

Lead Local Flood Authority
Section 19 (Flood and Water Management Act
2010)
Flood Investigation Report

Report Title:

Glastonbury Rd, Whitby Rd, Kirkstead Rd, Chepstow Rd and
Sherbourne Rd, Bury St Edmunds, Suffolk

Report Reference(s):

FW2020-1123	

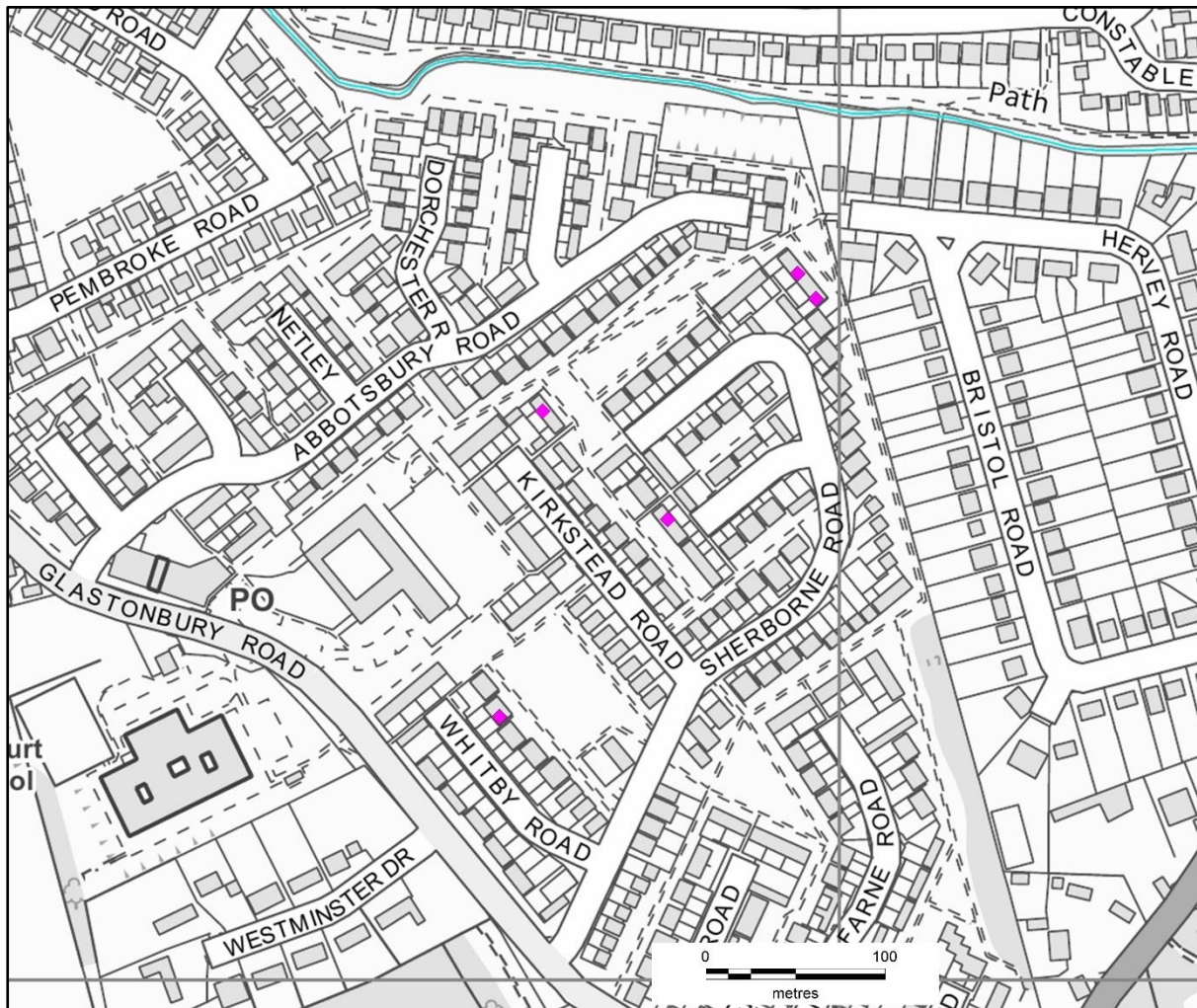
	Name
Lead Officer:	Steven Halls
Created by:	Steven Halls
Checked by:	Simon Curl
RMA Review:	Suffolk County Council (Highways)
Approved by:	Hannah Purkis

Flood Investigation Report

- 1.0** Suffolk County Council as a Lead Local Flood Authority (LLFA) has determined that in accordance with criteria, it considered it necessary or appropriate to carry out an investigation into this flood event in accordance with Section 19 (1) of the Flood and Water Management Act 2010, and in accordance with Section 19 (2) of the Flood and Water Management Act 2010, to publish the results and notify the relevant risk management authorities (RMAs).
- 2.0 Reference/s:**
- 2.1 Location:** Area encompassing Glastonbury Rd, Whitby Rd, Kirkstead Rd (KR), Chepstow Rd and Sherbourne Rd, Bury St Edmunds, Suffolk
- 2.2 Flood Event Date:** 16th August 2020
- 2.3 Reported to SCC Date:** 17th August 2020
- 2.4 Investigation Commencement Date:** 19th August 2020
- 2.5 Criteria for investigation:**

Criteria for an investigation (as per Appendix D of the Suffolk Flood Risk Management Strategy):	✓/X
There was a risk to life as a result of flooding?	x
Internal flooding of one property (domestic or business) has been experienced on more than one occasion?	x
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 as a result of flooding	x
Critical infrastructure was affected by flooding	x
There is ambiguity surrounding the source or responsibility of a flood incident	x

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2.6 OS Grid Reference: TL 83853 63245

2.7 Extent of flooding: A total of 5 properties flooded internally with extensive flooding to outbuildings and the adjacent highway.

2.8 Effect of flooding: Properties internally flooded up to a depth of 400mm. Single observation of foul affluent.

2.9 History: N/A

2.10 Flooding Source: Capacity of surface water drainage systems exceeded due to intense storm event on the 16th August 2020. Corresponding overland exceedance flows routed through private property following the local topography towards River Linnet.

1. Whitby Rd – Extensive overland runoff from Westminster Drive leads to deep ponding at the Glastonbury Rd junction, once this breaches the footway kerb it routes NE towards Whitby Rd affecting several homes and flooding the highway.

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2. Kirkstead/Chepstow Rd – Same flow path now with additional contributing areas increasing overland runoff.
3. Sherbourne Rd – Sits at the bottom of the same flow corridor, thus being subject to fast runoff routed through the entire valley plus all of Sherbourne Rd itself.

2.11 Causes:

- Local rain gauges (Rushbrooke - 5km from the incident) recorded an intense rainfall event of 21mm over a 60 min duration. This storm has a return period of once every 10 years (10% AEP in any given year). Currently there are no known gauges in a closer proximity to the affected area.

The above rainfall depths are not likely to be representative of the observed event. Due to the low proximity of the gauge to the affected area, the gauge may have been on the periphery of the storm and therefore not representative of the peak rainfall intensity.

(*return periods based on data collected from Environment Agency rain gauges and FEH13 Depth Duration Frequency curves).

- LiDAR data shows that the affected properties lie in a small side valley of the main Linnet valley. Westminster Drive is at the top of the corridor and Sherbourne sits at the bottom of the slope. This side valley swerves in a NE direction gently funnelling any surface water runoff towards the Linnet. All overland flows and underground services head in this same direction.
- Photographic evidence showed the public sewer flooding at the foot of Sherborne Rd flooding out into Kirkstead Rd and POS areas between Sherbourne/Hervey Rd. Observations during post flood site inspections outline lids had been lifted due to the pressure in both Sherbourne and Kirkstead Rd
- All the following sites are drained by a highway drainage system which connect into the public surface water sewers in Cornfield Rd, Victoria Street and Chalk Rd into Risbygate Street, before heading north down Spring Lane. The highway drainage consists of traditional gully sets and laterals linked to a central conveyance line which links into the surface water sewer. Thus, it is likely runoff was not being captured effectively by the gullies. This is very likely given the steepness of the road, intensity of the rain and position of gullies.

However, even if this system was in a serviceable manner and conveying at optimum capacity, the intensity and velocity of flow across the site may have overwhelmed this system or skipped over the gully grates.

2.12 Additional Information:

- All three sites are identified as a high-risk surface water flood risk zone on national mapping.

3.0 Risk Management Authority with Relevant Flood Risk Function

- Suffolk County Council: Public highway maintenance, land & asset owner
- Anglian Water: Asset owner

4.0 Recommendations:

- All homeowner(s) to add additional flood resilience measures to their properties i.e. property level resilience (PLR). Suffolk County Council may be able to support the funding and implementation of this. Any installation must not deflect floodwater onto adjacent properties and all homeowners would have to collectively install these so as not to increase risk of flood to an individual who is without it.
- Secondly, if topography allows and if carefully installed; a minor site layout change in places (using landscaping techniques or new full kerbing) alongside new PLR measures could be used to direct runoff towards safer pathways. Thus, manipulating the natural flow paths away from the property boundaries into designated safe exceedance routes using rills or linear channel drains may reduce flooding.
- Most importantly is intercepting and capturing runoff uphill which will likely reduce exceedance flows, therefore all highway drainage assets must be thoroughly investigated and brought into a serviceable manner in the short term.
- SCC Highways / AW to investigate additional options for dispersing surface water during extreme events. Long-term mitigation options include: -
 - Add larger or double gully lids to capture overland runoff and provide larger sump pits where runoff is currently not being captured. Glastonbury Rd is a prime example
 - Identify capacity issues in public sewer and highway drainage system and improve where necessary to modern standards – a SuDS retrofit scheme would be ideal to attenuate excess volumes when system is surcharging.

4.1 Recommended Actions:

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Action	Responsible Authority	Timescale for response	Latest Progress Update for Actions
Investigate road drainage in effected areas, prioritise improvements to the system accordingly. Westminster and Glastonbury Rd are historically recognised as a flooding hotspot and should be prioritised.	SCC Highways	6 Months	There are 53 highway gullies located on Chepstow Road, Whitby Road, Sherbourne Road and Kirkstead Road within this section of the estate. At the last cyclic maintenance visit in October 2025, 50 gullies were found to be fully operational. Three gullies were identified as having cracked gratings and were noted for further attention. These highway drainage assets discharge into the Anglian Water storm sewer network, and the capacity and performance of the highway drainage system may be influenced by the condition and capacity of the downstream carrier drains and/or outfall infrastructure.

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Advise landowners of potential Property Level Resilience measures and funding opportunities. Support the implementation of suitable measures including landscaping best practices	SCC Floods	3 months	
AW to check performance of surface water sewer	Anglian Water	6-12 months	
Investigate the potential for a new retrofit SUDS scheme or removal of water from main sewers to reduce pressure on public sewer infrastructure.	SCC and AW	6-12 months	