

# Lower Witham Flood Resilience Project



**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](mailto:lowerwitham.floodresilience@environment-agency.gov.uk)**

## Lower Witham Flood Resilience Project

The Lower River Witham is mostly 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.

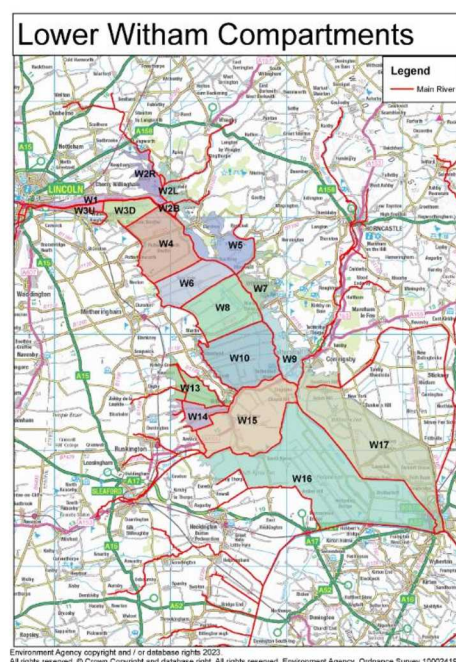
Some of these embankments are now over 200 years old. The extent and frequency of flood incidents is increasing pressure on flood risk management and drainage infrastructure. This is putting the local community and economy at risk. Flooding in 2019, and again during Storms Babet and Henk in the winter 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.

## Lower Witham Strategy update

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. An interim baseline report should be completed by January 2025.

Work on building the Lower Witham hydraulic model is currently paused, due to the need to incorporate more data across the whole Witham catchment following the winter storms of 2023/2024. When completed the modelling will allow us to better understand how a range of scenarios would affect water levels and flood defences, taking into account the latest evidence and projections for climate change. Work on the model is expected to restart in Spring 2025 and deliver later in the year. Future scenarios to be tested using the model will include hypothetical breach locations and different management and maintenance approaches.



## Lower Witham Flood Resilience Project Phase One- Grand Sluice and embankments

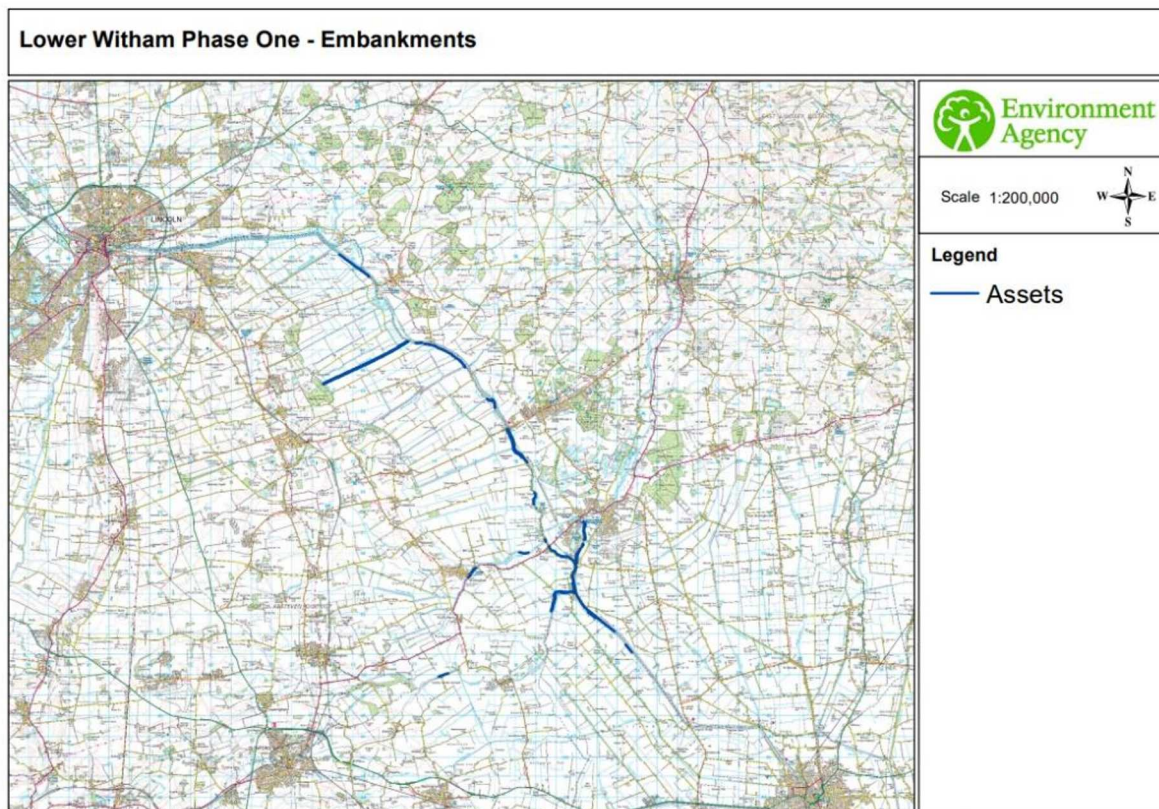


Creating a better place for people and wildlife

Phase One of the Lower Witham Flood Resilience Project is focused on repairing and reinforcing critical flood defences and improving catchment flood resilience. This is 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 One.

## Embankments

The project team have been identifying the works required at each site. Please see the location plan below. The aim of the project is to improve the resilience of the embankments, for example to overtopping, and seepage management to reduce the impact of flooding on communities. Whilst defences reduce the likelihood of flooding, the risk can never be removed entirely. Details on how to find out if you are at risk, preparing for and staying safe during floods, and signing up for free flood warnings can be found at the bottom of this newsletter. This work also aims to improve access to the embankment for maintenance. The team will contact landowners to discuss access where needed.



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In preparation for the works initial ecological screening surveys have been carried out. These surveys help the project team to understand the ecological characteristics of the embankments and where more detailed surveys may be needed. This information will help the project team ensure they comply with relevant environmental legislation, protecting any endangered species and habitats that might be in the area.

The project team are also in the process of scheduling tree and shrub works to allow the undertaking of the embankment works. Trees and shrubs will be removed to reduce flood risk and/or to enable access for the flood risk maintenance works. Our contractors will be on site to begin the tree and bushing works in early 2025. You may see our them working along the embankments using chainsaws and chippers, and there may be some intermittent noise.



### Why do trees and shrubs pose a flood risk at some locations?

- They provide too much shading and inhibit grass growth. Healthy grass cover helps protect the bank from sources of erosion such as rainfall, water currents, wave action and traffic (vehicular, pedestrian and animal).
- Their root growth can damage the structural integrity of the embankment.
- During adverse weather, erosion can increase around trees from swirling flood water, and high winds can cause trees to fall and damage flood banks.
- They can provide cover for and encourage burrowing animals, which can destabilise the banks.



*Bushing work carried out along the embankment of the River Bain.*

### Lower Witham Flood Resilience Project Land Purchases

The Environment Agency is required by law to mitigate for any habitat loss that occurs because of our works to provide flood defences. As well as replacing what is lost, where our works involve us applying for planning permission, we must now also provide an additional 10% more biodiversity. This means a development will result in more or better-quality natural habitat than there was before the development.

We have recently been able to purchase and complete on two land holdings that had come to the market within the Lower Witham Fens. These two sites have been purchased primarily to provide habitat mitigation for the capital works taking place under the 'Lower Witham Flood Resilience Project - Phase One'. They may also provide statutory biodiversity net gain for future phases of the LWFRP. A briefing note with further details on these land purchases can be found on the [Lower Witham Flood Resilience Project Citizen Space page](#).

### What's coming up?

The project team will be holding some drop-in events in the new year. They will be an opportunity for you to talk to our staff about the work that will be carried out along various stretches of the embankments, as well as the wider Lower Witham Flood Resilience Project. Details of these drop in events will be shared soon, and will be added to the [Lower Witham Flood Resilience Project Citizen Space page](#).

### Grand Sluice

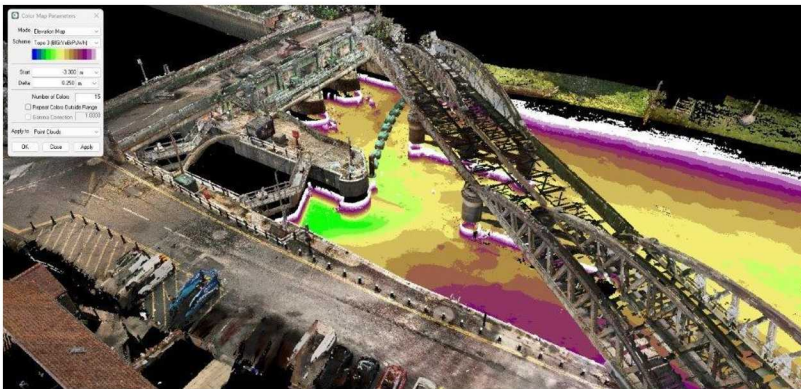
The project team have been carrying out ground and structural investigations to assess the current condition of Grand Sluice. This information will help to build an up-to-date picture of the structure and inform the team as the project progresses through the detailed design stage.

As part of these investigations, it's important that we understand what is happening below the water line as well as above ground. The project team have been using a variety of methods to do this. Both sonar and



Light Detection and Ranging (LiDAR) surveys have been carried out around the sluice. Data from both have been stitched together to build a full 3D model of the Grand Sluice along with the riverbed and river channels.

In June the project team also brought in specialist dive contractors to inspect the underwater conditions across the sluice. Unlike a model these surveys allow divers to feel the condition of the structure. Divers can test with their hands whether mortar is in good condition, they can also take samples from structures and investigate crevices that might not be seen remotely. Using divers and technology in tandem means the project team have been able to build a full picture of the underwater conditions of the sluice and the area around it.



*Sonar surveys in combination with lidar to build a full 3d model of the Grand Sluice, the riverbed and the channel sides*



*Diver carrying out a survey in the River Witham around the Grand Sluice*

### **Aquatic weed growth**

One of the challenges faced at Grand Sluice is that of aquatic weed build up. It can prevent people from accessing the water and can cause a strong smell. Weed can build up to 150mm thick in places and can stretch for miles up the River Witham.

This summer Canal and Rivers Trust have been working with agreement from the Environment Agency to flush the weeds through Grand Sluice. It is thought that cooler weather has been an influence on less weed growth this year.

As part of the refurbishment design process the project team are considering how the capacity for flushing aquatic weed could be improved in the future. They are exploring if mechanisms can be applied to the new vertical lift gates. This could help flush weeds more efficiently without drawing as much water from the system as weed flushing does now.



*Aquatic weed build up upstream of Grand Sluice.*



## What's coming up?

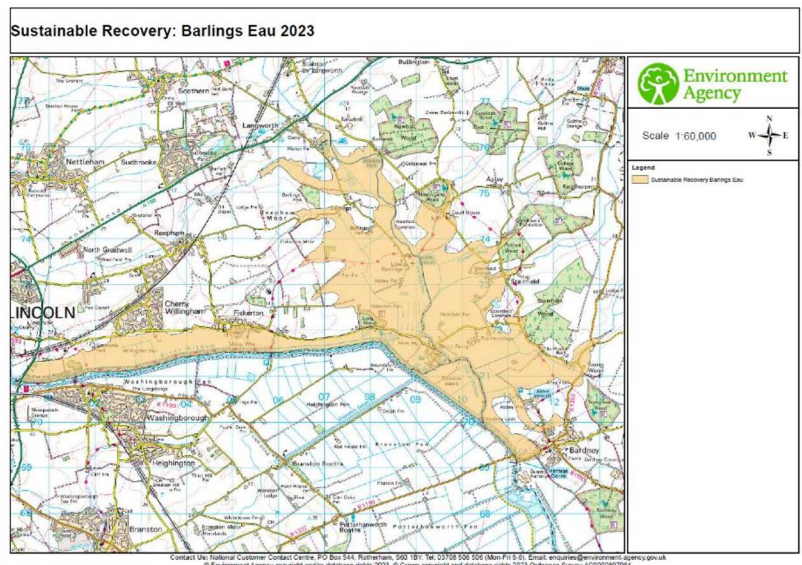
The current programme is to begin preparatory works on site in 2025. These preparation works will enable the main refurbishment works, which are planned to begin in 2026, to be completed in the most efficient way.

## Lower Witham Sustainable Recovery Pilot project

Over the summer we have been working to strengthen the partnership for this project. The pilot project currently comprises of 5 core organisations including Witham Third District Internal Drainage Board, Environment Agency (including Fens 2100+), Lincolnshire County Council, National Farmers Union and Natural England. Over the summer we have working together on:

- Creating a draft project vision and objectives.
- Reviewing the long list of measures compiled from stakeholder and partner suggestions and reducing this to a draft short list of options.
- Through a series of workshops creating a draft contingency plan to set out what will happen if flooding occurs in the short term. This includes the roles and responsibilities of the different partners.

This project is a Fens 2100+ pilot project. Fens 2100+ is 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.



*Lower Witham Sustainable Recovery Pilot project boundary.*

### Fens 2100+

Find out more about Fens 2100+ at the [Fens2100+ Citizen Space page](#).

We recently met with the Stakeholder Steering Group which includes the local farming community and other stakeholders. The partners presented the draft outputs from the work carried out together over the summer. At this meeting we invited stakeholders to discuss, feedback, and develop these draft

outputs further. Their local knowledge and expertise will help steer the next steps of the project.

## What's coming up?

The project team will be taking the feedback and comments from the recent Stakeholder Steering Group and using this to update the draft documents that were shared. By the New Year we are also aiming to be in contract with our consultants who will be carrying out a high-level technical feasibility study. This will involve looking at how the potential measures can be combined into a masterplan for the area, what this might cost, and possible sources of funding. This study is due to be completed by April 2025.

## Winter Recovery

Since our last newsletter our recovery work from Storm Babet and Storm Henk has continued across the area. By readjusting our programme, we have managed to allocate a percentage of our 2024/25 budget to repair some flood risk management assets that present the highest risk.

**Fiskerton** – Our contractors, Jackson Civil Engineering, have mobilised to site at the Fiskerton slips. Jacksons have completed the repair to the west slip and construction has now started at the east slip.

**Barlings Eau** – We completed repairs to two breaches on the Barlings Eau over the summer. In November our Field Team also completed a repair to erosion damage on the right bank of the Barlings Eau.

**Tattershall** – Our contractors Jackson Civil Engineering have now completed the works to the breach on the left bank of the River Bain.

Further to the completion of the breach repair, there will be some changes to the “River Bain in Coningsby and Tattershall” Flood Warning Area later this year. This is not related to our repairs but follows some modelling carried out last year, and the changes mean the Flood Warning Area will better reflect the risk. We have sent out more details to the town and parish councils affected.

**South Delph (Sandhill Beck and Branston Fen), Timberland, Branston Delph** - Our contractors have now completed the repairs to areas of storm damage on Branston Fen right-hand bank and Timberland Delph. They have now moved onto repairing damage on Branston Delph left hand bank. Construction on the right-hand bank of the South Delph near Sandhill Beck will begin in early 2025.



*Winter Recovery repair works carried out at South Delph (Branston Fen)*

**Farroway Drain** - Our teams/contractors have now completed preparations at the site. We anticipate that construction will begin in early 2025.

**Marsh Drain** - Funding has been secured and we are working with the Witham Third Internal Drainage Board to implement an improvement. Construction is planned for early 2025. Part of this will be to ensure gravity discharge in this area in the event of future flooding.

## 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, stay safe and sign up for (free) flood warnings visit [Flooding - GOV.UK](https://www.flooding.gov.uk) or call Floodline on **0345 988 1188**.

## Contact us



[Lowerwitham.Floodresilience@environment-agency.gov.uk](mailto:Lowerwitham.Floodresilience@environment-agency.gov.uk)



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