



BARNSLEY
Metropolitan Borough Council

FLOOD AND WATER MANAGEMENT ACT 2010

SECTION 19 STATUTORY REPORT:

**INVESTIGATION OF FLOODING EVENT IN BARNSLEY
STORM Babet OCT 2023**

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1. Introduction

Barnsley Metropolitan Borough Council, as the Lead Local Flood Authority (LLFA), has a responsibility under Section 19 of the Flood and Water Management Act 2010 to investigate significant flood incidents in its area. Section 19 states:

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 the above subsection it must:
 - a. Publish the results of its investigation, and.
 - b. Notify any relevant risk management authorities.

1.1. Risk Management Authorities (RMA) are defined in The Flood and Water Management Act 2010. In Barnsley, these are:

- Lead Local Flood Authority – Barnsley MBC
- The Environment Agency – Yorkshire Area
- An Internal Drainage Board – Danum Drainage Commissioners.
- A Water Company - Yorkshire Water Services Ltd
- A Highway Authority – Barnsley MBC & Highways England

Investigation under the provisions of the Flood and Water Management Act does not include scrutiny of the emergency response to a flooding event. Investigations of this kind may take place under different provisions e.g., the Civil Contingencies Act or local authority scrutiny processes.

2. Storm Babet – UK wide picture

Storm Babet brought exceptional rainfall to parts of the UK with 150 to 200mm falling in the wettest areas and the Met Office issuing two red warnings for rain.

Coinciding with this red warning area - 19 October 2023 was, by a wide margin, the wettest day on record in a series from 1891. Heavy, persistent, and widespread rain also affected much of England, Wales, and Northern Ireland from 18th to 20th, with 100mm falling widely.

This was the third-wettest independent 3-day period for England and Wales in a series from 1891, while the Midlands provisionally recorded its wettest 3-day period on record.

This rain came on top of very wet weather earlier in October with some central and eastern parts of England recording more than twice the October whole-month average rainfall in the first three weeks of the month.

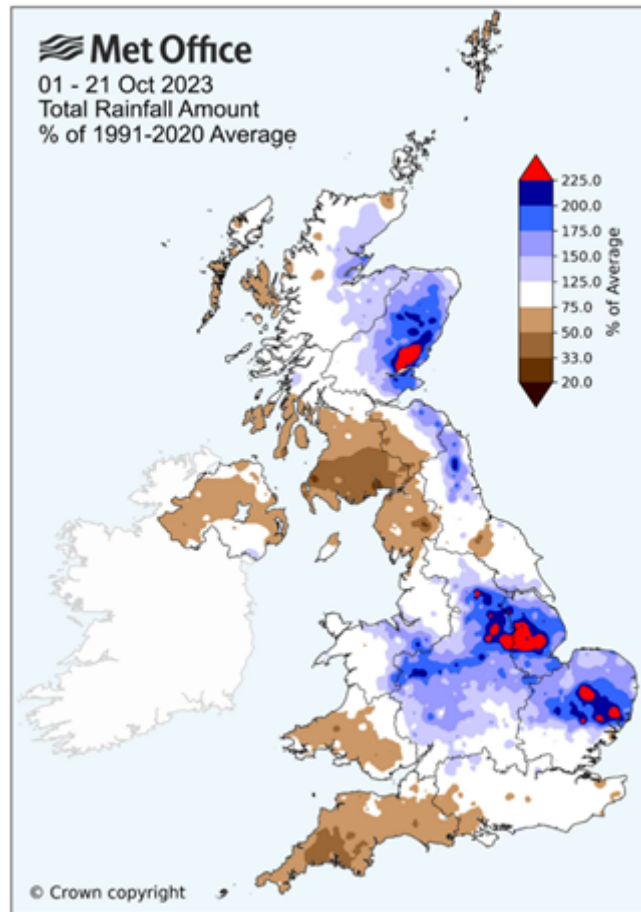
Babet also brought some very strong winds, gusting at over 50Kt (58mph) across northeast England. A blocking area of high pressure over Scandinavia prevented Babet clearing the UK eastwards into the North Sea and as a result these wind speeds were sustained for a prolonged period. The persistent heavy rain and strong wind resulted in atrocious weather conditions for a sustained period, with a gust of 67Kt (77mph).

2.1. Rainfall Event and Warnings

Following earlier Yellow Rain warnings and alongside warnings across the UK including Red warnings for the east of Scotland (the first since 2020) we received an Amber Rain Warning covering a large area of Yorkshire & Humber and the Midlands on the morning of Thursday 19th October.

The screenshot shows a Met Office weather warning for Amber Rain in Yorkshire & Humber. The warning is issued for the period between 12:00 (UTC+1) on Friday 20 October 2023 and 06:00 (UTC+1) on Saturday 21 October 2023. The headline states: "Persistent heavy rain brings the likelihood of some flooding and disruption." Under the heading "What to expect", there is a list of potential impacts: homes and businesses may be flooded, causing damage; fast flowing or deep floodwater is possible, causing danger to life; some communities may be cut off by flooded roads; delays and cancellations to train and bus services are likely; spray and flooding may lead to difficult driving conditions and road closures; and power cuts and loss of services to some homes and businesses are possible. A link for "What should I do?" is provided. The warning was issued at 10:40 (UTC+1) on Thursday 19 October 2023.

Atlantic storm systems affecting the UK in the autumn and winter months normally track west to east, driven by the jet stream, clearing eastwards fairly quickly. In contrast, storm Babet was on an unusual track from south to north, enabling it to pick up additional moisture as it crossed the Bay of Biscay.



Much of East Anglia, the Midlands, Lincolnshire and south Pennines, parts of Northumberland and much of eastern Scotland received over 150% of the whole-month average rainfall over this period, with significant areas over 200% and locally the wettest areas (shaded in red) more than 225%.

Barnsley experienced heavy rainfall throughout Tuesday 17th Oct 2023 that continued into the early hours of Saturday 21st Oct. Environment Agency rain gauges recorded 73.4 mm of rain having fallen on the borough over a 24-hour period. The accumulated daily rainfall for the 4-day period 18 to 21 October 2023 from storm Babet as actual totals in mm (left) and percentage of the October whole-month average (right). Large swathes of the UK received over 50mm of rain, with 75 to 100mm widely.

3. Barnsley MBC Response to Rainfall Event Weather data

During October 17th, 18th, 19th, and 20th storm Babet tracked north to the UK. Atlantic storm systems affecting the UK in the autumn and winter months normally track west to east, driven by the jet stream, clearing eastwards quickly. In contrast, this storm was on an unusual track from south to north, enabling it to pick up additional moisture as it crossed the Bay of Biscay. Babet was also unable to clear eastward into the North Sea due to blocking area of high pressure across Scandinavia. The rain-bearing fronts therefore remained stationary across eastern Scotland for a prolonged period before moving back across England and Wales

3.1. Response Tuesday 17th October to Saturday 21st October

From Tuesday 17th October to Saturday 21 October, we had more than 70mm of rain in several areas - that's usually the average for the whole month of October.

Unfortunately, some of our communities were badly affected

, with 20 properties in Lundwood suffering internal flooding and 1 property at the Ings Lane Caravan Site which ultimately required the evacuation of the entire site.

During our response:

- our Highways Team responded to 126 requests across the borough. They've checked and cleared culverts, deployed tankers to pump water and cesspits, put up flood signs, delivered sandbags and dealt with 13 fallen trees. They also had to close 11 roads across Barnsley, from Penistone in the west to Thurnscoe in the east.
- Berneslai Homes have had teams on the ground since the storm hit in key areas such as Stacey Crescent and Lang Avenue
- our Contact Centre received 1,113 calls for Berneslai Homes and Highways between Friday and Sunday, helping to answer people's questions and get them the support they need.
- our Safer Neighbourhood wardens supported communities throughout the night on shifts at all locations, providing sandbags, door-knocking to offer support and checking water levels.
- the Stronger Communities teams helped fill sandbags and helped run the Burton Grange Community Centre alongside Children's Services. This has been a key part of our support for residents affected and remains open for the community.
- we provided alternative accommodation to people who needed it.

Recovery

- providing cleaning products and skips to help people remove damaged items.
- offering financial hardship payments to people whose living areas flooded
- pausing council tax payments for up to three months for the people who can't live in their homes due to flood damage.
- pausing business rate payments for up to three months for the business that can't trade because of flood damage.
- supporting Berneslai Homes tenants to repair the damage inside of their homes and signposting them to their hardship fund.

4. Summary of flooding impacts

The Council's investigations have determined that the incident resulted in 21 residential properties and 0 reported commercial properties being flooded internally.

- Predominantly two areas were affected by flooding:
 - Lang Avenue 18 properties were affected.
 - Martins Road 2 properties were affected.
 - *Low Valley Ings Lane Caravan site - 1 property was affected with all residents ultimately advised to evacuate the site.*

5.0 Causes of Flooding

As outlined at item 2.0 of this report, a considerable amount of rain fell on the Dearne and Dove catchments impacting on the borough on 17th October to the 21st of October, very wet conditions in early autumn meant that soils in the upland areas were already saturated at the start of October, reducing their capacity to store rainfall, thereby increasing runoff, and exacerbating flooding.

6.0 Identification of Flood Risk Management Functions

Risk Management Authorities

Risk Management Authorities (RMA) have flood risk management functions according to the type of flooding as follows:

Main Rivers	- Environment Agency
Ordinary Watercourses	- LLFA
Surface Water Flooding	- LLFA
Public Sewers	- Water Company
Highway Flooding	- Highway Authority

The identification of a RMA as having these functions does not imply that the RMA has responsibility or liability for the flooding, or for taking any action beyond investigation.

The Risk Management Authorities which have flood risk management functions relating to this flooding incident are:

Residential Property Address	Number of properties flooded internally	Number of Businesses flooded internally	Risk Management Authorities with Relevant Flood Risk Management Functions
Lang Avenue, Lundwood	18	0	Barnsley MBC as LLFA
Martins Road	2	0	Barnsley MBC as LLFA
Ings Lane Caravan Site	1	0	Barnsley MBC as LLFA

7.0 Future Actions

This Section 19 Report identifies the Risk Management Authorities relevant to each flood location, but detailed consideration of further investigations and action is beyond the scope of this report.

Where the principal RMA identified is not Barnsley Council, the relevant RMA will be the primary contact for further information.

Where the Council has been identified as the principal RMA, investigations are ongoing. The investigations will identify where flood alleviation measures may be feasible and where applicable schemes will be promoted, but this is subject to funding being available. The rainfall experienced in October 2023 would have tested any urban drainage infrastructure, the rainfall intensities more than 100mm per hour are far more than the normal design standards across the industry.