

# Yarm Flood Alleviation Scheme

## December 2022 Newsletter

**Welcome to the first edition of the Yarm Flood Alleviation Scheme newsletter. This newsletter will form one of the ways that we'll keep you updated on our Flood Alleviation works in Yarm, as the project develops.**

### Introduction

Yarm has a long history of flooding, dating back as early as 1771, when Yarm High Street flooded to a depth of over 4 metres. In 1993, the original Yarm flood alleviation scheme was completed. This scheme involved the construction of flood walls and flood gates to protect Yarm from the River Tees. Unfortunately, in 1995, these new flood defences were overtopped, and Yarm suffered flooding from the River Tees (see figure 1 below). Additional works which built on the previous scheme were then undertaken in 2002. These works involved raising the flood walls by 0.5m (to their current height) and the installation of numerous new flood gates. In total, the Environment Agency maintains 1.3km of flood wall and 32 flood gates in Yarm, with the defences providing critical flood risk reduction to over 500 homes and businesses.



Figure 1 – Aerial image of Yarm during the 1995 flood event.

A project to replace the flood gates in Yarm started in 2017, with 30 flood gates being installed by April 2018. Unfortunately, the flood gates that were installed in 2017 are deteriorating and are challenging for our staff to operate. Whilst the existing flood gates can and will continue to be operated in the short term to protect Yarm, our assessments have concluded that new and improved flood gates are required, providing Yarm with a greater level of flood resilience.

The Environment Agency is looking to replace the Yarm flood gates because:

- The existing gates are deteriorating faster than expected. They continue to protect Yarm however the gates do need to be replaced.
- We have a new flood gate specification – using this specification to design new gates means that we will have gates that are safer and easier to operate.
- Wide single leaf swinging flood gates can be dangerous to operate in windy conditions or on uneven ground, putting our staff at risk of injury. Consequently, we have made some gates smaller and changed some to sliding gates to make them safer to operate.

Another benefit of the new gates is that we will be able to shut the gates more quickly. This means that we will be able to shut them later reducing the impact on residents. There will still be some instances where we need to close the gates early.

Over the last 18 months we have engaged with all residents and landowners in Yarm who have flood gates on their properties. We have agreed with all landowners whether their flood gate can be removed and blocked up or replaced. In some instances, we have agreed with the landowner to reduce the opening width of the flood gate.

Thank you for everyone's cooperation as we've gone through this process.

## Recent works

Our contractor has been carrying out various surveys to inform the designs of the new flood gates. This included a topographic survey which was undertaken at the end of October 2022. In addition, some localised site investigation trial holes have been carried out, allowing us to understand the construction requirements for the new gates. A drone survey on the river side of the flood wall has also been carried out to allow a visual inspection of the wall and the surrounding riverbank.

Once all the information from the surveys has been processed, the final flood gate designs will be completed allowing the gates to then be fabricated. Fabrication of the gates is a long process, so we are currently expecting to begin construction works in Yarm in Spring 2023.

To allow our contractors to work efficiently during this investigative phase, a temporary compound is being used on the corner of Bentley Wynd. A planning application has been submitted to Stockton-on-Tees Borough Council for a longer-term site compound for the duration of the main construction works.

Throughout the delivery and construction of this project, some disruption in Yarm will occur, however we will endeavour to keep this disruption to a minimum.



Figure 2 – Topographical Survey equipment in Yarm.

## Update on the project:

### Cladding:

The existing flood gates in Yarm have a wood effect cladding on them. As part of the Yarm Flood Alleviation Scheme, we are proposing to exclude cladding on the new flood gates. By excluding the cladding, the overall weight of the new gates will be reduced, making them safer to operate and improving our ability to visibly inspect the gates and monitor condition. All newly installed gates will be painted black on both the wet and dry side. The Local Planning Authority has confirmed that this is acceptable given the Environment Agency's permitted development rights.



Figure 3 – Existing flood gate 30 showing the wood effect cladding which won't be on the new flood gates.

### Gate types:

Ensuring that the new flood gates can be safely operated by our staff in poor weather and high winds is essential. For each gate we have calculated the expected wind loading (impact from the wind) based on the gate's dimensions and typical wind conditions seen in the build up to flood events. Where larger flood gates are needed for vehicular/public access, or if the flood gate is in a particularly exposed area, the wind loading (impact from wind) is higher. Where wind loading is highest and above an acceptable level for the use of hinged/swinging gates, we have spoken with the relevant landowners about our proposal to install sliding flood gates. The use of sliding gates at certain locations will enable the safe closure of the larger flood gates during higher winds, reducing the risk of injury to our staff and therefore ensuring the operation of the defences at Yarm are more resilient.

Currently 2 public access gates are proposed to be changed to a sliding mechanism, these are gate 17 accessed from Bridge Street, and gate 28, which provides access to Stockton BC's Yarm Wharf car park. An additional 5 private gates meet the criteria and are also planned to be sliding gates.

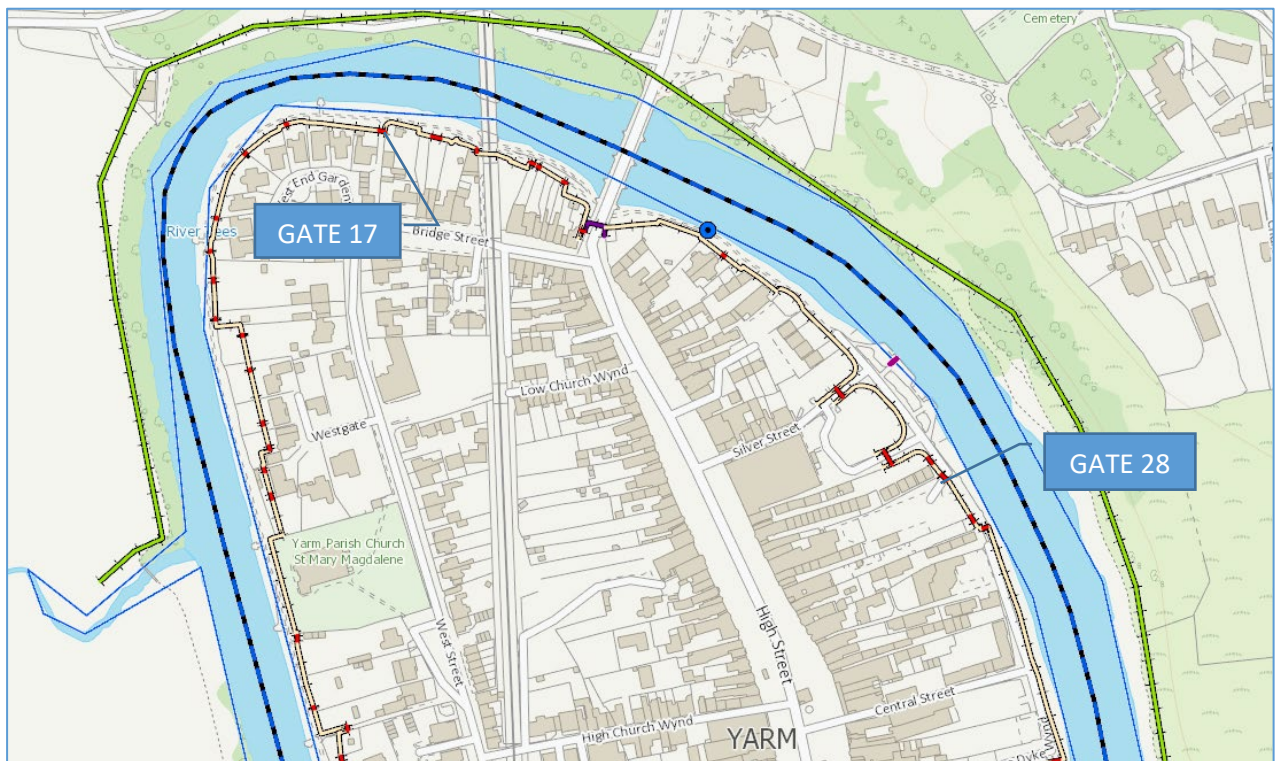


Figure 4 - Sliding Gates in Public Areas Location Map:

### **Public gate widths:**

The Environment Agency has consulted with the Local Authority (Stockton Borough Council), landowners and other parties such as the Fire and Rescue Service to understand the potential for reducing the opening width of three public flood gates in Yarm.

By reducing the opening width, the gate will be smaller and more manageable, which in turn will allow the gate to be secured in a safer and more effective time in high winds and during poor weather.

- Flood Gate 17 (Bridge Street) - Minor but essential and unavoidable reduction in opening width due to the new housing mechanism for the sliding gate. The opening width will be 2.6m, which will still allow vehicular access, as we do not wish to restrict public access to the riverbank. Access through this gate is limited as the width of the passage leading to the gate naturally narrows to 2.2m.
- Flood Gate 30 – This is currently pedestrian access only at 1.8m opening. The revised width will be 1.2m which will still be suitable for double pushchairs, wheelchairs, and parent with child side by side.
- Flood Gate 31 (Castle Dyke Wynd) – This is currently pedestrian access only. It has been agreed with the landowner that the opening width can be halved, to 1.8m.

### **Operational access improvements:**

Along the west side of Yarm, access to and between flood gates for our staff can be difficult, as there are several different steps and very small working areas/platforms on the river side

of the gates. We are developing initial proposals for some access improvements along the west side of Yarm to make access for our staff safer. Once we have these proposals, we will share these with the relevant landowners and stakeholders for discussion and comment.

### **Environmental enhancements:**

The Environment Agency met with Yarm Town Council, residents of Yarm and a representative of Matt Vickers MP in Spring 2022 to provide an update on the Yarm Flood Alleviation Scheme. During the meeting we took the opportunity to walk along True Lovers Walk. The great work of the volunteer group was discussed, and the Agency has been exploring whether there is scope to deliver any environmental enhancements, which would complement the work already undertaken. We have since engaged the Tees Rivers Trust, who have identified some potential opportunities to deliver improvements in line with the Water Framework Directive. The proposals are small scale soft engineered solutions designed to provide improved resilience to the riverbank through willow spiling, use of coir rolls or the utilisation of existing materials. We will share more on these proposals as they develop and once we've had initial discussions with key stakeholders.

### **Timescales**

We continue to work on the detailed design of the new flood gates. Construction is expected to start in Spring 2023.

### **Finding out more information**

We want to allow as many opportunities as possible for local community members to input their thoughts and opinions throughout.

If you would like more information or have a specific question, please get in touch with us via [EA-YarmFAS@environment-agency.gov.uk](mailto:EA-YarmFAS@environment-agency.gov.uk)

You can also visit our web page to keep up to date with the latest developments via <https://consult.environment-agency.gov.uk/north-east/yarm-floodgates>

Or the QRcode below



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