We have started to construct the flood scheme through Kendal which is being delivered in a number of small sections we term as 'reaches' We have completed the new flood defences at Dockray Hall.

We will be starting works at Waterside in early October with construction works being undertaken between Nether Bridge and working upstream to and including Waterside Flats. This work will be mainly the construction of flood walls following the boundaries of Nether Hall, Kirkland Hall and Parish Hall. The defences in this area will be set back from the riverside, re-using existing stone on site where we can and natural stone cladding to blend into the local landscape. At Waterside Flats we will be constructing a section of new flood wall and two floodgates around the boundary of the riverside flats.

In order to keep the community, visitors and our staff safe whilst these works are underway, a road and footpath closure along the riverside will be in place. A diversion will be in place and clearly signposted.

We will be starting construction works in early October and will take approximately 5 months to complete.

Aynam Road data gathering to inform the scheme design

We have undertaken extensive data gathering activities along Aynam Road which continues to inform the developing design of the flood walls and glass panels along Aynam Road. The data gathering activities we have undertaken are explained below.

- **Environmental surveys** – These assess the existing local environment to understand how wildlife use the site and which areas need special consideration. They will also provide guidance on mitigation measures and the timing of works to ensure certain activities are not undertaken within sensitive times of year. Environmental surveys are an ongoing activity and will continue up to, and during construction.

- **Utility and Ground Penetrating Radar ~~(GPR)~~ surveys** - A method used to detect and map services and underground features. The survey identified the location of a United Utilities sewer downstream from Parr Street and a number of services under the footpath on the riverside of the road which we will need to reposition ahead of construction.

- **Probe test** – A drilling rig was used to determine the depth of the bedrock and to test the ability to drill through the ground up to 7m deep. This is related to the seepage control measures that are likely to limit the rate that river water can pass through the ground while the river is high, but to allow groundwater to continue to flow into the river during normal conditions.

- **Drainage study** – A CCTV survey of the highways drainage network to understand the location of the underground network and to identify if there are any pinch points or restrictions. As part of this survey we removed a significant amount of silt blockages.

Aynam Road design development

The complex nature of flooding down Aynam Road requires careful design so that we can develop a scheme that will provide increased protection from the River Kent and also address the existing surface water and groundwater issues. The data gathering activities we have undertaken have provided us with a good understanding of the structure and conditions of underground services, soils, gravels and rock formation.

As our understanding of the area has increased significantly following planning approval in 2019, our design of the scheme down Aynam Road has also developed. This has been in the piling techniques we plan to use to construct secure foundations to the flood walls, as well as work we have been doing with Kendal Town Council to increase the extent of glass panels from 98m to over 400m. The heights of the flood defences remain the same running from ground level as a minimum to a maximum of 1.5m at the middle of Jennings Yard Footbridge. As this section falls within the Conservation Area, the walls will be finished in natural stone.

New planning application submission

Because we are looking at a piling technique in key sections of the scheme along Aynam Road to provide the solid foundations required as well as the proposed extension of the glass panels, this does require us to submit a new planning application to South Lakeland District Council. It is important to us that we design and deliver the best scheme we can for you and the town.

We are currently developing the full designs of the scheme and will provide an early copy of these to you ahead of any planning submission which you can provide feedback on.

What is happening next?

We are going to be assessing the extent and condition of the embankment and river walls below the road level at the lower end of Aynam Road. In order for us to make these assessments we will need to remove some of the vegetation on the riverbank and river walls in this lower section. The clearance works and assessments are planned to be carried out 31st August for a 1 week period, and a lane closure will be required. Prior to this an environmental assessment will be undertaken by our Environmental Clerk of Works. The clearance works will be undertaken using hand tools.

Design and Benefits Guide

We have accompanied this update with a copy of our new Design & Benefits Guide. This will provide information on our proposals to deliver a catchment scheme and detailed information on what we are delivering in Kendal. Further copies of this guide are available at Kendal Town Council, Kendal Library and the Flood Scheme Information Hub, Little Aynam (Tuesday & Thursday only).

www.thefloodhub.co.uk/kendal

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