JUNE 2025

Bridgwater Tidal Barrier (somerset.gov.uk)

NEWSLETTER

# BRIDGWATER TIDAL BARRIER

## Creating a community resilient to flooding and coastal change

The Bridgwater Tidal Barrier scheme has been developed by the Environment Agency and Somerset Council due to the increasing tidal flood risk to Bridgwater town centre and the surrounding area. The scheme will deliver a tidal barrier and improvements to downstream defences on the River Parrett near Chilton Trinity, and will reduce tidal flood risk to 11,300 homes and 1,500 businesses.

The whole scheme comprises:

- Constructing a tidal barrier on the River Parrett, next to Express Park, Bridgwater
- Improving existing downstream riverside banks and constructing new secondary flood banks
- Improving fish and eel passage at 12 upstream sites on the rivers Parrett and Tone

**Welcome from the Project Director**

Hello and welcome to the summer edition of the Bridgwater Tidal Barrier (BTB) Scheme newsletter.

I'm Ross Barton, and I'm delighted to introduce myself as the new Project Director for this significant infrastructure project. I have taken on this role from Jeanne Capey, who has been instrumental in progressing this project to its construction phase. Thank you, Jeanne, for your hard work and dedication to this project.

It's a real privilege for me to be leading the BTB Scheme at such an exciting and important phase, as we move deeper into the construction programme and begin to see the physical transformation of the landscape. Leading this project is a full circle moment for me, as I started my career as an apprentice flood defence engineer working in Bridgwater and the surrounding Somerset Levels. I've been involved with multiple projects that have created new habitats, including locally at Steart Marshes and until recently leading a major flood defence and habitat mitigation project further up the Severn Estuary at Avonmouth Severnside.

I've worked with the Environment Agency (EA) for over 20 years, most recently managing the EA South West capital investment programme with a particular focus on delivering large-scale flood risk and environmental projects. I'm passionate about sustainable infrastructure that not only protects communities but also delivers long-term benefits for those communities and the wider environment.

I would also like to iterate that the BTB Scheme is about more than flood defence, it's about creating a more resilient, greener future for Bridgwater and its surrounding communities. I've been hugely impressed by the strength of collaboration already in place across the project team, contractors, partners, and local stakeholders. As we continue with major works on site, I'm committed to keeping communities informed, building on the engagement already underway, and ensuring we deliver a Scheme we can all be proud of, one that stands the test of time.

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In this edition we revisit why we need the Scheme and the benefits, we highlight the significance of the green credentials of the Scheme, and how social sustainability is a key principle in the wider benefits of infrastructure Schemes such as the BTB. We share with you the significant progress the Scheme has made this year already and what's coming up as part of the wider project programme.

**Thank you for your continued interest and support.**

Ross Barton
**Project Director, Bridgwater Tidal Barrier Scheme**

## Why the Bridgwater Tidal Barrier Scheme matters

The Bridgwater Tidal Barrier Scheme will protect over 11,300 homes and 1,500 businesses from tidal flooding.

While the existing flood defences in Bridgwater and downstream are doing their job for now, the risk of tidal flooding is increasing. Just over 10 years ago, a combination of high tides and river flows nearly led to severe flooding in the town. Without this Scheme, rising sea levels and storm surges would place Bridgwater and surrounding communities at increasing risk of flooding.

Flood defences will be required downstream of the barrier to prevent flood water bypassing the barrier and to better protect the villages of Combwich, Chilton Trinity and Pawlett, the A38, the railway and farmland. We will do this by improving the existing flood defences and building new secondary defences.

Villages protected by the River Parrett flood banks are low lying, with some areas lower than 7 metres Above Ordnance Datum (AOD) and much of the area below 8 metres AOD. In Bridgwater Bay, and hence in the River Parrett, the 1 in 20-year extreme tide level is fast approaching 8 metres AOD. In 100 years, it will be nearly 9 metres AOD. Not only must our local operatives continue to maintain the existing flood banks, but we also have to raise and improve the banks where needed to keep ahead of the rising tide levels.

Without these essential works the banks would overtop or breach, and the whole area would be at risk of filling up with tidal waters, potentially to depths of up to 1 to 2 metres. The economics for the barrier show that for every pound spent there is a benefit of £7.50.

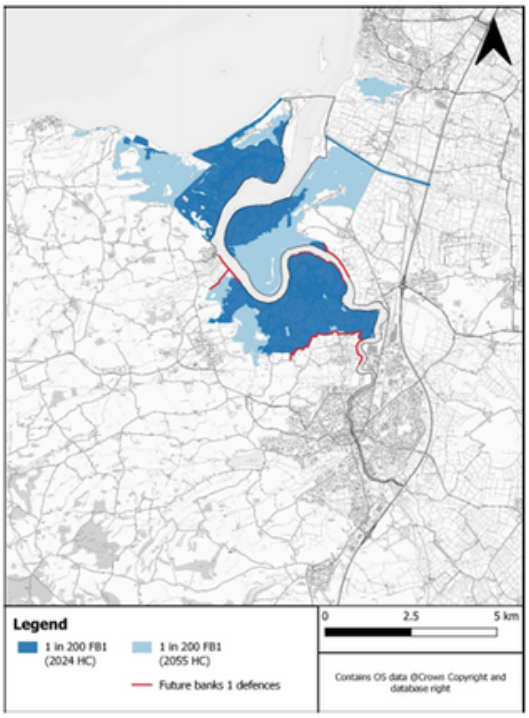


Figure 1 - With Barrier and defences

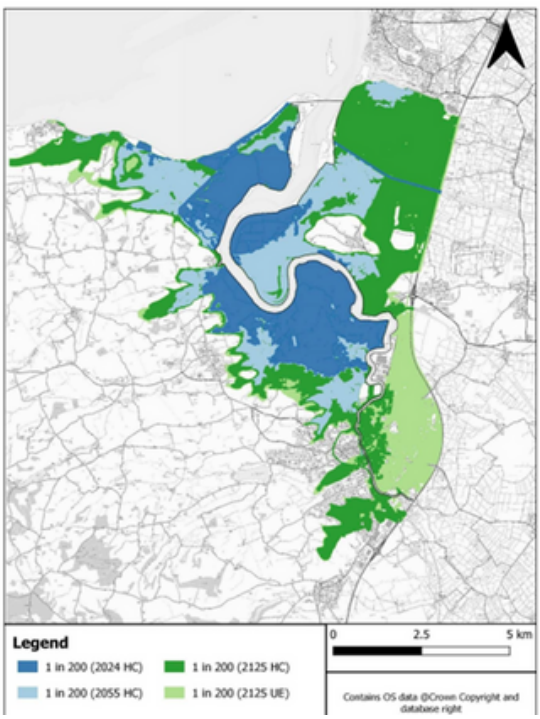


Figure 2 - Without Barrier and defences

The impact of flooding is far reaching, it's about homes, businesses, schools, roads and lives being disrupted significantly with a great emotional, physical and financial impact, that can take years for individuals and communities to recover from.

Each year, around 700 flood events are recorded in England, causing £2.4 billion in damages to homes, businesses, and infrastructure. Without action, these costs could rise to £3.6 billion annually by 2050. Therefore, investing in flood defences is one of the smartest things we can do.[from Public First]

- The BTB scheme will deliver a 1 in 200-year standard protection up to 2125 for the town of Bridgwater, and up to 2055 for the communities of Combwich, Chilton Trinity, and Pawlett.
- The proposed design of the scheme will ensure that the flood defences are able to adapt to climate change over the next 100 years, allowing it to cope with the expected rise in sea level during this time of 0.75 to 1 metre.
- The Scheme comprises more than just a barrier; the BTB includes new and improved downstream flood defences and better fish and eel passage at 12 key locations.

Delivering this vital scheme is complex, but wherever possible, we are working to balance the need to minimise disruption to communities and the environment with the importance of completing the tidal barrier and defences efficiently and effectively as possible.

## Safeguarding our Wildlife and Building Wildlife Highways

From bats to water voles, otters to great crested newts, we've found a range of protected species along the Scheme route. We're working closely with biodiversity specialists, Natural England, and ecologists to safeguard these animals during construction and to ensure conservation of the various species into the future.

To help bats continue their nightly journeys while we work, we've created special 'flight lines' where hedgerows were temporarily removed. These temporary fixes keep our winged friends safe until we can replant the hedges. You can see examples of this throughout the project at Straight Drove, Chilton Trinity, Pawlett, and Combwich.

Meanwhile in Chilton Trinity, we have recently constructed a new watervole habitat to support this protected species throughout the route of the construction of the secondary embankment. The new habitat will become a receptor site for watervoles to be translocated into and away from the works.

Bat fencing at Straight Drove

New watervole ditch in Chilton Trinity

## What's been happening?

### Piling update

Since our last update in March, the piling works for the bypass channel and West cofferdam continues to make good progress.

For both the northern and central sections of the bypass channel, each of the piles has been pitched into place and fully back driven. The piles that make up the southern bypass channel anchor walls have also been pitched and vibrated into their position and will require back driving over the coming weeks to get them to design level.

In addition, the team have also completed the West, South, and more than half of the East walls of the West Cofferdam – this is a temporary structure built to exclude water and soil from a specific area, so that construction work can be done in dry conditions.

Most notably, the first of the tubular piles, that will form part of the permanent works within the West Cofferdam have also been installed in the channel.

Looking ahead, plans are currently being finalised to commence works on the East cofferdam which sees the jack-up barge move position within the river.

Bypass channel piling

Tubular piles - West cofferdam

Tie rods installation


Anchor wall installation

# What's been happening? (Continued)

## Load Transfer Platform on the West bank is now complete

Back in January, 834 pre-cast concrete piles were installed on the east bank of the River Parrett to support the approach to the tidal barrier at the site where piling works for the East cofferdam will be carried out.

Following the initial installation, each of the 834 piles were cropped down to a design level of 7.15m AOD before having cast in-situ pile caps added to them.

Once the capping process was complete, the backfilling between the caps was carried out and the platform was built up to a level that was necessary.

The work's finishing touches included a layer of 6F5 - a type of well-graded stone, and the installation of an access ramp onto the platform itself.

In addition to the load transfer platform, the formation of a northern laydown area immediately adjacent to the platform has also been completed. This will provide an extended area for the storage of piles and materials.

Load Transfer Platform (Left hand side)

Emergency drill with Avon fire & rescue

## Straight Drove road diversion

Works at Straight Drove (Chilton Trinity) have also progressed since our last update ahead of the diversion road opening up imminently.

In May, protection slabs were installed at both the Northern and Southern entrances to the diversion road. These are laid over the underground services and culverts. This was done during the night to help minimise disruption as much as possible to the local community.

The diversion road has since been stoned, tarmacked, and had white lines added.
The fencing around the diversion road has also been complete, along with road signs installed on both the approach to the diversion road and the road itself.

Straight Drove diversion works

## Emergency drill with Avon Fire & Rescue at Bridgwater Tidal Barrier

Bridgwater Tidal Barrier recently welcomed Avon Fire & Rescue service to site to oversee an emergency person overboard drill between Kier and Red7 Marine from the Jack up barge and provide their feedback.

The training exercise was designed to enhance the responsiveness and coordination of the team in real-life situations with RED7 completing the rescue of a simulated victim (Lifebuoy ring) in the channel.

David Reeves, Kier Safety, Health, and Environment manager (SHE), was on hand to help with the coordination and said: "The exercise not only reinforced the skills of the responders but was a positive example of working together with local emergency services to ensure the highest level of safety in the event of a real incident."

## What's been happening? (Continued)

### Kerb Realignment works for enhanced safety and efficiency

At Bridgwater Tidal Barrier's entrance to site on the Express Park side (East bank) of the project, a recent realignment of the kerb outside of the local police station has been completed.

For better traffic efficiency and safer vehicular access to site, the decision was made to move the kerb back from its original position to create a smoother turning circle and a larger carriageway as a result.

The enhanced carriageway also helps to negate the potential issue of a bottleneck or breakdown scenario. This has had the additional positive effect of ensuring that police vehicles can make a quick exit at all times from the nearby emergency blue light exit that is situated immediately before the works.

Kerb realignment

## What's happening over the next three months?

- Completion of the Southern anchor wall for the bypass channel
- Piling works continue for the West and East cofferdams
- Continuation of the haul road throughout Chilton Trinity towards the end of the secondary embankment towards Perry Green
- Straight drove road raising in line with the secondary embankment
- Further enabling works in Pawlett and Combwich, such as haul road construction and ditch works
- Ongoing environmental surveys

## Social sustainability

The organisations and contractors delivering the BTB Scheme are also committed to creating a legacy of social value too – this is termed social sustainability and is commitment to support and enhance community needs not only for today but also support the ability of future generations to maintain a healthy community.

Social sustainability is a core pillar of the Scheme's delivery, ensuring that local people, businesses, schools experience real benefits beyond the engineering itself.

## Examples of social sustainability activity on the BTB scheme include:

| What | How |
|---|---|
| **Local Employment and Apprenticeships** | The contractor and supply chain are working to prioritise local recruitment where possible. This supports economic benefits and investment within the Somerset economy. |
| **STEM Education and Careers Engagement** | Engagement with local schools and colleges supports awareness and interest in careers in Science, Technology, Engineering and Mathematics (STEM). Careers talks, site visits, and classroom-based sessions help to inspire the next generation of engineers and environmental professionals. |
| **Supplier Diversity and Local Procurement** | The project actively encourages procurement from local suppliers and SMEs, helping to strengthen regional supply chains, reduce transport-related carbon emissions, and support inclusive economic growth. |
| **Volunteering and Community Support** | Project staff have contributed time and skills to support local causes, from hands-on volunteering days to fundraising and community clean-ups, reinforcing the Scheme's commitment to being a good neighbour. |
| **Open Doors Event** | An open-doors event has enabled students aged 16-21 to see behind the scenes of the project and understand how it is progressing. These sessions offer insight into working in a construction environment. Work experience opportunities have also taken place on site. |
| **Sustainable Urban Drainage Systems (SuDS) and Environmental Enhancements** | SuDS interventions are designed not just for surface water management but also to improve biodiversity, water quality, and community amenity. Where possible, the BTB Scheme seeks to integrate SuDS features such as:<br>• Rain gardens in landscaped areas<br>• Permeable surfaces to support natural infiltration<br>• Integration of habitat features into SuDS design (e.g. marginal planting, insect hotels) |
| **Wembdon Primary School Improvement Project** | An example of community investment includes the support provided to Wembdon Primary School, where improvements to the physical environment have been delivered providing safer, greener spaces for local children to learn and play. |
| **Material Donations** | Excess materials and equipment from the construction process have been repurposed or donated for community use, reducing waste and offering tangible benefits to local schools and voluntary groups. |

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## Clean Energy

Our sustainability activity also extends to the BTB Scheme site too, where Kier have been trialling solar power and green hydrogen solutions to reduce carbon emissions.

Collaborating with the EA, the minimum 12-month trial is designed to explore if solar power with a green hydrogen backup is a viable primary power supply where access to mains electricity is not available.

The technology supplied to site aims to be zero-emission power at point of use due to its combination of solar panels and hydrogen fuel cell power pack. Incorporating a battery that integrates with solar panels, allows the system to convert energy directly into clean, renewable power. **Read the full story here**.

Hydrogen and panels on site

## Community Updates

### Latest update on sound disruption and June drop-in

Thank you again to those who attended our recent drop-in sessions in Chilton Trinity in May and June in relation to sound disruption. We've reviewed the feedback gathered from the initial drop-in in May and wanted to keep you updated. Part of our engagement on this matter, was creating a Community Response information pack.

This information pack contains important information about current construction activity, how we're working to minimise sound disruption, how feedback is shaping our approach and key FAQs. **You can view the Information Pack on the BTB Scheme webpage Bridgwater Tidal Barrier (Community Response to Noise Disruption Document).**

Further feedback and suggestions from the June drop-in on community social sustainability moving forward is currently in train and we will respond to that feedback soon.

### Public site visits

Our monthly site visits have proven exceptionally popular with all allocated tickets being booked in a matter of weeks following the launch.

These visits are a good opportunity for the local community to find out more detail around the history of the Scheme so far and to see the construction site from the viewing platform.

Site visit from May

### Parish Council meetings

We continue to regularly attend parish council meetings across the local area including Chilton Trinity, Pawlett, Otterhamption and Wembdon, to keep them updated and answer any questions.

## Supporting WWT

In April there was a Public Consultation in Angel Place, Bridgwater for the new riverside park urban wetland conservation area proposal. There were over 50 responses, with many more people looking at the stall and becoming aware of the project. Some interesting ideas from the local community included; viewing platforms, art installations, learning opportunities, nesting in pil boxes, boardwalks, wildflowers and native planting and bug hotels to name but a few. Further consultation sessions are planned for July at Express Park and Chilton Trinity, dates and details will be shared shortly. If you have any other ideas and or comments on the riverside park design, please email: Joe.May@wwt.org.uk

## Boards

If walking on the perimeter of the construction site, you may have also noticed our information boards that have gone up around the site perimeter. They have interesting information about the scheme and its progress to date.

## 4D Construction Simulation Animation – Watch how the Barrier Will Come to Life

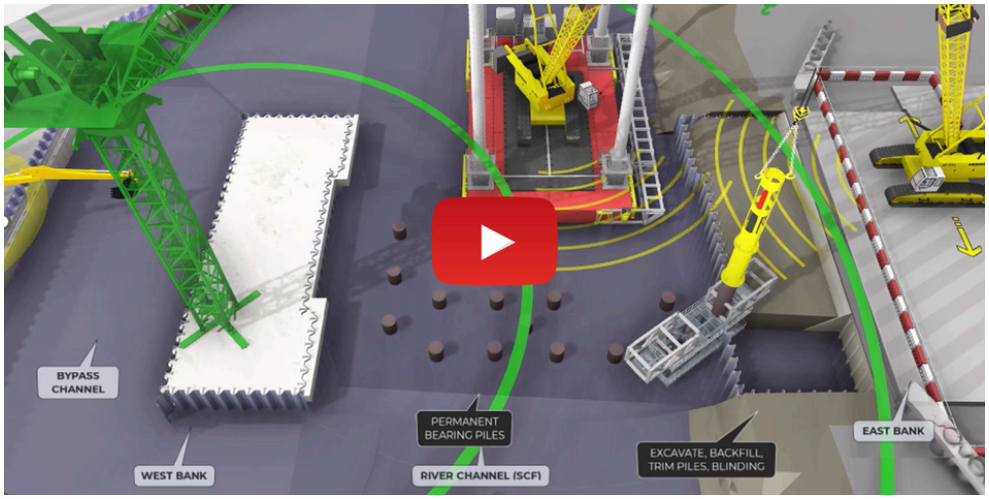
Ever wondered how a tidal barrier is built? Check out our 4D animation that walks you through the construction process from foundation work to the installation of our state-of-the-art moveable gates. This visual journey shows the cutting-edge engineering that will reduce the risk of tidal flooding in Bridgwater for the next 100 years!

4D modelling is playing an important role in enhancing the planning and execution of works, it integrates programme, logistics, safety, design, and site information into a single dynamic model.

This model provides a simulation of the intended construction process, allowing teams to review and refine the plan, improve coordination, and enhance overall project efficiency. It fosters collaboration and enables teams to rehearse and optimise their approach before work begins on site.

Over 12 months, the 4D model was continuously developed and refined through a series of reviews and team planning exercises. This iterative process helped align the team, optimise the programme, improve temporary works design, and enhance safety.

**Now Live https://youtu.be/v9JPzNUSoPQ or click the image below.**



## Further information

**Working Hours**
Our core working hours on site are from 7am to 7pm.
There are certain activities that have been granted extended working hours and this will be communicated to affected stakeholders when required.

If there is anything you would like to see or hear more about in our quarterly newsletter, raise any other questions or concerns, please email **bridgwater.barrier@environment-agency.gov.uk**
Would you like the BTB team to give an update at one of your events? Are a community group or school interested in knowing more about the project then please get in touch.