

Grendon Flooding points for further consideration

Grendon Parish Council objects to the applicant's revised Flood Risk Assessment in respect of the proposed BESS and substation areas at Grendon, because its conclusions materially understate the actual flood risk on the ground and fail to reflect both mapped flood constraints and the demonstrated flooding history of the site and its surroundings.

EX5/GH6.3.10.11 Revision B

Environmental Statement Appendix 10.11: Flood Risk Assessment and Drainage Strategy Annex J: Green Hill BESS Revision B

Document Ref: 313532 23/02/2026

In the above document, the applicant's mapping of BESS 2 and associated substations, is shown within Flood Zones 2 and 3, with the majority of that field falling within Flood Zone 3. **(Fig 7, section 2.1 EA's Flood Map for Planning).**

In plain terms, this is land recognised as being **at significant risk** from fluvial flooding. It is therefore very difficult to reconcile that mapped position with the applicant's attempt to describe BESS 2 as presenting "low risk" as per **2.7.1.** in the same document. The below photographs were taken in November 2024, several weeks after the peak of the floods in September 2024. **(please see photographs 1 &2)**

The revised assessment does not appear to give proper weight to the **actual** flooding record in this area. The applicant acknowledges a historic flood event affecting the eastern BESS 1 area in 1947! That is not an isolated or purely historic concern and is heavily misleading, which has been pointed out to the applicant on many an occasion.

The Environment Agency's September 2024 flooding presentation, attached, records that Grendon has previous flood history in **2024, 2012, 1998 and the 1980s.** However, The Environment Agency only concerns itself with displacement or threat to life events, as Parish Council, we can state that the Village and environs have flooded many more occasions than that in recent times i.e. 2024, 2023, 2020, 2016, 2012.

The principal concern in Grendon is, and always has been, **fluvial flooding**, including the interaction between watercourses, flood storage behaviour and local topography. The Environment Agency's September 2024 presentation specifically refers to **Flood Storage Areas – Grendon Brook** and records that emergency spillways were used at **Yardley Hastings East and North** during the September 2024 event. That evidence reinforces the reality that this wider catchment was under severe pressure and cannot be treated as benign.

The Environment Agency report also includes draft flood-event mapping for **Lower End, Grendon**, showing a clear flood outline associated with the September 2024 event. This recent evidence is highly relevant and should weigh heavily against any suggestion that flooding here is only a limited or theoretical possibility. **(Please see photographs 3-6).**

Consultation relied on by the applicant appears to have taken place in early 2024, i.e. before the severe September 2024 floods. That timing matters. The Environment Agency presentation shows Northamptonshire experienced **148.6 mm of rainfall by the morning of 30 September 2024**, around **three times the average rainfall for the month**, and states that this was wetter

than the previous wettest September on record for Northamptonshire. In Easton Maudit, cars were swept off the road and into a brook! **(please see photograph 7)** The same presentation also notes the Environment Agency had seen the **highest rainfall totals on record** for 3, 6 and 12month periods across the Lincolnshire and Northamptonshire area. Any flood assessment that predates that event is plainly less reliable as an indicator of **present-day risk**.

Furthermore, the proposal to create hardstanding across the whole of BESS 2 is itself a flood risk issue. Replacing permeable agricultural land with extensive hardstanding will inevitably alter runoff characteristics and increase the speed and volume of water entering surrounding drainage routes and watercourses. That is especially concerning in an area where the applicant has already acknowledged fluvial flood risk, where mapped flood zones are severe, and where recent events show the catchment has experienced exceptional pressure. This gives rise to question closely, the applicants claim that the scheme **‘will not improve the flood risk, but will not worsen flooding in the area’**.

The applicant’s characterisation of the eastern part of BESS 1 area as only at “moderate risk” is interesting. Local experience is that the Eastern area of BESS 1 floods badly and repeatedly, with flooding occurring at least annually, and photographic evidence exists to support that. **(Please see photograph 8)**. It is also noted that the applicant is not planning on developing the Eastern area of BESS 1, presumably because the flood risk is recognised, as the Eastern end of BESS 1 is marked as flood zone 3 on **Figure 7 section 2.1: EA's Flood Map for Planning** (as is the site for BESS 2).

Where the applicant’s desk-based conclusions conflict with repeated observed flooding on the ground, **greater weight** should be given to real-world evidence, particularly when recent Environment Agency material confirms both exceptional rainfall and a clear history of flooding affecting Grendon.

For all of those reasons, the revised Flood Risk Assessment should be treated with considerable caution. It does not appear to present a robust or credible assessment of flood risk for the proposed BESS areas, particularly BESS 2. As a minimum, GPC requests that the Examining Authority should require the applicant to revisit the assessment in light of the September 2024 flooding evidence, the mapped flood-zone constraints, the historic and recent flood record for Grendon, and the runoff consequences of extensive hardstanding within this catchment. On the evidence presently available, the applicant has not demonstrated that the siting of BESS 2 particularly, is environmentally acceptable in its proposed situation, would be safe for its lifetime, nor that it would avoid increasing flood risk.

Yours faithfully

Cllr [REDACTED]
On Behalf of Grendon Parish Council

Environment Agency Material references are from their report: Enc.



environment-agenc
y-grendon-meeting-

Photographs taken by Charles Ward Photography 28.11.24 nine weeks after the floods of September 2024, which displaced 12 households in Grendon and several in Easton Maudit.

PHOTOGRAPHS1&2



Pastures Farm, surrounding fields and Grendon sub-station November 2024 several weeks post the worst floods

PHOTOGRAPHS 3&4



The Marina car park under water, the bridge closed due to flooding November 2024



The approach road to the bridge closed due to flooding

PHOTOGRAPHS 5-6



Main Road Grendon impassable due to floods at Lower End Sept 2024

PHOTOGRAPH 7



Car being washed into ditch in Easton Maudit due to force of the floods Sept 2024

PHOTOGRAPH 8



Photograph of flooding at the Eastern section of BESS 1 Sept 2024

September 2024 flooding

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Flood Risk management enquiries to the Partnerships and Strategic Overview Team
psown@environment-agency.gov.uk

Sources of Flooding

➔ Sources that we warn for:

- ➔ Fluvial (main river)
- ➔ Tidal
- ➔ Groundwater in certain locations

➔ Other Sources of flooding:

- ➔ Surface Water
- ➔ Non-main river
- ➔ Sewer
- ➔ Reservoir
- ➔ Other



Flood Risk – Who is responsible?

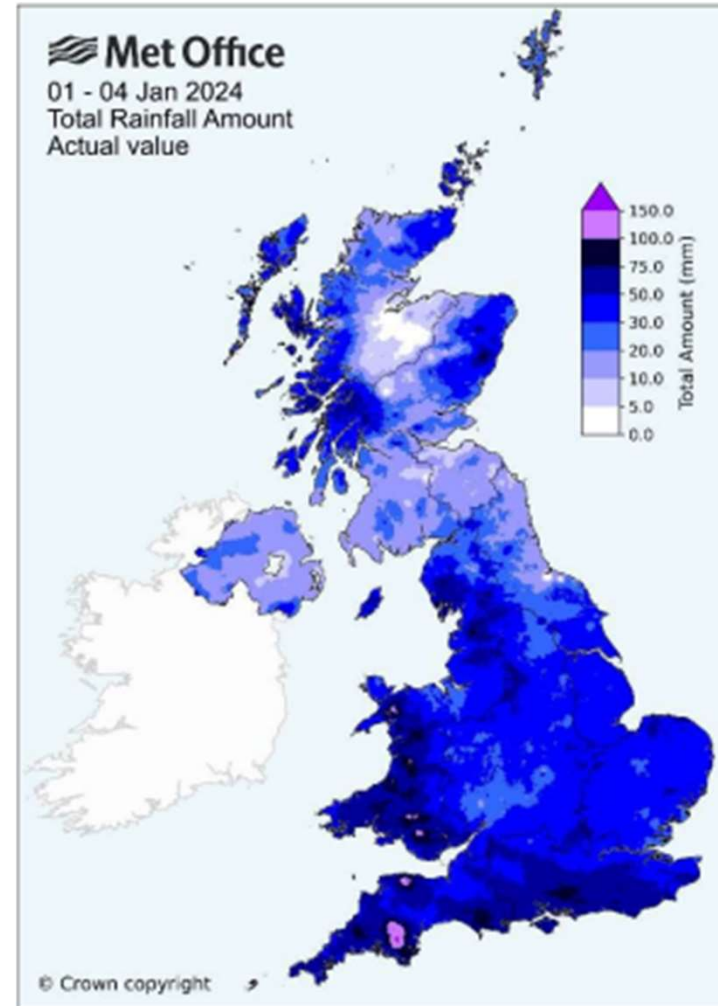
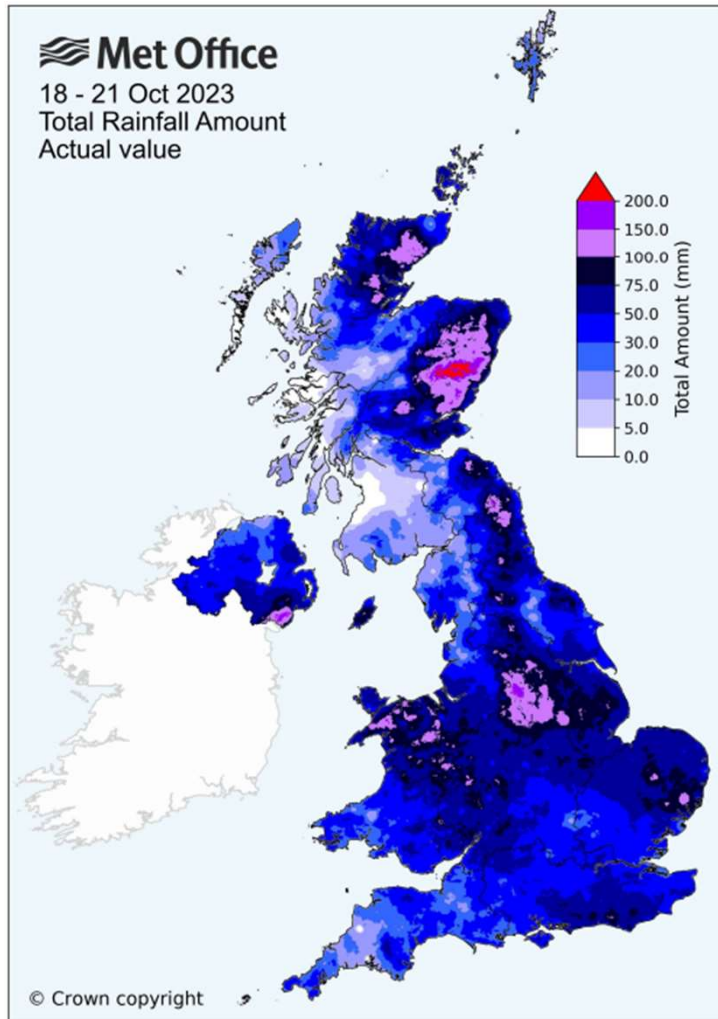
Risk Management Authority	Responsible for
Environment Agency (EA)	<ul style="list-style-type: none"> • the strategic overview of all sources of flooding and coastal erosion • flood and coastal erosion risk management activities on Main Rivers and the coast • regulating reservoir safety • working in partnership with the Met Office to provide flood forecasts and Flood Warnings
Lead Local Flood Authorities (LLFAs) County Councils and Unitary Authorities	<ul style="list-style-type: none"> • managing local flood risks (from surface water, ground water, and ordinary watercourses) • preparing and maintaining a strategy for local flood risk management in their areas • local Highways - providing and managing highway drainage and roadside ditches
Water and sewerage companies	<ul style="list-style-type: none"> • managing the risk of flooding to water supply and sewerage facilities • managing the flood risks from the failure of their infrastructure
Internal Drainage Boards (IDBs) Land Drainage Authorities within their Districts	<ul style="list-style-type: none"> • managing water levels in low-lying areas • supervising land drainage and flood defence works on ordinary watercourses within their Districts
Riparian Land Owners Although not an RMA, they have the right to protect their property from flooding and erosion	<ul style="list-style-type: none"> • <u>getting permissions to build anything in or around the watercourse</u> • not building anything which could divert water and increase flood risk to other people's property, or they may have to pay damages

Significant Flood events:

Year	Flood event	Properties flooded
2024 (Sept)	Northamptonshire September 2024	TBC
2023/2024	Storm Babet, Ciarán, Henk	2000+ (Lincs and Northants)
2020 (23/24 December)	Christmas flooding River Nene - Billing Aquadrome	Properties affected 1500+
2019	Lincolnshire flooding - Wainfleet	100+
2018 (May)	Northampton Surface Water Flooding	200+
Mar-16	River Nene	circa 100
2015/16	Winter Floods December 15 and January 160	10,000+
2013/14	Winter Floods – inc. Lincolnshire (Dec 13 to May 14)	11000
2012	2012 Floods (Mar-Dec)	7900
2010	Cornwall November 2010	250
2009	Cumbria November 2009	1500
2008	Morpeth September 2008	1250
2007	Summer 2007	55000
2006	Thames August 2006	190
2005	Cumbria January 2005	2500
2004	Boscastle August 2004	60 (40 in other Cornish locations)
2003	Thames December 2002 - January 2003	700
2001	Thames October 2001	110
2001	Thames February 2001	120
2000	Thames December 2000	240
2000	Autumn 2000	10000
1998	Easter 1998	4500 & 2 deaths



Storm Babet and Storm Henk rainfall



Storm Babet and Storm Henk rainfall statistics:

- October rainfall = 312% long term average
- November rainfall = 113% long term average
- December = 206% long term average (UK average 172%)
- Jan: 80% of river flows are exceptionally high for the time of year

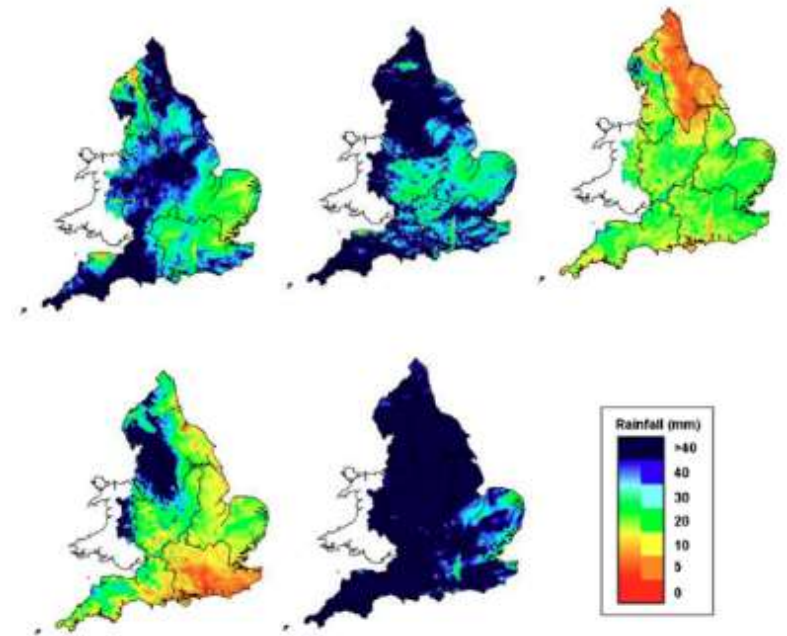
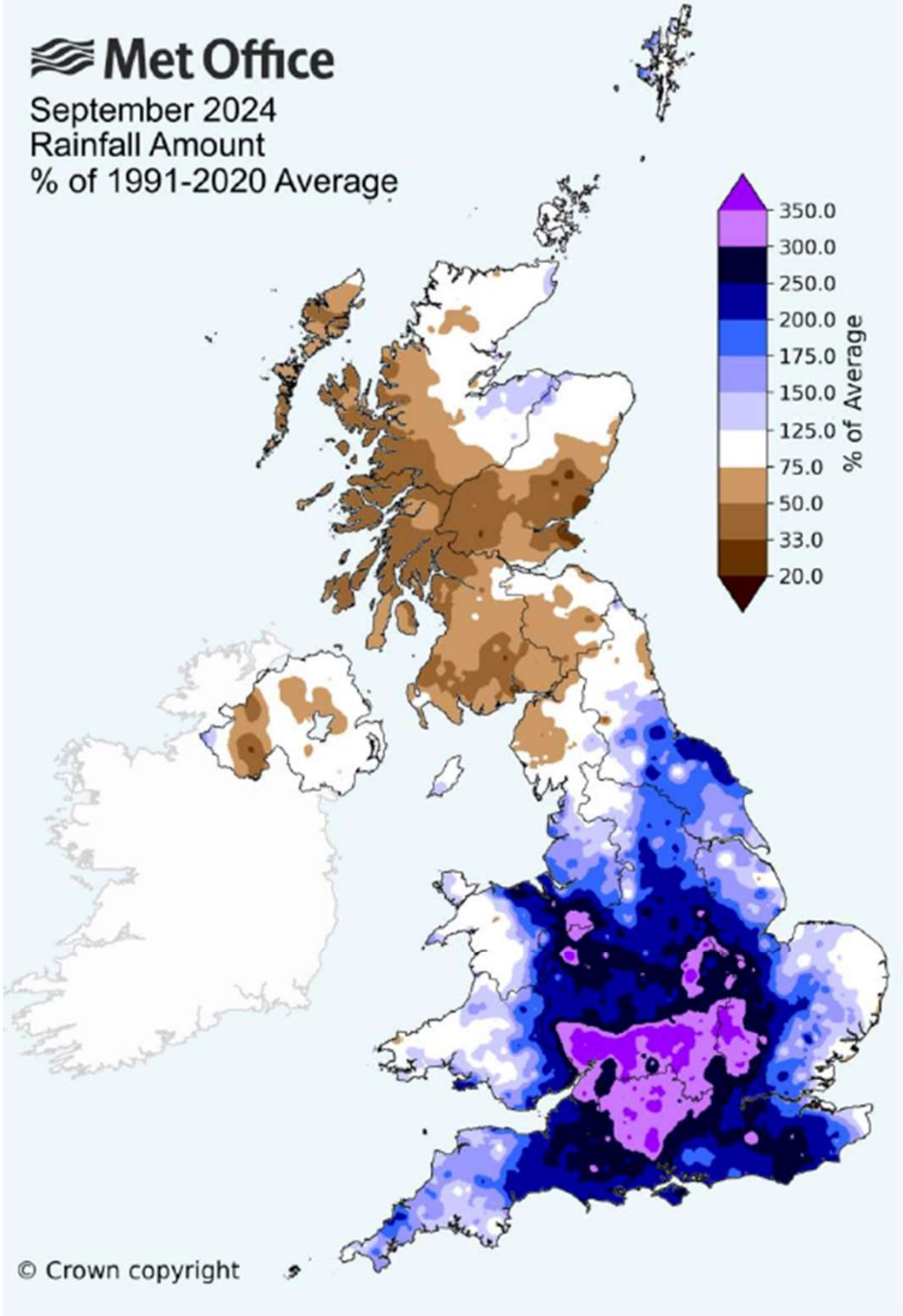


Figure 1 Weekly precipitation across England and Wales for the past 5 weeks. UKPP radar data (Source: Met Office © Crown Copyright, 2023). Note: Images may sometimes include straight lines originating from the centre of the radar, resulting from tall trees and buildings located near the radar installation affecting its performance. This does not reflect actual conditions on the ground. Crown copyright. All rights reserved. Environment Agency, 100024198, 2023

Rainfall Sept 2024:

 **Met Office**

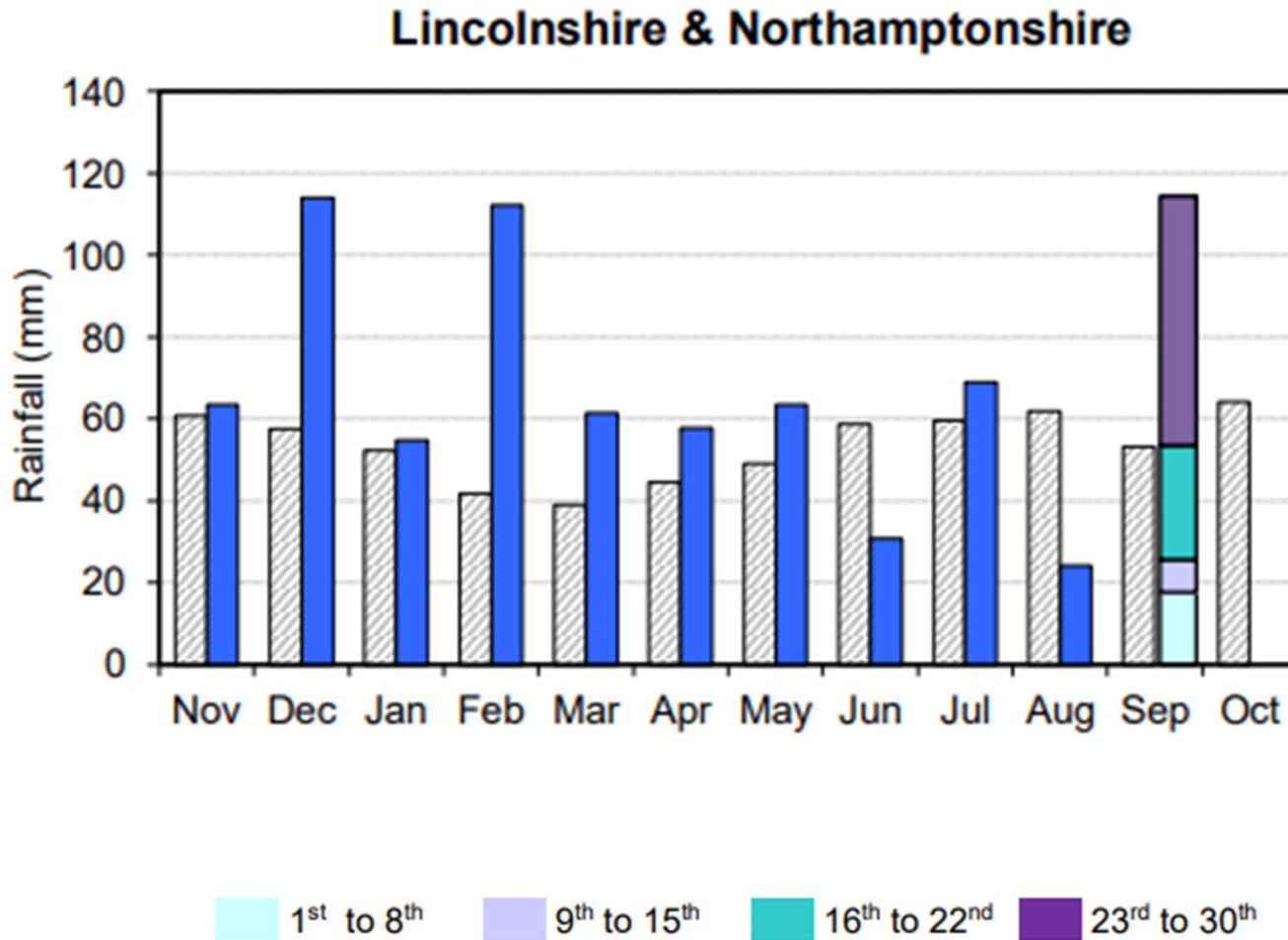
September 2024
Rainfall Amount
% of 1991-2020 Average



© Crown copyright



Environment Agency rainfall data – Lincolnshire and Northamptonshire Area



We have seen the highest rainfall totals on record for:

- 3 months (December to February)
- 6 months (August to February)
- 12 months (March to February)

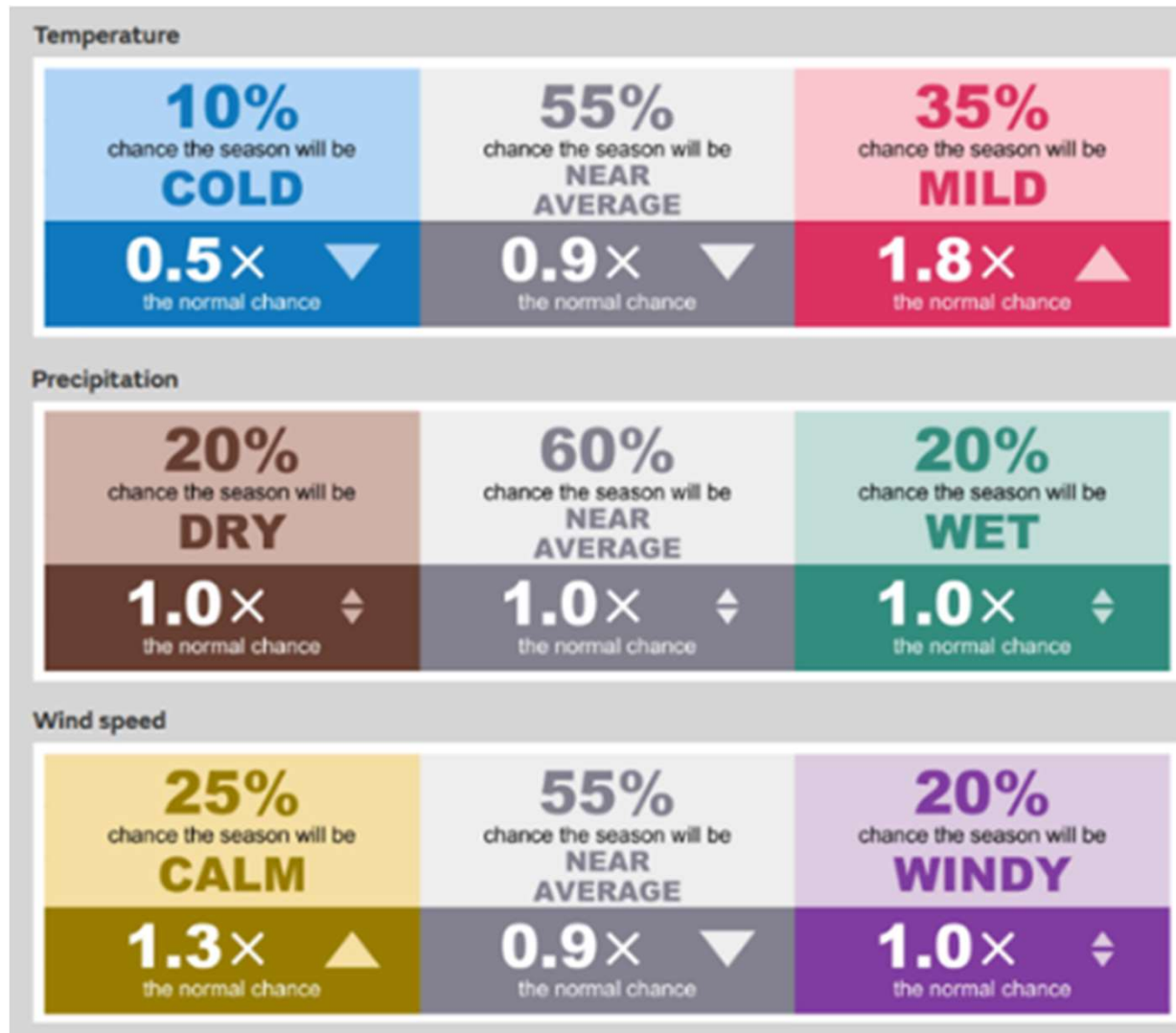
Figure 2.2: Monthly rainfall totals for the past 12 months as a percentage of the 1991 to 2020 long term average for each region and for England.

Northamptonshire's September statistics:

- ➔ Rainfall by morning of 30 September: 148.6mm
- ➔ 3 times the average rainfall for the month
- ➔ The wettest September on record was September 1876 when there was 137.4mm.
- ➔ The current long term average for the month is 56.2mm

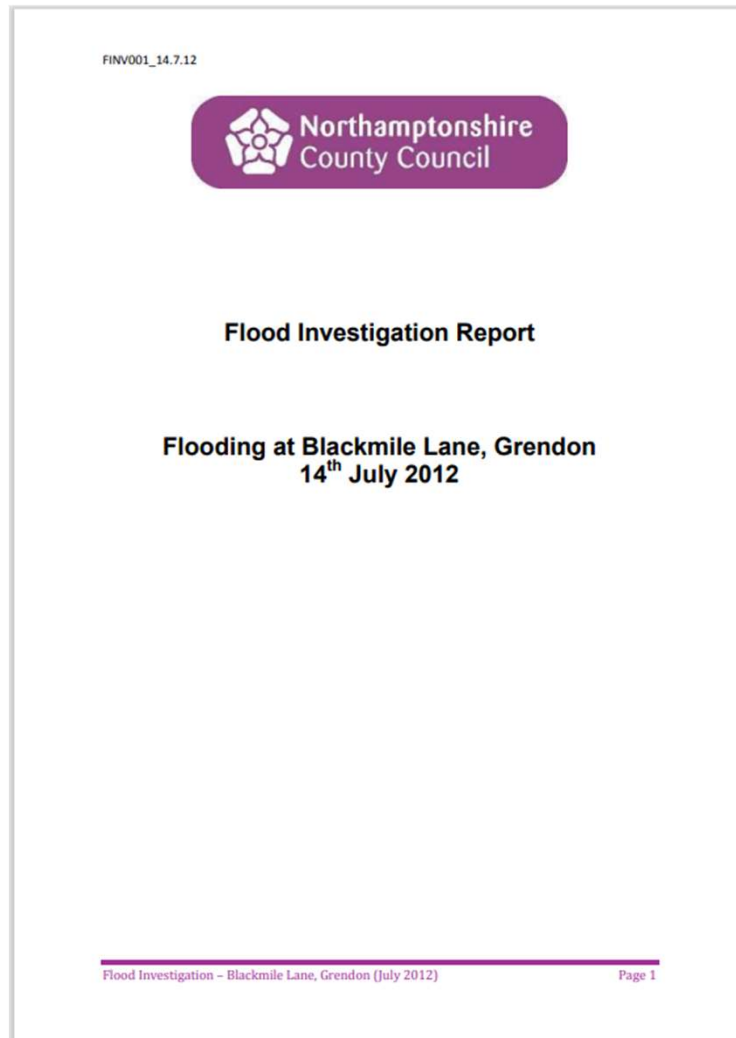


Winter 24/25



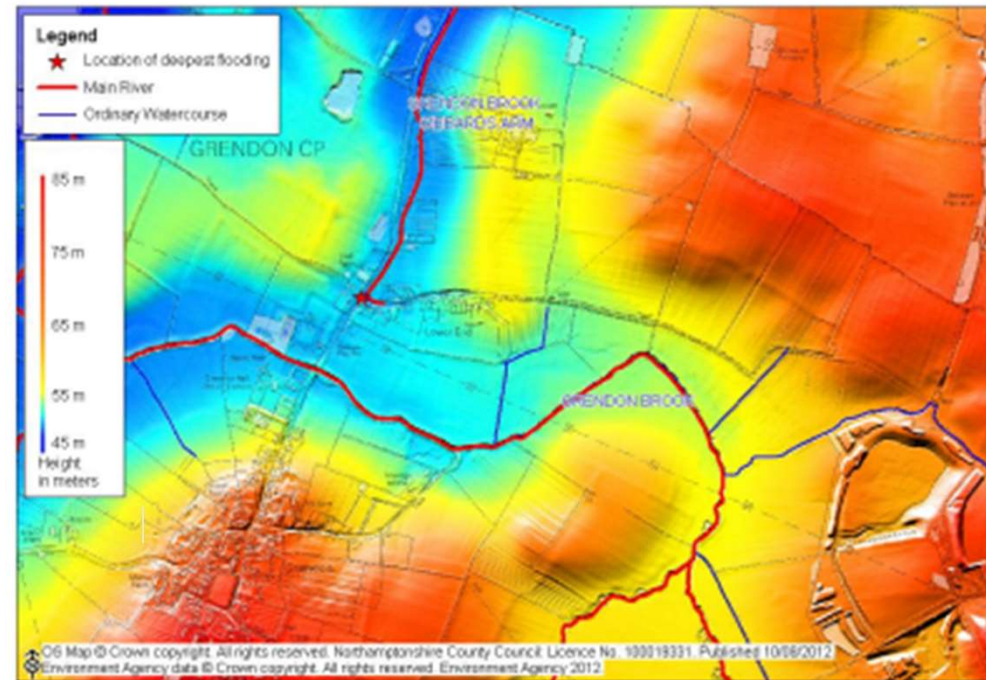
Updated 15/10/24

Previous Grendon flood history:



- 2024
- 2012
- 1998
- 1980s

Map 3. LIDAR Data



6. Recommendations

- 6.1.1. The method for prioritising flood risk management works varies for each risk management authority involved, dependant on factors such as resources available, operational area, and interpretation of flood risk.
- 6.1.2. NCC as the LLFA is in a position to facilitate sharing of information between risk management authorities. We also suggest that the following recommendations are considered:
1. NCC Highways to undertake drain clearing in Blackmile Lane Area;
 2. EA to consider clearing of river channel of Gibbards Arm;
 3. NCC and EA to investigate damage to assets at Easton Maudit;
 4. NCC to consider contacting residents at Yardley Hastings to obtain more detail on the flooding that occurred in this location;
 5. NCC to write to owners of drainage ditches between Grendon Brook and Blackmile Lane to ensure they are being properly maintained;

Flood Investigation - Blackmile Lane, Grendon (July 2012)

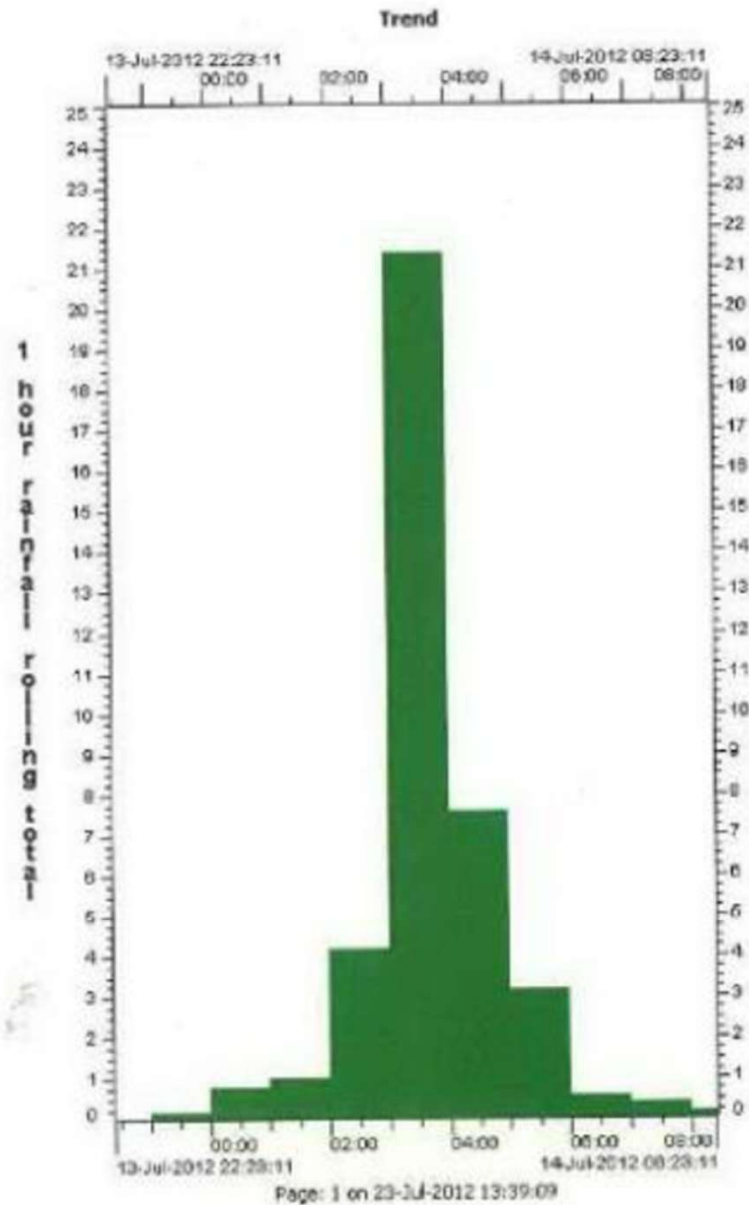
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6. NCC to consider undertaking further enquiries to obtain information in relation to the historical flood event referred to by residents over 30 years ago;
7. NCC to provide advice to residents on property level protection, liaise with the flood warden and update the village emergency plan.



Previous Grendon flood history:



2.2. Rainfall Analysis

2.2.1. The period up to 14th July 2012 saw regular periods of intense rainfall, which saturated the catchment. Between midnight and 04:30 hours on 14th July

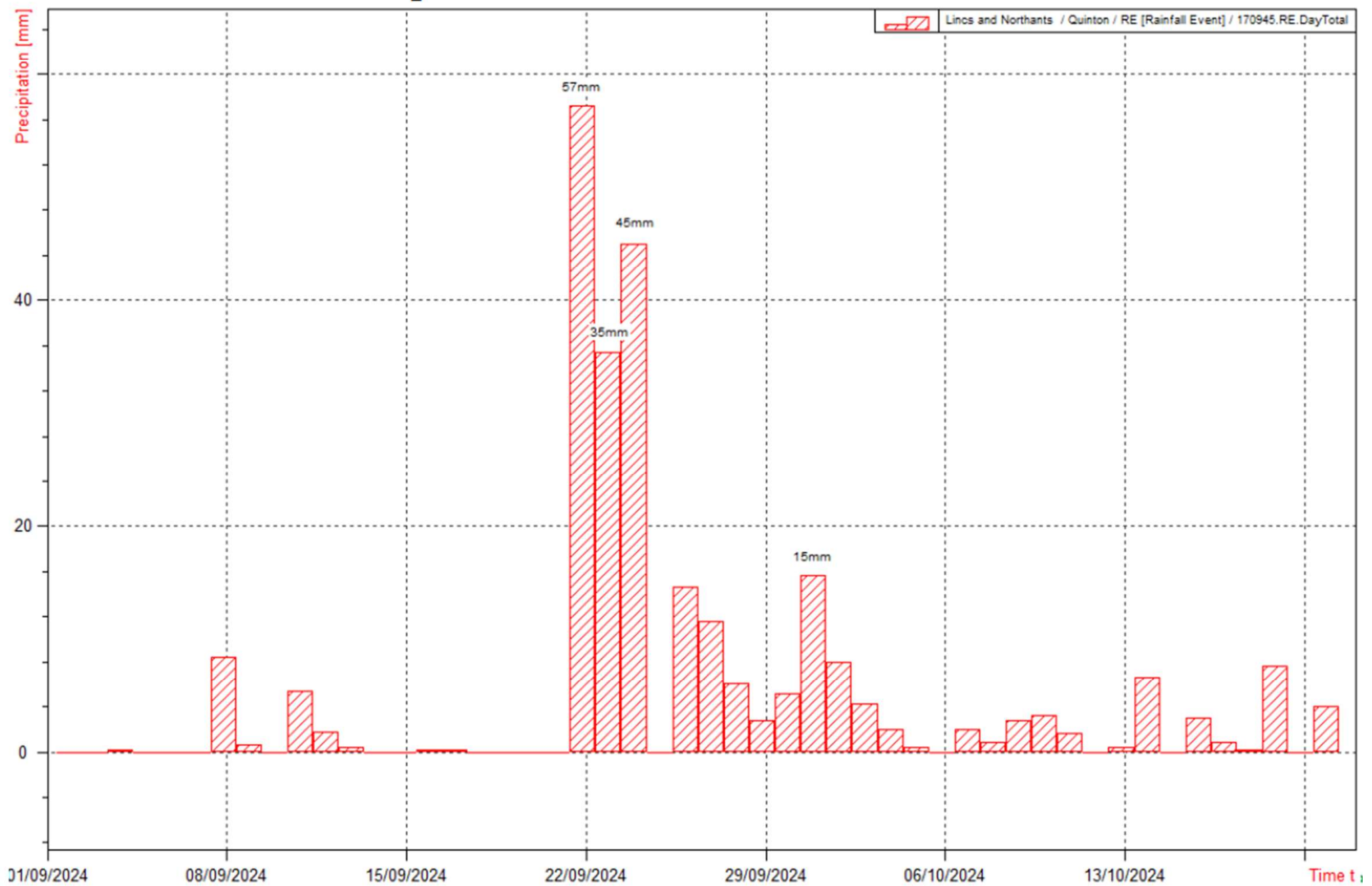
Flood Investigation - Blackmile Lane, Grendon (July 2012)

Page 8

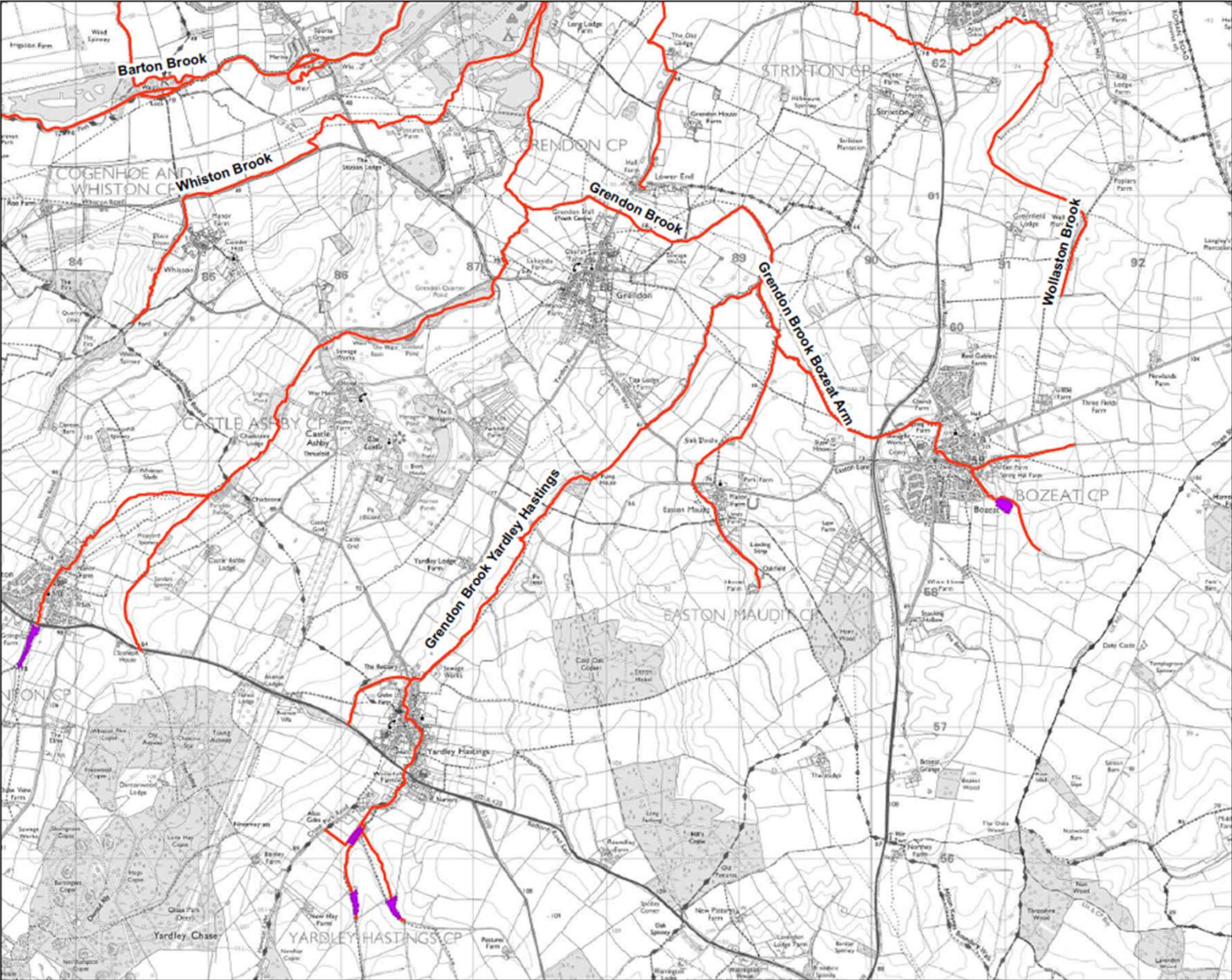
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2012, 44mm of rain fell in the Grendon area. The rainfall chart for Yardley Hastings Rain Gauge is shown below (source: Environment Agency).



Rainfall Sept 2024:



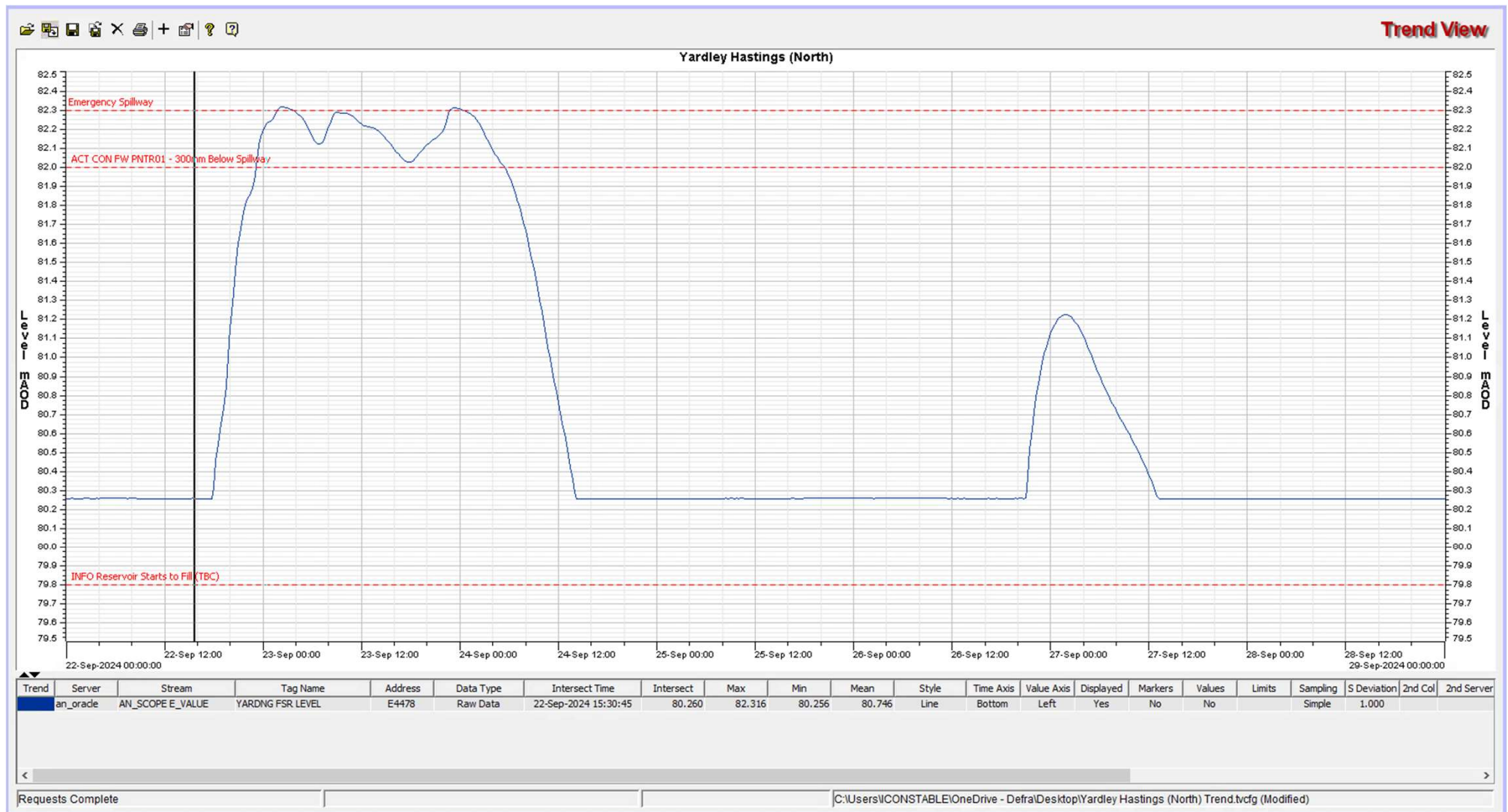
Flood Storage Areas – Grendon Brook



Legend

-  Flood Storage Areas
-  Main River

Flood Storage Areas – Grendon Brook



Were any overflow emergency spillways used?
 Yes - Yardley Hastings East and North

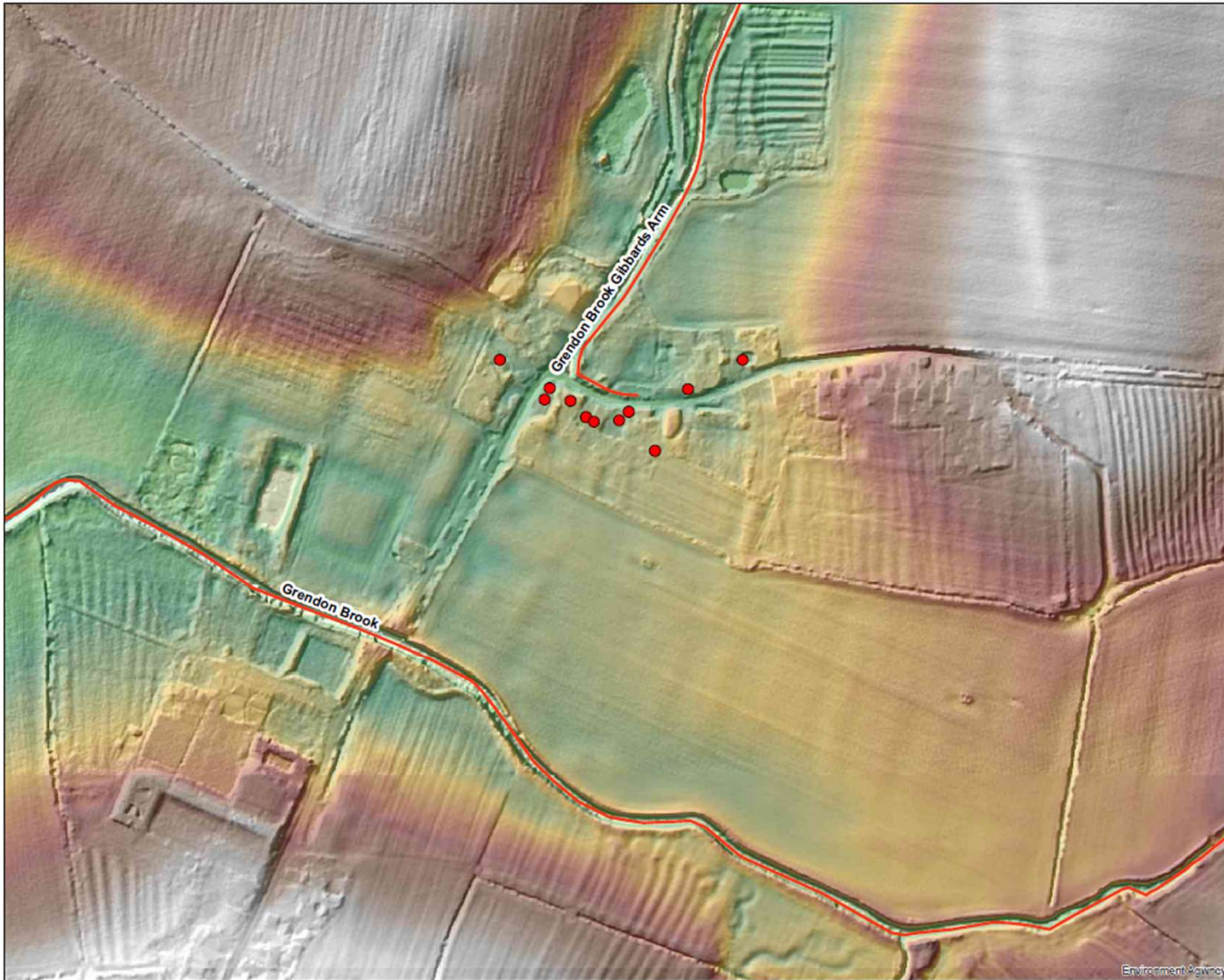
Flood Storage Areas – Grendon Brook



Yardley Hastings



LIDAR - Lower End, Grendon



Scale 1:3,000



Legend

— Main River

● DRAFT Flooded Properties - September 2024

LIDAR Composite 2022 1m DTM: Elevation

Value

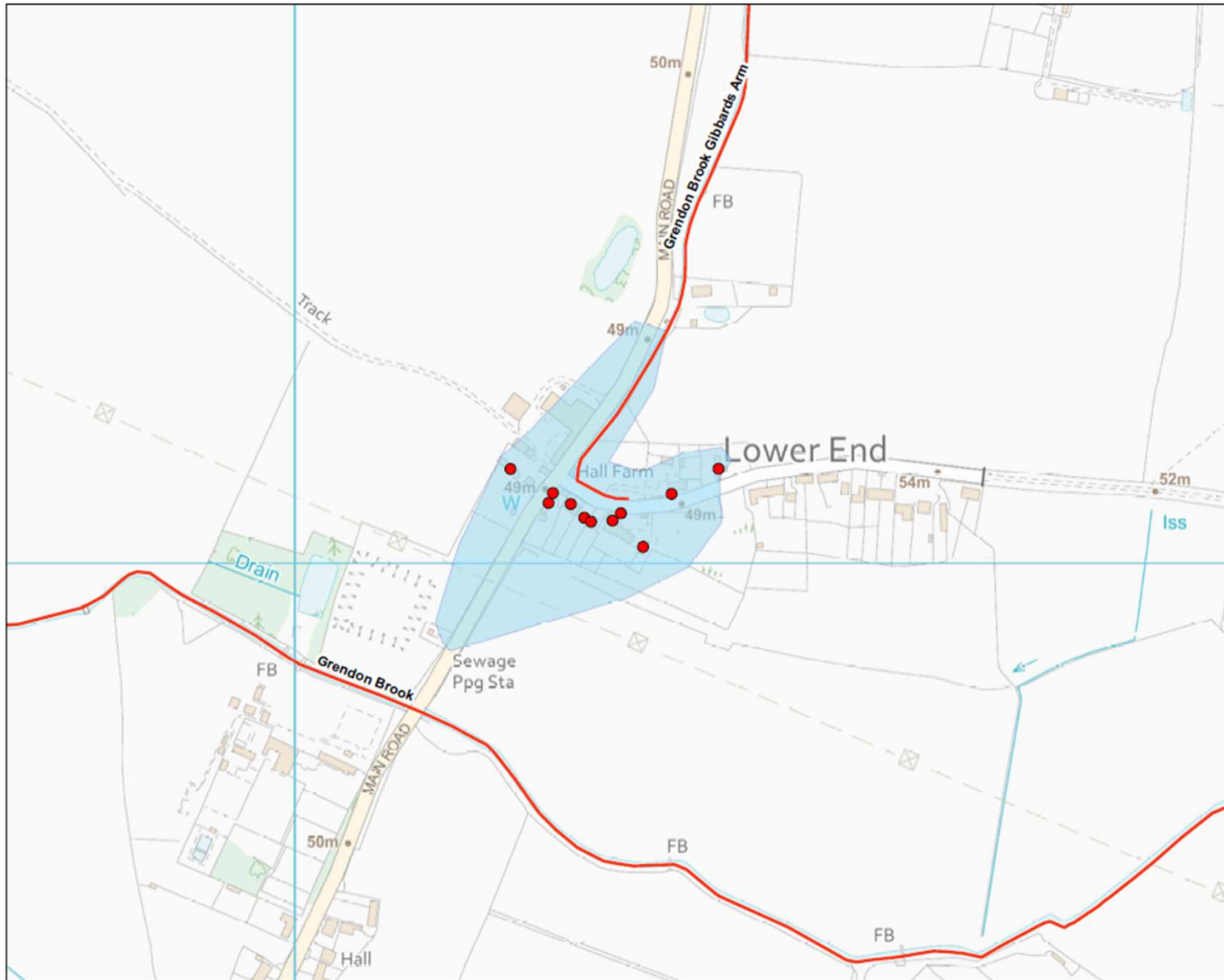
· High : 54.2943

· Low : 46.9653

Created by the Partnerships and Strategic Overview Team,
Kettering



Draft Flood Event Outline - Lower End, Grendon



Scale 1:3,500



Legend

- Main River
- DRAFT Flooded Properties - September 2024
- DRAFT Flood Event Outline - September 2024

Created by the Partnerships and Strategic Overview Team, Kettering



Our Incident Management role

- ➔ As a **Category 1 Responder under the Civil Contingences Act 2004** (CCA 2004), we are responsible for managing a wide variety of environmental incidents.
- ➔ Strong working relationships with other professional partners, through the **Local Resilience Forum (LRF)**
- ➔ Incident Management is one of our **corporate priorities**
- ➔ 24/7 monitoring and incident response capability
- ➔ Flood Warning Service
- ➔ Mutual aid

Would you know what to do in a flood?



**FLOOD
ALERT**

PREPARE

- Prepare a bag that includes medicines and insurance documents
- Visit www.gov.uk/check-flooding

Flood Alert: flooding on lowlying land, roads and gardens



**FLOOD
WARNING**

ACT

- Turn off gas, water and electricity
- Move things upstairs or to safety
- Move family, pets and car to safety

Flood Warning: property could be flooded



**SEVERE
FLOOD
WARNING**

SURVIVE

- Call 999 if in immediate danger
- Follow advice from emergency services
- Keep yourself and your family safe

Severe Flood Warning: Imminent risk to life

Flood plan templates for your home, community or business are here:
www.gov.uk/prepare-for-flooding

Creating a better place for people and wildlife

Floodline 0345 988 1188

Sign up for flood warnings:

Stay up to date using the following methods:

- **Sign up to the Flood Warning Service** online to get advance notice of when river or sea flooding is expected: www.gov.uk/sign-up-for-flood-warnings. You can also do this by calling Floodline on 0345 988 1188.
- You can see **current flood warnings** issued and **monitor local river, sea, groundwater and rainwater levels** online here <https://www.gov.uk/check-flooding>
- An explanation about what flood warnings are and what they do is available here www.gov.uk/guidance/flood-alerts-and-warnings-what-they-are-and-what-to-do
- **Find river, sea, groundwater and rainfall levels** - <https://check-for-flooding.service.gov.uk/river-and-sea-levels>
- You could **prepare an Emergency Bag** of essential items. This might include spare glasses, waterproof coat, medication and a copy of any recent prescription, water, food, insurance documents and pet food.



Owning a watercourse - Riparian responsibilities

• Report incidents

Call the Environment Agency [Incident hotline](#) to report:

- flooding
- blockages which could cause flooding to [main rivers](#)
- pollution
- unusual changes in the flow of water
- collapsed or badly damaged banks

• Let water flow naturally

They must let water flow naturally.

They may have to remove blockages, fallen trees or overhanging branches from their watercourse, or cut back trees and shrubs on the bank, if they could:

- obstruct or affect a public right of navigation
- reduce the flow or cause flooding to other landowners' property – they may have to pay damages if they do

They should:

- leave all other trees, branches and shrubs - they can help prevent flooding by varying the shape and flow of the channel, and reduce erosion
- If they own it; keep any trash screen, weir, mill gate or other structure clear
- Don't go inside a culvert.

• Prevent pollution

They must not pollute the water. Don't throw waste water, chemicals or anything else which could cause pollution on the banks or in the water.

They must [apply to use herbicides within one metre from the top of the bank of the watercourse](#).

Find out how to prevent rainwater carrying topsoil into the watercourse and polluting it in the [Think Soils publication](#).

They should:

- remove litter from the banks
- remove animal carcasses - contact their [local council](#) if they need advice
- not put garden waste, including grass cuttings, on the banks or into the water

• Protect wildlife

They must:

[not disturb certain species or their habitats](#), including the bed and banks

[not disturb birds and their nests](#)

not disturb the spawning or eggs of salmon, trout or other fish

[prevent invasive species](#) such as Japanese knotweed from spreading into the wild or onto neighbours' land.



WELCOME TO THE BLUE PAGES

THE UK'S LEADING INDEPENDENT
FLOOD DIRECTORY

Any questions?

