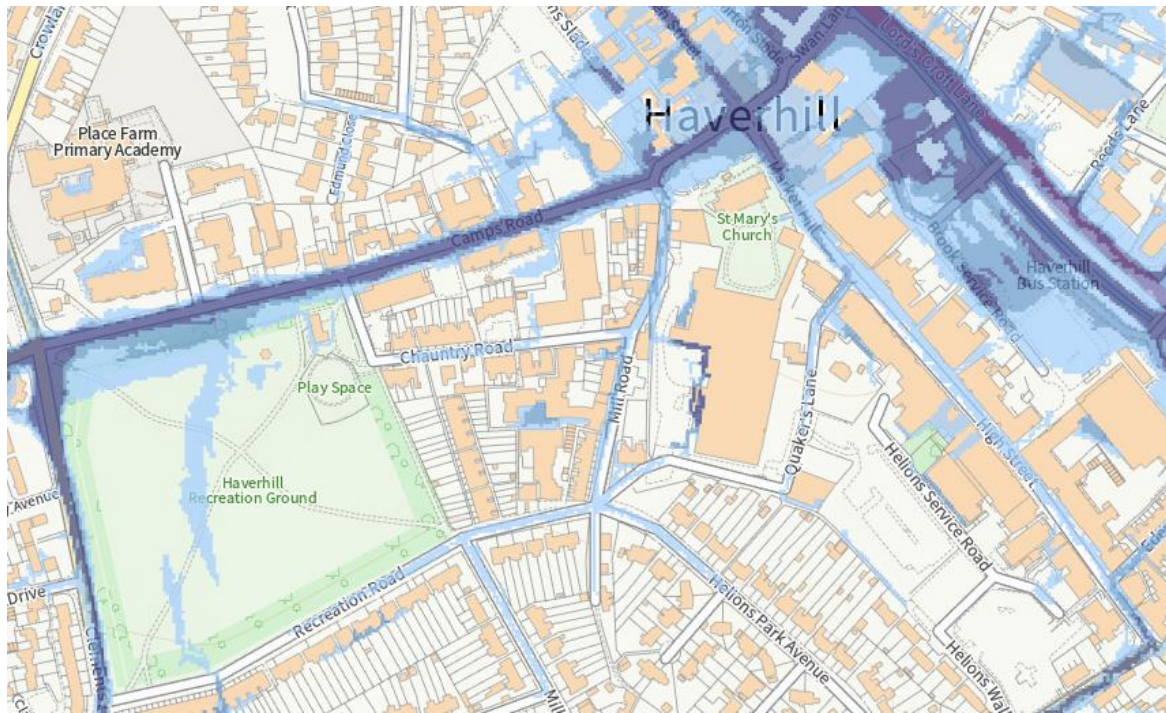


## Section 19 Flood and Water Management Act 2010

### Report Title: Chantry Road, Haverhill

Report References:

CRNo 329967



	<b>Name</b>	<b>Date</b>
<b>Report Author</b>	<i>H Purkis</i>	
<b>Responsible Officer:</b>	<i>H Purkis</i>	
<b>Checked by:</b>	<i>S Curl</i>	<i>09/11/2021</i>
<b>RMA Review:</b>		<i>30/11/2021</i>
<b>Approved by:</b>	<i>M Hullis</i>	<i>20/01/2022</i>
<b>Date Published</b>		<i>21/01/2022</i>
<b>Date Report Closed</b>		

## Introduction

Suffolk County Council, Lead Local Flood Authority (LLFA) has determined that in accordance with our criteria, it is considered necessary and appropriate to carry out an investigation into this flood event.

This is in accordance with Sections 19 (1) & (2) of the Flood and Water Management Act 2010, to publish the results and notify the relevant risk management authorities (RMAs).

### *Section 19 Local authorities: investigations*

*(1) On becoming aware of a flood in its area, a lead local flood authority 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*

<b>Criteria for an investigation (as per Appendix D of the Suffolk Flood Risk Management Strategy):</b>	
There was a risk to life because of flooding?	
Internal flooding of one property (domestic or business) has been experienced on more than one occasion?	✓
Internal flooding of five properties has been experienced during one single flood incident	
Where a major transport route was closed for more than 10 hours because of flooding	
Critical infrastructure was affected by flooding	
There is ambiguity surrounding the source or responsibility of a flood incident	✓

## 1. Location of flooding

An intense localised rainfall event occurred on 25.07.2021 in Haverhill. Nearby Environment Agency (EA) rain gauges at Wixoe & Steeple Bumpstead (see values in brackets) recorded that 14.4mm (45.4mm) fell within 5 hours from 15.15 to 20.00, with 5.0mm (13.4mm) falling in 15 minutes at its peak. To put this in context, the average July rainfall for Haverhill is 92.1mm.

The majority of Haverhill was impacted in some way, with flooding reported to Suffolk County Council (SCC) in Sturmer Road, Hazel Close, High Street, Harewood Terrace, Greenwood Close, Elm Close, Chantry Road & Withersfield Close. This has triggered several Section 19 investigations.

This investigation focusses on the flood events that occurred at a single location; Chantry Road, Haverhill. The location is shown in context on the map extract below. Chantry Road lies immediately to the south-east of Haverhill town centre. The properties impacted were located at the junction of Mill Road and Chantry Road.

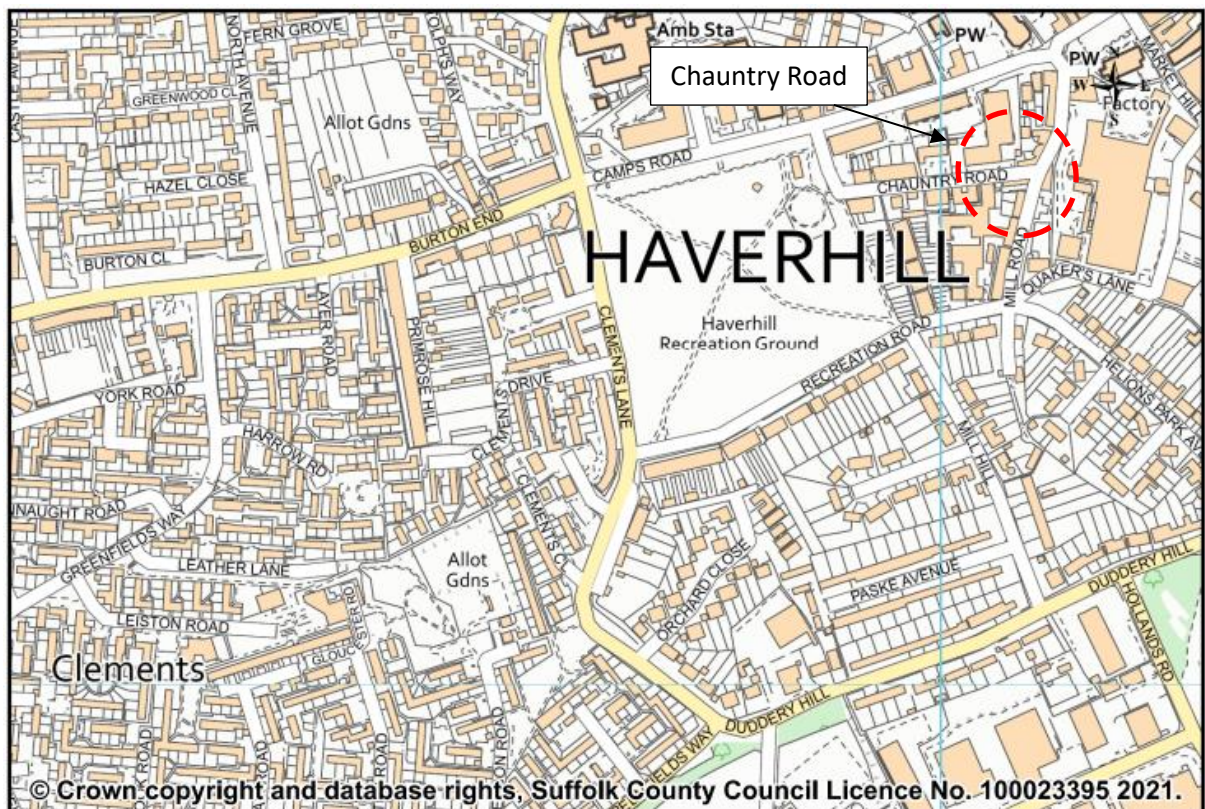


Figure 1 - Investigation Area Map

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## 2. Records of any historical flooding

Whilst the east of England is typically one of the driest parts of the country, summer rainfall events can be very short and intense, leading to the drainage networks being overwhelmed and unable to cope with the volume of water.

The two properties are reported to have flooded in the July 2021 event, one further occasion within the last 6 months of which the occupant(s) could not recall the date and a third time in July/August 2020.

Shown in Figure 2 below is a map extract of the recorded historical pluvial flood events as held by SCC. Please note that as not all of the above events were formally reported to SCC, they do not all appear on the following extract.

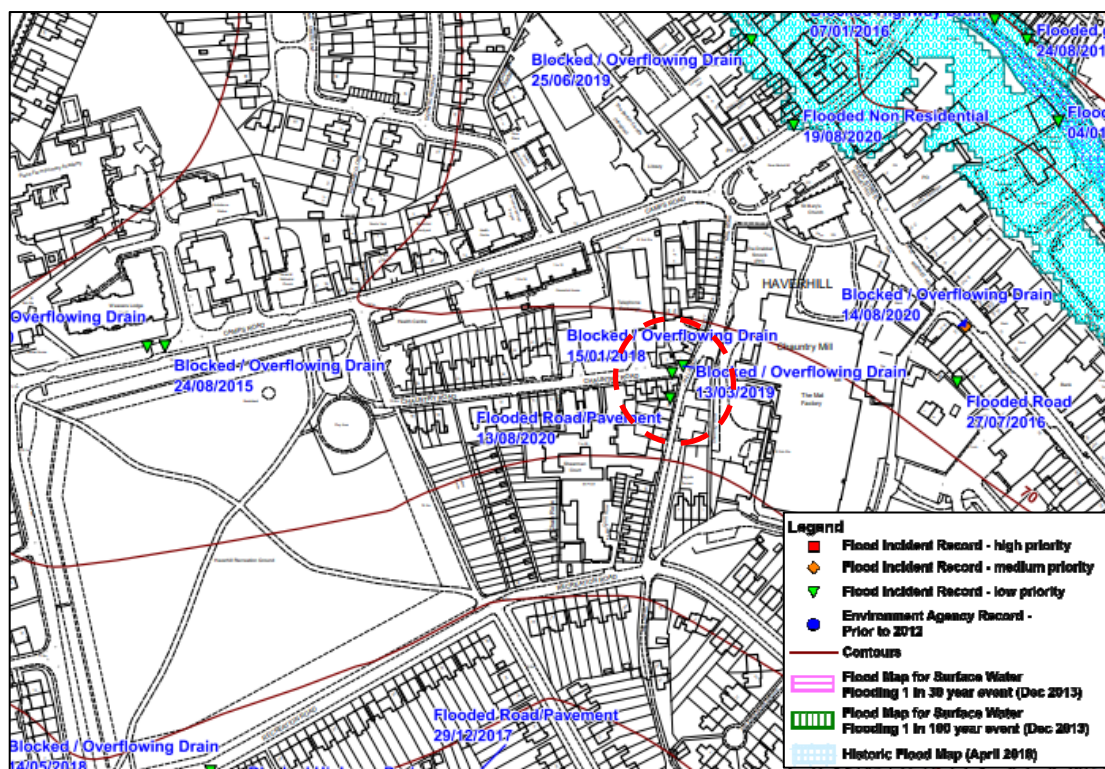


Figure 2 - Historical Pluvial Flood Incidents (to be updated once the 2021 events have been mapped)

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Anglian Water have been consulted as part of this Section 19 investigation and they have reported that they have not had any reports of flooding relating to the foul network in this location. It should be noted that this does not mean flooding has not occurred, but that it wasn't reported to Anglian Water. The incidents as detailed above have now been formally reported to Anglian Water.

### 3. Effects of flood event (July 2021)

Anecdotal evidence indicates that floodwaters entered the properties through the rear doors. The occupants were not at home when the flooding occurred but have indicated that surface water runoff travelling down Mill Road within the highway jumped the kerb and entered the rear gardens before flooding the properties.

The flood water was reported to 'smell foul' during the flood event which occurred in August 2021. This indicates it has either originated from the foul

sewer or it is surface water runoff which has mixed with overflow from a surcharging foul sewer.

At the time of the site visit, an Anglian Water manhole was identified within the rear garden. The cover was loose, and debris indicated it may recently have 'blown' due to a surcharge within the system. Anglian Water have since confirmed this manhole is part of a foul water network that collects foul water (with some possible surface water connections) from the properties at the junction of Mill Road and Chantry Road and directs it northwards towards the centre of Haverhill.

Flood water was reported to reach a depth of entered the properties throughout the ground floor to a depth of 10-20mm This caused repeated damage of internal flooring materials, furniture and personal property which has resulted in an insurance claim.

#### **4. Predicted Flood Risk**

The national government "indicative flood risk for planning" map identifies that neither tidal (sea), fluvial (river) or reservoir flooding represent a significant risk at this location. Pluvial (surface water) flooding however is recorded to represent a Low to Medium risk to the site (each year this location has a risk of flooding of between 1 – 3.3%).

An extract of the pluvial flood mapping is shown below for reference. This extract demonstrates the direction and speed of flow during the worst-case scenario. Dark blue denotes flows faster than 0.25m/s with light blue denoting flow speeds less than 0.25m/s. The small black arrows denote direction of flow.

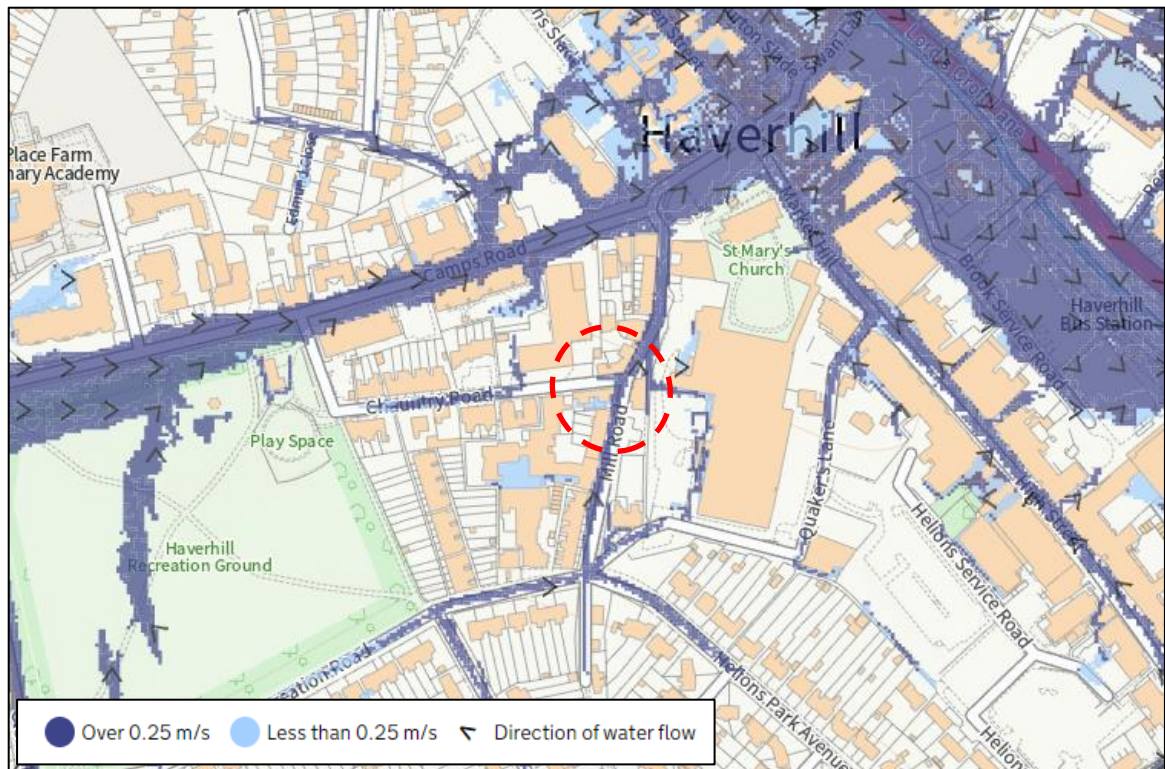


Figure 3 - Surface water flood risk: water velocity in low-risk scenario (GOV.UK mapping)

A route of surface water overland flow down Mill Road can clearly be identified in the above figure. This flow route travels past the properties which reported flooding on Chantry Road. There is also an area to the rear of the properties (including the rear gardens of the flooded properties) identified to be at risk of surface water flooding.

Haverhill is recorded within the West Suffolk Strategic Flood Risk Assessment (SFRA) 2021 as having limited potential for groundwater flooding to occur at the surface. This suggests groundwater flooding is unlikely to have contributed to this flood event.

Anglian Water’s records have been checked and they have “no properties on their flood register” in this location and no “flooding incidents related to the capacity of the network” recorded.

## 5. Flooding Sources & Likely causes:

- **Significant rainfall:** one cause of the flooding was the intense nature of the rainfall. 45.4mm (half a month’s rainfall) fell in less than 5 hours which overwhelmed the drainage systems which resulted in large volumes of surface water accumulating in the highway.

- **Overwhelmed Anglian Water assets:** the Anglian Water foul sewer located to the rear of the properties that flooded was observed to have recently surcharged during the site (Aug 2021). Further, residents reported that the floodwaters 'smelt foul'. Whilst Anglian Water have not had any flooding incidents reported to them, this is likely to be connected to the flood events. Whilst this length of sewer is classified as foul, as the flooding occurred in conjunction with a severe rainfall event, it should be further assessed as to whether this system receives any surface water.
- **Overwhelmed gullies/unknown highway drainage:** the intensity of the rainfall is likely to be greater than the capacity of the highway gullies which capture runoff in Mill Road. Runoff from Mill Road (which is relatively steep), is likely to have contributed to the flooding as runoff was reported to have flowed off the carriageway and entered the rear gardens of the properties. Further information is required regarding the condition and capacity of the highway drainage network.

## 6. Photos of flooding



Floodwater accumulating inside the kitchen and living room of one of the flooded properties



Floodwater accumulating inside the living room of one of the flooded properties



Manhole (foul sewer) in the rear garden that had recently surcharged



Mill Road, looking upgradient, where surface water travelled down, missing gullies and jumped the kerb into adjacent properties through rear gardens

**7. Risk Management Authorities, Non-Risk Management Authority and flood risk function(s)**

<b>Risk Management Authority</b>	<b>Relevant Flood Risk Function(s)</b>
Suffolk County Council SCC	Lead Local Flood Authority, Highways Authority & Asset Owner
Anglian Water AWS	Asset Owner
<b>Non Risk Management Authority</b>	<b>Relevant Flood Risk Function(s)</b>
Property Owners/Occupants	N/A



## 8. LLFA Recommended Actions:

Action	Risk Management Authority	Timescale for response	Latest Progress Update for Actions
Reactive jetting (where possible) of highway drainage	SCC HA	March 2022	Pending
Investigate highways drainage in Mill Road to ensure capacity and condition are sufficient	SCC HA	June 2022	Pending
Investigate to see if additional gullies should be installed in Mill Road	SCC HA	June 2022	Pending
Investigate foul sewer to rear of properties in Chantry Road, to establish if it has receives surface water flows and if its capacity and condition is sufficient	AWS	June 2022	Pending

## 9. Reviews

This report will be reviewed and updated every 3 months until actions are marked as complete

Reviewer	Date of Review

## 10. Disclaimer

This report has been prepared and published as part of Suffolk County Council's responsibilities under Section 19 of the Flood and Water Management Act 2010. It is intended to provide context and information to support the delivery of the local flood risk management strategy and should not be used for any other purpose.

The findings of the report are based on a subjective assessment of the information available by those undertaking the investigation and therefore while all reasonable efforts have been made to gather and verify such information may not include all relevant information. As such it should not be considered as a definitive assessment of all factors that may have triggered or contributed to the flood event.

The opinions, conclusions and recommendations in this Report are based on assumptions made by Suffolk County Council when preparing this report, including, but not limited to those key assumptions noted in the Report, including reliance on information provided by third parties.

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The implications for producing Flood Investigation Reports and any consequences of blight have been considered. The process of gaining insurance for a property and/or purchasing/selling a property and any flooding issues identified are considered a separate and legally binding process placed upon property owners and this is independent of and does not relate to Suffolk County Council highlighting flooding to properties at a street level. Property owners and prospective purchasers or occupiers of property are advised to seek and rely on their own surveys and reports regarding any specific risk to any identified area of land.

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