry period. These kinds of event are becoming more common due to climate change, and their impacts can be mitigated to some extent by paying attention to the weather forecast and flood warnings, and regular maintenance of drains and watercourses.

## **6. CONCLUSIONS AND RECOMMENDATIONS**

Members are requested to comment on the draft Mott MacDonald Section 19 Flood Investigation Report for the July 2019 floods in Appendix A and recommend that the Cabinet approves the final report.

### **BACKGROUND PAPERS**

Draft Section 19 Flood Investigation Report for July 2019 Flood Event.

Anyone wishing to inspect the above background papers or requiring further information should contact [Mark Glynn](#) on Tel: 0161-474-3700 or by email on [mark.glynn@stockport.gov.uk](mailto:mark.glynn@stockport.gov.uk) or Sue Stevenson tel 0161 474 4351 [sue.stevenson@stockport.gov.uk](mailto:sue.stevenson@stockport.gov.uk).