



Ousemere Lode, Billingborough

Flooding 6th January 2025 – Evidence Based Review

Date: 9th May 2025

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Introduction

This review has been undertaken following a rainfall event on the 5th and 6th of January 2025 resulting in residential property flooding at Billingborough on the 6th of January 2025. It has been undertaken by staff in the Witham Partnerships and Strategic Overview (PSO) team, Environment Agency (EA) and based on available and relevant information at the time.

Figures (graphs, photos, tables) considered pertinent to the text have been included within the main report.

For feedback or any further information, please contact PSOLincs@environment-agency.gov.uk.

Purpose and what will happen next

The purpose of this investigation is:

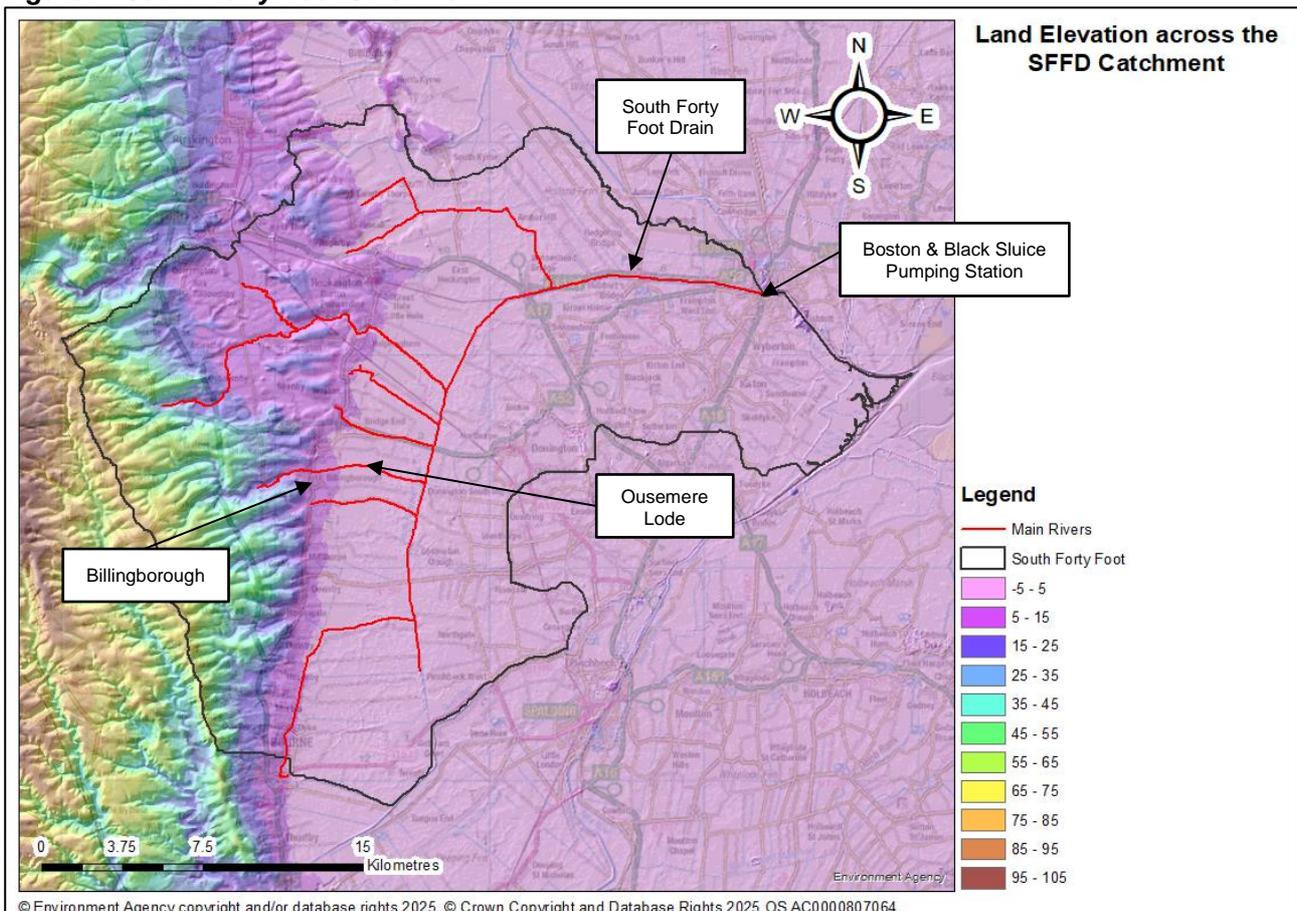
- To understand how the flooding happened. It has been initiated by the Environment Agency because we believe flooding from a designated main river occurred resulting in properties being flooded internally.
- To provide the direction for any further work the Environment Agency will undertake following flooding (see Next Steps section).
- The report will be shared with Lincolnshire County Council to support any Section 19 investigation undertaken and with communities who were impacted by flooding. It remains a public document and will be shared on request.

Section 1: Billingborough

Billingborough and Ousemere Lode

Billingborough is a small village located within the South Kesteven District Council of Lincolnshire, England with an approximate central National Grid Reference TF 116 342. The village has been subject to a long history associated with flooding dating back 200 years. It is situated within the South Forty Foot Drain Catchment (Figure 1) along the spring line of the historic Fen also known as the “Fen Edge” at around the 10m contour level sitting up above what would have been natural water levels in the Fen.

Figure 1: South Forty Foot Catchment

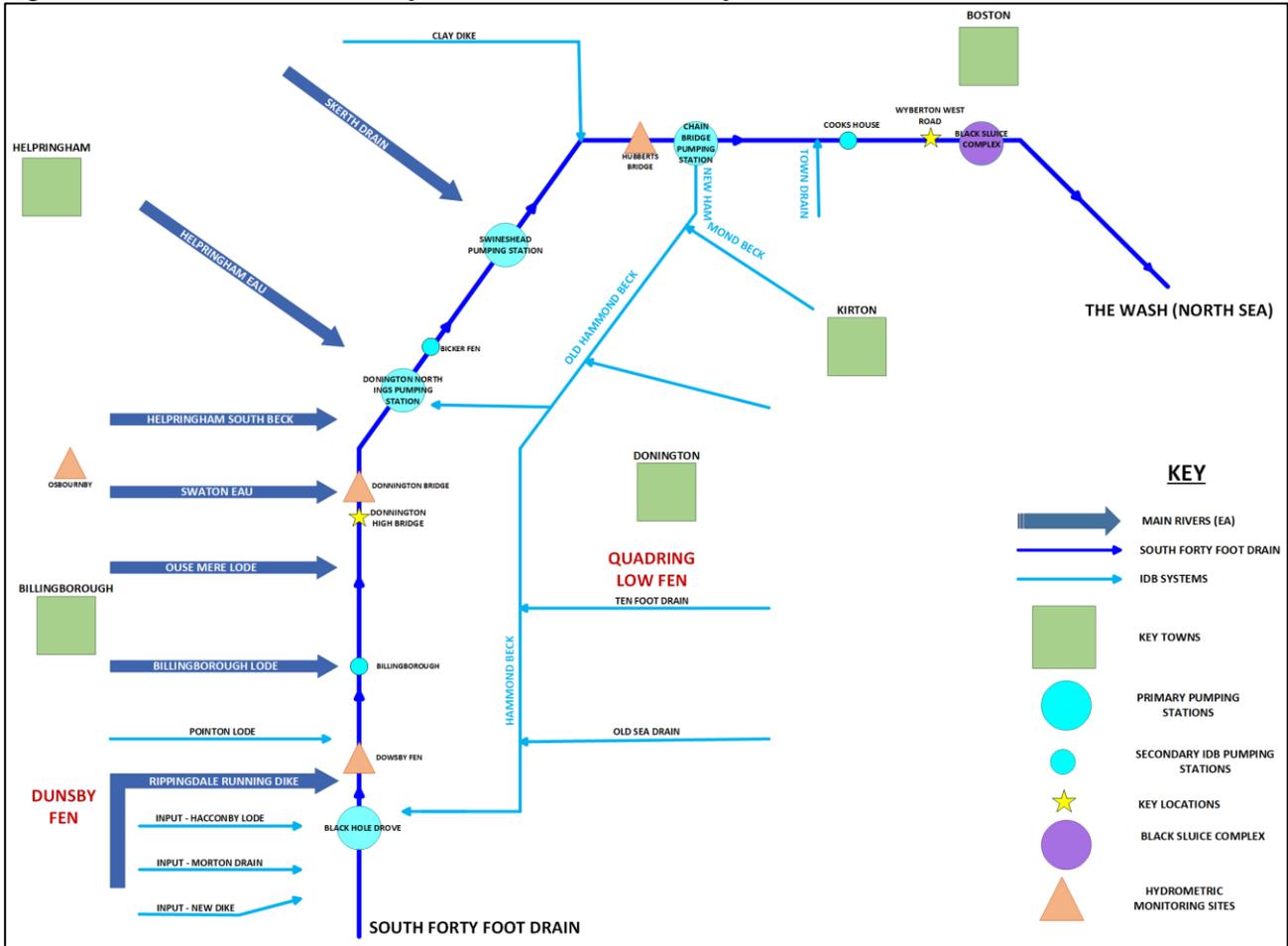


The Ousemere Lode (Figures 2 and 3) (*waterbody ID: GB105030056490*) is a designated main river under the regulation of the Environment Agency (red line) east of Folkingham with the upper reaches being classed as an ordinary watercourse and under the regulation of South Kesteven District Council.

The Ousemere Lode sources from the west in the fenland uplands at an elevation of around 73mAOD meandering through fields west of the A15 near Pickworth, flowing easterly to Walcot, then in a southerly direction to Folkingham before heading east crossing under Folkingham Road (known as the Piperdam Bridge) and flowing around the north edge of Billingborough (at around 9 to 10m AOD) and through the fens discharging into the South Forty Foot Drain (SFFD) – see figure 2 below. The Ousemere Lode is approximately 17km in length. It has an open and unrestricted confluence flowing via gravity into the SFFD, which

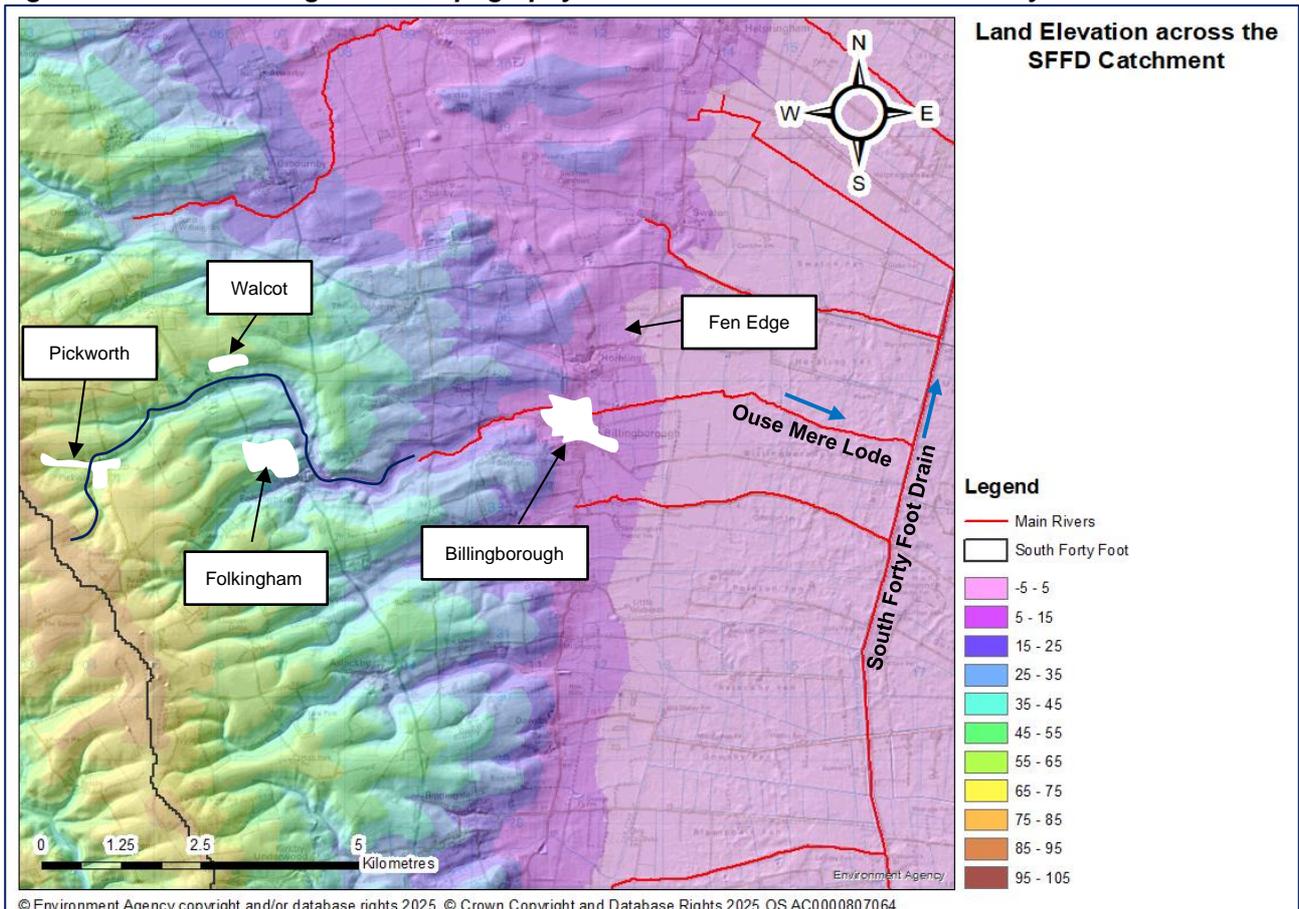
then flows north, then east to Boston discharging via gravity through the Black Sluice Complex, into the Boston Tidal Haven and out to sea.

Figure 2: Schematic of all the key rivers in the South Forty Foot Drain Catchment



The Ousemere Lode has a combination of formal flood defence embankments, flood walls, engineered high ground and natural high ground on both sides throughout its 17km length. Specifically, to Billingborough the Environment Agency constructed an earth embankment in 2000 of c. 1.1km in length on the right-hand bank to the north of the village following flooding in 1998. The designed Standard of Protection (SoP) for the embankment was 1 in 25 meaning a 4% chance of flooding in any year. This is based on the embankment either failing or overtopping. However, over time this has been reviewed against newer modelling outputs and techniques which has meant the SoP has been reassessed. Based on the new modelling assessment parameters, the embankment is now classed as providing a minimum SoP of 1 in 100 meaning a 1% chance of flooding in any year.

Figure 3: LIDAR showing relative topography for Ousemere Lode and South Forty Foot Drain



The embankment begins after the watercourse passes under Piperdam Road Bridge and is continuous all the way to the flood wall just before Victoria Street meets the B1177. The raised embankments are cut twice a year with a weed cut in channel performed once a year. The channel itself is rich with gravels creating small riffles. There is a small section of engineered high ground and a flood wall past Victoria Street. The left-hand embankment from where the watercourse passes under Piperdam Bridge is classified as natural high ground. In extreme events, it is expected that the channel along this stretch of the river overtops the left-hand bank onto the floodplain. In addition to Ousemere Lode, the catchment is also drained via a local drainage network that includes field and roadside ditches as well as culverted drains in Billingborough itself. Following this network down Folkingham Road towards the old railway embankment, some of the ditches are open with access bridges to properties. Some have been filled in over the years. The access bridges to properties have a small pipe running underneath to allow water to pass between the ditches either side. At the time of our initial investigations, in some cases, it appeared flows may be impeded within ditches and/or through culverts due to debris accumulation.

Section 2: Summary of prevailing weather and catchment conditions

United Kingdom

The period from late December 2024 to early January 2025 brought some very wet and windy weather, with significant cold spells and snowfalls across upland areas in the north. Several long-running stations in eastern England recorded their wettest January day on record on the 05 January. 30 to 50mm of rain fell very widely across the country. The very wet weather was accompanied by some strong winds and near freezing temperatures and rain fell on extremely saturated and frozen ground. The heavy rain between the 04 to 06 January led to significant flooding problems. Worst hit areas included parts of Leicestershire and Lincolnshire with major incidents declared (Figure 4 - Map (Met Office, 2025)).

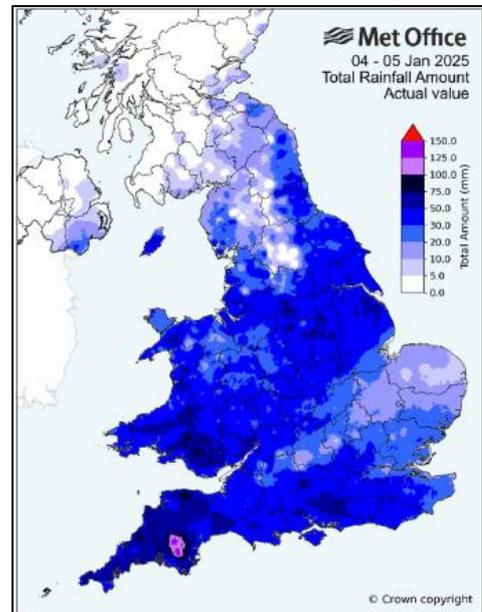


Figure 4: National rainfall 4th to 5th January 2025

Lincolnshire

January 2025 started with an Arctic maritime airmass bringing cold temperatures and wintry showers. From the 4th to the 6th of January a low-pressure system brought extensive rain, sleet and snow to the county. In Lincolnshire over 50mm of rain fell in some locations, equivalent to a whole-month's average rainfall falling in just two days. Ground conditions remained saturated following a wet winter. On 5th January, several weather stations recorded their wettest January day on record including Cranwell, (30.8mm, 111 years of recorded data) and Coningsby (33.2mm, 60 years of recorded data).

Catchment conditions

The ground conditions across the catchment were already saturated (Figure 5). The soil had the capacity to absorb less than 5mm of rainfall (known as the soil moisture deficit). Temperatures overnight on the 5th and 6th January were around 0°C and snow had fallen on the higher ground, meaning the surface of the ground was frozen and, in some places covered with a layer of snow. Vegetation cover in January is significantly reduced, with no leaves on trees. These factors resulted in rainfall running overland and straight into watercourses rather than infiltrating into the ground and reaching watercourses at a slower rate. This caused rapidly rising river levels and flooding.

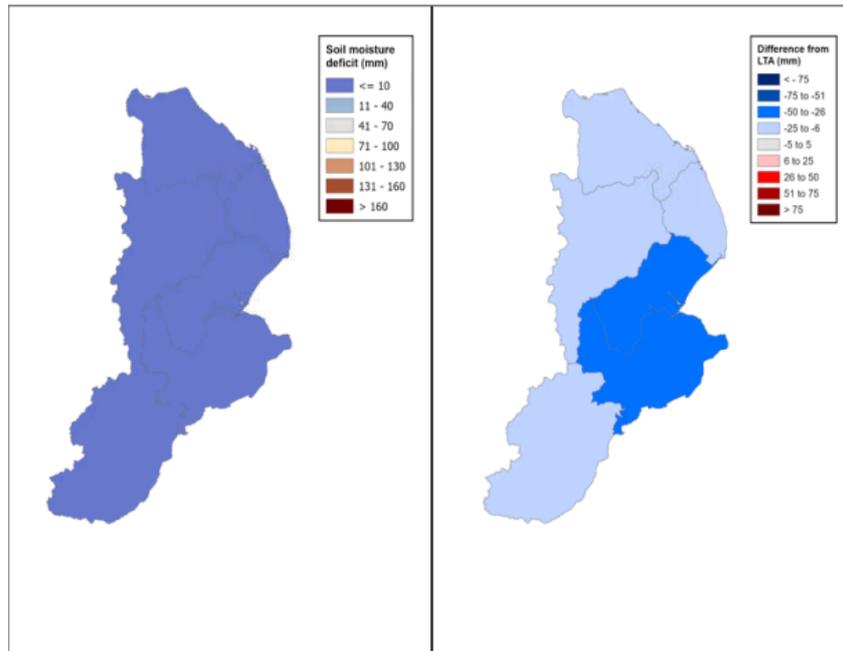


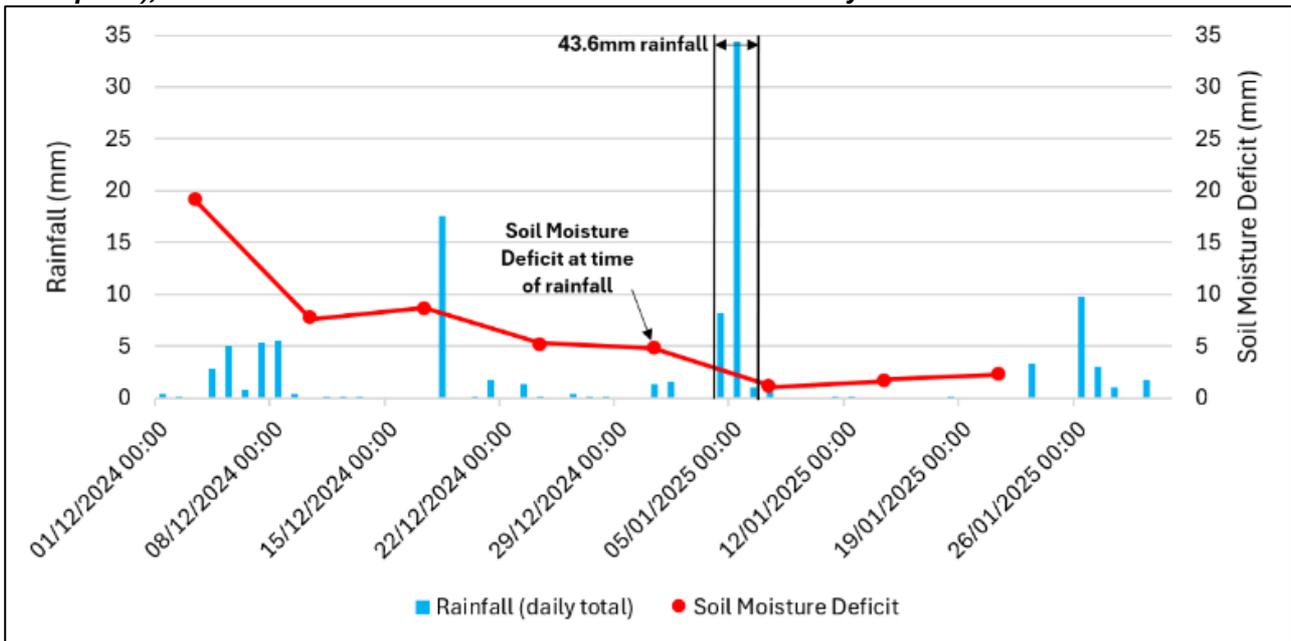
Figure 5: Lincolnshire Soil Moisture Deficit during December 2024 compared to the long-term average

Section 3: What happened and impacts

Rainfall and ground conditions

The Billingborough area recorded 43.6mm of rainfall at the Osbournby Rain Gauge between the 4th to the 6th of January 2025. Of this total, 32mm fell in 9.5 hours between 22:15 on 5th January and 09:45 on 6th January. This rainfall fell onto already saturated and frozen ground meaning the ground had limited capacity to absorb further water. The ground conditions had less than 5mm of absorption (measured as ‘Soil Moisture Deficit’ (SMD)) available to soak into the ground. Rainfall and SMD are shown in Figure 6 below.

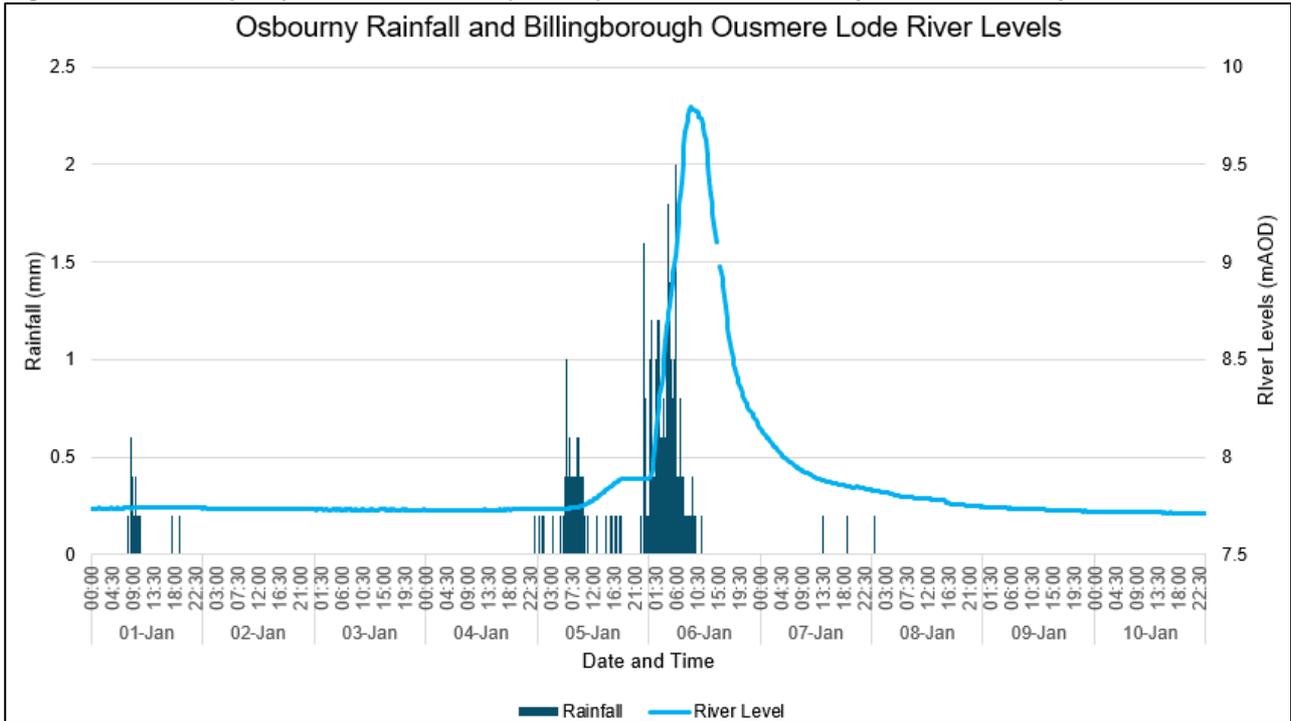
Figure 6: Rainfall daily totals (mm) and Soil Moisture Deficit (SMD) (ground capacity for water absorption), Ousemere Lode Catchment December 2024 to January 2025



Ousemere Lode and flooding

The Ousemere Lode response to the rainfall event resulted in the watercourse recording its highest ever level at Billingborough Gauging Station (NGR TF1173434506). The watercourse peaked at 9.79 metres Above Ordnance Datum (mAOD) (also referred to as above sea level) at 09:00 hours on 6th January 2025 (Figure 7).

Figure 7: Rainfall (mm) and River Level (mAOD) between 1st January and 10 January 2025

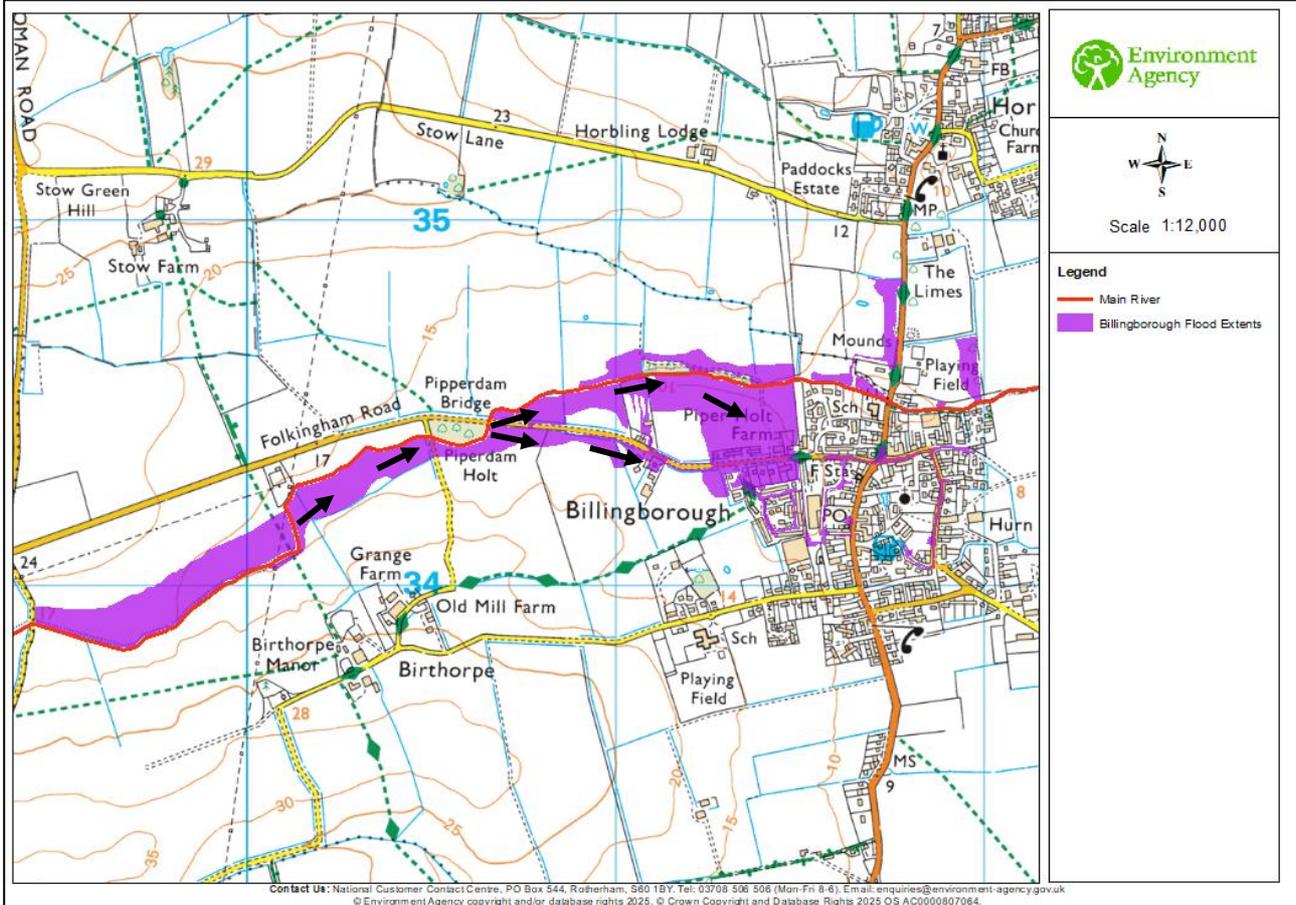


Evidence shows the Ousemere Lode flowed overland and across both Mareham Lane and Oseby Lane. Significant accumulations of debris, mainly straw in the fields, showed the path of the floodwater. The valley like topography, funnels the water east, down towards the Ousemere Lode and towards Billingborough. Ultimately, the Ousemere Lode exceeded its channel capacity between Mareham Lane and Oseby Lane (approximately NGR TF1013434129) and further downstream before Piperdam Road Bridge (NGR TF1064834410). Excess water came out of the channel and flowed across the natural floodplain, remaining out of channel as it reached the Piperdam Road Bridge. The road bridge did allow water to flow beneath the soffit level but given the high river level, water was already out of channel at this point and therefore flowed east along the field adjacent to Folkingham Road.

The floodwater pooled and entered the drainage ditches, spilling across Folkingham Road, into the field to the north and across the floodplain taking its natural flow path flowing down the highway, further overwhelming roadside ditches and crossing fields before pooling at the lowest point on Folkingham Road. Whilst water could not re-enter the Ousemere Lode from the fields north of Folkingham Road due to the flood embankment, it must be noted had the embankment not been in place, it is highly likely a significant amount of additional water would have spilled onto the floodplain from the river. This would likely have further increased the depth and extent of flooding in Billingborough. There is also evidence of water flowing over the bridge at Piper Holt Farm in Billingborough from debris positioning on site.

Figure 8 shows the flood extent and estimated flow path directions.

Figure 8: Flood extent and main river overland flow paths, Ousemere Lode, Billingborough, January 6th, 2025



Flooding Impacts

Much of the flood water pooled on Folkington Road (up to 0.8m deep), High Street, West Road, Low Street and Vine Street/Court. Flooding impacted 15 properties, 13 on Folkington Road, one on West Road and one on Vine Court/Street as well as highways, drainage networks and surrounding land (Figure 9 and 10). Folkington Road, Blasson Way, Low Street, West Road High Street and Vine Street were all reported as being impassable on 6th January with Folkington Road still so on 7th January. Issues with sewer flooding were also reported by some residents.

Figure 9: Internal property flooding Billingborough, 6th January 2025



Figure 10: Flooding on Folkingham Road area Billingborough, 6th January 2025 (source - left unknown, right K. Brown)



Several residents were spoken to within the days after the flooding, by Environment Agency staff visiting the area to collect evidence and eyewitness accounts. Two village hall events were held by the Environment Agency in the following weeks after the flood event. Key information from these conversations is summarised below:

At around 05:00hrs, residents observed water flowing onto Folkingham Road west of Blasson Way. At around 06:30hrs, water was seen flowing down Folkingham Road and by 07:30hrs, the drainage ditches on Folkingham Road were full with Ouseby Lane being impassable due to overland flows. By 08:00hrs, multiple properties along Folkingham Road reported being flooded internally or cut off and by 09:30hrs, Folkingham Road was completely impassable to both vehicles and residents. Further highway flooding was

witnessed across Billingborough, with reports of one property flooding on West Road, and further roads being impassable on Blasson Way, Low Street, Vine Street, Church Street and High Street. Reports and evidence of stranded vehicles and wider property flooding were being reported by 10:00hrs. River levels on the Ousemere Lode remained high until about 12:00hrs but fell over the following 12 hours. Water on the surrounding land began to subside around 18:00hrs but Folkingham Road remained impassable and flooded to a depth of around 0.5m. Although water did start to very slowly drain away the fire service began to pump the remaining floodwater back into Ousemere Lode overnight on 7th and 8th January.

Please note these timings are approximate and may not be the same for everyone as the onset of flooding can and does occur at different stages depending on location.

Flood warnings

Below is the timeline of the flood warnings issued for Billingborough. Please note this service is only applicable to flooding from designated main rivers. It does not take account of other flooding mechanisms and timings, for example overland flow that may have reached properties in Billingborough from fields south-west of the village before main river water did.

Table 1: Timeline for the Flood Warning Service

Date	Time	Flood Warning Service Action
6 January 2025	02:05hrs	Flood Alert issued
6 January 2025	03:57hrs	River level threshold met to consider issuing a Flood Warning
6 January 2025	04:35hrs	Flood Warning issued
6 January 2025	07:00hrs	Resultant threshold met meaning property flooding likely
6 January 2025	09:00hrs	Ousemere Lode reached peak level at 9.793mAOD
6 January 2025	17:00hrs	River level drops below threshold for Flood Warning
7 January 2025	09:05hrs	Flood Warning removed

As the river level began to rise in the early hours, the flood warning service was used to inform residents that flooding was a possibility. The flood alert was issued at 02:05hrs and the flood warning at 04:35hrs. At the time of the flood warning service being used only 15% of properties in this flood warning area were signed up to the service. We have had a report of a resident receiving no warning prior to flooding and this is most likely due to surface rather than river water being the first source of flooding.

Section 4: Potential causes of flooding review

Review scope

We have reviewed the potential causes of flooding to understand the part they may have had in why the flooding occurred. They have been considered in order of importance in terms of impacts based on available evidence.

- Rainfall and preceding catchment conditions
- Ousemere Lode
- Surface water runoff (overland flow)
- Local drainage network
- Black Sluice Pumping Station decommission

Rainfall and preceding catchment conditions

Although the rainfall total was high in January 2025 (43.6mm), in the context of previous rainfall events it was not the highest recorded (Table 2) but did result in some of the worst flooding seen since at least 1998. The key factors that explain this are:

- 1) Some previous rainfall events occurred at times of year where the capacity for the ground to absorb more rain would have likely been greater (e.g. 2007, 2012) or can be shown to have been greater (e.g. October 2023) resulting in lower peak river levels compared with January 2025 (also see Figure 11). Comparatively, as already evidenced, in January 2025, the soil had little capacity to absorb rainfall resulting in water running quicker into the watercourse and resulting in higher river levels in a short period of time.
- 2) The intensity of rainfall differs between events. In January 2025 43.6mm of rainfall of which 33.6mm fell in only 9.5 hours, one of the most intense periods of rain from notable events.
- 3) Temperatures overnight on the 5th and 6th January 2025 were near freezing (around zero degrees), meaning along with saturated ground, the surface of the ground in many places was frozen or near frozen reducing even further the infiltration rates.
- 4) Vegetation cover is seasonal meaning rainfall in winter is not intercepted by trees and other plants to the extent it would be during the warmer months.

Table 2: Comparison of notable rainfall events (Osbourneby Rain Gauge) and SMD in the South Forty Foot Catchment

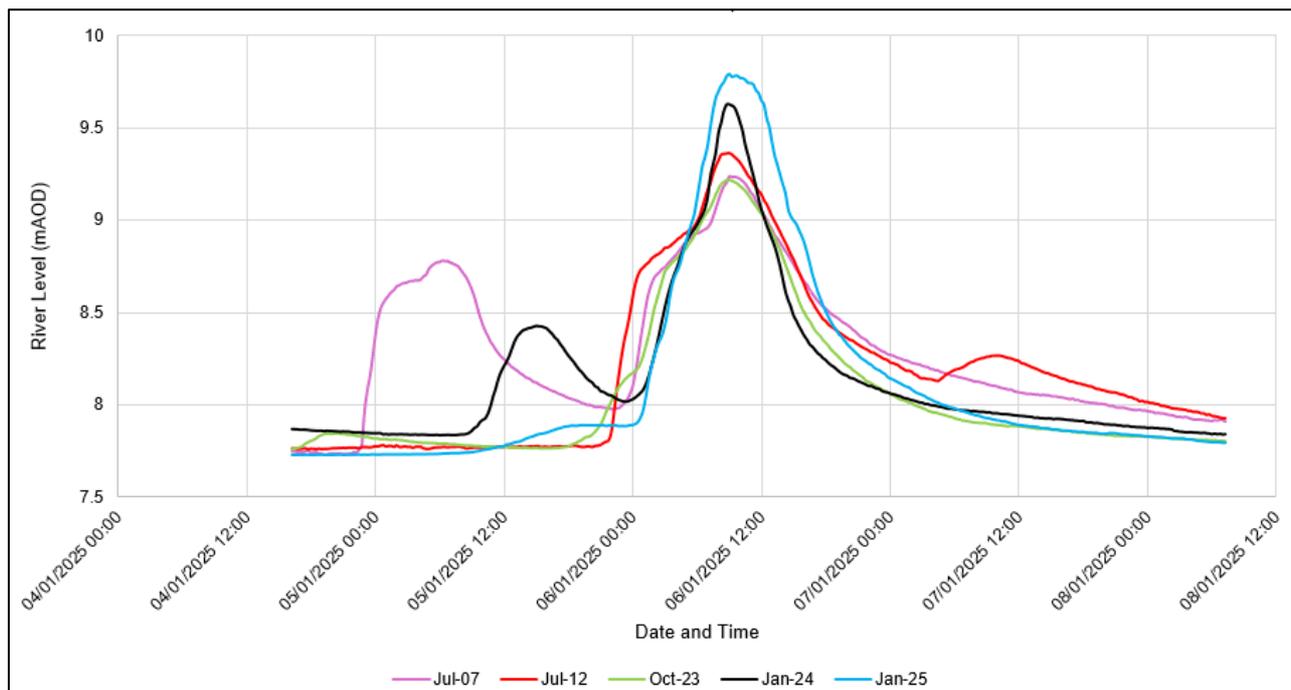
Rainfall Event Date	Total rainfall	Total Period of Rainfall	Soil Moisture Deficit (SMD) Date	SMD (Met Office)
18 th to 21 st October 2023 (Storm Babet)	66.4mm	49hrs (51.8mm in 23hrs)	17 October 2023	21.9mm
19 th to the 21 st July 2007	61.2mm	58hrs (29.2mm in 18hrs)	No data	No data
4 th to 6 th July 2012	56.2mm	65hrs (39.6mm in 12rs)	No data	No data
4 th to 6 th January 2025	43.6mm	36hrs (32mm in 9.5hrs)	31 December 2024	4.8mm
1 st to 2 nd January 2024 (Storm Henk)	37.4mm	45hrs (23.8mm in 11hrs)	26 December 2024	0mm
25 th to 26 th October 2019	28.6mm	29hrs (27.2mm in 19hrs)	No data	No data

All the above factors played a significant part in how the Ousemere Lode responded to the rainfall that fell in early January 2025.

Ousemere Lode

The quantity of rain that reached the Ousemere Lode, in a short period of time, led directly to the river exceeding its channel capacity. The river level reached was around 0.16m higher than Storm Henk in January 2024 and 0.57m higher than Storm Babet in October 2023 (Figure 11).

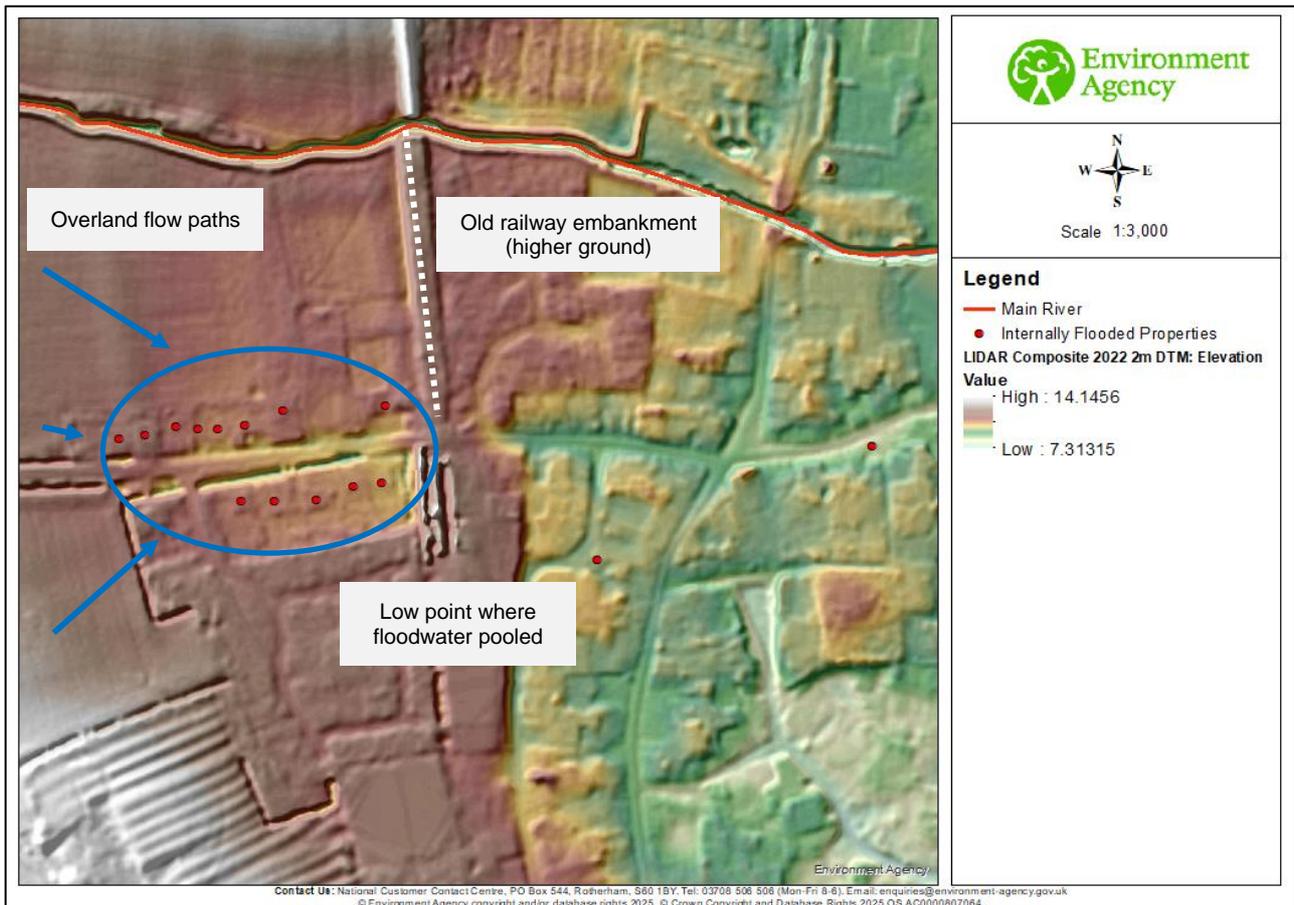
Figure 11: Comparison of peak rivel levels in Ousemere Lode with January 2025



The rain resulted in the excess flows spilling onto areas of natural high ground at two locations upstream of Billingborough. Evidence shows the flood water flowed overland following the natural valley topography which slopes in an easterly direction towards Billingborough, the fens and ultimately the South Forty Foot Drain. Immediately west of the old railway embankment on Folkingham Road is a natural low spot (see Figure 12), and it is here flood water flowed to and pooled. The road itself has land levels of 11.1mAOD gradually sloping downwards to 9.5mAOD towards Station Road. The land surrounding Folkingham Road ranges between 10.1mAOD to 15.1mAOD meaning the road in some places is lower than surrounding land by 0.5m towards the western end of Folkingham Road and 1.5m towards the eastern end before the disused railway embankment towards Station Road.

Given the extent and depth of flooding that occurred, it is believed the primary but not the first source of flooding that reached residential properties in Billingborough was from the Ousemere Lode evidenced by both photographs and a significant accumulation of straw debris within the fields as floodwater pooled and backed up.

Figure 12: Land elevations in Billingborough showing low spot where flood water pooled



To understand the magnitude of the flood event, analysis of the South Forty Foot Drain Model 2016 has been undertaken to estimate two things:

- The Annual Exceedance Probability (AEP) of flooding (the chance of the flood event occurring in any one year).
- The extent of the Extreme Flood Outline and whether it was matched.

Table 3 shows the modelled scenarios used and the comparative timing of actual river levels from 06 January 2025. It is difficult to predict an exact probable annual exceedance probability without further modelling data. For Billingborough, the river level gauge has simply recorded a water level higher than the 1 in 1000 modelled level. This does not mean the event was higher than a 1 in 1000. The way in which flood events are measured are based on probability. An event of 1 in 1000 is expressed as a 0.1% chance of the flood event occurring in any one year which means simply the event is less frequent yet is more extreme.

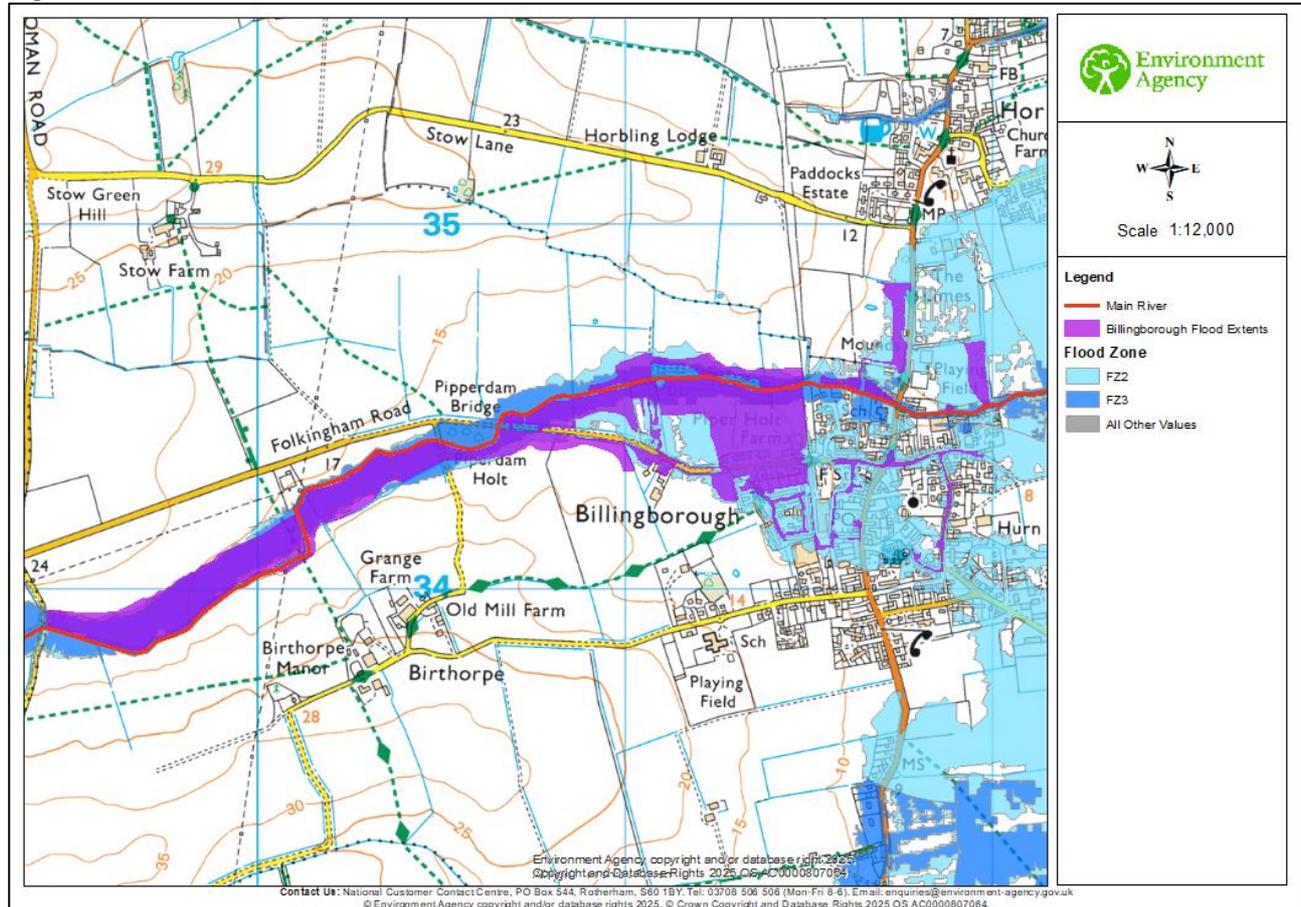
Our evidence shows the water level within the river being recorded as higher than the 0.1% (1 in 1000) annual chance of occurring in any year when compared to our most recent model. The floodplain was used and matched the extreme flood outline in places (see Figure 13). Without further investigation or detailed modelling and in absence of a detailed flood frequency analysis a definitive probability is difficult to achieve and therefore an estimation cannot be given. As this report is looking at the how flooding occurred, we will not be estimating the event probability further. What we can say is this event was an extreme flood event that would overwhelm most modern flood risk management assets.

Table 3: Modelled river levels (2016) and actual peak river level January 2025

River level date / time from event	Actual river levels	Modelled River Levels	Modelled scenario	Annual chance of river level occurring
06/01/2025 05:45	9.035	9.046	L50	1.5% chance in any one year
06/01/2025 06:00	9.118	9.169	L75	1.3% chance in any one year
06/01/2025 06:15	9.206	9.207	L100	1% chance in any one year
06/01/2025 06:45	9.334	9.339	L100_CC20	1% chance in any one year with climate change allowance
06/01/2025 07:30	9.596	9.558	L1000	0.1% chance in any one year
06/01/2025 07:45	9.664	9.624	L1000_CC20	0.1% chance in any one year with climate change allowance
06/01/2025 09:00	9.793	n/a	n/a	RECORD PEAK RIVER LEVEL

The volume and extent of overland flows observed aligns with the predicted extreme flood outline (1 in 1000 (0.1%) annual chance plus climate change flood extent) (Figure 13). The Ousemere Lode utilised its natural floodplain, flowing easternly towards Billingham, and covered a large area of floodplain as a result of the extreme flood event.

Figure 13: Actual flood extent overlaid on the extreme flood outline



Surface water runoff (overland flow)

Surface water that did not flow towards the Ousemere Lode appears to have originated from the south-west of Folkingham Road at TF 1129234311 starting with runoff from Birtherpe Road and surrounding higher land in the early hours between 03:00hrs to 07:00hrs on 6th January. Several reports from residents during the drop in events referred to surface water being an issue as water flowed over the land towards Folkingham Road coming from

Birtherpe Road. It was reported this was the same for Storms Babet and Henk. The surface water began to fill up the existing ditches, drains and sewer network and then started to back up from the eastern end of Folkingham Road next to the old railway embankment as the whole drainage network become overwhelmed. Surface water that did not flow towards the Ousemere Lode occurred as previously mentioned due to saturated and frozen/near frozen ground, and whilst it contributed in the early stages of the flooding it is not believed to be the primary contributor to flooding that occurred.

Local drainage network

It is possible following investigations that there were conveyance issues with some of the open ditches and culverted access bridges along Folkingham Road, which may have reduced the effectiveness of water flow. Evidence has been submitted to us regarding state and the filling in of roadside ditches over the last 20 years along Folkingham Road. A lot of the roadside ditches are the responsibility of the landowner or riparian owner. However, given the scale of the flood event, the overall general drainage could not have coped with the volume of water received and hence they would have made very little difference in terms of the flooding outcome on this occasion.

It is possible improved conveyance overall including through the culverted section under the old railway embankment to the outfall on Ousemere Lode downstream could have reduced the depth of flooding and timescale of flooding impacts which continued for more than 48 hours. The reasons for floodwater pooling for so long along Folkingham Road to at least 0.5m are to be determined. It is understood surveys of the culverts under the old railway embankment have been undertaken by another Risk Management Authority.

Black Sluice Pumping Station decommission

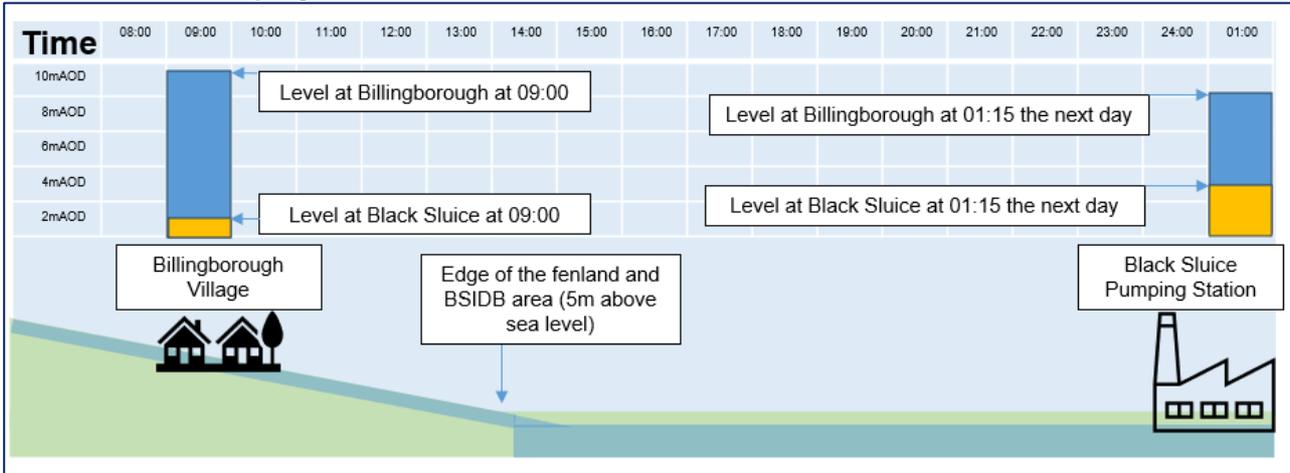
There have been many questions regarding the decommissioning of the Black Sluice Pumping Station in Boston. It is the Environment Agency's view that this decision in 2018, did not lead to flooding in Billingham. There are three main reasons why the Black Sluice Pumping Station cannot influence flows or flooding in Billingham. These are:

- **Time:** the time that rainfall takes to move through the South Forty Foot Drain Catchment.
- **Elevation:** the height of Billingham Village in relation to the Black Sluice Pumping Station.
- **Distance:** how far up the South Forty Foot Drain the effect of pumping at Black Sluice can be seen.

Time

The Ousemere Lode at Billingham reached its record peak of 9.79m above sea level at 09:00hrs on the morning of the 6th of January 2025. Reports of homes flooding were received before this at 07:30hrs. At the same time, levels in the South Forty Foot Drain at Black Sluice Pumping Station were much lower at 1.04m above sea level. Levels did not rise, and peak at Black Sluice Pumping Station (around 3.0m above sea level), until 01:15hrs on the 7th of January 2025, more than 16 hours later. By this time, levels had dropped in the Ousemere Lode through Billingham by 1.69m, as water had been able to flow towards the South Forty Foot Drain and discharge without restriction (Figure 14).

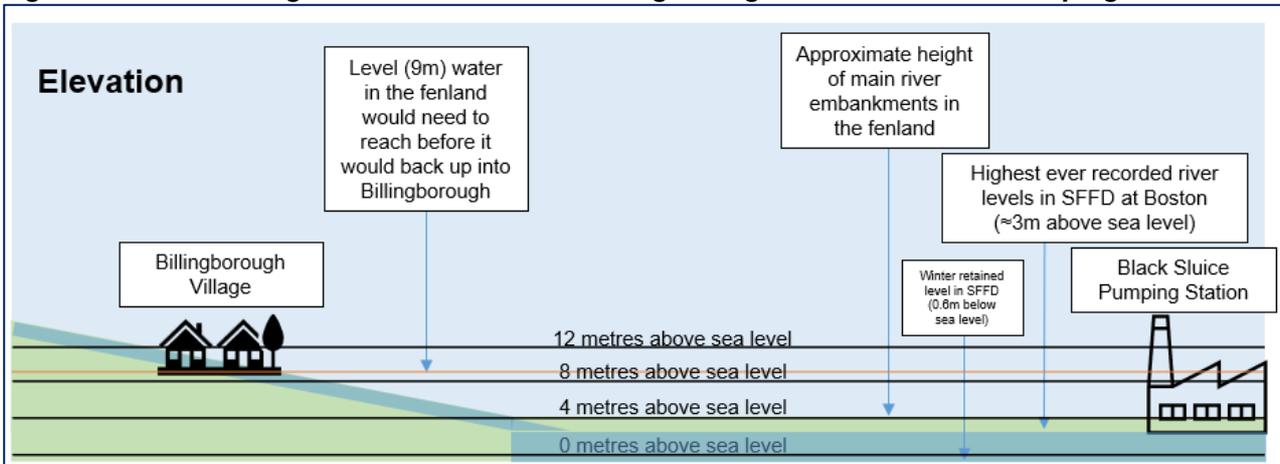
Figure 14: Relative timings and river levels between Ousemere Lode and the South Forty Foot Drain at Black Sluice Pumping Station



Elevation

The diagram below shows the relative heights above sea level of the pumping station and Billingborough. For water backing up in the South Forty Foot Drain to affect Billingborough, it would need to rise to the level of the village. This would be around 6m higher than the highest ever recorded levels in the South Forty Foot Drain, by which point the entire Fenland area of South Lincolnshire would be under 5-6m of flood water (Figure 15).

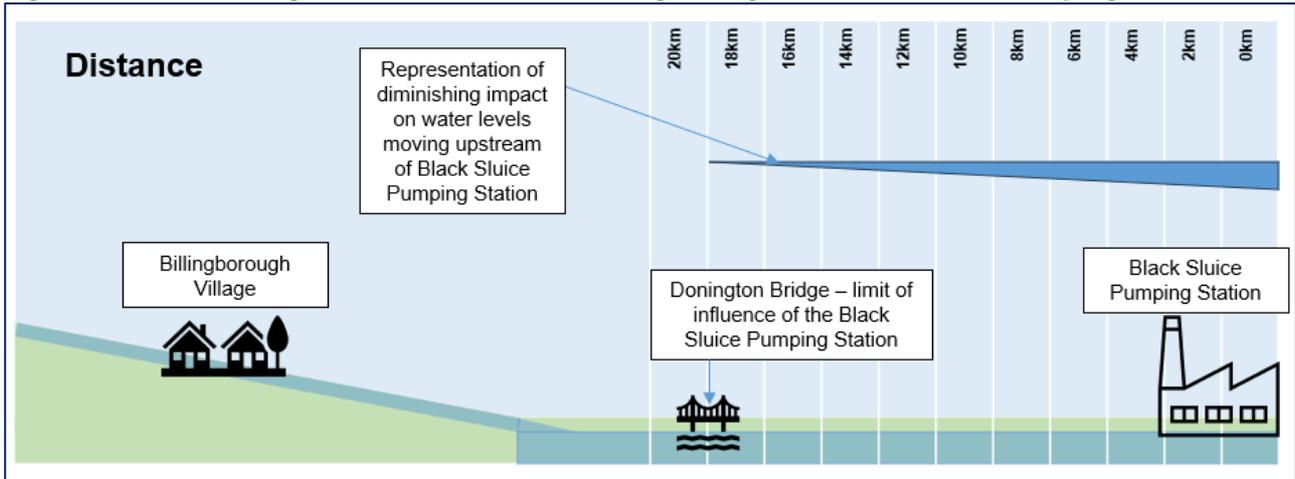
Figure 15: Relative heights above sea level of Billingborough and Black Sluice Pumping Station



Distance

The Black Sluice Pumping Station is around 27km downstream of Billingborough. When the pumping station was operated in the past, the effect that could be observed on levels diminished as you moved upstream away from the station. The effect of pumping became unnoticeable upstream of Donington Bridge, which is around 20km from the pumping station. Therefore, anything further upstream than Donington Bridge does not benefit from the pumping station running. Billingborough is a further 7km upstream of Donington Bridge where the benefit stops and therefore pumping at Black Sluice has zero effect (Figure 16).

Figure 16: Relative heights above sea level of Billingborough and Black Sluice Pumping Station



Section 5: Review Conclusions and Next Steps

Conclusions

- Based on our initial observations, evidence and eyewitness accounts from residents and stakeholders, the flooding came from two sources, the Ousemere Lode and runoff from surface water (overland flow).
- Ousemere Lode was the primary contributory factor resulting in flooding that occurred as the result of the river exceeding its capacity further upstream, running overland towards Billingborough and subsequently flooding the village as a direct result of the rainfall and ground conditions.
- Early onset of flooding from surface water appears to have occurred first for which there is no flood warning system. The nature of surface water flooding is often characterised as being a “flash flood” and can occur quite rapidly meaning it is extremely difficult to predict when and where it will occur.
- The river flooding exceedance event was exacerbated by the heavy intense rain falling on saturated and frozen or near frozen ground, providing little room for infiltration resulting in overland flows being increased significantly between Folkingham and Billingborough with the floodplain being used to its full capacity.
- Our flood warning service provided the relevant warning and information ahead of the flooding.
- Due to the significant volumes of water conveyed across the floodplain and amount of water received via rainfall, onto saturated and frozen or near frozen ground, there is unlikely to have been anything that could have been done to prevent the flooding.
- Flooding from Ousemere Lode was an extreme event anticipated to be within the 1% (1 in 100) to a 0.1% (1 in 1000) chance of occurring in any year. These types of events can rarely, if ever, be mitigated against. As an example, most river improvement schemes in towns and cities to reduce flood risk design for up to a 1% (1 in 100) chance of a flood occurring in any one year.
- It is possible that the depth and period of flooding on Folkingham Road may have been reduced if the floodwater had been able to drain away via the culvert under the old railway embankment, via adequately maintained roadside ditches and into Ousemere Lode once the river levels receded.

Issues for further investigation and action

Whilst it is clear the flooding on the 6th of January 2025 Ousemere Lode was an extreme event, it did not exceed the flood risk management assets in place, constructed in 2000 to reduce the risk of flooding to Billingborough. However, the incident has highlighted areas for further investigation and actions that can be taken to improve the area's resilience to similar events in the future.

- Flood warnings: Take further action to increase the numbers of residents at risk of flooding to sign up to the Environment Agency's flood warning service.
- Update to the South Forty Foot model: at 10 years old the current model is due an update and will be scheduled for a full update on our modelling programme. Latest climate change projections, more advanced modelling software and new data from recent flooding incidents will help us to improve our understanding of the catchment as it is now. However, modelling is a time-consuming process, and the outputs may take several years to finalise. In addition, catchment changes because of Anglian Water's proposed new reservoir will need to be considered.
- Work with the Local Resilience Forum to support development of community emergency response plans.
- Support other Risk Management Authorities leading on investigating to understand whether there are conveyance issues under the old railway embankment and if there are, what can be done about these to reduce the depth of flooding and length of flooding for any future similar event.

The Environment Agency are not proposing any further specific interventions in terms of improving flood risk management assets on the Ousemere Lode. For a scheme to receive centrally funded Government Grant in Aid (GiA), options considered will need to have a strong cost benefit ratio, in line with Treasury rules. In simple terms the economic assessment will look at damages caused by predicted flooding, including a monetary value for stress, social impacts, and property damage. The two key factors which will determine how much money can be justified are the number of properties at risk and the frequency with which they are predicted to flood. It is very unlikely Billingborough would attract funding for any new scheme over and above the one delivered in 2000.

There may be improvement options that can be progressed, but that cannot be funded using government funding and could only be progressed by the community themselves such as natural flood management upstream of Billingborough. We may be able to support and help advising if such a scheme was to be considered.

Next Steps

- We will share our draft report with Lincolnshire Council to discuss the findings and, which will also support their Section 19 investigation.
- We will share the findings of the report at a meeting with the Billingborough Flood Group after the local May elections, after which the report will be made publicly available.

Main Rivers rights and responsibilities

You can find out more information about the rights and responsibilities of owning a river bank here: [Your watercourse: rights and roles | Engage Environment Agency](#)

How resilient are you?

Are you prepared for future floods?

Although defences reduce the likelihood of flooding, the risk can never be removed entirely. To begin to be more resilient take some practical steps to help reduce the impact of flooding to your home or business.

To find out if you are at risk, how to prepare, and check what flood warnings are available to sign up for (free) visit [Flooding - GOV.UK](#) or call Floodline on 0345 988 1188.

The Environment Agency intend to provide improved coverage of fluvial (river) flood warnings in this area this year, so please check back after the summer to see if you can register for additional warnings. [Sign up for flood warnings - GOV.UK](#)

You can find out how to put together Flood Plans for your home, business or community here www.gov.uk/prepare-for-flooding Call Floodline on 0345 988 1188 for a hard copy. You can also check with your parish, ward or borough council to see if they have or are developing a Community Emergency Plan.

There is guidance on measures that can be taken to improve homes and businesses resilience to flooding on this website <https://thefloodhub.co.uk/pfr/>. There is also further information on Flood Products to help reduce the impact of flooding on your home e.g. flood doors, airbrick covers, at www.bluepages.org.uk.