Flood Investigation Report

Storm Henk

2nd January 2024

Syston

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10 SYSTON

Syston town is situated within the Charnwood Borough area of Leicestershire, approximately 6km north east of Leicester City Centre.

10.1 LOCAL DRAINAGE CONTEXT

The most significant watercourse in Syston is the Barkby Brook, a designated Main River which flows in a north westerly direction from the village of Barkby, as illustrated in Figure 10-1. The responsible agency for managing the risk from Main Rivers is the EA. Details relating to RMA responsibilities can be found in Section 21 of the main Storm Henk report.

Barkby Brook flows north west through Syston village before it passes beneath the A46 and joins the River Wreake. Their confluence is located downstream of Watermead Country Park (Ordnance Survey national grid reference (OSNGR) SK 61031 12089). The Grand Union Canal (a navigable 'Main River' downstream of its confluence with the River Wreake) flows in a north westerly direction to the west of the town and converges with the River Wreake at OSNGR SK 60906 12201. The River Wreake then discharges into the River Soar at Cossington Lakes at OSNGR SK 59565 12733. Figure 10-1 illustrates five defined Flood Areas from Storm Henk and observed flow routes (A to E).

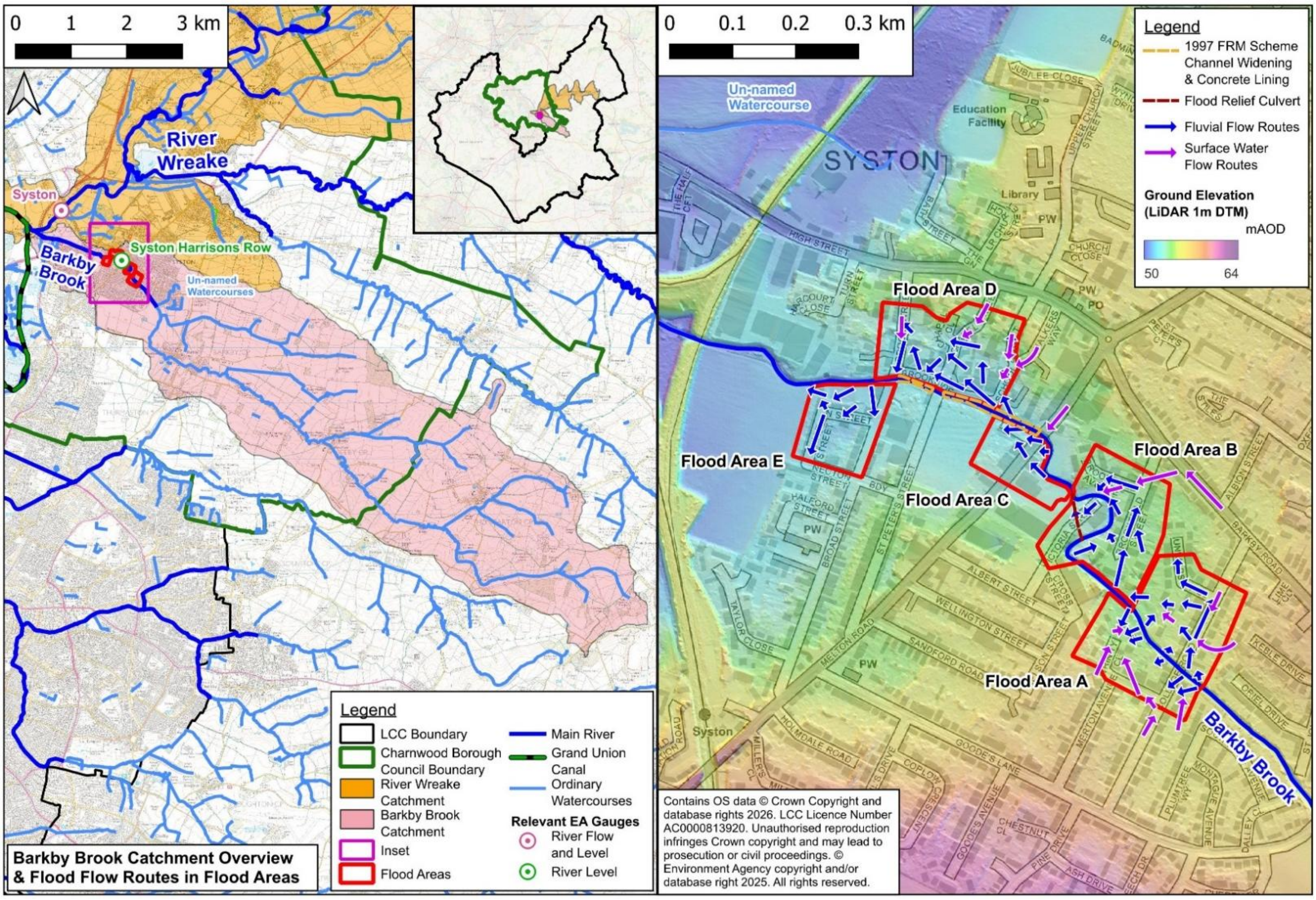
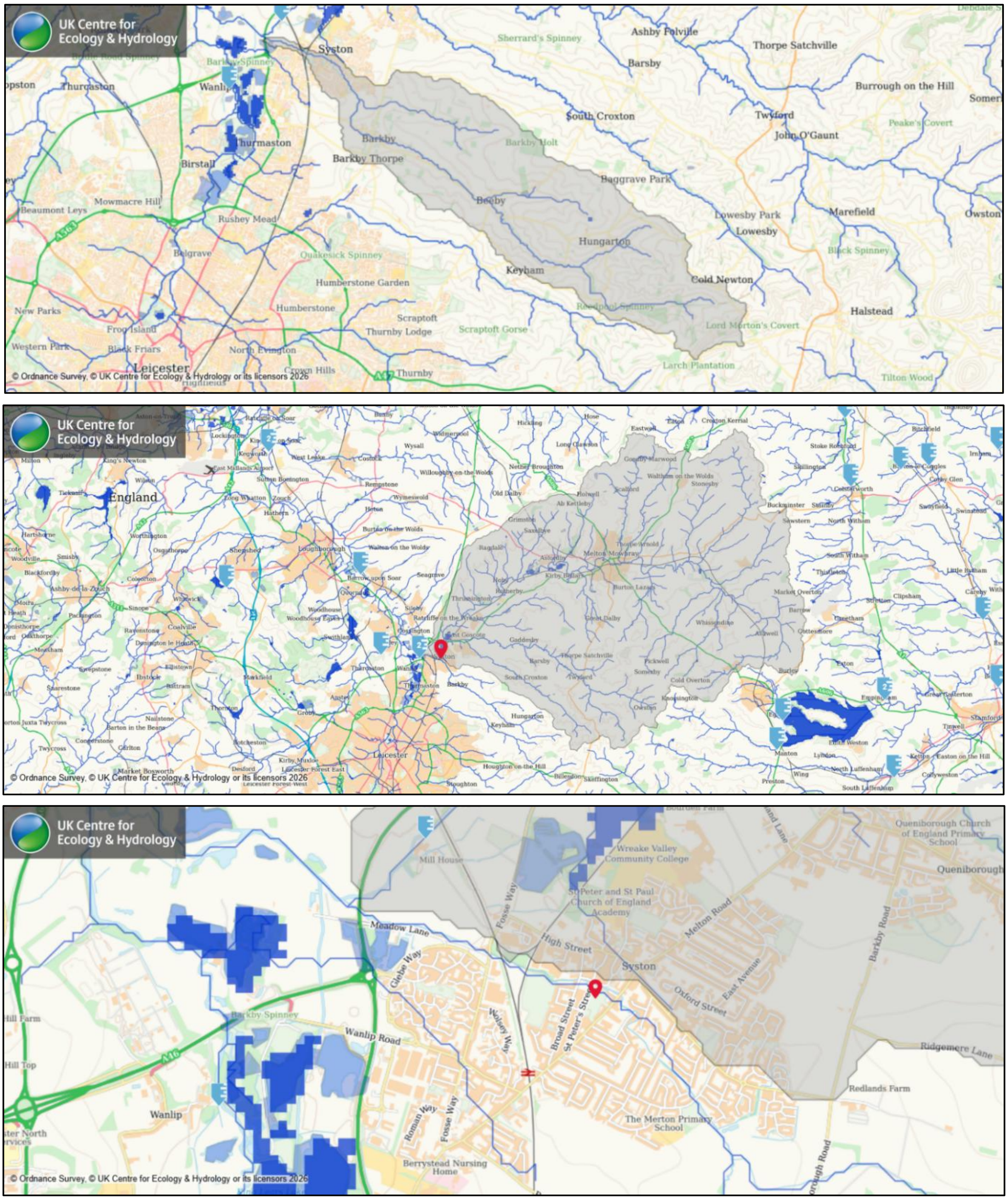


Figure 10-1: Syston Location Plan, relevant Watercourse Catchment and Flow Routes through Flood Areas (INSET 7)

The UK Centre for Ecology & Hydrology's Flood Estimate Handbook (FEH) Web Service[1] provides strategic level catchment mapping for the area, illustrated in Figure 10-2. This identifies that Barkby Brook drains a catchment area of approximately 24.9km^2 to the A46 and the River Wreake drains a larger catchment of 418km^2 to the A46 inclusive of the northern region of Syston town.



1.
2.
3.

Figure 10-2: FEH Web Service Catchment Extents of Barkby Brook at the A46 (1) and River Wreake at the A46 Syston (2 and zoomed in in 3)

[1] Centre for Ecology & Hydrology (2026) FEH Web Service https://fehweb.ceh.ac.uk/Map
[1] British Geological Survey (2026) BGS Geology Viewer. https://geologyviewer.bgs.ac.uk/
[1] LandIS Soilscapes https://www.landis.org.uk/soilscapes/

The Barkby Brook catchment drains from the south-east through arable land. Upstream of Syston, the channel is largely natural with earth banks, but with a varied geometry that is in places quite deeply incised. Upstream of St Hildas Close, Barkby Brook is defined as an ordinary watercourse.

10.1.1 UPSTREAM OF SYSTON TOWN CENTRE

Barkby Brook is joined by an unnamed ordinary watercourse tributary (Ordinary Watercourse 1) upstream at OSNGR SK 63301 10573, as illustrated in Figure 10-3. This drains land to the north of Barkby and south of Queniborough.

A second unnamed ordinary watercourse (open ditch) (Ordinary Watercourse 2), illustrated in Figure 10-3, originates from the south-east of Syston within land west of Queniborough Road. This flows in a horseshoe shape around the western edge of the Empingham Drive estate before crossing beneath Barkby Road and flowing south in a swale, illustrated in Photograph 10-3. This swale is owned and maintained by Charnwood Borough Council (CBC). A series of check dams exist along this swale as it flows south-west.

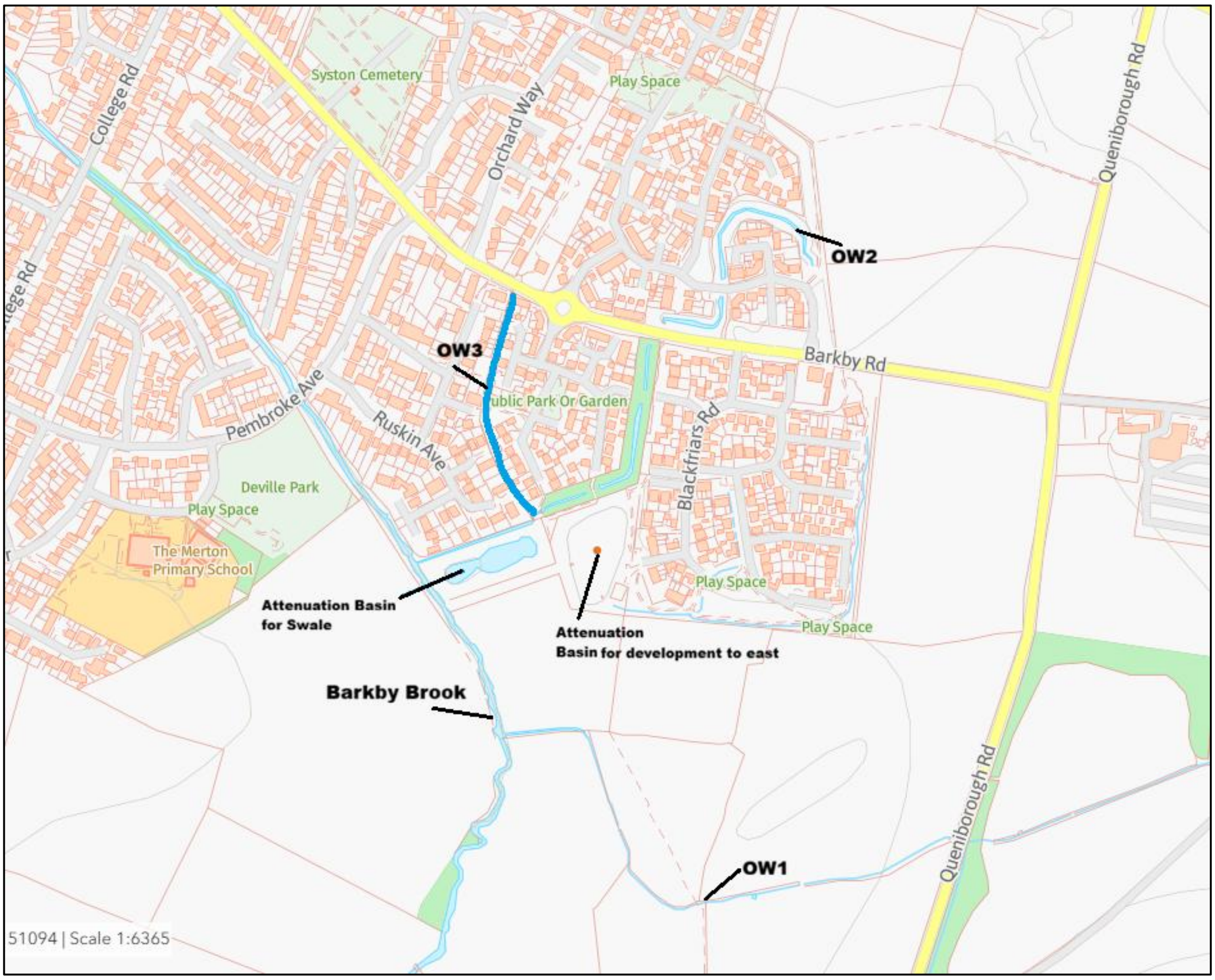


Figure 10-3: Location Plan of Un-named Ordinary Watercourses 1-3, south-east Syston

An attenuation basin to the south of this swale is understood to provide storage for raised water level events in the swale. This is owned and maintained by CBC and outfalls by a control structure leading towards the confluence with Barkby Brook at OSNGR SK 63212 10754 south of St Hildas Close, as illustrated in Figure 10-3.

A second attenuation basin, illustrated in Figure 10-3, located to the west of Hertford Close at OSNGR 63400 310766 services runoff from the Blackfriars Road development south of Barkby Road. This outfalls via a control structure at OSNGR SK 63372 310752 into Barkby Brook.

Another un-named ordinary watercourse (Ordinary Watercourse 3) originates to the east of Lincoln Drive, south of Orchard Way, as illustrated in Figure 10-3, and flows south-eastwards through multiple landowners gardens (depicted in Photograph 10-2) before discharging into the Ordinary Watercourse 2 swale via an outfall structure at OSNGR SK 63330 310803. This area has been investigated in Section 10.2.1.

Photograph 10-1: Ordinary Watercourse 2 Swale looking northwards towards Barkby Road

Photograph 10-2: Ordinary Watercourse 3 looking north-westwards upstream alongside Whissendine Way

10.1.2 WITHIN SYSTON TOWN CENTRE

Barkby Brook becomes a Main River from St Hildas Close and continues north-westwards towards its confluence with the River Wreake. As it flows through the town, Barkby Brook passes through several bridges and/or culverts and is heavily channelised through the centre of town where it is constrained by development and reinforced with brick, gabions, sheet piling and concrete.

Following Storm Henk, five key focus areas within the centre of the town were impacted all along the corridor of Barkby Brook; Flood Areas A to E, as illustrated on Figure 10-1 and the flooding mechanisms identified are discussed in Sections 10.2.2 to 10.2.6.

10.1.3 GEOLOGY

A review of geological information from the BGS online mapping system[2] identified that this area of Leicestershire is dominated by the Mudstone and Siltstone Lithology.

Syston's Superficial geology comprises Alluvium-Clay, silt, sand and gravel along Barkby Brook and head-clay, silt, sand and gravel along the north-eastern and southern parts of Syston, indicative of mixed permeability.

Syston's Bedrock geology beneath this is made up of Branscombe Mudstone which is compact and dense and usually contain clay. This suggests that the bedrock geology in Syston is categorised as very low permeability.

The predominant Topsoil type in the upper catchment is deep and seasonally waterlogged clay with pockets of fine loam surrounding Syston town. Syston comprises loamy and clayey

[2] British Geological Survey (2026) BGS Geology Viewer. https://geologyviewer.bgs.ac.uk/

floodplain soils with naturally high groundwater to the east with minimal infiltration and a higher susceptibility to flooding. Freely draining slightly acid loamy soils in the centre with a lower susceptibility to flooding, and slightly acid loamy and clayey soils with impeded infiltration and drainage to the west demonstrate the variability of the drainage and permeability across Syston.

10.1.4 FLOOD HISTORY

Syston has a long history of flooding with historically significant events having occurred in 1947, 1992, 1993, 6th July 2012, 17th March 2013 and 9th March 2016. It was reported by Leicestershire County Council (LCC) in 1990 that the channel capacity remained exceeded up to 20% of the time each year.

10.1.5 NATIONAL SCALE PREDICTIVE FLOOD MAPPING

EA Flood Map for Planning (NFRA2) Flood Zones 2 and 3 (medium and high risk of river flooding respectively) associated with Barkby Brook are illustrated in Figure 10-4 (see more detail in Section 2.7.6 of the main Storm Henk report). These maps show where flooding is predicted from this source in the vicinity of Flood Areas A to E in this investigation.

The EA Risk of Flooding from River and the Sea (RoFRS) map (NaFRA2) available online[3] takes into account the presence and condition of flood risk management assets, as detailed in Section 10.1.6, and takes account of the chance of them overtopping or failing (as detailed in Section 2.7.6 of the main Storm Henk report). These outlines and risk ratings however cannot be directly compared to the Flood Zones.

Small areas of the town are also identified as being at a high, medium and low risks of flooding in the national EA Risk of Flooding from Surface Water (RoFSW) (NaFRA2) as illustrated in Figure 10-4.

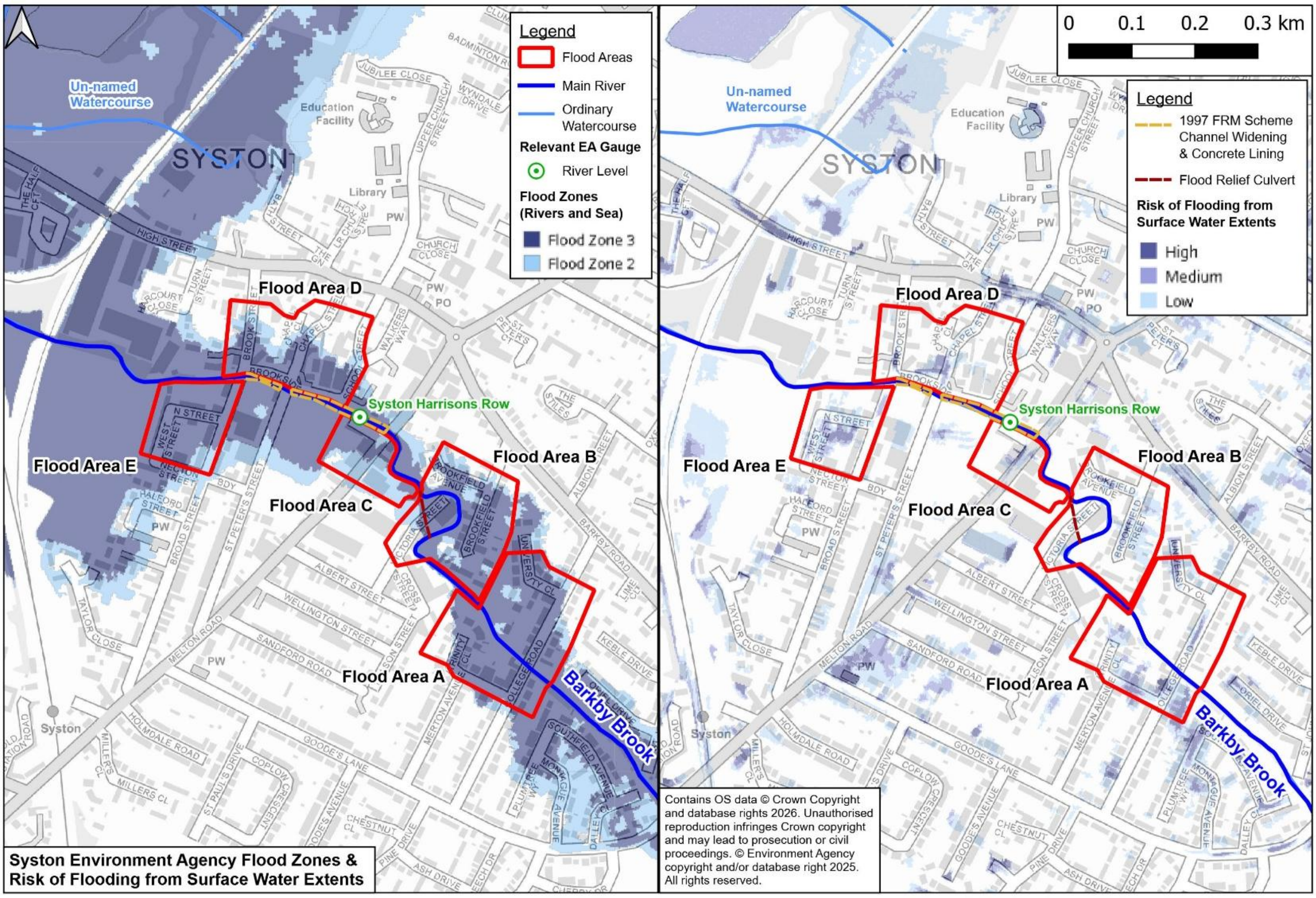


Figure 10-4: Syston EA Flood Map for Planning Flood Zones[4] and EA Risk of Flooding from Surface Water Extents[5] in Flood Areas (INSET 7)

[3] Environment Agency (2026) Risk of Flooding from Rivers and the Sea. https://check-long-term-flood-risk.service.gov.uk/map
[4] Environment Agency (2026) Flood Map for Planning – Flood Zones https://flood-map-for-planning.service.gov.uk/map
[5] Environment Agency (2026) Risk of Flooding from Surface Water map. https://check-long-term-flood-risk.service.gov.uk/map

10.1.6 EXISTING FLOOD RISK MANAGEMENT

In response to flooding during the 1990s, CBC undertook works including channel desilting (1995), installation of a concrete channel (1997), and construction of a bypass culvert (1998). The continuation of flood events, however described in Section 10.1.4 demonstrated the need for consideration of further measures.

There are two key flood risk management assets within Syston; the widened section of Barkby Brook adjacent to Brookside, and the Victoria Street Flood Relief Culvert (FRC), both illustrated in Figure 10-1. The widened channel includes a central low flow gully and is designed to convey flows up to approximately a 1 in 30 (3.3%) chance in any year, after which flows may exceed channel capacity and localised flooding can occur. The construction of the watercourse varies from a 2.5m deep x 3.0m wide trapezoidal natural channel upstream of Victoria Street (Photograph 10-3) to a 1.5m deep x 5.5m wide trapezoidal artificial concrete channel alongside Brookside (installed by CBC in 1997) (Photograph 10-4). This channel is vulnerable to the build-up of silt and organic matter in the high flow sections of the concrete channel, if there is a prolonged period of low flows due to the shallow gradient. The Victoria Street FRC, installed by CBC in 1998, is a large high flow box culvert designed to operate during periods of elevated water levels in Barkby Brook, providing additional conveyance capacity reducing flood risk within the town.

Both assets are maintained by the EA through routine inspections, debris clearance and vegetation management. The FRC was surveyed via CCTV in 2021 and visually inspected in 2024, with both inspections confirming that it was in good condition and clear of debris.

Photograph 10-3: Barkby Brook channel upstream of Melton Road

Photograph 10-4: Barkby Brook concrete-lined channel alongside Brookside (left in low flow, right in higher flow) looking downstream towards St Peter's Street Bridge

The channel banks themselves vary in composition. Upstream of Syston, it is a largely natural channel with earth banks and associated trees and vegetation. Within Syston town, the channel is constrained by development, and the banks are made up of brick and gabion retaining walls, sheet piling and concrete. As Barkby Brook exits the town, the channel returns to earth banks.

Several studies to date have assessed additional potential flood risk management measures, including:

- **Natural Flood Management (NFM)** – assessed through the Syston and Sileby NFM Scoping Study (2022) and subsequent Arup opportunity mapping (2024).
- **Upstream Flood Storage** – assessed by CBC (2004) and revisited by the EA (2014).
- **Flood Walls** – assessed through the Charnwood feasibility study (2004) between Broad Street and Melton Road.
- **Mid-catchment Wetland** – identified within the NFM Scoping Study (2022) as a potential intervention.
- **Property Flood Resilience (PFR)** – including grants administered by the Council.

10.1.7 HYDROMETRY

A river level gauge, monitored by the EA, exists along Barkby Brook (known as the Syston Town gauge[6]) and is located shortly downstream of the Melton Road bridge (OSNGR SK 62595 11563) as illustrated in Figure 10-1. At the time of Storm Henk, the gauge was monitoring river levels for the purpose of EA operations, not flood warnings. The EA has confirmed that the confidence in the level information is low and therefore cannot be accurately assessed to help describe the levels in the brook at the time of the flood event. However, the event was understood to have resulted in some of the highest water levels on record here and peaked at 19:45hrs on 2nd January 2024.

On 17th May 2024, the EA calibrated the gauge for the purpose of providing a flood warning service to the community. More details will be provided in the formal investigation for the 6th January 2025 flood event.

The next nearest gauge to Syston is found along the River Wreake upstream of its confluence with Barkby Brook at Syston Mill[7] (OSNGR SK 61510 12460) also illustrated in Figure 10-1. During Storm Henk, the River Wreake river level peaked at 3.69 metres above the gauge station datum (mASD) at 01:30hrs on 3rd January 2024, slightly below the highest recorded level at the gauge of 3.83mASD in April 1998. The peak flow occurred at 01:15hrs. Raised water levels in the Wreake would reduce the ability of Barkby Brook to discharge water at their confluence downstream of Syston town centre.

10.1.8 FLOOD WARNINGS

No EA Flood Warnings covered Syston at the time of the Storm Henk flood event. A Flood Warning is now available, following calibration of the gauge discussed above (Code: 034FWFBKSYSTON)[8].

[6] Environment Agency (2026) Barkby Brook level at Syston Town – river level gauge. https://check-for-flooding.service.gov.uk/station/9606

[7] Defra (2026) Hydrology Data Explorer – River Wreak at Syston - river level gauge. https://environment.data.gov.uk/hydrology/station/f62ffa59-4994-4d08-a962-69378aa1b2e6

[8] Environment Agency (2026) Barkby Brook at Syston flood warning area. https://check-for-flooding.service.gov.uk/target-area/034FWFBKSYSTON

10.2 WHAT HAPPENED AND WHY?

Catchments across Leicestershire were already suffering low soil moisture deficit levels before Storm Henk, as detailed in Section 2.1 of the main Storm Henk report. This, coupled with additional exceptionally heavy rainfall, led to significant runoff into Barkby Brook. The capacity of the Barkby Brook channel and the surrounding drainage infrastructure was subsequently overwhelmed. Surface water runoff generated by heavy rain that fell on the highway was unable to drain away due to high water levels in the brook at the drainage network outfalls, and thus further contributed to the flooding.

Figure 10-1 illustrates defined Flood Areas within Syston (A to E) containing the worst affected areas; College Road, Trinity Close, University Close, Victoria Street, Brookfield Avenue, Brookfield Street, Barkby Road, Melton Road, Brookside Chapel Street, Brook Street, School Street, North Street and West Street.

Internal flooding was reported to have occurred on 2nd January 2024 from 12:00 midday and continued through to 3rd January 2024.

WHO OR WHAT WAS AFFECTED?

104 properties reported as internally flooded

A significant number of properties were reported as externally flooded.

Storm Henk resulted in reports being received of internal flooding to at least 97 residential properties and 7 businesses. Affecting more properties than previous recorded flood events. At the time of the flood event, no flood warning existed for the community, and there was limited warning and limited time to prepare to mitigate the impacts.

10.2.1 PRELIMINARY INVESTIGATIONS UPSTREAM OF SYSTON TOWN CENTRE

The local community raised maintenance concerns relating to a swale (and check dams) which flows from east to west to the south-east of Syston. Following investigations after Storm Henk, some debris was found, and maintenance was required, which was actioned by CBC. No overland flow was reported coming out of the bank from this swale during the event. No evidence has been found or submitted that indicates this contributed to any internal property flooding. Concerns were also raised about the condition of the attenuation basin and control structure linked to the downstream extent of this swale. Since Storm Henk, CBC inspected the basin and found that a flap valve was missing from the control structure, and it was replaced in Spring 2025. There is no evidence that this flap valve being missing would have caused or exacerbated the flooding experienced during Storm Henk. The attenuation basin was not reported to be overtopping, and no water from Barkby Brook was known to have backed up through the exposed pipe.

Following Storm Henk, an obstruction was identified within Barkby Brook just upstream of the discharge from the attenuation basin receiving flows from the CBC-owned swale. The debris is likely to have been mobilised from upstream during the flood event. There is no evidence that the obstruction increased the extent of internal property flooding downstream, although it may have marginally impeded flow. While maintenance is the responsibility of the riparian landowner, CBC removed the obstruction as a gesture of goodwill in response to community concerns.

Following Storm Henk, the local community raised concerns that development in the upper catchment of Barkby Brook contributed towards the flooding, including the fact that a surface water attenuation basin to the west of Hertford Close was not functioning correctly. This attenuation basin is intended to manage surface water from the development hardstanding to the east only. The flow control structure of the attenuation basin limits surface water discharge to the pre-development greenfield runoff rate. It is not designed to hold or manage water from the swale to the north or any other source of water. LCC, as Lead Local Flood Authority (LLFA), contacted the developer of this attenuation basin after the event (who still owns and maintains the structure in the absence of formal adoption by CBC), who subsequently checked it and confirmed that it was working as intended. A flat valve at the outlet of the attenuation pond is yet to be replaced at the time of writing this report. No evidence has been found to suggest that this attenuation basin contributed towards the flooding.

New development is required to comply with the National Planning Policy Framework (NPPF) (and previously Planning Policy Statement 25) and associated guidance. By complying with these requirements, new development is designed to mitigate the impact downstream by restricting flows on-site through the provision of on-site storage for surface water. Additionally, development design also accounts for climate change in line with EA guidance, which would further protect the downstream catchment in the future. LCC LLFA has been responsible for reviewing all major planning applications since 2015 (before this, the EA was responsible), to ensure that the correct level of mitigation is provided.

The following sub-section of the report considers the local flood routing and impacts within each of the five Flood Areas within the town centre.

10.2.2 FLOOD AREA A - COLLEGE ROAD, TRINITY CLOSE AND UNIVERSITY CLOSE

The College Road Bridge soffit level was exceeded by Barkby Brook during Storm Henk, as the available cross-sectional area to convey the flows beneath the bridge was exceeded. The road bridge deck is flat with a large rectangular void beneath that conveys flows, and above this, solid parapet headwall, as depicted in Photograph 10-5. The channel side of the bridge is of concrete construction. On each side of the bridge opening, there is a 450mm diameter (dia) concrete culvert that provides additional conveyance capacity during higher flows. Anecdotal reports following the flood event suggested that the bypass culverts were obstructed. No evidence has been received that they were obstructed before the flood event.

Vegetation debris mobilised by floodwater was also reportedly caught along a sewer pipe bridge that crosses the watercourse, approx. 38m upstream of the bridge, causing a restriction within the watercourse. This could have raised water levels upstream of the pipe during the flood event and encouraged water to flow around the sides, increasing the flood risk locally.

Photograph 10-5: Barby Brook Culverts beneath College Road Bridge, showing additional bypass culverts

Once flows exceeded the channel capacity, flood waters rose, flowed westwards around the parapet wall, and flowed along College Road following the topography (both to the north and south of Barkby Brook) (as depicted in Photograph 10-6). The width of the road deck was reported to be flooded up to ‘shin height’, causing internal flooding to 31 properties. Residents reported that it was the ‘first time they have flooded in 30 years’. Water continued flowing along University Close to the north and caused internal flooding to ten properties.

Photograph 10-6: External Flooding Extents at College Road

Floodwater also exceeded the south bank alongside Trinity Close (as depicted in Photograph 10-7) causing internal flooding to eight properties. Floodwater was reported as reaching approximately ankle depth internally, damaging personal items, electrics, floor coverings and furniture. Several gardens were also inundated, and some residents had to be evacuated.

Floodwater eventually drained back into Barkby Brook via the surface water drainage network once brook levels dropped.

Photograph 10-7: External Flooding Extents at Trinity Close

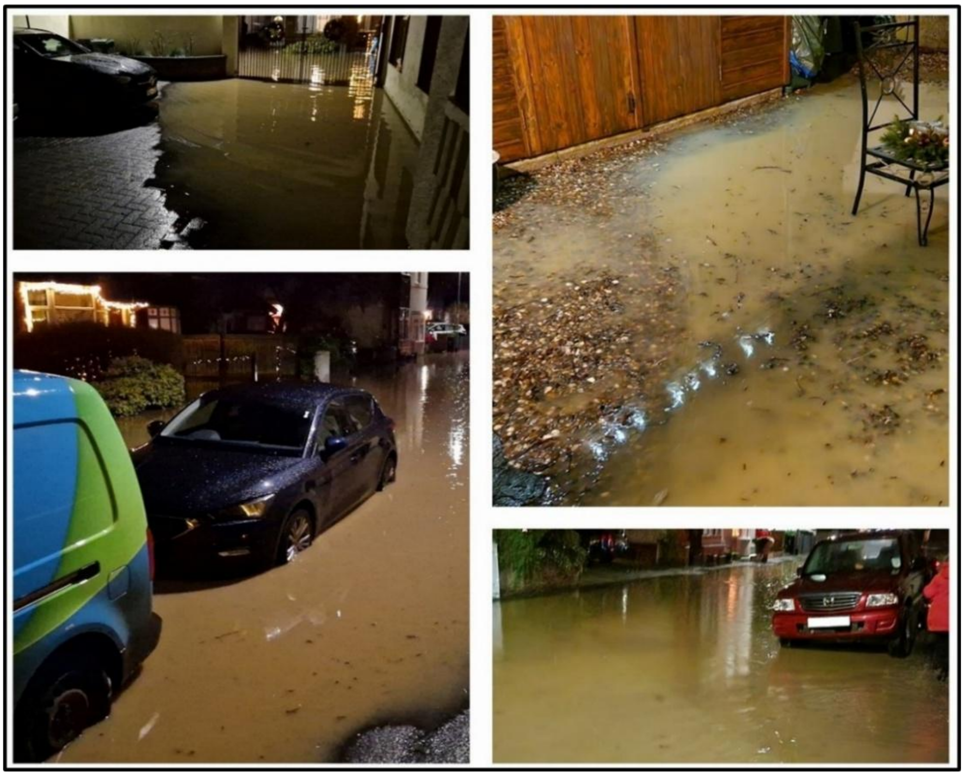
A review of STW records identified four public surface water sewers of relevance to this investigation beneath College Road, University Close and Trinity Close, that discharge water into Barkby Brook. The highway drainage system and sewers are designed to manage runoff from the road network during limited rainfall events, and not to convey river floodwater. As noted in Section 10.2, during the event, elevated levels in Barkby Brook restricted discharge from the drainage outfalls, resulting in temporary surcharging of highway gullies. Combined with the exceptional volume of rainfall, this led to short-term ponding on the highway surface, contributing to temporary highway inundation rather than flooding originating from the drainage system itself.

In this location, flood depths exceeded property thresholds due to the rapid rise in flood levels and not due to failure, inadequacy or flaw in the drainage systems.

10.2.3 FLOOD AREA B - VICTORIA STREET, BROOKFIELD AVENUE, BROOKFIELD STREET AND BARKBY ROAD

Within Flood Area B, river water exceeded the channel capacity of Barkby Brook on its northern side. Following the ground level downhill in a north-westerly direction into lower-lying land along Brookfield Street (see Photograph 10-8).

Surface water runoff within Flood Area B was also conveyed in a south-westerly direction into Brookfield Street and progressed towards Brookfield Avenue. Water also overtopped the southern bank of Barkby Brook into Victoria Street. Water was reported to vary, reaching ankle to knee depths, entering properties once water depths exceeded the thresholds directly through front and rear doors and via air bricks.



Photograph 10-8: External Flooding along Brookfield Street

Surface water runoff flowed in a generally northerly direction along Brookfield Street, with additional surface water flows converging from Brookfield Avenue. These combined flows progressed downhill further south of Brookfield Street. Floodwater crossed private land before discharging back into Barkby Brook over the banks or via the surface water drainage network.

A 225mm dia STW public surface water sewer drains Brookfield Avenue and Brookfield Street, outfalling into the brook west of number 30 Brookfield Street. Two highway drains drain Victoria Street, one eastwards and one north-eastwards into the brook.

As with Flood Area A, excessive rainfall on the highway and resultant flows of surface water runoff overwhelmed the capacity of the highway drainage infrastructure. Water was also unable to discharge effectively from the outfalls due to high water levels within Barkby Brook, leading to the capacity being exceeded and surcharging of highway gullies, rather than flooding originating from the drainage system itself. Floodwater temporary pooled on the highways in this location. Flood depths exceeded property thresholds due to the rapid rise in flood levels and not due to failure, inadequacy or flaw in the drainage systems.

Anecdotal reports received by the community following Storm Henk suggested that the FRC at Victoria Street was obstructed, which may have exacerbated the flooding in this Flood Area. This FRC is riparian owned but actively monitored by the EA since installation in 1998 by CBC. Before the flood event, the FRC was inspected by the EA in December 2023 and was found to be in good condition. After the event, the EA inspected the culvert reactively and found no obstructions. A tree had become established at the outlet of the FRC, and the local community were concerned that this may impede flow. The EA arranged for this tree to be removed after the event in January 2026. This tree could have exacerbated the flooding extents and depths locally at this location; it was not deemed to have been the primary cause of flooding, and the sheer volume of floodwater would likely have still exceeded the capacity of the channel.

10.2.4 FLOOD AREA C - MELTON ROAD AND BROOKSIDE

Within Flood Area C, river water from the Main River overspilled the southern bank and followed the ground level, progressing westwards over Melton Road into lower-lying land along Brookside (south of Barkby Brook). Major damage was caused to properties and businesses adjacent to the brook. Here, the volume of floodwater overwhelmed the design capacity of the flood risk management scheme detailed in Section 10.1.6.

In addition, overland flows of surface water generated along Melton Road by excessive rainfall on the highway were also conveyed in a north-westerly direction towards Brookside, further contributing, in combination with the overland flow of river water, towards the flooding extent and depth. As in Flood Area A and B, this combined flow was also restricted from discharging into Barkby Brook via the highway drainage infrastructure until the elevated river levels dropped at the outfalls of the drainage network.

As described in Section 10.2.2, the aforementioned sewers are only designed to accommodate rainfall events on the contributing area of a highway, and do not have the capacity to convey any additional volumes of river water, leading to water pooling on the highways. In this location, flood depths exceeded property thresholds due to the rapid rise in flood levels and not due to failure, inadequacy or flaw in the drainage systems.

Some residents also raised concerns regarding the lack of routine maintenance with vegetation build-up within the widened Barkby Brook channel. Anecdotal reports were received on coir rolls being placed in the channel for aesthetic reasons resulting in siltation and self-settling trees and other vegetation. Residents suggested the lack of routine maintenance within the brook has led to increased flood levels during flooding events. Material would have also been mobilised during the event. The extent to which further pre-emptive maintenance would have reduced the flooding is not known, but it would not have prevented the flooding. Riparian owners are responsible for maintaining their reach of the watercourse. The EA carry out routine tree and bush maintenance work along the channel to maintain conveyance. The EA has also carried out a periodic desilting of the channel, with the last recorded desilting of Barkby Brook prior to Storm Henk taking place in 2020. See Section 10.4 for additional details of work the EA has undertaken following RMA consultations.

10.2.5 FLOOD AREA D - BROOKSIDE, CHAPEL STREET, BROOK STREET AND SCHOOL STREET

Flood Area D was also directly affected by Main River flooding when the channel capacity of Barkby Brook alongside Brookside (north of the brook) became exceeded. The scheme that was implemented in 1998 as described in Section 10.1.6 was overwhelmed. Floodwater followed the local ground levels, overspilling the northern bank and travelling downstream in a generally westerly direction, inundating properties and the highway around School Street, Chapel Street and Brook Street via Brookside (depicted in Photograph 10-9). A vehicle was reportedly lost to the floodwater at this location. Anecdotal reports were received that vehicles in the area (particularly on Melton Road) created bow waves in this flood area and exacerbated flooding impacts.

Photograph 10-9: External Flooding Extents at Brookside and Response by Emergency Services

A review of STW public sewer records identified four STW public surface water sewers of relevance to this investigation beneath Walkers Way, School Street, Chapel Street, Chapel Close and Brookside Street that outfall into Barkby Brook along its northern bank alongside Brookside.

As outlined in Section 10.2.2, the highway drainage system is intended to manage runoff from the road network during rainfall events and is not designed to convey river floodwater. The exceptional volume of rainfall on the highway, combined with the overland flow of river water, led to short-term inundation of the highway as the network capacity became exceeded. As in Flood Area A, B and C, elevated water levels in Barkby Brook also restricted discharge from the local drainage network outfalls, resulting in temporary surcharging of highway gullies.

In this location, flood depths exceeded property thresholds due to the rapid rise in flood levels and not due to failure, inadequacy or flaw in the drainage systems. This flood water reportedly peaked quickly and subsided within approximately one hour.

10.2.6 FLOOD AREA E - NORTH STREET & WEST STREET

North Street and West Street (Photograph 10-10) were reported to have flooded as a result of floodwater overspilling the left bank of Barkby Brook. Water travelled through the garden of 50 West Street and proceeded south on West Street. Flood waters also propagated east along North Street and combined with the surcharging drainage system on Broad Street. The Memorial Park was also flooded. The Syston Masonic Hall Club anecdotally reported water ingress from the northeast corner of their boundary wall.

This propagated across the open space and under the property. Within this area, five properties reported external flooding, and one reported internal flooding.

Surface water from North Street and West Street is conveyed via a 300 mm diameter pipe beneath West Street that flows northwards before connecting to a further 300 mm diameter pipe beneath North Street. These flows then enter a larger 675 mm diameter public surface water sewer beneath Broad Street, which discharges into Barkby Brook on its southern bank, approximately 21 m south-west of the Brookside Street and Broad Street junction.

As within Flood Area A, elevated water levels within Barkby Brook restricted the discharge of water from the drainage network outfalls, which led to surcharging from highway gullies connected to the local drainage network. This caused a temporary inundation of the highways, and the resultant flood depths exceeded property thresholds due to the rapid rise in flood levels and not due to failure, inadequacy or flaw in the drainage systems.

Photograph 10-10: Flooding Extents at West Street

One of the local community's concerns was regarding the existing sluice gate at the Barkby-Wreake confluence, which was confirmed as a CRT asset. It was investigated and confirmed that the sluice gate situated here had no impact on the Storm Henk flooding incident in Syston. The only function of the asset is to lower water levels for maintenance of the weir and lock gates at this location, and the operation of this sluice would have no impact on the flooding in Syston due to the gradient of the watercourses and the distance that the small sluice is from Syston town centre.

10.3 WHAT HAS BEEN DONE?

On 6th January 2025, another major countywide flood event occurred, which resulted in widespread internal property flooding in Syston. This 2025 flood event is being investigated separately. This report will therefore focus on the actions agreed and undertaken in relation to this event only. Any actions, investigations or engagement undertaken following the 6th January 2025 event will be covered in that report.

A summary table of the actions undertaken by the relevant RMAs across Leicestershire is provided in Section 2.7 of the main Storm Henk report. A summary table of actions and any relevant next steps specific to Syston is provided in Section 10.4.

Whilst the actions from this investigation will help to reduce flood risk, communities should also take steps to be prepared for future flooding, especially with climate change increasing the risk of occurrence. More information can be found in Section 21.8 of the main Storm Henk report.

10.4 SYSTON ACTIONS

The following actions will be monitored by LCC LLFA through their local coordination role. This action plan is live and will be subject to change as actions are progressed.

Actions taken during and in the immediate aftermath of the event, such as the closure of roads and the set-up of rest centres, are not detailed. Further details on RMAs and their roles, and how they work in partnership, can be found in the Leicestershire Local Flood Risk Management Strategy.[9].

10.4.1 SHORT-TERM ACTIONS (0 - 6 MONTHS)

ACTION	ACTION DETAIL	LEAD RMA or ORGANISATION	CURRENT STATUS
Site Walkovers to Inform Investigation	Following Storm Henk, a multi-agency site walkover was undertaken on 7th June 2024 to witness the devastation and collect information to help identify actions and towards the formal flood investigation. Before this, a series of multiagency virtual meetings had taken place. Various other site walkovers have also occurred by the separate agencies at different times to support the community and help collate data to inform this investigation. Liaison, guidance and support to the Flood Wardens (in addition to site walkovers) have been provided to better understand what happened and identify actions to help reduce future flood risk and develop community resilience.	LCC LLFA, EA, CBC, Local Resilience Forum (LRF)	Complete

[9] Leicestershire County Council (2024) Leicestershire Local Flood Risk Management Strategy - https://www.leicestershire.gov.uk/environment-and-planning/flooding-and-drainage/lead-local-flood-authority/flood-risk-management

ACTION	ACTION DETAIL	LEAD RMA or ORGANISATION	CURRENT STATUS
Refuse Collection	Clear up of bulky waste from residential dwellings affected by flooding was undertaken following Storm Henk and after the 6th January 2025 flooding.	CBC	Complete
Flood Resilience Equipment	Aqua sacks were provided to the Parish Council in advance of the Storm Henk and 6th January 2025 flood events, and following the 6th of January 2025 flood event, to create a centralised stock for the community.	CBC	Complete
Street Cleansing	After Storm Henk and the 6th January 2025 flood event, additional street cleansing was completed on a number of roads across the borough, including in Syston, to remove silts and other deposits.	CBC	Complete
Henk Flood Recovery Framework support	CBC administered the National Flood Recovery Grant, tax relief, business rates relief and also one-off sums of funding to affected homeowners in the immediate aftermath of Storm Henk.	CBC	Complete
Routine Main River Asset Maintenance	As part of the EAs maintenance regime of flood assets (298 inspections), the routine inspections of assets in Syston were performed.	EA	Complete

ACTION	ACTION DETAIL	LEAD RMA or ORGANISATION	CURRENT STATUS
Briefing Note	All Risk Management Authorities (RMAs) are to agree on the briefing/position note/FAQ to circulate to residents of Syston. This briefing note was intended to act as a myth buster on behalf of all RMAs and disperse some of the false information going around the community at the time of the flooding. It also helped to raise the awareness of riparian responsibilities. LCC LLFA to share a virtual copy of the note shared at the public drop-in regarding reporting and responsibilities	EA, LCC LLFA	Complete
Community Drop-in Sessions	A number of public flood drop-in sessions were arranged and attended by all RMAs, including EA, CBC, LCC, Local Highways Authority (LHA), LCC LLFA and the LRF. These sessions aimed to better understand what happened after the flood events, but also to promote flood resilience for future events.	All RMAs	Complete Following Storm Henk, five drop in events were arranged in Loughborough, Blaby, Melton and Syston. In Autumn 2024, a further two drop-in events were arranged in Harborough and at County Hall in Glenfield.

ACTION	ACTION DETAIL	LEAD RMA or ORGANISATION	CURRENT STATUS
Review of Surface Water Drainage of Development close to Barkby Road	CBC and LCC LLFA to collate and review technical details relating to surface water drainage and any possible flood alleviation measures associated with the developments downstream of Barkby Road near St Hilda's Close.	CBC, LCC LLFA	Complete
Blockage Reporting	Flood wardens to report the concerns regarding blockages under the highway bridge (notably College Road bypass channels) to LCC for comment/inspection. Details on how to report blockages can be seen on the attached leaflet but can also be done directly through the flood warden.	Flood Wardens	These can be actioned when reported.

<table>
<tr>
<td>Highways Asset Maintenance</td>
<td>Completed targeted gully cleansing (in addition to routine maintenance) after Storm Henk across Syston (and many other affected parts of the County)

The data collected from this process was used to help reprioritise gully cleansing in flood-affected areas. Within Syston, the following roads were reviewed, and the frequency of cleaning increased:
<table>
<tr><th>Street</th><th>Original Priority</th><th>New Priority</th></tr>
<tr><td>St Peters Street</td><td>P2</td><td>P1</td></tr>
<tr><td>Brook Street</td><td>P2</td><td>P1</td></tr>
<tr><td>Brookside</td><td>P2</td><td>P1</td></tr>
<tr><td>Chapel Street</td><td>P2</td><td>P1</td></tr>
<tr><td>Roman Way</td><td>P2</td><td>P1</td></tr>
<tr><td>Chapel Close</td><td>P2</td><td>P1</td></tr>
<tr><td>College Road</td><td>P2</td><td>P1</td></tr>
<tr><td>Plumtree Way</td><td>P2</td><td>P1</td></tr>
<tr><td>University Close</td><td>P2</td><td>P1</td></tr>
<tr><td>Trinity Close</td><td>P2</td><td>P1</td></tr>
<tr><td>Montague Avenue</td><td>P2</td><td>P1</td></tr>
</table>
</td>
<td>LCC LHA</td>
<td>Complete</td>
</tr>
</table>

Merton Avenue	P2	P1
Riverdale Close	P3	P2
Turn Street	P3	P2
West Street	P3	P2
North Street	P3	P2
Broad Street	P2	P1
School Street	P2	P1
Southfield Avenue	P2	P1
The Half Croft	P2	P1
Access road from fosse way to bridleway	P2	P1
Glebe Way	P1	P1
Senator Close	P1	P1
Barkby Road	P1	P1

Priority (P) 1 – Cleansed every 10 months, P2 – Cleansed every 20 months , P3 –Every 24 months inspected by technician to check silt levels. If reported as blocked or full by customers an ad hock works instructions is raised.

ACTION	ACTION DETAIL	LEAD RMA or ORGANISATION	CURRENT STATUS
Flood Warning Service	EA to implement a Flood Warning service for Barkby Brook.	EA	Complete 08/2024 Barkby Brook at Syston flood warning area now available: https://check-for-flooding.service.gov.uk/target-area/034FWFBKSYSTON

10.4.2 MEDIUM-TERM ACTIONS (6 - 12 MONTHS)

ACTION	ACTION DETAIL	LEAD RMA	CURRENT STATUS
Surface Water Drainage Review	LCC LLFA, CBC and EA to meet to discuss the technical details relating to the surface water drainage and its function downstream of Barkby Brook. To include identification of landowners/responsible bodies and notification of riparian responsibility/maintenance requirements where appropriate/possible. Where this is not clear, CBC/EA/LCC LLFA to discuss how this will be tackled. This shall include the scrubland to the south of St Hildas Close/Ruskin Avenue, of which concerns were raised over its function.	LCC LLFA, CBC, EA	Ongoing
Riparian Responsibilities	LCC LLFA to liaise with LCC LHA regarding maintenance of culvert beneath Barkby Road. LCC LLFA to liaise with riparian landowners of the watercourse around Saxby Drive and Lincoln Drive but investigate the source of the watercourse. EA to liaise with the riparian landowner of the section of watercourse adjacent to the Town Centre car park, where the retaining wall has slipped or is at high risk of collapse.	LCC LHA LCC LLFA EA	Ongoing
Review Land Ownership	Review land ownership in and around Barkby Road to clarify CBC land ownership extents.	CBC	Complete
Main River Maintenance	De-silting works were carried out within the 2024/25 financial year from upstream of the Melton Road bridge alongside the Melton Road carpark to the Memorial Park. Tree and bush maintenance was also completed in Winter 2024.	EA	Complete

ACTION	ACTION DETAIL	LEAD RMA	CURRENT STATUS
Henk Property Flood Resilience Repair Grants	Administer the National Flood Grant for Property Flood Resilience on behalf of DEFRA following Storm Henk. 17 grants were provided for Syston.	LCC LLFA	Complete

10.4.3 LONG-TERM ACTIONS (12 MONTHS +)

ACTION	ACTION DETAIL	LEAD RMA	CURRENT STATUS
Additional Capital and Investment Review	Discuss in more detail the Natural Flood Management (NFM) proposals and revisit potential landowners who were able to support the original scheme. Also, to revisit what other potential options there are for helping the community further, which may include upstream attenuation, and reviewing all possible funding sources.	LCC LLFA, EA	Ongoing
Enhanced Scrutiny of Major Planning Applications	LCC LLFA, and EA to work closely with CBC and the developer in the role of statutory consultee to the planning process linked to the proposed large development site upstream of Syston with the key aim to identify and secure opportunities for flood risk management in the upper catchment where possible and appropriate.	LCC LLFA, CBC, EA	Ongoing