



This newsletter is given to interested parties in the Lower Witham area. It provides an update on the development of a project to increase flood resilience in the Lower Witham Fens. If you wish to receive future copies of this newsletter or would like further information, please contact us at lowerwitham.floodresilience@environment-agency.gov.uk

Lower Witham Flood Resilience Project

The Lower River Witham is a large area of drained marshland between Lincoln and Boston. Historic drainage infrastructure, including embanked channels and pumping stations has enabled highly productive arable land to be farmed and communities have established in the area.

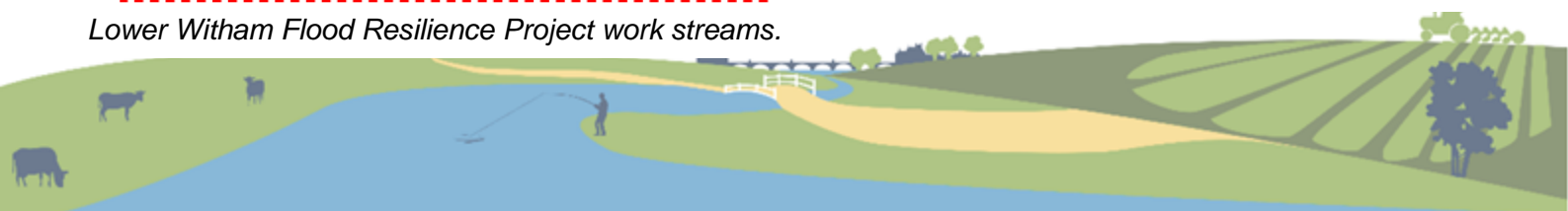
Some of these embankments are now over 200 years old. The extent and frequency of flood incidents is increasing pressure on flood risk management and drainage infrastructure. This is putting the local community and economy at risk. Flooding in 2019, and again during Storms Babet and Henk in the winter of 2023/24 has highlighted the need to update the long-term strategy to manage flood risk in the area.

This project aims to improve the catchment's resilience to flood events and reduce the harm caused by flooding where possible.

Project update



Lower Witham Flood Resilience Project work streams.



The Lower Witham Flood Resilience project consists of a series of work streams. The project is currently 'twin-tracking' works on the ground to key assets (Phase 1) and the development of a more strategic long term plan (Lower Witham Strategy Update - Fens 2100+)

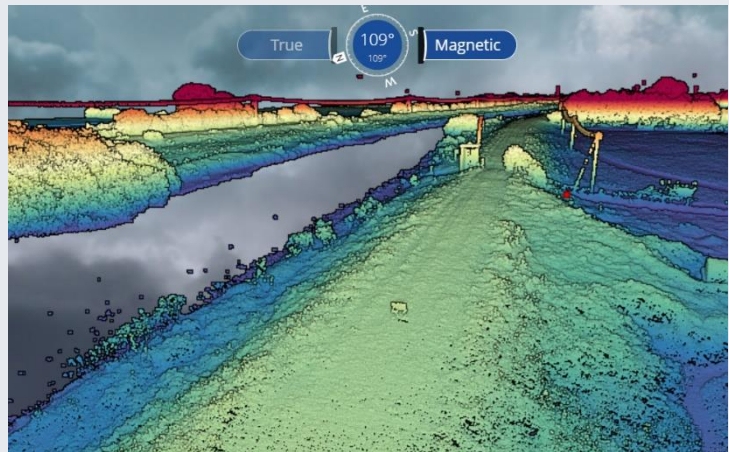
Lower Witham Strategy update- works to date

Work is continuing on the strategic baseline report for the area. This report will summarise the evidence gathered about the catchment. It will be used to inform the future strategic plan for the area.

Since our last update we have completed surveys including geotechnical, topographical and LiDAR (Light Detection And Ranging) surveys. This is part of our asset health assessment, building an accurate and up to date picture of the Lower Witham flood risk management systems.

What are LiDAR (Light Detection And Ranging) surveys, and how are we using them?

- Drones use beams of light to measure distances, indicating the height of the land relative to the drone.
- We surveyed Lower Witham embankments from Stamp End in Lincoln to Grand Sluice in Boston.
- This helps us to identify low points and where banks need work.
- LiDAR data will also be used during the planning stages of Phase 1 works. For example, we can use it to work out how much material we will need at different locations.



Fine resolution LiDAR imagery, Bardney.

Height range: Blue - Red = Low to High

We are in the process of building the Lower Witham hydraulic model. This will allow us to understand how a range of scenarios would affect water levels and flood defences, taking into account the latest evidence and projections for climate change. Winter 2023/24 storm data is currently being used to test the accuracy of the model. Delivery of the model is now due by Winter 2024. Future scenarios to be tested using the model will include hypothetical breach locations and different management and maintenance approaches.

Phase 1- Grand Sluice and embankment refurbishments

Phase 1 of the Lower Witham project is focused on repairing and reinforcing critical flood defences, and improving catchment flood resilience whilst longer term strategies are planned. Grand Sluice in Boston and embankments along the River Witham and some of its tributaries are flood defences currently included in Phase 1.



Last October the project gained Outline Business Case (OBC) approval for Phase 1 works. This meant the team could progress outline designs for works to sustain these critical flood defences.

Grand Sluice

Where: Boston

Why: Grand Sluice is the tidal outfall for the whole Witham catchment. It is critical that it continues to discharge the river, with no mechanical failure. We need to meet the operational needs of today and improve the resilience of the structure.

What: The work will replace the pointing doors, vertical lift gates, and operating equipment. The project will also look to improve aquatic weed flushing and ensure legal compliance i.e. eel passage.

When: The project is at the outline design stage. Initial surveys to find out more about the current condition of the structure are already underway. Construction is planned for 2025-2027.

What's next: Dive surveys will be taking place during w.c. 3rd June to inspect the current condition of the submerged sections of the Grand Sluice.



Grand Sluice, Boston.



Embankment in the Lower Witham Fens (Kyme Eau).

Embankments

Where: Various sites along the River Witham and its tributaries.

Why: To improve resilience of the embankments, for example to over topping, and seepage management to reduce the impact of flooding on communities. This work also aims to improve access to the embankments for maintenance.

What: The work will fill low points, and restoring banks where required.

When: Construction is planned for 2025-2027

What's next: We will be confirming the locations where these works will take place and exploring designs for the different locations.

Winter 2023/24

During the autumn/winter of 2023/2024, Storms Babet and Henk brought significant heavy rainfall across much of the UK. Impacts from flooding were seen across Lincolnshire. In October Storm Babet brought at least a month's rain (around 90mm) in 24hrs. Storm Henk saw rainfall totals of up to 40mm, putting pressure on already saturated catchments in the area. These storms caused damage and breaches to several flood defences.

Winter Recovery

We are in the process of determining future repair work. We will need to ensure that we are using our resources and funding efficiently and effectively to where it helps reduce risk of flooding to the greatest number of people and homes or infrastructure such as roads and railway lines.

Working with our framework contractor's, repair works have been completed at some locations like the Barlings Eau due to the ongoing risk to infrastructure in the area.

Lower Witham Sustainable Recovery Pilot 24-25/26

After being impacted by flooding in 2019 and during winter 2023/24 farmers and landowners in the Fiskerton and Barlings Eau area have asked us to consider doing something different in terms of flood recovery. They have asked that we take a different approach instead of repairing flood defences to their previous condition where possible, as done in the past.

We are working with communities and partners, including farmers to look at whether it is possible to take a different approach to helping the area recover from future flooding and the impacts of climate change. This pilot is being led by the Fens 2100+ team.

We have engaged with farmers, landowners, and key partners in this area. Individuals have shared their experiences as well as their ideas and aspirations for the future. This has given us valuable insights which will help inform the potential options for this pilot project.

Over the next 6 months we will explore these options with the landowner community to support them to become more resilient to flooding and to adapt to future climate change. We continue to work with partners including Lincolnshire County Council and Internal Drainage Board to manage risks and explore options for a more resilient future. We are currently in the process of collating evidence about the area, such as current land use, and producing an action plan for how we can pilot a different approach to recovering from flooding in the future.



Winter 2023/24 flooding along The River Witham, between Washingborough and Short Ferry.

Fens 2100+

Developing a Fens-wide approach to managing flood risk in a way that balances the needs of people, the environment and agriculture, both now and in the future.

Find out more at the [Fens2100+ Citizen Space page](#).

A forward look



What's coming up next for the Lower Witham Flood Resilience Project?

- **Dive surveys at Grand Sluice during w.c. 3rd June** to inspect the current condition of submerged sections of the structure.
- Finalisation of the **Lower Witham Baseline Report** - Summer/Autumn 2024.
- **Full Business Case for Phase 1** - detailed designs will be prepared for Grand Sluice and embankments sustain works to inform the full business case, expected to be submitted for approval in 2025.
- **Continue to explore options** with key partners and landowner community regarding the **Sustainable Recovery** pilot project in the Fiskerton and Barlings Eau area.

Contact us



Lowerwitham.Floodresilience@environment-agency.gov.uk



[Lower Witham Flood Resilience Project - Information Page - Environment Agency - Citizen Space \(environment-agency.gov.uk\)](https://www.environment-agency.gov.uk/citizen-space/lower-witham-flood-resilience-project)

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