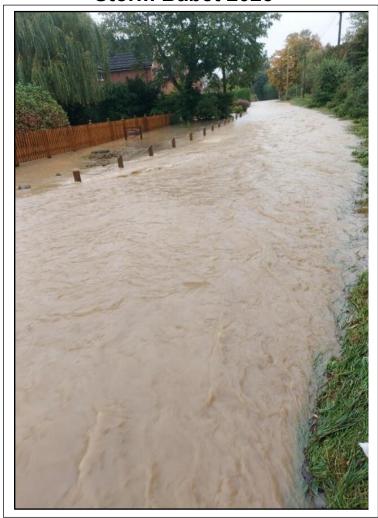


# Section 19 Flood and Water Management Act 2010

# **Hundon Flood Investigation –**

## Storm Babet 2023



|                      | Name          | Date       |
|----------------------|---------------|------------|
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### **Executive Summary**

Storm Babet caused significant disruption to communities across Suffolk between 18<sup>th</sup> - 21st October 2023. Hundon was one of the impacted villages, with approximately 10 properties suffering internal flooding as well as disruption to infrastructure and services. Suffolk County Council, as Lead Local Flood Authority, have therefore undertaken a Section 19 Flood Investigation. The resulting report will:

- highlight the probable causes of flooding
- identify options to reduce future flood risk and increase property resilience
- make recommendations for actions by relevant responsible organisations, landowners or homeowners.

Hundon is located in an area at risk of both fluvial and pluvial flooding. The nature of the surrounding topography and geology contributes to the susceptibility of the community to flooding. Parts of the village are low-lying, adjacent to the Chilton Brook, with flow paths converging into the watercourse. The local geology and soils are characterised as having impeded permeability and high run off, making a number of properties in Hundon vulnerable to flooding due to intense rainfall events.

Storm Babet delivered significant rainfall to the catchment, following an extended period of above average rainfall. The impact within Hundon was extensive and for the purposes of this report, the affected areas have been categorised into two locations. The description of the flood events detailed in the report have been compiled using data submitted to Suffolk County Council, as well as information from Risk Management Authorities (e.g. Suffolk County Council Highways, Anglian Water) and the community.

A comprehensive summary for each location is provided within the report, outlining the context of the event and the impact. A key finding is that Hundon was impacted by flooding due to the intensity of rainfall, which caused multiple surface water flow paths to overwhelm the capacity of watercourses, drainage infrastructure and inundate low lying areas of the village.

Short, medium and longer term recommendations have been published and each have a potential role to improve resilience and reduce the risk of flooding to the village. For short term measures, key highlights include the implementation of community flood plans, utilising Property Flood Resilience (PFR) and continued maintenance of watercourses and drainage assets. For medium to longer term recommendations, there is emphasis on management of water from rural land and the creation of new natural flood management features, to help reduce flood risk within the catchment.

## **Justification for Investigation**

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 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).

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

| Criteria for an investigation (as per Appendix D of the Suffolk Flood       |   |
|---|---|
| Risk Management Strategy):  |   |
| 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  |   |

## **Understanding the flood context**

#### 1. What happened during Storm Babet

A succession of weather fronts between the 11<sup>th</sup> and 13<sup>th</sup> of October 2023 brought significant rainfall to the region. Readings indicate that between 30mm and 50mm of rain fell across Suffolk compared with an average of just less than 65mm across the whole month of October according to Met Office weather data (Met Office, 1991-2020). This significant rainfall occurred in a short space of time and resulted in saturated land and rivers reaching their capacity. Shortly after this, Storm Babet followed on the 18<sup>th</sup> to 21<sup>st</sup> of October 2023. The storm brought between 50 mm and 80 mm of rain to much of central and northern East Anglia, with some Suffolk weather stations recording the wettest October day on record.

The Environment Agency river level measuring stations indicated many flows close to or exceeding their highest on record, and the weather remained wetter than average for the rest of the month. October 2023 was the joint wettest on record in the east of England since 1871. During Storm Babet, Suffolk saw the heaviest rainfall across East Anglia causing significant flooding of roads and properties. The river systems rose rapidly across whole catchments due to the existing conditions, which was unusual as storms will often impact a small area and result in a steady progression of flood water downstream. A major incident was declared by the Suffolk Resilience Forum (SRF) in the afternoon of the 20th of October due to significant impacts on communities and disruption to the road and rail networks.

The following maps illustrate the extent to which the rainfall in the months preceding Storm Babet exceeded the average monthly rainfall for July to October in recent years in Suffolk.

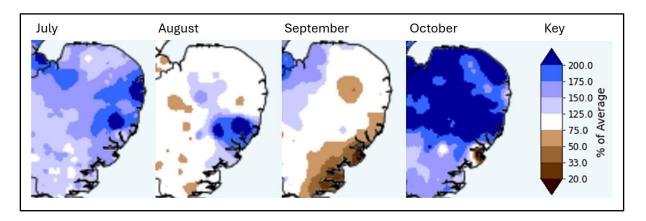


Figure 1. Average rainfall in East Anglia between July and October 2023 as a percentage of the historical average monthly rainfall

The following report acknowledges that October 2023, and in particular Storm Babet, was an extreme event and will assess the likely causes and impacts. The report will recommend measures to reduce the risk of flooding within the location, in line with best practice, ranging from large to small scale interventions and be targeted at a range of stakeholders. It should be noted that Storm Babet was a significant event, with a low probability of recurrence. The recommendations will provide advice about reducing flood risk; however, they should not be relied upon as a guaranteed failsafe to mitigate against all future flooding.

#### 2. Location of flooding

Hundon is a small village located in the district of West Suffolk. The village is situated approximately seven miles to the northeast of the larger town of Haverhill.

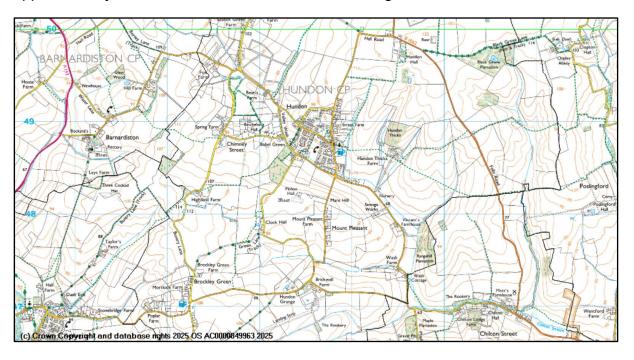


Figure 2. Investigation area map

The Environment Agency has permissive powers to carry out maintenance, improvement or construction work on main rivers to manage flood risk. The Internal Drainage Boards (IDBs) have similar permissive powers but instead relate to ordinary watercourses within their board area.

Lead Local Flood Authorities (LLFAs) and Internal Drainage Boards (IDBs) manage the flood risk from ordinary watercourses but responsibility for maintaining watercourses rests with the Riparian Landowner, defined as those who have a river, stream or ditch which runs next to or through their land or property.



Figure. 3 below, shows the most significant watercourses in the Hundon area.

Figure 3. Location of statutory main river and ordinary watercourses

On the 20<sup>th</sup> of October 2023, Storm Babet resulted in significant rainfall in Suffolk on top of an already wetter than average October. This caused internal flooding to properties, residential and commercial, across the county from various flooding sources. Hundon was significantly impacted with approximately 10 properties reporting internal flooding. Flood water was described as coming from multiple sources including surface water runoff from surrounding fields and highways (pluvial) and the overtopping of local watercourses (fluvial).

For the purposes of this investigation the areas affected by flooding have been separated into two distinct locations (see Figure 4). The locations are as follows:

- 1. Mary Lane and Valley Wash
- 2. Lower North Street, Farmerie Road and Lower Road

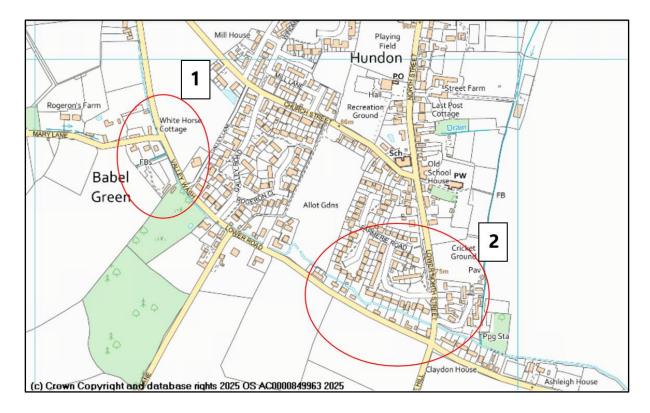


Figure 4. Hundon investigation area map with locations

#### 3. Records of any historical flooding

A review of Suffolk County Council's highway reporting tool, Environment Agency and Anglian Water records, indicate that Hundon has been impacted by flooding in the past.

Blockages (blocked culverts, pipes and ditches) and hydraulic overload (overloading of the foul sewer system causing external flooding) are common reported causes of flooding in Hundon.

Flooding incidents have been reported as a combination of rainfall events and high water levels in the brook.

Anglian Water records confirm that there have been instances of flooding on Lower North Street. These were attributed to blockages.

#### 4. Predicted Flood Risk

Several areas of Hundon are at risk of flooding from pluvial and fluvial sources.

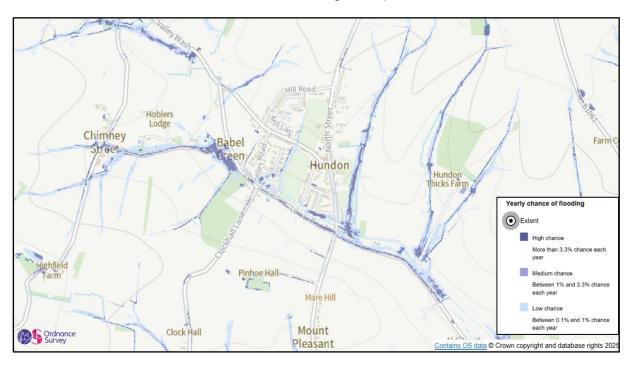


Figure 5. Surface water flood risk

Figure 5 highlights the predicted pluvial (surface water run-off from surrounding land and highways) flood risk in Hundon, with multiple flow paths from the north, west and southwest flowing through the village and into the Chilton Brook.

There is a high chance of surface water flooding on sections of Mary Lane, Valley Wash, Lower Road, Farmerie Road and Lower North Street. These areas were all affected by flooding during Storm Babet.

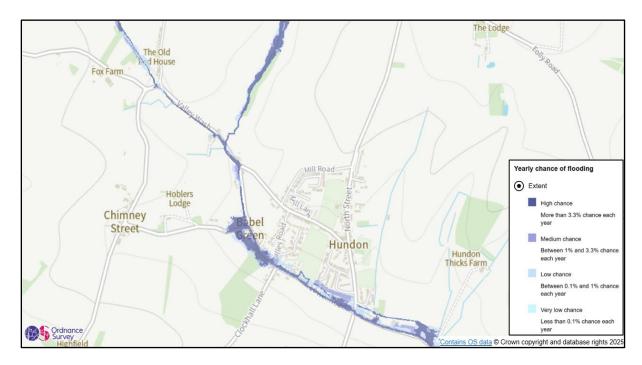


Figure 6. Flood risk from rivers and sea

Figure 6 shows the predicted fluvial (from designated main river and ordinary watercourses) flood risk in Hundon. The fluvial flood risk in Hundon is predominantly associated with the Chilton Brook which passes through the village.

There is a high chance of fluvial flooding on Mary Lane, Valley Wash and Lower Road, On Farmerie Road there is a Medium chance of fluvial flooding. These areas were all affected by flooding during Storm Babet.

#### 5. Catchment characteristics

The village of Hundon is situated in a rural area dominated by arable agriculture. The village is surrounded by higher ground to the north, south and west. An ordinary watercourse, the Chilton Brook flows northwest to southeast through the village.

The low-lying nature of parts of Hundon mean that during high rainfall events, considerable overland flowpaths converge upstream and flow into the village through the Chilton Brook bringing floodwater in close proximity to many properties in the village. Overwhelmed drainage infrastructure and additional ordinary watercourses may also be observed during these intense rainfall events.

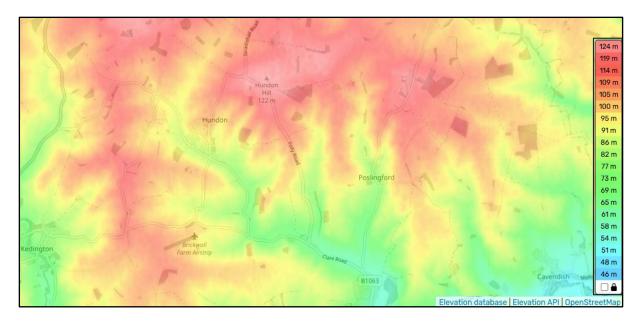


Figure 7. Hundon and surrounding topography (TessaDEM as cited in topographic-map.com)

Figure 7 shows the topography surrounding Hundon with gradient changes across the wider village. Some of the lowest points in Hundon are along Lower Road adjacent to the Chilton Brook. The junction of Lower Road and Lower North Street is lower than the surrounding land to the north and south. These locations were identified as being some of the worst affected areas during Storm Babet.

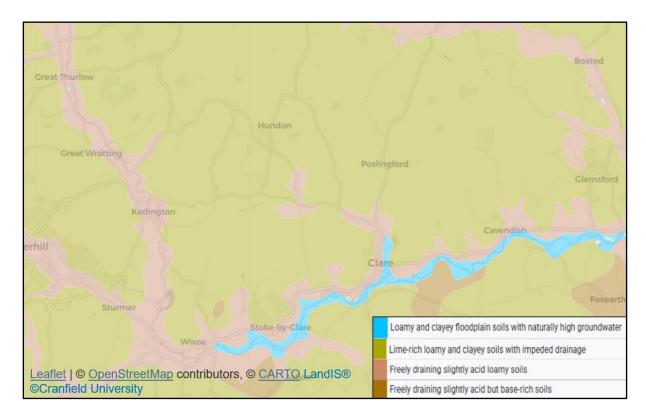


Figure 8. Soil map (LandIS Soilscapes)

The soils more generally surrounding Hundon are loamy and clayey with impeded drainage, meaning that water permeates more slowly and surface water runoff is greater. The floodplain soils surrounding the Chilton Brook further downstream are more freely draining, usually having naturally high groundwater and tend to be wetter.

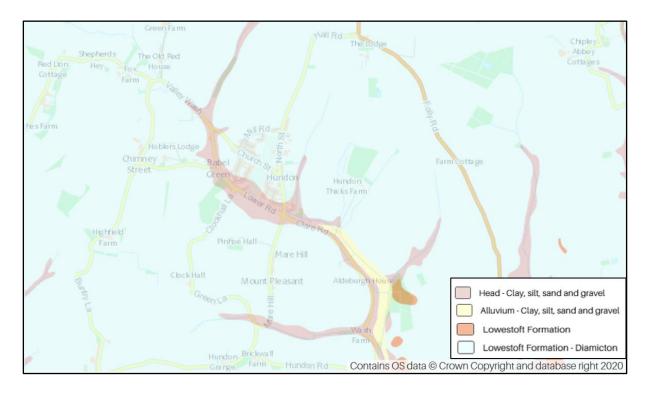


Figure 9. Superficial Geology (BGS Viewer)

Lowestoft Formation 'Diamicton' surrounds Hundon which is described by the British geological survey as a diverse mixture of clay, sand, gravel, and boulders varying widely in size and shape. This generally has a low permeability, meaning water will tend to flow off it before it can be infiltrated, which reflects some of the reports from the Storm Babet event.

The low-lying nature of parts of Hundon, the multiple surface water flow paths merging into the Chilton Brook and the low permeability of the surrounding soils, make it susceptible to flooding in extreme rainfall events.

## Flooding Source(s), Pathway(s) & Receptor(s)

Storm Babet was an extreme event which came at a time when Suffolk had experienced a significant amount of rainfall in the preceding week.

Storm Babet delivered significant rainfall in the catchment between 19 and 20 October. Data from the rainfall gauge at Lavenham recorded 50.77mm of rainfall on 20th October, with 15-minute peaks of 5.43mm at 00:30 GMT and 5.21mm at 07:00 GMT

The Environment Agency issue two types of warning when flooding is possible from a main river. These are:

- 1. Flood Alert Flooding is possible. Be prepared. usually issued between 2 and 12 hours before flooding.
- 2. Flood Warning Flooding is expected. Immediate action required usually issued 30 minutes to 2 hours before flooding.

Flood Warnings are not available for Hundon, which is located on a tributary of the River Stour. Hundon is within the more extensive Flood Alert area of the 'Upper Stour and Surrounding Tributaries'. This Flood Alert was issued on 20<sup>th</sup> October 2023 at 09.15am and remained in force until it was removed on 25<sup>th</sup> October 2023.

The description of the flood events described below will discuss the probable sources of flooding, the observed flow paths through the community and the receptors which have been affected. The term 'floodwater' may be used to describe both fluvial (water from a watercourse) and pluvial (surface water run-off) flooding. This section has been prepared using reports submitted to Suffolk County Council via the online Highways Reporting Tool and information gathered by Risk Management Authorities (RMAs) and the community.

Detailed descriptions of each investigation area can be found in the following section.

#### 1. Mary Lane and Valley Wash

Following heavy rainfall on the morning of 20 October, extreme water levels flowed down the Chilton Brook from the catchments upstream of Hundon. From early morning onwards (the flooding commenced at approximately 7:30 am), the swollen water levels exceeded the capacity of the channel and floodwater flowed across the highway at multiple locations (see Image 2). The floodwater rose very rapidly, over a period of 60 - 90 minutes, and high water levels are reported to have remained in place for approximately 4 - 6 hrs before starting to reduce.

A torrent of water flowed down Valley Wash (see Image 1) towards the junction with Mary Lane. Some properties in this area were flooded directly from the overwhelmed Chilton Brook. The situation was compounded by additional surface water flows coming in an easterly direction on Mary Lane and from the adjacent ditch (see Figure

10). Sections of this ditch have been filled in and built over historically, meaning the majority of the floodwater flowed along the highway towards the Valley Wash junction.

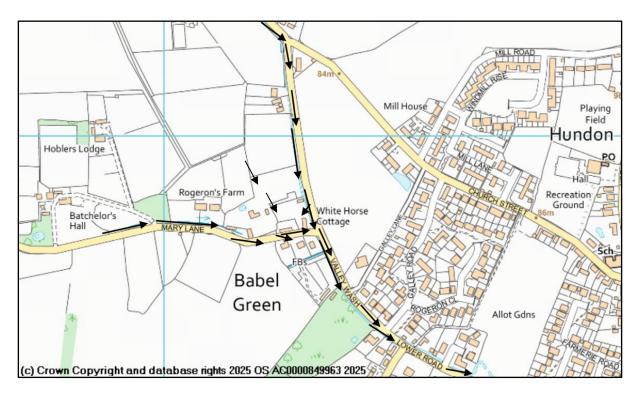


Figure 10. Approximate flood water flow routes along Mary Lane and Valley Wash

A culverted section of the watercourse and the road bridge at this location may also have held up some floodwater as their capacity was exceeded. Additionally, there was a section of coir matting on the roadside bank displaced into the channel of the Brook on Valley Wash and there may have been some subsequent bank erosion, reducing its capacity and ability to convey the floodwater.

Residents reported floodwater depths of up to 30cms around the junction of Mary Lane and Valley Wash, with flood water impacting properties mainly from the road as the highway drainage systems were unable to cope. Multiple reports mention blocked drains, and drains being overwhelmed by the sheer amount of floodwater as the highway was completely submerged in places. The highway drainage assets in this area were last cleansed prior to Storm Babet in February 2022, with the gullies recorded as being operational.

The floodwater flowpaths observed in this location during Storm Babet closely match the national surface water and fluvial flood risk mapping (see Figures 11 & 12). Mary Lane is characterised as having a high chance of surface water flooding, whilst sections of Valley Wash are shown to be highly susceptible to fluvial flooding from Chilton Brook (classified as an ordinary watercourse in this location before it becomes main river at Chilton Street).



Figure 11. Surface water flood risk on Mary Lane and Valley Wash



Figure 12. Fluvial flood risk on Mary Lane and Valley Wash

#### In Summary:

- Following heavy rainfall on the morning of 20 October, extreme water levels flowed down the Chilton Brook from the catchments upstream of Hundon. Water levels exceeded the capacity of the channel and floodwater flowed across the highway at multiple locations.
- A torrent of water flowed down Valley Wash towards the junction with Mary Lane, combining with surface water flows coming from the west on Mary Lane.
- The floodwater impacted properties from the road and directly from the overwhelmed Chilton Brook.
- Highway drainage systems were overwhelmed by the sheer amount of floodwater on the highway.

#### LLFA recommended action(s):

- Residents to install Property Flood Resilience (PFR).
- Increase awareness of riparian landowner responsibilities with regard to watercourse management across Hundon.
- Riparian landowners to carry out appropriate watercourse maintenance to reduce flood risk as necessary as per their riparian responsibilities.
- Identify where works could be considered to improve flow through the village to reduce risk within this location, in particular on Valley Wash and Mary Lane.
- Explore potential NFM projects to 'slow the flow' and attenuate water on overland flow paths west of Mary Lane and north and west of Valley Wash, E.g. leaky dams, woody debris installation, restoration of watercourses, storage ponds, wetland areas.
- Suffolk Highways to ensure the completion of highway drainage asset cyclic maintenance on Valley Wash and Mary Lane.

#### 2. Lower North Street, Lower Road and Farmerie Road

On the morning of 20 October, intense rainfall caused vast amounts of floodwater to enter the watercourses above Hundon and flow towards the village. Large quantities of floodwater flowed in a southerly direction down the ditch to the east of Lower North Street and at the rear of the properties. Multiple properties and the car park in this area were flooded directly from the overwhelmed ditch as the flow of water exceeded the capacity of the ditch (see Figure 13).

Residents have reported that the flow of the floodwater in the ditch was hindered by overgrown vegetation in the channel and a potentially blocked culverted section of the watercourse. Figure 14 shows the yearly chance of surface water flooding on Lower North Street.

One property was flooded as water came up through a toilet, likely to be one of the lowest points on the sewer network. Anglian Water believe the sewer was likely overloaded from the rainfall and that it was surface water runoff entering the sewer that may have played a big part in overloading it. This overloading of the sewer network

also regularly results in additional localised foul water flooding on to the road from a manhole on Lower North Street.

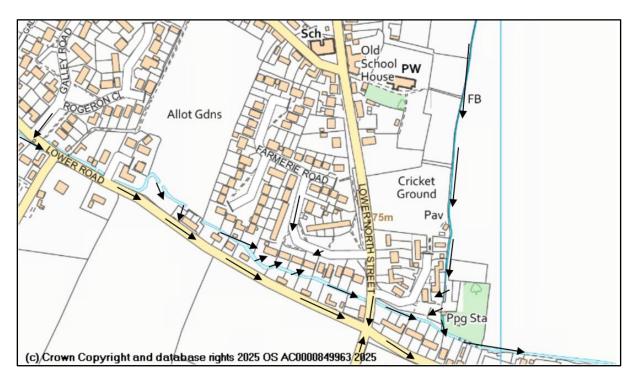


Figure 13. Approximate flood water flow routes on Lower North Street, Lower Road and Farmerie Road

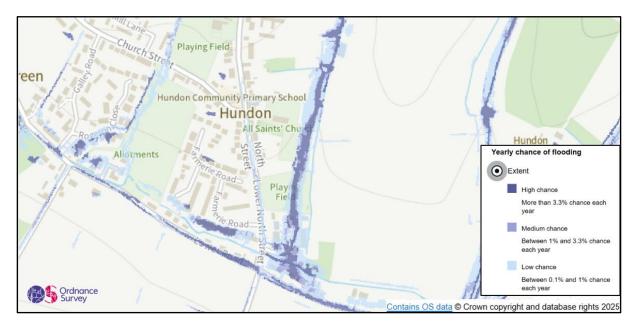


Figure 14. Surface water flood risk on Lower North Street, Lower Road and Farmerie Road

On Lower Road one property was reported to have flooded as the Chilton Brook overtopped its banks, encircling the property in floodwater. This section of the Chilton Brook, that runs parallel with Lower Road is one of the lowest points in Hundon. Valley

Wash and Lower Road were both flooded with fast flowing floodwater along almost their complete length (Image 4).

Long sections of an historic roadside ditch along the north side of Valley Wash, Lower Road and Clare Road have been infilled and built over, or in some cases grassed over. During Storm Babet and in more frequent, less severe wet weather events, this has the effect of trapping the floodwater on the highway.

At the Galley Road junction with Lower Road, floodwater depths of up to 30cms were observed (see Image 3). At the junction of Lower Road and Lower North Street the flood water had a maximum depth of approximately 1m (see Image 5). There have been reports of a blocked and/or damaged pipe below the crossroads prior to and after Storm Babet. Floodwater has been observed flowing out of a kerb offlet onto the highway whilst the ditches are full of water and not flowing away under the road junction as normal.

One of the worst affected areas during Storm Babet was Farmerie Road. Multiple properties as well as gardens, garages and sheds were impacted directly by the large overflows of floodwater from the Chilton Brook to their rear. Reports described the massive flow of water exceeded the channel capacity at a number of places (see Figure 13) with flooding occurring rapidly, as two foot (approx. 60cm) of floodwater rose in 30mins.



Figure 15. Fluvial flood risk on Lower North Street, Lower Road and Farmerie Road

Resident reports cited a general lack of maintenance within the Brook with the resultant overgrown vegetation causing blockages and holding up the flow of water.

There are also sections of the channel where historically, the capacity has been reduced over time, through straightening and narrowing. This has been contributed by various locations in which unconsented works have been undertaken along this stretch of the Brook. These alterations to the channel have likely contributed to the flooding as did a number of other nearby culverted sections. Taken together cumulatively, the floodwater flows were restricted in an area already greatly susceptible to both surface water and fluvial flooding (see Figures 14 & 15), and flooding is likely in this location irrespective of additional restrictions in the channel. The Lead Local Flood Authority has investigated and concluded no further action is to be taken regarding the unconsented works in this location.

Some of the properties on Farmerie Road suffered additional flooding from the front as the highway drains were overwhelmed by the rainfall. The highway drainage assets were recorded as being operational prior to Storm Babet in February 2022 and again immediately after the storm in October 2023. It is likely the water within the gullies had nowhere to drain to, as the Chilton Brook into which they outfall was so high. Floodwater pooled on the road and pavement before flowing down towards the houses. Traffic attempting to drive through the floodwater caused bow waves which further increased the flooding experienced.

#### In Summary:

- On the morning of 20 October, intense rainfall caused vast amounts of floodwater to enter the watercourses above Hundon and flow towards the village.
- Multiple properties were flooded as the capacity of the ditch to the east of Lower North Street was exceeded by the floodwater flows.
- The localised sewer network was overloaded from rainfall and surface water runoff entering the system, resulting in foul & floodwater emerging from manholes and toilets.
- Valley Wash and Lower Road were both flooded along almost their complete length. One property on Lower Road was flooded as the Chilton Brook overtopped its banks.
- Farmerie Road was badly affected, with multiple properties flooded directly by the water overtopping from the Chilton Brook to their rear.
- Residents reported a lack of maintenance and historic narrowing and straightening of the channel (including a number of unconsented works in the channel) as reducing the capacity, together with culverted sections of watercourse, these all contributed to the flooding in this location.
- Surface water from the highway added to the extent of the flooding as highway drainage was overwhelmed by the amount of floodwater. Traffic causing bow waves in the floodwater added to the flooding.

#### LLFA recommended action(s):

- Residents to install Property Flood Resilience (PFR).
- Increase awareness of riparian landowner responsibilities with regard to watercourse management across Hundon.
- Riparian landowners to carry out appropriate watercourse maintenance to reduce flood risk as necessary as per their riparian responsibilities.
- Parish Council to investigate utilising the Community Self Help scheme to undertake minor maintenance activities.
- Identify where works could be considered to improve flow through the village to reduce risk, in particular on Lower Road, North Street and Clare Road.
- Suffolk Highways to investigate highway drainage assets at the crossroads of Lower North Street and Lower Road following reports of a blocked and/or damaged pipe below the road.
- Explore potential NFM projects to 'slow the flow' and attenuate water on overland flow paths to the east of North Street, E.g. leaky dams, woody debris installation, restoration of watercourses, storage ponds, wetland areas.
- Suffolk Highways to ensure the completion of highway drainage asset cyclic maintenance on Lower North Street, Lower Road and Farmerie Road.

# **Images**

The use of photos below has been included to support the investigation and provide further context of the flood event.



Image 1. Flooding on Valley Wash

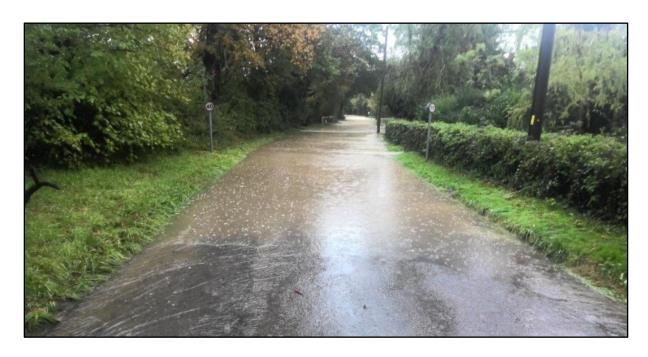


Image 2. Flooding on Valley Wash near Chilton Brook



Image 3. View from Galley Road towards Lower Road



Image 4. Flooding on Lower Road



Image 5. Lower Road and Lower North Street Junction



Image 6. Lower road after Storm Babet

# Risk Management Authorities, Non Risk Management Authority and flood risk function(s)

The following section acknowledges both RMA's and Non-RMA's relevant to the location and provide an overview of their flood risk functions. The table has been compiled from information collated as part of the investigation. It is not exhaustive and it should be acknowledged additional organisations and groups may be active within the community.

| Risk Management Authority                        | Relevant Flood Risk Function(s)  |
|--|--|
| Suffolk County Council                           | Lead local Flood Authority (LLFA),   |
|  | Highways Authority & Asset Owner   |
| The Environment Agency (EA)                      | Lead organisation for providing flood risk   |
|  | management under its permissive  |
|  | powers and issuing warnings of flooding  |
|  | from main river  |
| Anglian Water                                    | Asset owner supplying water and water  |
|  | recycling services   |
| West Suffolk District Council                    | Local Planning Authority (LPA) & Asset   |
|  | Owner  |
|  | - · · · · · · ·  |
| Non-Risk Management Authority                    | Relevant Flood Risk Function(s)  |
| Non-Risk Management Authority Private Landowners | Relevant Flood Risk Function(s) Riparian responsibilities and  |
|  | Relevant Flood Risk Function(s) Riparian responsibilities and management of water from land or   |
|  | Relevant Flood Risk Function(s) Riparian responsibilities and  |
|  | Relevant Flood Risk Function(s) Riparian responsibilities and management of water from land or watercourses Improving flood resilience to property and   |
| Private Landowners                               | Relevant Flood Risk Function(s) Riparian responsibilities and management of water from land or watercourses Improving flood resilience to property and some riparian responsibilities if adjacent  |
| Private Landowners                               | Relevant Flood Risk Function(s) Riparian responsibilities and management of water from land or watercourses Improving flood resilience to property and   |
| Private Landowners                               | Relevant Flood Risk Function(s) Riparian responsibilities and management of water from land or watercourses Improving flood resilience to property and some riparian responsibilities if adjacent to watercourses. Manage flood risk at a community level,   |
| Private Landowners  Private Homeowners           | Relevant Flood Risk Function(s) Riparian responsibilities and management of water from land or watercourses Improving flood resilience to property and some riparian responsibilities if adjacent to watercourses.  Manage flood risk at a community level, prepare and produce flood action plans |
| Private Landowners  Private Homeowners           | Relevant Flood Risk Function(s) Riparian responsibilities and management of water from land or watercourses Improving flood resilience to property and some riparian responsibilities if adjacent to watercourses. Manage flood risk at a community level,   |

# Action(s) completed to date:

The following section acknowledges actions that RMA's and Non-RMAs have implemented or are currently in progress since Storm Babet and prior to publishing of this report.

| Action   | Risk Management<br>Authority | Progress                             |
|--|------------------------------|--------------------------------------|
| Offer of Property Flood                          | Suffolk County Council       | Application window now               |
| Resilience (PFR)                                 | Lead Local Flood             | closed. Installation of PFR          |
| measures to the                                  | Authority                    | measures on approved                 |
| properties that flooded                          |                              | applications has been                |
| during Storms Babet                              |                              | extended to December                 |
|  |                              | 2025.                                |
| Ensure riparian                                  | Suffolk County Council       | SCC published "Flood Smart           |
| landowner  | Lead Local Flood             | <u>Living</u> " online and hard copy |
| responsibilities are                             | Authority                    | guide to increasing flood            |
| understood with regard                           |                              | resilience for residents,            |
| to watercourse                                   |                              | landowners and communities,          |
| management.                                      |                              | December 2024                        |
| Understand the annual                            | The Environment              | Complete                             |
| event probability of the                         | Agency (EA)                  |                                      |
| rainfall & river flow                            |                              |                                      |
| across the region                                |                              |                                      |
| Following Storm Babet,                           | Suffolk Highways             | Complete                             |
| in November and                                  |                              |                                      |
| December the whole                               |                              |                                      |
| village area was jetted                          |                              |                                      |
| and cleansed.                                    |                              |                                      |
| Annual cyclic cleanse                            |                              |                                      |
| was carried out in                               |                              |                                      |
| September 2024. Next                             |                              |                                      |
| cyclic cleanse planned                           |                              |                                      |
| for Aug/Sept 2025.  Written to all residents     | Hundon Parish Council        | Camplete                             |
|  | Hundon Parish Council        | Complete                             |
| with land adjoining                              |                              |                                      |
| watercourses and                                 |                              |                                      |
| attached a copy of the Riparian Responsibilities |                              |                                      |
| information leaflet to                           |                              |                                      |
| make them aware of                               |                              |                                      |
|  |                              |                                      |
| their responsibilities.                          |                              |                                      |

## LLFA Recommended Action(s):

The following section provides a range of flood mitigation measures that could be implemented to reduce the risk of flooding in Hundon. They have been derived from data and evidence collated as part of the report and have been included having been considered realistic in their implementation. The implementation of actions falls to the responsible party. Progress on the action will be monitored by Suffolk County Council, but it should be acknowledged that the council has limited powers to enforce the implementation of recommended actions.

| Action                    | Responsible<br>Party | Timescale<br>for<br>response | Latest Progress Update for Actions    |
|---------------------------|----------------------|------------------------------|---------------------------------------|
|                           | ` •                  |                              | activity and initial investigation of |
| options that can          |                      | limited need                 | for forward planning)                 |
| Establish a               | Hundon Parish        | 6 months                     |                                       |
| Community                 | Council              |                              |                                       |
| Emergency                 |                      |                              |                                       |
| Plan that                 |                      |                              |                                       |
| includes plans            |                      |                              |                                       |
| to manage<br>future flood |                      |                              |                                       |
| events –                  |                      |                              |                                       |
| Liaison with              |                      |                              |                                       |
| Suffolk Joint             |                      |                              |                                       |
| Emergency                 |                      |                              |                                       |
| Planning Unit.            |                      |                              |                                       |
| Residents to              | SCC LLFA /           | N/A                          | DEFRA PFR Grant has now               |
| consider                  | Residents            |                              | closed for new applications.          |
| installing                |                      |                              | Installation of PFR measures on       |
| Property Flood            |                      |                              | approved applications has been        |
| Resilience                |                      |                              | extended to December 2025.            |
| (PFR)                     |                      |                              | Further information on PFR            |
| measures to               |                      |                              | measures can be found within          |
| property to reduce        |                      |                              | SCC published "Flood Smart            |
| damage                    |                      |                              | <u>Living</u> " handbook.             |
| caused by                 |                      |                              | There is currently no active PFR      |
| flooding.                 |                      |                              | schemes being managed by the          |
|                           |                      |                              | LLFA in Suffolk.                      |
| Riparian                  | Riparian             | N/A                          | Further information on Riparian       |
| landowners to             | landowners           |                              | Ownership can be found within         |
| carry out                 |                      |                              | SCC published "Flood Smart            |
| appropriate               |                      |                              | <u>Living</u> " handbook.             |
| watercourse               |                      |                              |                                       |
| maintenance to            |                      |                              |                                       |
| reduce flood              |                      |                              |                                       |
| risk as                   |                      |                              |                                       |
| necessary as              |                      |                              |                                       |

|   | T  |                 | <u> </u>  |
|---|--|-----------------|---|
| per their riparian responsibilities (See Appendix A).   |  |                 |   |
| Utilise the Community Self Help scheme to undertake minor maintenance activities.   | Hundon Parish<br>Council / Suffolk<br>Highways | 6 -12<br>months | Further information can be found at the following https://www.suffolk.gov.uk/roads-and-transport/highway-maintenance/community-self-help-scheme |
| Suffolk Highways to ensure the completion of highway drainage asset cyclic maintenance on Valley Wash, Mary Lane, Lower North Street, Lower Road and Farmerie Road. | Suffolk<br>Highways                            | Annually        | Ongoing. Routine annual cleansing of the gullies will be completed in line with the set cycles.   |
| Investigate highway drainage assets at the crossroads of Lower North Street and Lower Road following reports of a blocked and/or damaged pipe below the road.       | Suffolk<br>Highways                            | 6 -12<br>months |   |
| Identify where works could be considered to improve flow through the village to reduce risk through effective   | Residents/<br>Community and<br>SCC LLFA        | 6-12<br>months  |   |

| watercourse                |                              |                 |                                |
|----------------------------|------------------------------|-----------------|--------------------------------|
| management                 |                              |                 |                                |
| (See Appendix              |                              |                 |                                |
| A).                        |                              |                 |                                |
|                            | A <b>ctions</b> (e.g. longer | nlanning time   | escales and potential need to  |
|                            | out potential for grea       |                 | escales and potential need to  |
| Explore                    | Landowners,                  | 12 - 24         | Further information on NFM     |
| potential NFM              | supported by                 | months          | measures can be found within   |
| measures                   | relevant                     |                 | SCC published "Flood Smart     |
| which aim to               | authority,                   |                 | <u>Living</u> " handbook.      |
| attenuate                  | resource                     |                 | <u>=</u>                       |
| water and                  | dependant (SCC               |                 |                                |
| 'slow the flow'            | LLFA, EA)                    |                 |                                |
| on overland                | , ,                          |                 |                                |
| flow paths in              |                              |                 |                                |
| the upper                  |                              |                 |                                |
| catchments                 |                              |                 |                                |
| north and west             |                              |                 |                                |
| of Hundon e.g.             |                              |                 |                                |
| storage ponds,             |                              |                 |                                |
| wetland areas,             |                              |                 |                                |
| leaky dams,                |                              |                 |                                |
| woody debris               |                              |                 |                                |
| installation and           |                              |                 |                                |
| restoration of             |                              |                 |                                |
| watercourses               |                              |                 |                                |
| (See Appendix              |                              |                 |                                |
| A).                        | Land Diamina                 | 40              |                                |
| Investigate                | Local Planning               | 12              |                                |
| opportunities to           | Authority, SCC               | months+         |                                |
| update                     | LLFA                         |                 |                                |
| development plan policy in |                              |                 |                                |
| Neighbourhood              |                              |                 |                                |
| Plans or any               |                              |                 |                                |
| potential Joint            |                              |                 |                                |
| Local Plan site            |                              |                 |                                |
| allocation(s)              |                              |                 |                                |
| which identify             |                              |                 |                                |
| risks and                  |                              |                 |                                |
| opportunities to           |                              |                 |                                |
| mitigate flood             |                              |                 |                                |
| risk issues as             |                              |                 |                                |
| development                |                              |                 |                                |
| comes forward.             |                              |                 |                                |
| Long Term a                | , ,                          |                 | scale and budget required with |
|                            |                              | greater positiv | ve impact)                     |
| Installation of            | Landowners,                  | TBC             |                                |
| NFM features               | supported by                 |                 |                                |
| within upper               | relevant                     |                 |                                |

| catchments to<br>attenuate and<br>slow flood<br>water if<br>investigation<br>works suggest<br>it is viable.  | authority,<br>resource<br>dependant (SCC<br>LLFA, EA) |     |  |
|--|---|-----|--|
| Deliver improvements to highway drainage network to manage surface water flows if investigation works suggest it is beneficial and viable (as set out in the medium term actions). | Suffolk<br>Highways                                   | TBC |  |

# **Approval**

This report will be reviewed and updated every 6 months until actions are marked as complete.

| Reviewer | Date of Review |
|----------|----------------|
|          |                |
|          |                |

#### **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. Should there be additional information available to develop the report, please email to floodinvestigations@suffolk.gov.uk

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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## Appendix A - Indicative locations for NFM and watercourse maintenance

