



Welcome to the project

For a long time, flooding has been a concern for the communities between Barton and New Holland. In December 2013 the area suffered severe flooding due to overspilling of the defences caused by a record tidal surge, and due to climate change, flood defences need to be adapted and evolve to withstand increasing risk of flooding in the future.

To deliver part of the 2008 Humber Flood Risk Management Strategy the Environment Agency plan to work with stakeholders across the area to develop options to alleviate flood risk to better protect homes, businesses, and infrastructure in the floodplain. For these communities we are at the early stages of this journey, there is no quick fix, but we are committed to working with you over the coming months and years to help define a long-term sustainable solution.

Our project aims to reduce tidal flood risk along the estuary frontage and to maximise the number of properties with an increased standard of resilience. The approaches we will be implementing will focus on sustainability and adaptation, with the end goal of improving community resilience to future tidal flood incidents. The project is likely to recommend a combination of flood risk management measures.



This newsletter is the first of many designed to help keep people informed about the project, our progress, and opportunities to get involved. The aim is to provide updates every 2-3 months.

Flood map: This map shows the areas at risk of river and sea flooding between Barton to New Holland. (darker blue areas indicate higher risk of flooding) – more details are shown on Gov.uk web site





Impacts of December 2013 tidal surge. (left) Barton Haven (right) embankment erosion near New Holland.

What happens next?

- A Steering Group will be set to support the Environment Agency's Project Board and team. Invitations will be sent soon.
- Resilience Advisory Group is being organised and arranged for early 2022. If you are interested in being involved in the project, please contact us via our project email.
- January 2022 onwards we will begin conducting ecological surveys. These surveys will require some access to private land and will be conducted during both the day and night. (If you have any concerns regarding this please contact us via the project email.

Timeline

2022 & 2023 – **Options Development**

2024 – **Design/Approvals/Procurement**

2025 – **On site works begin**

Project funding

The majority of funding for this project will be provided by the government. However, the remainder of the funding will need to be sourced from local funding contributions where possible.

Flood Warnings:



Environment Agency: 03708 506 506

To report an incident please call:

(24-hour service) 0800 80 70 60

Flood line: 0345 988 1188

Sign up for flood alerts at:

<https://www.gov.uk/sign-up-for-flood-warnings>

Project website coming soon...

In the new year we will be launching a project website on Citizen Space, this will give more information about the work we are doing in more detail, giving you the opportunity to check in any time to see what's happening, when and who is involved.

We have a dedicated project team working on this, to find out more:

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>



Flooding in 2013 from New Holland towards Barrow Haven

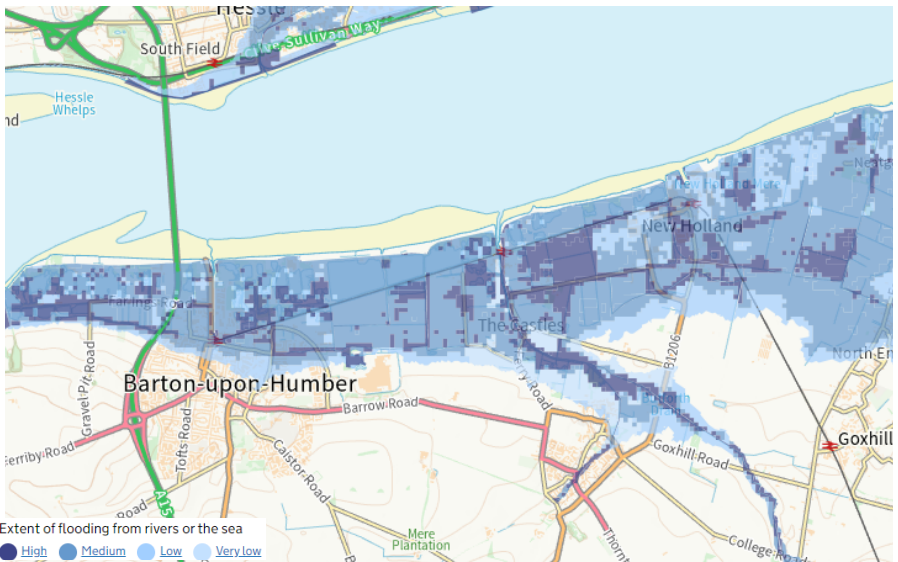
Project Updates

Our ecological surveys are well under way! Started in January, these are vital for the project team to understand the ecology of the project area and any potential environmental impacts and benefits. Thank you to all landowners who have allowed us access so far, we are grateful for your continued co-operation.

Our second Resilience Advisory Group (RAG) meeting was held in early May and focused on ecology and the environment. The session involved some really interesting presentations and discussions with topic experts from the group. We have recently developed a longlist of options, which we are currently working on to rationalise into a shortlist that will achieve the scheme objectives, delivering environmental benefits and protect homes and livelihoods within the project area. We will continue to develop the evidence base as the project progresses and keep you updated.

Flood Modelling

We are currently undertaking more detailed hydraulic modelling (the modelling of tidal flood scenarios) of the catchment to support the assessment of different flood risk measures. We are also undertaking wider flood modelling to explore what impact raising the defence across the study area might have on the wider estuary, and also how other measures across the estuary might affect the Barton to New Holland frontage. Our work also assesses the impacts of climate change.



This important piece of work will help inform the appraisal of the shortlist of options and ultimately guide the solution.

Map showing Barton to New Holland and extent of flood risk.

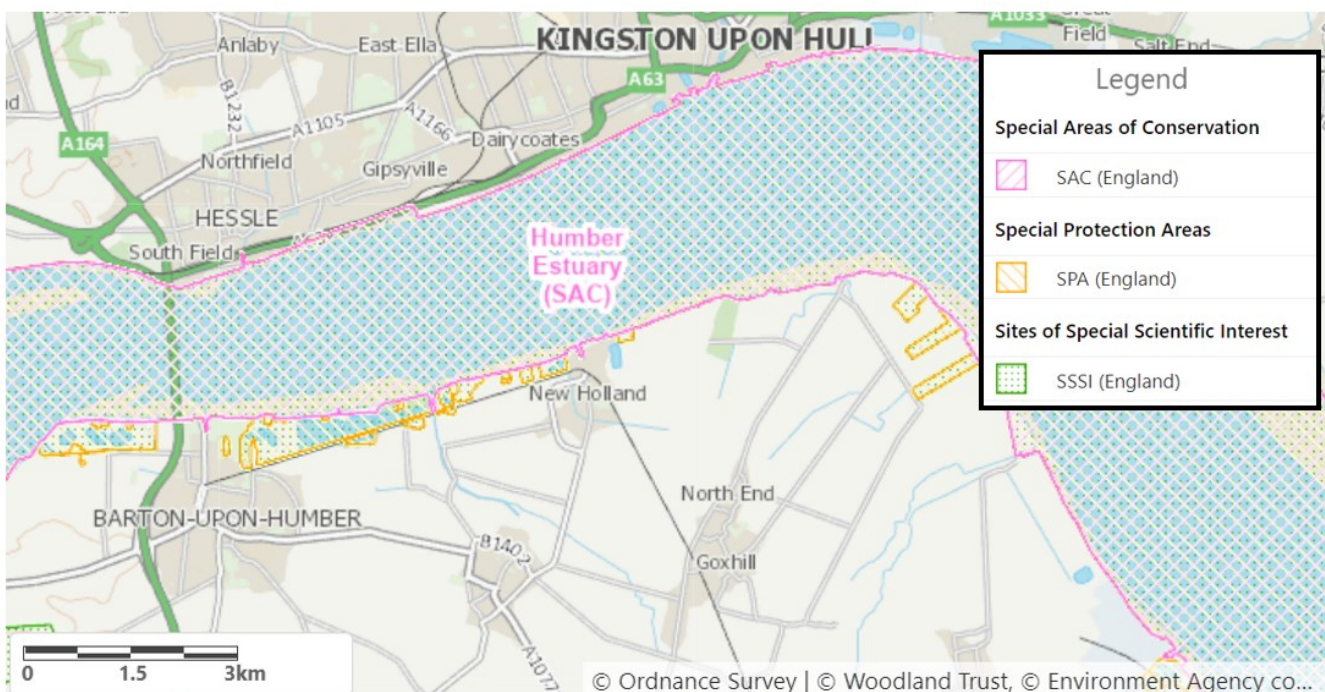


Project Funding

The majority of this project will be funded by the Government. However, there will still be a substantial amount of supplementary funding to be sourced to help achieve our goal to reduce economic, social, and environmental harm in the long term, together with delivering amenity and environmental enhancements. Where possible, we will be looking to project partners for local funding contributions to help gather the remaining funds required to deliver the project.

Environmental Opportunities and Constraints

It is highly important that we fully understand the environmental opportunities and constraints of the project area, as environmental risk must be considered throughout the optioneering process. Sometimes the cheapest option to construct flood defences can be at the detriment of the environment so it is important that we find a balance between a financially viable option which works with the existing local conditions.



This map shows the Special Areas of Conservation, Special Protection Areas and Sites of Special Scientific Interest. (The areas shown as SPA are also designated SSSI)

During the options development process we will also be looking for potential opportunities to enhance the current environment. Any opportunities within the project study area need careful consideration and any works may lead to a requirement for the creation of compensatory habitat.

There have been many species identified during our recent ornithology (bird) surveys recently including yellowhammer, starling, song thrush, skylark and bittern just to name a few!



Working Together

We are in the process of updating our project webpage on Citizen Space! This page will be regularly updated with our progress. We are also looking into how we could make the page more interactive so keep an eye out for some new features coming soon!

We are also looking for other ways to spread the word and will continue to seek out community magazines and forums such as the Bartonian to help spread key information and seek your input. If you have any suggestions on how/where we can share information in the community, please let us know.

We will continue to hold meetings with our RAG members every two months. The group is made up of key stakeholders and community organisations, who meet every two months. Their role is to act as a conduit between the communities and the project team to help ensure our stakeholders have a voice in the projects development.



Photo taken on our site walk at the second RAG meeting in May 2022, moments before heavy rain!

Next Steps

We are continuing to carry out flood modelling and ecological and environmental surveys throughout the next few months to help inform the shortlist of options to investigate further. If you have any concerns or queries, please contact us via the project inbox.

Our next Resilience Advisory Group meeting in early July will focus on the theme of engineering and we look forward to sharing updates from this meeting with you in our next newsletter. We look forward to holding the next Steering Group in meeting mid-July.

Contact Us!

Got a question? Why not contact our dedicated project team.

Email: BartontoNH@environment-agency.gov.uk

Or to find out more scan the QR code to be taken straight to our Citizen Space webpage!



SCAN ME

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

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.

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.

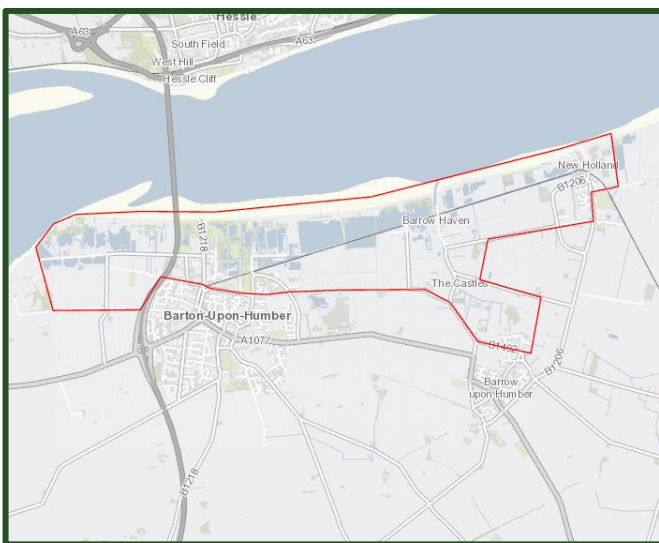


Figure 1: The red line on this map shows the extent of the project study boundary.

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.



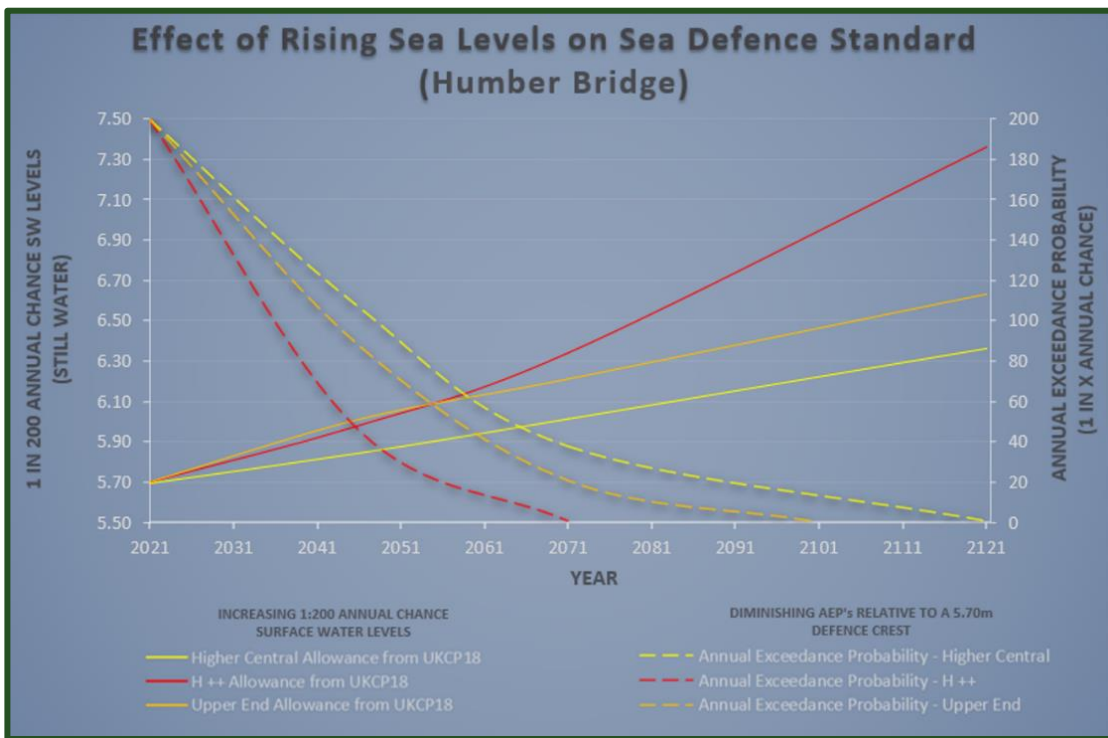


Table 1: Predicted sea level rise for a range of 1 in 200 annual chance water levels and associated reduction of Annual Exceedance Probability of a typical existing embankment near to the Humber Bridge. The ranges are determined using three standard climate change prediction scenarios up to 100 years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

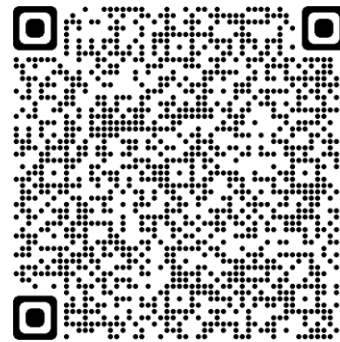


Figure 3: Drone image taken of Barton frontage above the Humber Bridge looking eastward towards New Holland.

Aerial Image of William Blythe Tillery and Clay Pits - 2022

Welcome to the Project

Welcome to the fourth edition of the Barton to New Holland Tidal Flood Alleviation Scheme Newsletter.

Tidal 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 community resilience, sustainability, and adaptation at its core.

Project Update

Firstly, we would like to thank you all for your continued support on this project. We made good progress during 2022 and will continue to do so during 2023.

This year we are continuing to engage with our Resilience Advisory Group and Steering Group to help with the assessment of options and better understand how they will impact and benefit the wider community.

The Groups are made up of local residents and representatives from environmental bodies such as Natural England and Lincolnshire Wildlife Trust, North Lincolnshire District council, and internal drainage board authorities.



Figure 1: The red line on this map shows the extent of the project area boundary between Barton to New Holland.

Ground Investigation Surveys

In January we began our first phase of on-site ground investigation surveys with our delivery partners, Jackson Civil Engineering. These surveys will help us understand the makeup of some sections of the existing flood embankments and underlying ground.



Figure 2: The project team on site using a cut down rig.



Figure 2: One of the Hydrogen Cells used to power the site.

As an organisation, the Environment Agency are committed to reducing carbon emissions and being as clean and green as possible throughout all stages of a project. Therefore, to provide power to our ground investigation sites we have chosen to use hydrogen fuel cells and solar panels.

Hydrogen fuel cells are a zero-carbon alternative to traditional diesel generators. Not only are they better for the environment, but they are also significantly quieter to run compared to diesel generators, meaning less disturbance and disruption to the community, and surrounding residential areas.

Landscape and Heritage

Our cultural heritage consultant and landscape architects from Arup have been conducting desk-based and field-based research to understand the historic environment and landscape between Barton to New Holland. This will allow the project team to be sensitive to landscape, cultural and heritage sites within the project area when considering the design.

The area is complex and diverse, and findings span multiple archaeological and cultural periods with local, regional, and national significance.

Studies show that there are:

- 1,421 recorded built heritage assets and archaeological sites with the majority dating from the Post Medieval period.
- 220 of these are designated heritage assets meaning they are sites of national importance.
- The remaining 1,201 are non-designated heritage assets meaning they are of local and regional importance.

If you would like to know more about our historic and cultural findings let us know via our inbox BartontoNH@environment-agency.gov.uk



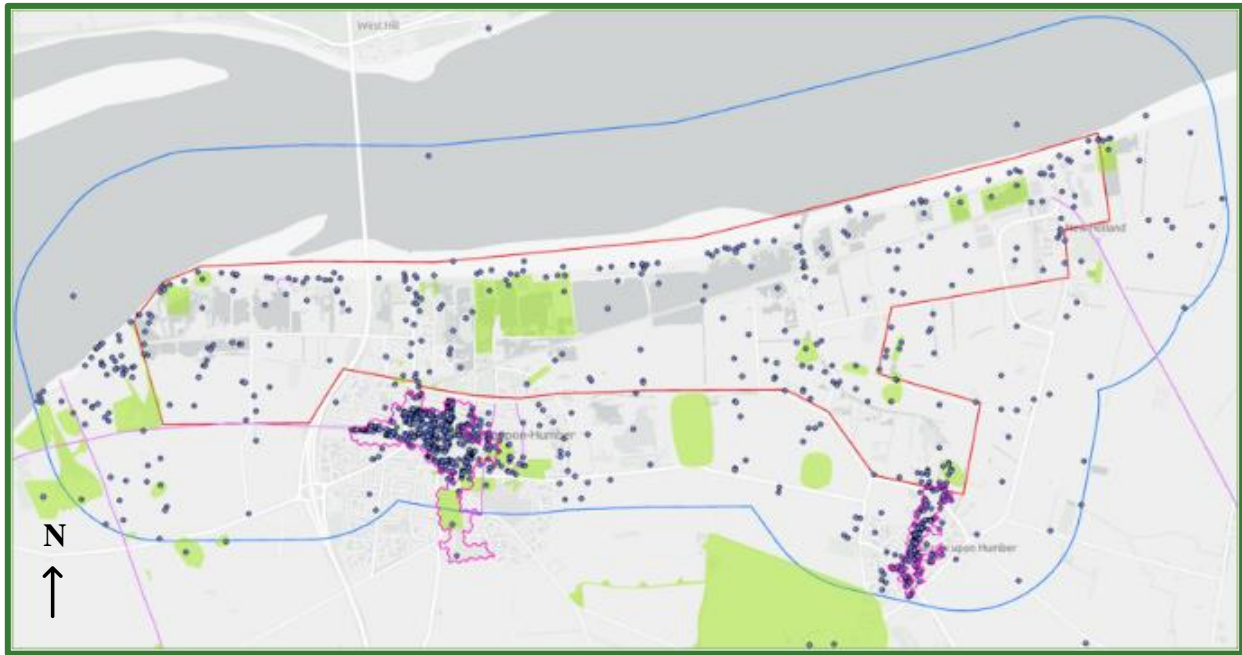


Figure 3: Map showing the locations of the non-designated heritage assets. The red line indicates the project area, and the blue line indicates the study area. Produced by Arup © 2022. NHLE data are reproduced under Open Government Licence Version 3.0, 2022. HER data are reproduced with the permission of North Lincolnshire Council, North Lincolnshire Council Copyright © 2022. Base map contains OS data, Crown Copyright © 2022.

Engagement

In January 2023 our Citizen Space webpage had a refresh! Access the webpage via the link or QR code below. The updated webpage is more user friendly and should be clearer and easier to navigate. On the site you can find out more about the project team, the project objectives, view photos taken on site by members of the project team and read our quarterly project updates.

We would love to hear what you think of our Citizen Space Webpage! Do you find it easy to use? Is there any other information you would like to see on there? Let us know via our inbox BartontoNH@environment-agency.gov.uk

During the Spring we will be producing a project overview video. The video will be used on the Environment Agency's social media and as a promotional and informational tool for our project. Keep an eye on our Citizen Space for the premiere!

Next Steps

- Continue working with the Resilience Advisory Group and Steering Group to evaluate and discuss options. The options will be appraised in detail during the summer/autumn of 2023 to determine the preferred option and measures that will be included in an outline business case towards the end of the year.
- Over April and May, we will be undertaking topographic and non-intrusive surveys to inform the shortlist development. Any landowners who may be affected will be written to in advance.
- We are continuing with environmental surveys and baseline reporting. Our Year 2 bird surveys are currently scheduled to take place until the end of March.

Contact Us:

Email: BartontoNH@environment-agency.gov.uk

Citizen Space: Barton to New Holland Citizen Space





View looking towards Humber Bridge from New Holland – July 2023

Welcome to the Project

Tidal flooding is a long-standing problem for the communities of Barton, Barrow and New Holland, along the Humber Estuary. 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 better the community's ability to respond to, withstand and recover from flooding.

This scheme aims to develop an approach to alleviate tidal flooding which has the community, sustainability, and adaptation at its core.

Project Update

In May, a topography survey was completed, this provided the team with a 3D grid of references and the varying heights of the ground. The findings from these surveys will help us to assess which options will work best with existing ground conditions.



Figure 1: The red line shows the extent of the project area boundary between Barton and New Holland



Bird Survey Update

Over the past year we have been conducting on site bird surveys to gather data on the numbers and distribution of breeding and non-breeding birds across the site. These surveys are used to identify any key species living and breeding within the project area. The data from these surveys will help us to identify areas of sensitivity, better understand how potential options may impact/interact with the local wildlife and how we could adapt our options to protect their habitats.

In 2024 we will be carrying out intertidal botanical and waterbody surveys to explore how our option designs could contribute to increased biodiversity net gain.

If you have any questions about these findings or would like to know more, please email us at BartontoNewHollandFAS@environment-agency.gov.uk

Ground Investigation Results

In February, we visited site to conduct ground investigation surveys. The aim of these surveys was to confirm site-wide ground conditions to inform the options appraisal.

The ground Investigations revealed that all embankments are similar in structure and composition with only a few variations. The ground under the tidal flats deposits (marsh land) is of low strength, this type of ground condition will not be suitable for all options. We will now analyse the data and assess the shortlist of options and their suitability further.

Bird Surveys – What we found

14 Bittern Territories
(That is 6% of the national population of Bitterns)



4 Marsh Harrier nests



83 Cetti's Warbler territories



53 species were identified in total, 9 of which are red listed and are endangered in the UK, Channel Islands and Isle of Man

© Charles Homler

Email: BartontoNewHollandFAS@environment-agency.gov.uk

Web Search: [Barton to New Holland Tidal Flood Alleviation Scheme - Information Page - Environment Agency - Citizen Space \(environment-agency.gov.uk\)](#)



Get involved

We have been looking at new ways to spread the word about this project and get even more of the community involved.

A poster is on display in local shops, nature reserves, and community centres. If you haven't seen one yet and know a good place for one to be displayed, please let us know by emailing us at – BartontoNewHollandFAS@environment-agency.gov.uk

Earlier this year our project web page had a refresh, search Barton to New Holland Flood Alleviation Scheme online to see. On this page you can find the latest project updates and information, spread the word among your friends and family and let them know about the important works coming to your area.



Figure 2: View of Humber Bridge from Waters Edge Country Park and Visitor Centre

Next Steps

Project

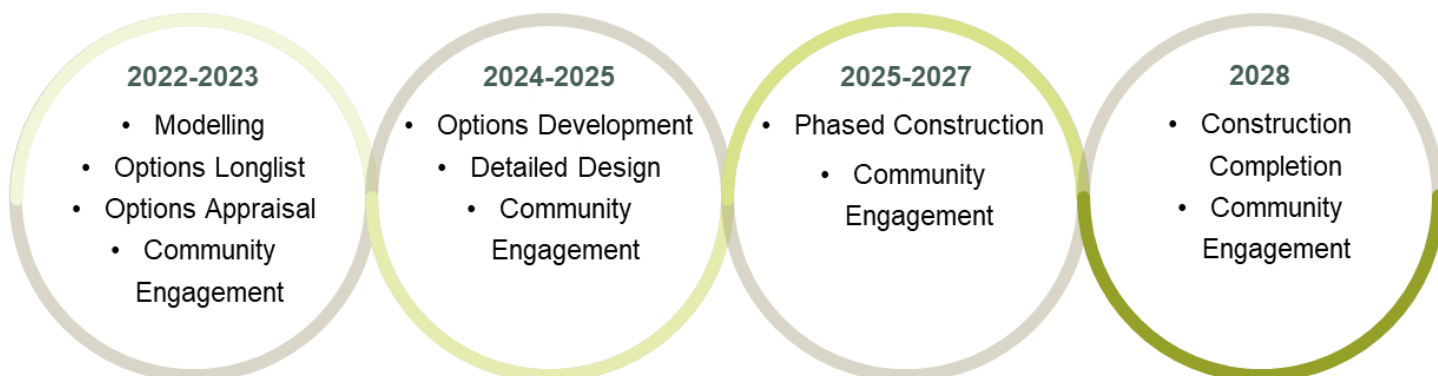
- We are further developing and refining the short list options, with the aim to choose a preferred option early 2024.
- We will shortly be starting our economic assessment; this must be completed as part of the funding application process.

Engagement

- In early 2024 we will be holding drop-in events to share our draft plans with the wider community, keep an eye on our newsletters and Citizen Space for more information on upcoming community events.

Project Timeline

The project is due to be completed in 2028. The timeline below explains what will happen at each stage of the project.



Email: BartontoNewHollandFAS@environment-agency.gov.uk

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Welcome to the Project

Tidal flooding is a long-standing problem for the communities of Barton, Barrow and New Holland. Previous tidal flood incidents such as the last major event which took place on the 5 December 2013, highlight the need for improved tidal flood defences and increased community resilience.

This scheme will develop an approach to alleviate tidal flooding which has community resilience, sustainability, and adaptation at its core.

Project Update

As we approach the end of the year, we are finalising the modelling and economic assessment of the short list of options to identify our preferred option.

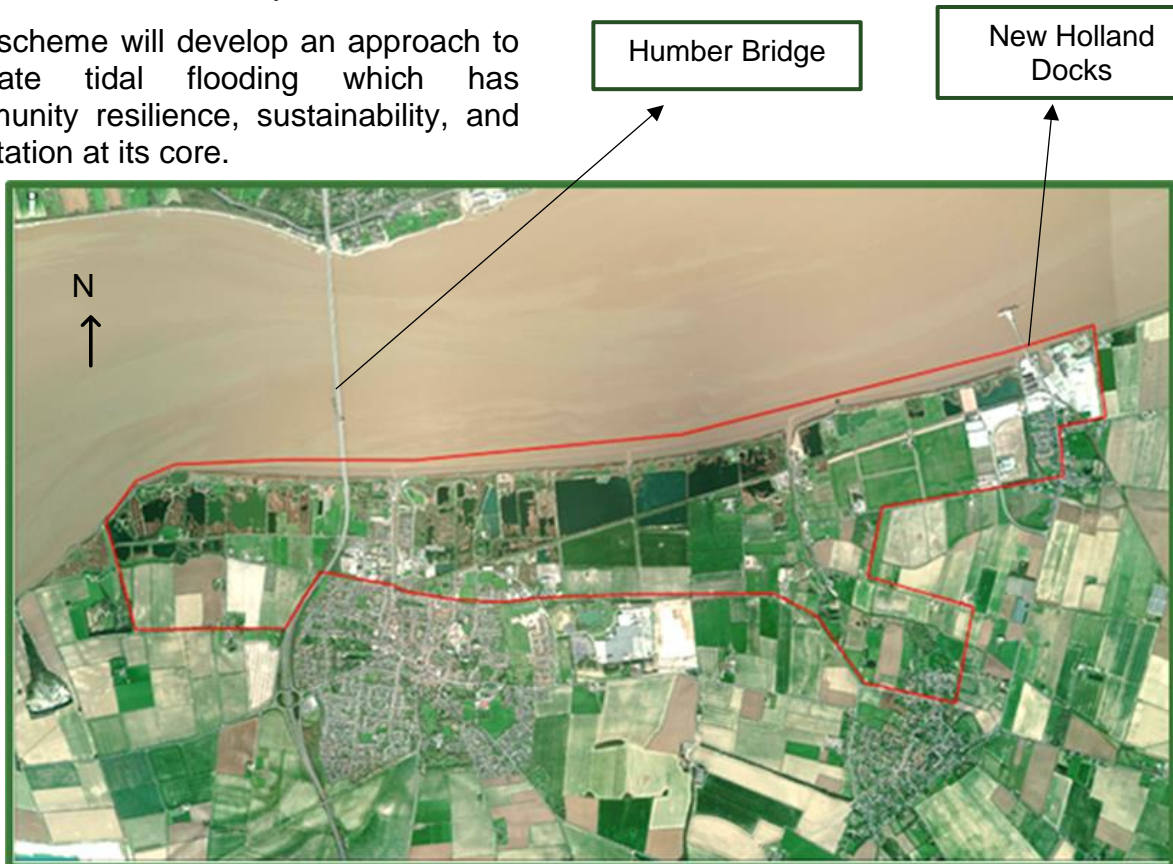


Figure 1: Map showing boundary of project site (Boundary shown in red)

Biodiversity Net Gain

The focus of our September Resilience Advisory Group was Biodiversity Net Gain (BNG). BNG is a government strategy, developed to ensure that natural habitats and nature are in a better state than they were before development.

This strategy has been brought in to counteract any loss or degradation of habitat caused by development. The strategy will become law in 2024 and all developers will be required to deliver 10% BNG. The Environment Agency has committed to deliver at least 20% Biodiversity Net Gain on all our projects and schemes from 2023.

There are several ways that we can deliver Biodiversity Net Gain, through the delivery of new habitats, including green spaces, planting trees and restoring damaged or lost habitats. At our September Resilience Advisory Group, we asked members to use maps of the local area to identify potential approaches and areas suitable for habitat development. The group identified over 36 areas which are now being reviewed by our natural environment and sustainability team.

Bat Surveys

In mid-November the team were on site conducting bat surveys. These are just one of several ecological surveys we are required to complete to ensure that no wildlife or habitats are disturbed or impacted by our development. All our ecological surveys aim to cause minimal disturbance to local residents and businesses.

Habitat Types



Woodland



Intertidal flats



Wetlands

Get Involved

Email: BartontoNewHollandFAS@environment-agency.gov.uk

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In February 2024 we will be holding community events across Barton, Barrow Haven, and New Holland to share our options with you.

Drop-in Events:

New Holland Community Centre,
DN19 7RR
20.02.24 between 09:00 and 12:00

The Ropewalk, Maltkiln Road, DN18 5JT
22.02.24 between 12:00 and 20:00

The Haven Inn, Ferry Road, DN19 7EX
23.02.24 between 12:00 and 17:00

These events are your opportunity to meet the team and find out more about how we plan to address tidal flooding in the short and long term.

We want to ensure that our designs work for your communities, therefore, we need your views and opinions. If you are unable to attend in person, you will also be able to view our proposals and give your feedback online, via our Citizen Space webpage - [Barton to New Holland Tidal Flood Alleviation Scheme - Information Page - Environment Agency - Citizen Space \(environment-agency.gov.uk\)](https://www.environment-agency.gov.uk/citizen-space/barton-to-new-holland-tidal-flood-alleviation-scheme)



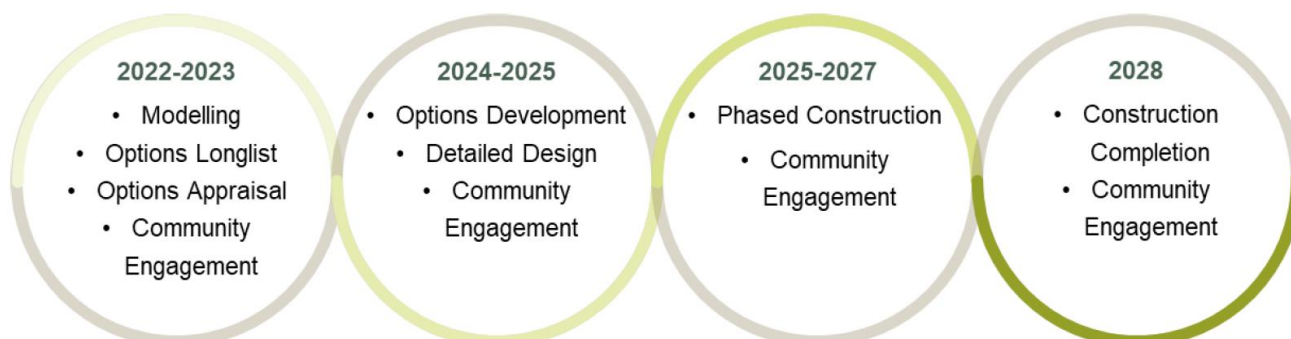
Figure 2: Aerial image of Barton-Upon Humber

Net steps

- We are approaching the stage of the project where we can share with you the proposals we have been developing over the past year. Drop into one of our events in February 2024 to find out more.
- We are continuing with our environmental and ecological surveys. If you see a member of our team on site, do not hesitate to approach them to ask for more details about their work.

Project Timeline

The project is due to be completed in 2027, the below diagram explains the steps to construction completion.



Email: BartontoNewHollandFAS@environment-agency.gov.uk

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