Frequently Asked Questions:

Arundel Tidal Walls Scheme - Phase 2

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Is the wall about to collapse?

The existing quay wall in front of Tarrant Warf is old and in a bad state of repair. Due to the masonry/rock nature of the construction it is not possible to predict when the wall would collapse if left untreated. For the team to understand the behaviour of the wall to the best of our ability, a robust monitoring regime has been in place since September 2020 with measurements of the deflection of the wall at 34 points recorded every week. This data is analysed as soon as it is received and there are procedures in place so that if the monitoring shows a marked increase, this will trigger an emergency response.

Can the wall be supported?

Supporting the wall to prevent it collapsing has been investigated. It is the opinion of engineers from the project consultant engineers and the Environment Agency's engineers that any work to support the wall risks precipitating collapse. If the wall collapsed onto plant and equipment, then that may result in more disruption to river users and potentially damage to residents' properties. Even if the supporting structure was successfully installed then it would probably result in increased flood risk upstream, downstream and on the opposite bank due to river constriction, elevated water levels and scour due to higher water velocity.

Are other parts of the river wall also in bad condition?

The quay wall through Arundel is maintained by a variety of differing owners. As such, various remedial/repair programmes have been undertaken over the years for different sections of wall. This means that the condition of the wall is not constant along the route, some sections have been repaired recently and the condition is good and some have not and are less good.

Why will sheet piles work this time if they did not last time?

Considerable time and effort has gone into understanding the challenges experienced during the last stage of works. We have learned that the geology beneath the River Arun is highly complex and so additional Ground Investigation works comprising boreholes in the river and the road of Tarrant Wharf have been undertaken. This has enabled us to tailor the design to the ground conditions that we are expecting to encounter and given us increased confidence going into the construction phase of the project. We have worked with the previous teams and applied their lessons learned to be prepared for this phase of the project.

Are the houses going to fall into the river?

We know from drawings produced at the time of construction that the Tarrant Wharf properties are on piled foundations which go into the bedrock. This means that the stability of the properties is independent from the stability of the wall. We will be monitoring all neighbouring properties during the construction phase.

Are the EA going to 'take over' Arundel again?

There is a small section of wall which has become unstable and poses a flood risk to Arundel. We are going to sheet pile in the river, in front of a few properties at Tarrant Wharf, from a jack up barge. Initially, all our deliveries will be received at our main site compound at the rear of Mill Road car park. From there, we will transport materials as and when they're needed to our other compound in River Road. We will be using River Road car park to load our construction materials and equipment onto the jack up barge, in the river. We are planning for all deliveries and the movement of materials between our site-compounds to take place outside of peak hours, to limit traffic disruption in the town. Any full road closures will be communicated to the affected residents as far in advance as possible. For a full list of parking restrictions and traffic movements please visit ADC traffic portal at https://one.network/uk.

Are we at risk of flooding if the wall does collapse?

If the wall were to collapse before the start of the project, we would enact our emergency plan to avoid any further damage and exposure of the wall to erosion from the river. To provide stabilisation to the frontage of Tarrant Wharf, rock filled mesh bags would be lifted and placed to the exposed area of the collapsed section by a crane based on a barge in the river. The wall collapsing would not result in flooding to the properties in the short term.

Is there an emergency response plan? What does this involve.

Please see information in question above and further detail below-

A work barge with a crane would be floated up from Littlehampton. Rock bags would be driven to the River Road car park and lifted on to the barge. The barge would then be moved downriver, and the bags lifted into place.

The bags are rubble/stone-filled Kyowa Filter Unit mesh bags of approximately 2T each and are available locally in the EA depot at Ford. The bags would be lowered into position slowly and carefully so as not to disturb the current location of the collapsed wall. Once we are satisfied with the final position of each bag, the quick release shackle would be released via a rope attachment and the lifting equipment lifted clear. The remaining bags would be positioned in the same manner. The boat would not be located beneath the load at any time.

The rock bags we have selected are durable, can be placed around unusual shapes (i.e. debris and scour holes), have sufficient mass to be stable in river flows up to 3.4 m/s individually (5.2 m/s when placed in groups) and can be lifted out at a later date for the permanent repair solution.

When will we do the project?

We have a planned start date of 31 July 2023. The complex nature of the construction means that the programme may change as the work progresses. Any changes to the programme will be communicated with as much notice as possible through the project website and direct contact with any affected residents. The main piling works will not start until September 2023.

We are aiming to complete the works by the end of Spring 2024.

What are the working hours?

Working hours have been agreed with the local authority and stakeholders prior to the works starting on site. These will generally be 08:00-18:00 on weekdays with workings attending site from 07:30. The project team will also plan works around daylight hours. Where possible and where safe to do so, temporary lighting will be utilised both in compound areas and river working platforms.

What will the noise be?

Noise levels will be similar to those encountered during the previous project. The project team will seek to mitigate noise levels using acoustic screening, arranging deliveries during appropriate hours of the day and by using low noise emitting plant, where possible. The noisiest phase of works, the main piling, will take place between September and October 2023.

What access will change?

Access routes will be similar to those utilised from the middle to the end of the previous project. The project team completed a ‘lessons learned’ session with members of the previous works team, to take those lessons forward into this next Phase. We have planned all traffic movements and restrictions with the aim to minimise disruption to the town. The traffic routes can be seen in the newsletters hosted on the scheme website.

What are Impacts on the river usage?

There will be disruption to river navigation during site mobilisation in the second half of August 2023. The river’s East Bank side (south at Arundel) will remain open to careful navigation during this period except during brief critical operations such as barge movements which will only occur on weekdays and will be kept as short as possible. Subsequently, the works will cause a **full closure** to all craft of the channel at Arundel between the A27 Bridge and Queens St Bridge from 8 September 2023 until Spring 2024 (for safety reasons this also includes paddlecraft). We understand this will also prevent

access to Littlehampton Harbour Limits from areas up-river of Arundel's Queens St Bridge and vice versa.

What will it look like? Will the frontage change?

The proposed design is a steel sheet pile wall with a small steel capping beam and handrail to neaten the top of the sheet piles. This will be consistent with the frontage upstream of the new section. Initially the sheet piles may be a brighter grey colour, however they are designed to corrode in the environment and so it is expected that they will weather to a brown/orange with time.

The frontage will be offset approximately 1 m into the river to be in line with the upstream works. The gap between the old wall and the new will be filled with clean gravel to provide an appropriate engineering fill material.

Is there risk of the EA damaging the wall further?

See response for ***Why will sheet piles work this time if they did not last time?***

How will you arrange access to undertake the works?

We will discuss with you what access is required to your property to undertake these works before they start. However, as is our standard procedure when undertaking such works, we have statutory powers under sections 165 – 172 of the Water Resources Act 1991 that allows us to access land and property after serving a Notice of Intended Entry on any owners or occupiers where access and works are required.

What compensation will we be offered?

We have a duty under the Water Resources Act 1991 to compensate anyone who suffers loss when the Agency carries out this work.

Often, this compensation is in the form of reinstatement of the property to the same condition before our access is taken. Condition surveys will be undertaken beforehand to record the condition of the property, access and working areas. Please note that we will try to mitigate the risk of any damage due to our works.

Should we not reinstate to the same condition, a claim for financial compensation can be made for the fair and reasonable cost of reinstating the damage to a 'no worse, no better' condition.

On this basis, it is our preference for the claimant to do the reinstatement work themselves to whatever standard they wish and make a claim for compensation for the cost of doing so, but we would only pay compensation for the reasonable cost for reinstating to the original condition.