

## Davenham Main Report Details

Project:	Storm Christoph Section 19 Main Report		
Area:	Davenham		
Date:	10/08/2022	Project No.:	5150735

### Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Draft for RMA Comment	Draft for RMA Comment	SF	TS	EJG	EJG	10/08/22
Draft for Final Approval	Draft for Final Approval	SF	TS	EJG	EJG	01/09/22

### Client signoff

Client	Cheshire West and Chester Council
Project	Storm Christoph Section 19 Main Report
Project No.	5150735
Client signature / date	

# Davenham Main Report Details

This Davenham specific Main Report should be read in conjunction with the Section 19 Flood Investigation – Main Report (January 2021 Storm Christoph Flooding Event).

## 1. Background

Davenham is a village and civil parish, approximately 3km south of Northwich town centre. The Weaver Navigation (classified as a main river) is to the west of the village and the River Dane (classified as a main river) is to the east of the village. There are several land drains and ordinary watercourses located within the rural civil parish. Flooding in Davenham was reported on Davenham Meadows, Eaton Lane and Hartford Road within the village. To the south of the village and to the north of Moulton village, flooding was reported on Beehive Lane, Jack Lane and Church Street. It is understood the properties that flooded in Moulton are within the Davenham Parish.

To the west of the village, and the west of the River Dane, flooding was also reported in Whatcroft. Whatcroft is a township in the Davenham Parish. Whatcroft lies between the River Dane, to the west, and Puddinglake Brook (classified as a main river), to the east. The Trent and Mersey Canal is located to the north and the west of the township.

Davenham and Moulton are within Flood Zone 1 and classified as an area that is not likely to flood from the rivers or the sea. Some areas of Davenham and Moulton are classified as being at risk of surface water flooding (Appendix I). Areas of Whatcroft are classified as being at risk of both surface water flooding and flooding from rivers or the sea – with some areas within Flood Zones 2 and 3 (Appendix I).

## 2. Flood Review

### 2.1. Davenham village

During the Storm Christoph event, flooding in Davenham was reported on Davenham Meadows, Eaton Lane and Hartford Road, internally flooding four properties, one of which was affected by foul water flooding. Figure 1 shows details of the flooding developed in consultation with Cheshire West and Chester Council (CWaC) and the affected property owners.

The area has previously suffered from highway flooding during big storm events such as the Sept 2012 flooding, however, Storm Christoph is the first time that properties have suffered internal flooding.

At the point where the watercourse is culverted under Eaton Lane, the watercourse overtopped and flooded the junction of Eaton Lane and Hartford Road. Water ran down Hartford Road and flooded properties on both the north and south side of Hartford Road. Manholes on Eaton Lane and Hartford Road associated with the culverted watercourse also surcharged. The combined sewer system surcharged at one manhole along Hartford Road; residents reported backing up of toilets. During the event, the flooded section of Hartford Road was closed.

The watercourse is culverted under properties on Hartford Road and then flows to the west behind properties on Rookery Gardens and Davenham Meadows before flowing in a culvert under the A556. Drainage maps suggest the watercourse is culverted along this entire section, however the watercourse is in open channel behind properties on Davenham Meadows. It is understood that the poor condition of the pipe restricted flow causing the watercourse to flow above ground as an open channel before dropping back into the culvert at a manhole just before flowing under the A556. During the event, the levels in this watercourse were reported to be up to 2 m high and water flowed through gardens and into a property on Davenham Meadows. Water flowed overland on Davenham Meadows from Hartford Lane.

Residents reported the following issues:

- Residents are concerned the catchpit on Eaton Lane and highway gullies were not cleared prior to the event.
- Residents expressed concern that upstream developments are contributing to additional flows during storm events. They are particularly concerned with the impact of a recent development on London Road which discharge into ponds to the southeast, which drains into the watercourse.

- The fire service arrived during the event but did not carry out any pumping, whereas during a previous flood event the fire service pumped water from the junction between Hartford Road and Eaton Lane to land further west down Eaton Lane.
- Some residents had to be relocated for up to 6 months after the event.
- Structural issues within the drainage system in the land behind Rookery Gardens and Davenham Meadows, including a damaged pipe, is resulting in open channel flow at this location. Residents are concerned over the lack of maintenance and repair of the drainage system.

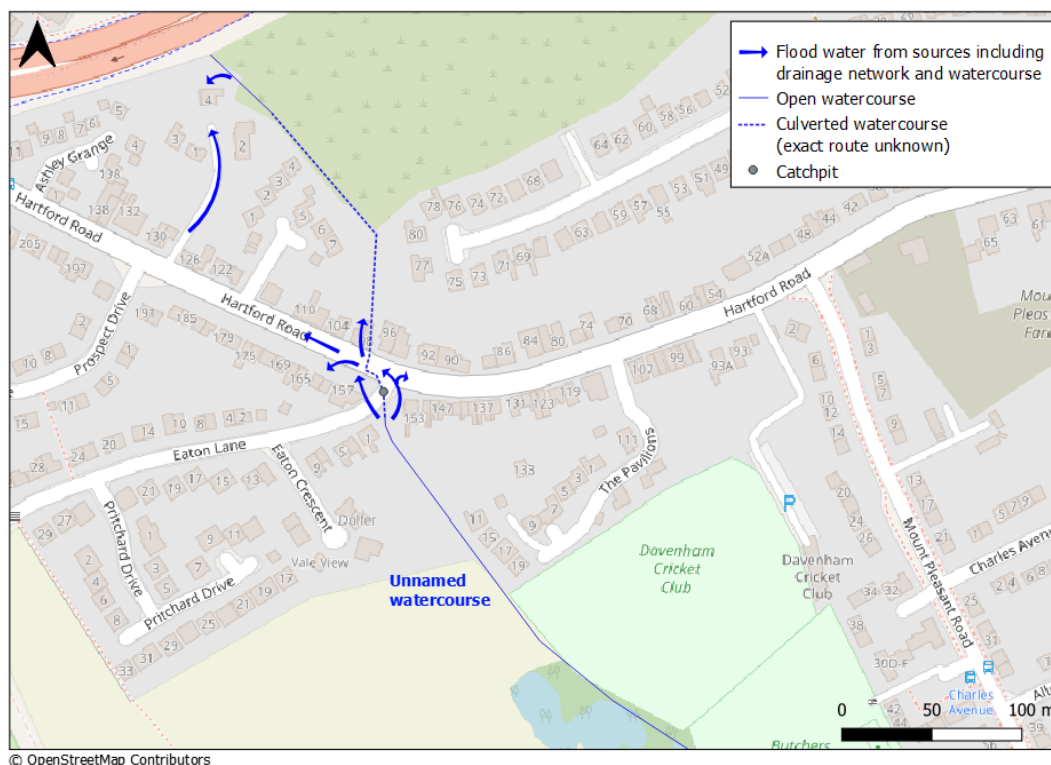
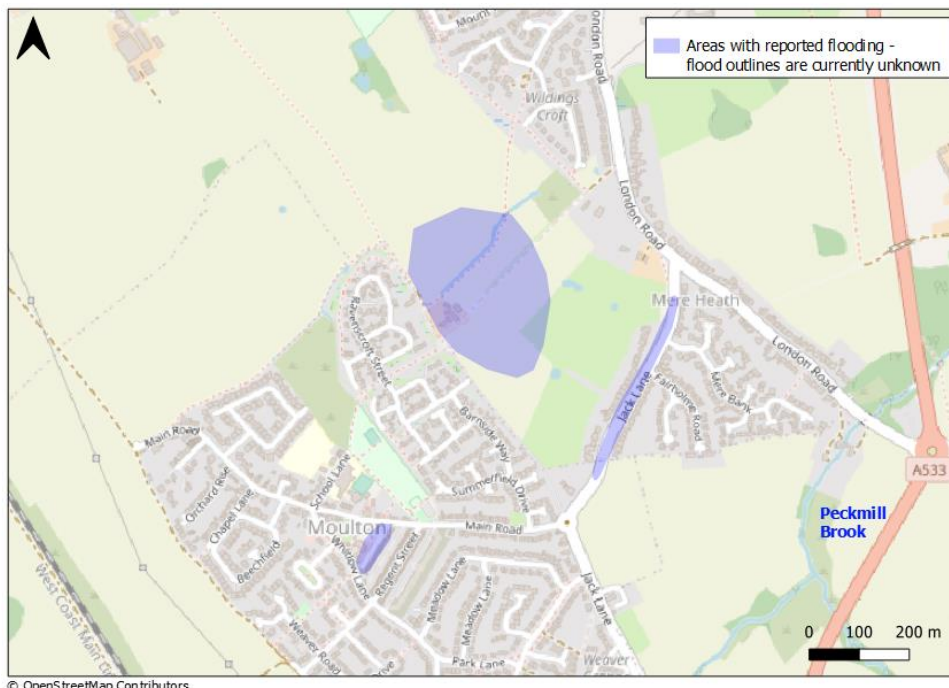


Figure 1 - Davenham Flood Overview

## 2.2. Moulton

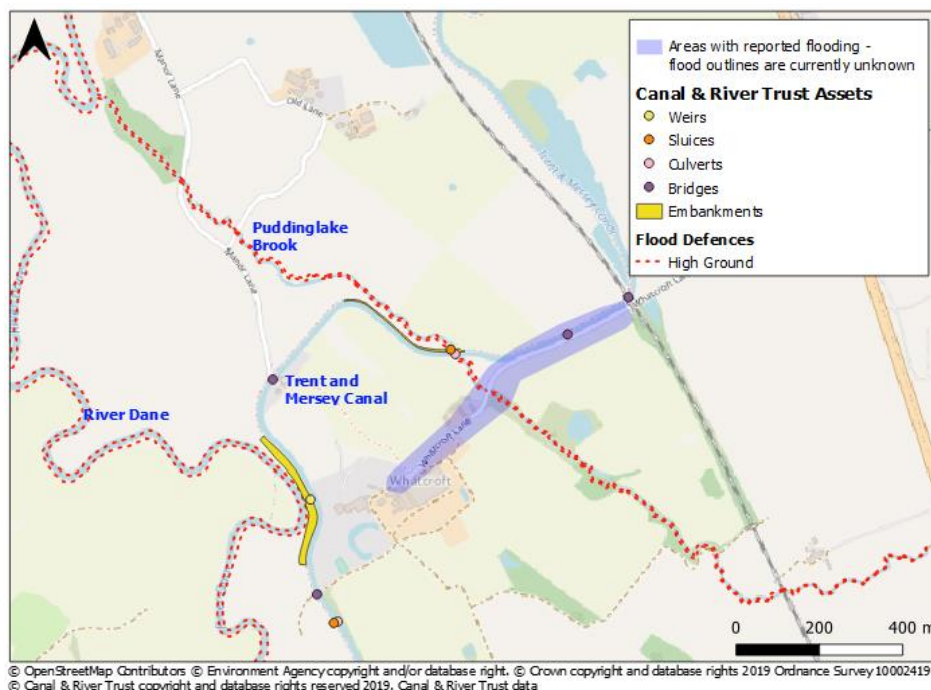
South of the village, towards Moulton, flooding was also reported to impact a number of properties on Jack Lane and The Dairy Farm on Beehive Lane, internally flooding one property. London Road and Church Street were also reported to flood. The exact details of this flooding are not currently known. Figure 2 shows details of the flooding developed in consultation with CWaC.



**Figure 2 - Moulton Flood Overview**

### 2.3. Whatcroft

Whatcroft Hall Lane was reported to flood, blocking access to properties. Residents raised concern regarding a sinkhole on Whatcroft Lane that has been temporarily repaired but is beginning to sink again. CWaC highways team attended the site during the event to pump flood water away. Figure 3 shows details of the flooding developed in consultation with CWaC.



**Figure 3 - Whatcroft Flood Overview**

### 2.4. Area Summary

Key statistics of the Storm Christoph flooding in Davenham are summarised in Table 1. A detailed timeline of the flood event can be found in Appendix II.

**Table 1 - Flood Impact Summary**

Residential properties affected:	Commercial premises affected:	Number of properties evacuated:	Number of properties flooded:	Number of domestic properties flooded:	Number of commercial premises flooded:	Comment
11	0	0	5	5	0	As reported to CWaC prior to publishing

Table 2 provides a brief summary of the flood event, impact and response in Davenham.

**Table 2 – Davenham**

Davenham	
Date	<ul style="list-style-type: none"> <li>21<sup>st</sup> January 2021</li> </ul>
Affected Roads	<ul style="list-style-type: none"> <li>Davenham Meadows, Eaton Lane, Green Lane, Hartford Road, Jack Lane, London Road, Church Street, Whatcroft Hall Lane, Beehive Lane</li> </ul>
Flood Alert / warning issued?	<ul style="list-style-type: none"> <li>Flood warnings are not available for the affected properties</li> </ul>
Flooding Impacts and Observations	<ul style="list-style-type: none"> <li>Property damage</li> <li>Risk to life</li> <li>Additional stress and mental anguish on the community over such an event happening again</li> </ul>
Summary of Flooding Incident Response During Event	<ul style="list-style-type: none"> <li>Sandbags delivered by CWaC to properties in Davenham</li> <li>Residents used their own sandbags to protect properties</li> <li>Road closure of Hartford Road</li> <li>Pumping of flood water by CWaC at Whatcroft</li> </ul>

The following actions were undertaken after the event:

- Meeting on site with affected residents 13<sup>th</sup> January 2022 with CWaC, as Lead Local Flood Authority (LLFA).

### 3. RMA Response

This section outlines the RMA response to the flood event at Davenham. Consultations have been undertaken with the participating RMAs and local residents.

CWaC, as LLFA, provided sandbags to properties at risk of flooding

- CWaC have inspected the route of the culvert and have now traced its route from Hartford Road through the residential properties into the open land behind Rookery Gardens. The system is in good condition until it reaches the open ground.
- CWaC has identified, served notice and have met the landowner with a view to them undertaking the work required to repair the drain in the open land. CWaC continue to monitor the situation for evidence of progress on site.
- CWaC have inspected the planning applications for the developments upstream and these have been built in accordance with planning and include attenuation for surface water runoff.
- The FloodHub has been promoted to affected residents. A link is also included from the Flood pages of the CWaC website.
- Property level protection and resilience measures
- CWaC continue to correspond with local residents and elected members.

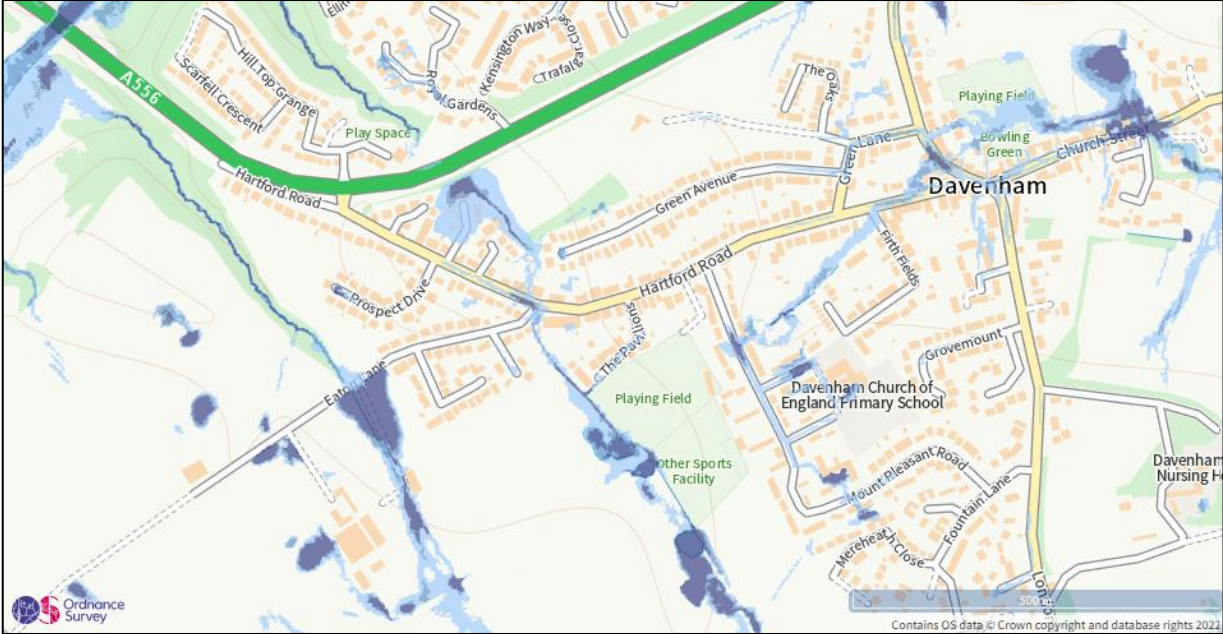
## 4. Recommended Actions

The following actions are recommended:

- LLFA to investigate opportunities for economic and technically viable upstream flood storage to hold back and delay water.
- CWaC planning team to review the requirements set out within the granted planning permission for the London Road development and confirm whether these requirements were implemented.
- LLFA to investigate the drainage network on Hartford Road and Eaton Lane and to check for structural damages or blockages.
- LLFA to undertake CCTV inspection of the culverted watercourse to fully establish its route and condition and if required, undertake de-silting activities.
- LLFA to establish land ownership and responsibility for maintenance and repair of the watercourse behind Davenham Meadows.
- LLFA to undertake maintenance of the highway gullies and catchpit to remove debris and check for blockages.
- LLFA to support local residents and to continue to correspond with a number of affected residents
- LLFA to promote the use of the FloodHub for information on flooding.

# Appendix I – Map

## Davenham flood risk



Extent of flooding from surface water

- High
- Medium
- Low
- Very low

Source: EA

Moulton flood risk



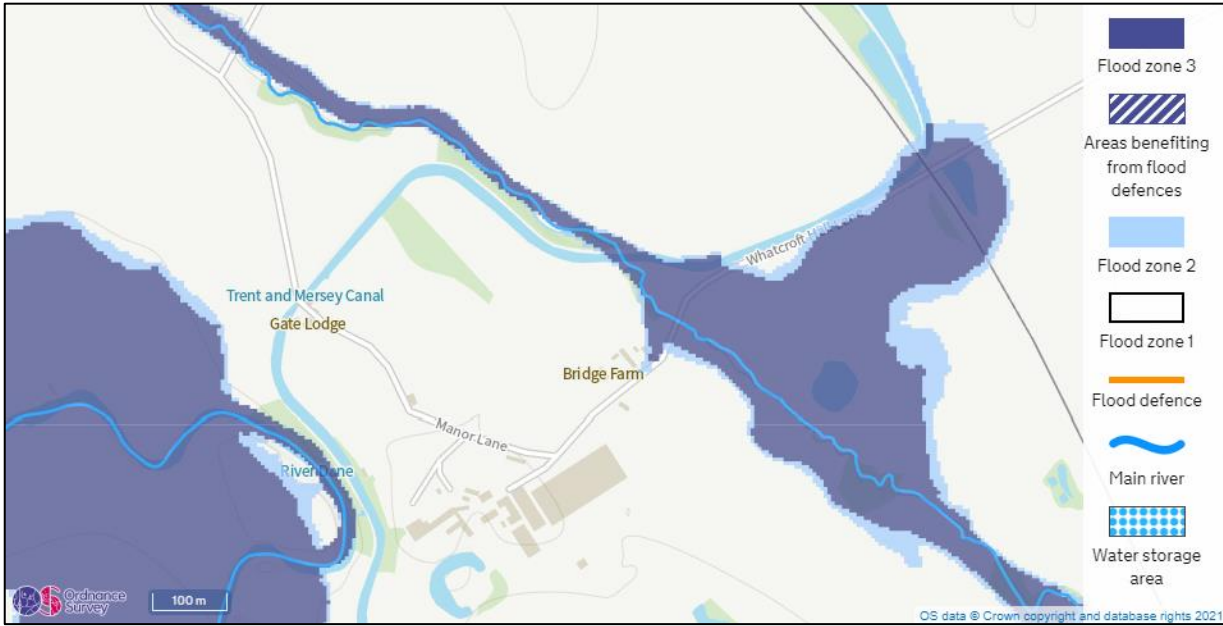
Extent of flooding from surface water

- High
- Medium
- Low
- Very low

Source: EA



Whatcroft flood risk



Source: EA



Extent of flooding from surface water

- High
- Medium
- Low
- Very low

Source: EA

## Appendix II – Timeline

<b>Time</b>	<b>Davenham village</b>
21 <sup>st</sup> Jan 14:00	Water began to pond in gardens.
21 <sup>st</sup> Jan 15:00	Water overtopped the open watercourse at the point where it is culverted under Eaton Lane. The watercourse also overtopped behind Davenham Meadows.
21 <sup>st</sup> Jan 20:00	Water began to enter properties on Hartford Road and Davenham Meadows.
21 <sup>st</sup> Jan 23:00	Flood water reached its peak levels at approximately 0.8m inside of properties. Some residents evacuated their homes.
22 <sup>nd</sup> Jan am	Water had retreated and flood water was no longer inside of properties.
<b>Time</b>	<b>Moulton</b>
	No information available at this time
<b>Time</b>	<b>Whatcroft</b>
	No information available at this time