Barton to New Holland Tidal Flood Alleviation Scheme

Issue 03
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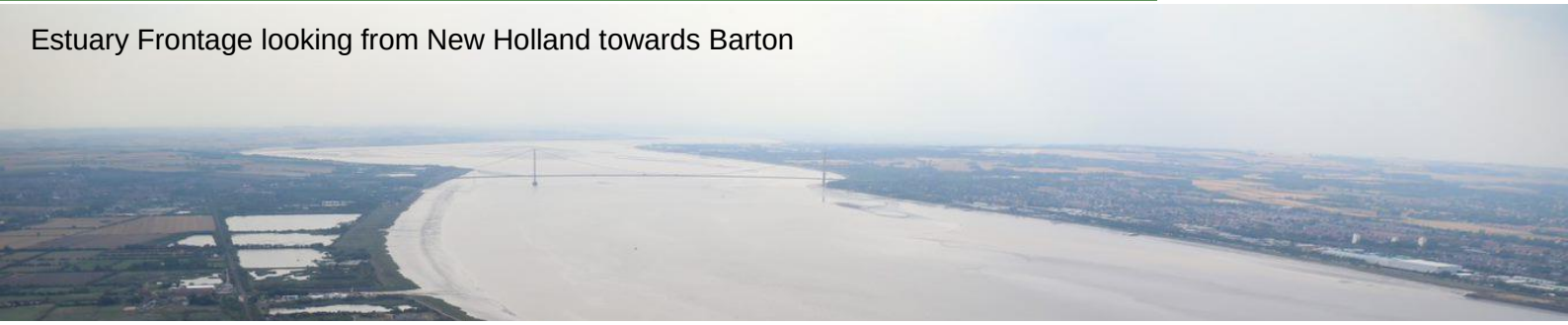
Environment Agency



Estuary Frontage looking from New Holland towards Barton

Project Overview

Welcome to the third edition of the project newsletter for the Barton to New Holland Tidal Flood Alleviation Scheme. Flooding is a long-standing problem for the communities of Barton, Barrow and New Holland. Previous tidal flood incidents such as the last major incident which took place on the 5 December 2013, highlight the need for improved tidal flood defences and increased community resilience. This scheme aims to develop an approach to alleviate tidal flooding which has communities, sustainability, and adaptation at its core.

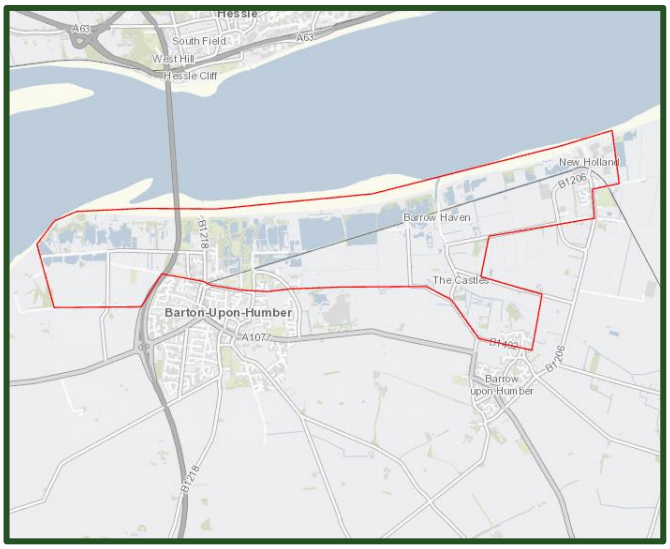


Figure 1: ***The red line on this map shows the extent of the project study boundary.***

Project Update

We have continued to make good progress since our previous project newsletter issued in May 2022. In this edition of the newsletter, we reflect on progress with environmental surveys, modelling, and engagement.

Environmental Surveys

We continue to undertake bird and baseline environmental surveys. This important work will continue over the coming months. Initial results are being analysed and environmental constraints identified. These environmental constraints will help us to develop our short list of potential options.

Modelling

We have completed our strategic modelling which considers the potential impacts to the wider Humber estuary by making interventions along the Barton to New Holland frontage. The project team is now reviewing the modelling results. Early indications suggest that the interventions being considered would have no noticeable impact on water levels within the wider estuary. However, it is still possible that future interventions elsewhere may cause higher water levels to this part of the estuary.

Our baseline modelling (consisting of ‘do-nothing’ and ‘do-minimum’ scenarios) is now completed.

The ‘do-nothing’ scenario is a theoretical baseline against which we assess all other options. The ‘Do-minimum’ is a more realistic scenario where the existing defences are maintained and repaired for as long as economically possible, but not raised or improved. We are finalising our results into a report. The results will be used to inform the baseline economic assessment and shortlist of options.

Whilst preparing the baseline models, we have also assessed the potential impacts of climate change on peak water levels and at the Humber Bridge. These are presented in Table 1 below.

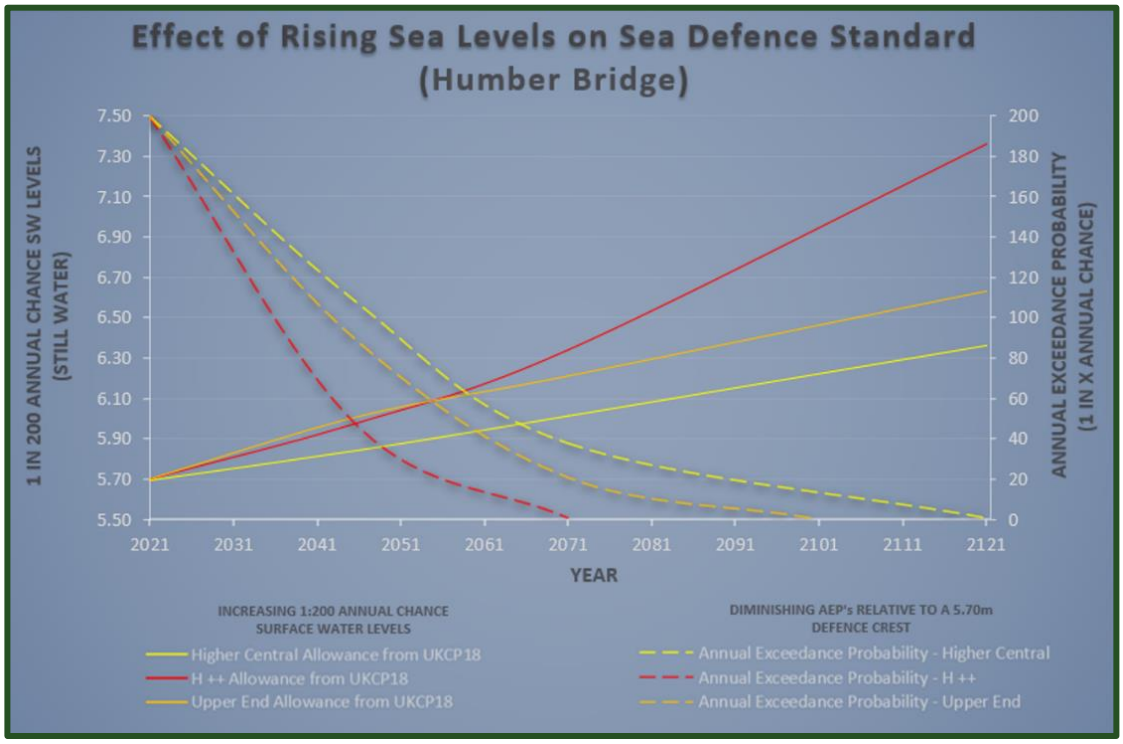


Table 1: ***Predicted sea level rise for a range of 1in 200 annual chance water levels and associated reduction of Annual Exceedance Probability of a typical existing embankment near to the Humber Bridge. The ranges are determined using three standard climate change prediction scenarios up to 100 years into the future.***

Barrow Haven Maintenance Repair Works

We have recently undertaken some repair works to the western flood embankment of Barrow Haven. During a routine inspection, cracks along the crest were noted. A contractor was appointed to undertake some grout injection repairs, a process where grout is injected into cracks, fills the gaps and then hardens. This process was carried out for a 30m section near to the old mill (figure 2). An additional 60m section of slipped embankment was reconstructed upstream of the railway bridge (figure 3).

The Environment Agency regularly inspects their flood and coastal defences as well as channel assets throughout the year to ensure they are in a good working condition. Regular maintenance of flood defence and channel clearing is a vital part of the Environment Agency's maintenance programme and is key to helping reduce flood risk across the UK.

Figure 3: ***Slipped embankment upstream of railway bridge.***

Figure 2: ***Grout injection repairs being undertaken near the Old Mill.***

Economics and Funding

Economics and Funding was the focus of our most recent Resilience Advisory Group meeting (7 September 2022).

Jacobs, our technical engineering partners, joined the meeting to explain the economics of the project and key definitions. Two terms which are regularly used and important to understand are ‘scheme cost’ and ‘scheme benefit’. The ‘cost’ includes the development, design, construction, maintenance, and operational costs over the design life of the scheme. The ‘benefit’ is a monetary value of how much a scheme reduces flood risk and prevents a flood causing damage over its design life.

In order to compare scheme options, benefit cost ratios (BCRs) are calculated. BCRs are calculated by dividing the scheme benefits (how much a scheme reduces flooding) by the scheme costs (full price of scheme including construction costs).

As you can imagine, a scheme of this scale requires significant funding. Using the economic assessment of the solution options and expected outcome measures, the project team will apply for Government funding. The outcome measures, including economic benefit (properties, businesses, land and infrastructure), human benefit (health and welfare), and ecological benefit are used to determine how much funding will be granted.

Figure 2: ***Taken at our Resilience Advisory Group meeting 7/09/22 where economics and funding was the focus. The group also assessed some of the long list of options with members of the project team.***

Any funding shortfall is required to be filled by contributions from others. The project team are currently identifying and contacting potential funding partners.

As well as other government agencies, these partners have been identified as significant businesses and key stakeholders who will benefit from the project.

If you would like more details on how project funding works and how this project will be funded, please get in contact with us using the email provided.

Engagement:

Landowner Engagement

In July we wrote letters to over 300 landowners, requesting access to their land to carry out a range of environmental surveys. During this we found that there were several inaccuracies/missing information on HM Land Registry.

We have been working on correcting our landowner lists and identifying missing landowner information and all landowners have now been contacted.

You can check your land registry details are up to date here: HM Land Registry Check

We would like to thank the landowners for their understanding and continued support with the project. If you have any concerns, please get in touch via the email provided.

Ground Investigation Surveys

Our delivery partners, Jackson Civil Engineering, will begin to undertake ground investigation surveys early in the New Year. Ground investigation surveys are used to understand the makeup of the ground and existing flood embankment, including the types and depth of rock and soil.

We have begun to contact those landowners where we will require access and will continue to engage throughout the survey period.

If you would like more information or have any questions, please contact us via the email provided.

Next Steps

- Our environmental and bird surveys will continue throughout the next few months, and landowners will continue to be engaged where necessary.
- Our baseline and strategic modelling reports will soon be complete. We will continue to cost and model our long list of options to help reduce to a short list.
- We will be reviewing our longlist of options and assessing them against a number of factors including environmental constrains, affordability, adaptability and modelling outputs. This will help us progress towards a short list of options.
- A refreshed and updated Citizen Space webpage will be online at the end of October. If you have any feedback on the new layout or content, then please get in touch via the email provided.
- Ground investigations will take place during the winter months. Landowners affected will be contacted in advance.

Contact us:

Email us at: BartontoNH@environment-agency.gov.uk

Citizen Space Link:
https://consult.environment-agency.gov.uk/lincolnshire-and-northamptonshire/barton-to-new-holland-flood-alleviation-scheme

or scan our QR code:

Figure 3: ***Drone image taken of Barton frontage above the Humber Bridge looking eastward towards New Holland.***