

Leeds Flood Alleviation Scheme Phase 2 (LFAS2) Newsletter – December 2021

Our December 2021 newsletter includes information about the design and construction for Phase Two of the Leeds Flood Alleviation Scheme. There is a zone map on the last page of this newsletter.

Response to COVID-19

All site work continues at pace, with the team working in line with government COVID guidelines. We're restarting the monthly surgeries where you can find out more about the work or ask any questions. The first session will be on Thursday 27 January 2022, from 10am to 2pm. These surgeries will be held on the last Thursday of every month at our offices on Viaduct Road, please see the attached leaflet for more information. No appointment is needed.

We'll keep using COVID safe practices, so that our staff and members of the public are able to meet safely. We are also offering virtual meetings online, please contact us on LFAS@leeds.gov.uk to arrange one of these.



LFAS2 project offices on Viaduct Road

Developing proposals

In Zone 12a, we regularly meet with the team from Armley Mills (Leeds Industrial Museum). The museum will be closed to visitors for a short period during the works and we're working with the museum to let you know when this will be. A heritage specialist is working with the project team to ensure the museum's collection and historical importance will be maintained. Look out for information boards near the museum in the new year, explaining our work and what the site will look like afterwards. We're starting construction in February 2022 and expect to be finished by the end of 2022.

In Apperley Bridge (Zone 15), we're meeting with residents and businesses to ensure they're kept aware of developments in this area. We're setting up a site office in the new year and plan to start work in late January.



Step 1 progress (Leeds City Centre to Kirkstall and Newlay)

Construction progress

Zone 10

Since September, we've been working with landowners and developers in this city centre area to ensure they are informed of construction schedules. This month, we created an access route through Wellington Place and we'll continue preparing the site for construction of flood defences. We're also carrying out preparatory work at the former Yorkshire Evening Post site, with a view to start installing sheet piles before construction pauses for Christmas.



Piling at the SFS site

Zone 11

We've made significant progress in Zone 11 in the last few months, with construction between Wellington Road and Washington Street now complete. Last month, we moved our machinery and materials behind the SFS building on Kirkstall Road. We've now begun installing sheet piles along the riverside (see above).



Pre-augering at the NIC Services

In October, we shared our designs at a productive meeting with NIC Services (formerly Vermillion). We started work on site last month (as shown on the right), conducting preliminarily drilling to allow for sheet piles to be installed. This sheet pile wall is now complete, and work to build the reinforced concrete wall that will sit upon these piles has begun.

We understand the importance of preserving natural assets and wildlife throughout the construction of flood defences. We've installed an otter ramp by the section of the river behind the City Reach development site. This allows otters to climb the vertical river wall, especially when the river is in flood. We've also installed steps over our flood defence wall in the same area, so otters can reach safety during high river levels.



Otter ramp

Zone 12

In Zone 12b, we've finished our flood defence walls at Cardigan Fields Leisure Park. Over the last couple of months, we've been completing minor reinstatement and landscaping works. We've used landscaping features produced with 3D printed concrete (see right), which reduces our carbon footprint. This work will be finished before Christmas, and the area cleared of fencing and equipment.



Landscaping works at Cardigan Fields

We're going to reopen Milford Place Footbridge at the end of January 2022, after we complete some final landscaping and stone cladding.

Last month, we began installing sheet piles at the Cardigan Trading Estate car park. This has progressed well and we're now working on the concrete clad wall around the piles, which will be finished before Christmas (see right). Reinstatement works will take place in the new year, with work on this section to be finished and equipment removed by the end of February 2022.



Concrete wall at Cardigan Trading Estate

In Zone 12c, sheet piling along Kirkstall Road has progressed significantly over the last few months. We have been talking regularly to residents and businesses to ensure they know about construction, and so we can reduce disruption where possible, such as by changing our working hours, or over weekends. The final sheet piles along this section are now in place. This section of the flood defences will be complete by late Spring 2022.



Stone causeway and sheet piling in Zone 12c on Kirkstall Rd

In Zone 12d, we've completed piling by two pitches at the Kirkstall Training Ground, and we're now working on the remaining section. The sheet piling will be finished before Christmas, with reinstatement works continuing in the new year.

Zone 13

We've been carrying out ground investigation works at Kirkstall Meadows (Zone 13a) to understand ground conditions there and how they will affect our permanent flood defence works.

With Zone 13b, we've now completed and submitted our designs for approval. We're talking to affected residents and businesses in this zone, so that they are kept informed of developments.



Sheet piling at Kirkstall Training Ground

In Zone 13c, we've installed additional rock scour (see right) along 50 metres of riverbank of the left bank by the Aireside Stables off Fleet Thro Road. This will protect the river bank from erosion during the winter. Our design team are looking at how to incorporate this work into our permanent flood defences, which we're set to start on in Spring 2022.



Rock scour installed at Newlay

Step 2 progress (Calverley Area to Apperley Bridge)

Zone 14

Since September, we've made significant progress at the flood storage area near Calverley. In order to construct this, we're creating a cofferdam (a dry working area) within the riverbed, so we can construct a flow control structure. This has been slowed in the last month because of varying ground conditions and adverse weather. We're continuing with ground investigation work, to inform our programme. We hope to have the cofferdam completed by Christmas.

On Friday 29 October, we welcomed Cllr Helen Hayden (Leeds City Council) and Sir James Bevan (Chief Executive of the Environment Agency) for a site walkover of the flood storage area near Calverley. Meeting with representatives from Leeds City Council, BAM Nuttall and the Environment Agency, Sir James got to see the works first-hand, and discussed progress on this ambitious and fast-paced project.

On Thursday 18 November, we also welcomed Cllr Wadsworth (Leeds City Council) and Cllr Hardcastle (Horsforth Parish Council) to the flood storage area. Meeting with representatives from Leeds City Council, BAM Nuttall and AECOM, the councillors received an insight into the scheme and had the opportunity to ask questions and understand how the project team were progressing with the construction of the storage area. Further councillor visits are being arranged in 2022.

Zone 15

We've been working closely with Bradford Council to discuss design proposals, planning approval and implementation of the works at Apperley Bridge. We're pleased to say that work in this zone will start in January. Our contractors will be establishing site offices off Apperley Road, allowing engineers and machinery ease of access.

The work in Apperley Bridge consists of new flood defence walls, embankments, a pumping station and the strengthening of Apperley Lane Bridge. The first section of works will be to construct a sheet pile and concrete wall from Apperley Lane Bridge to the Stansfield Arms.

The work on Apperley Lane Bridge will mean that it will be temporarily closed between April and September 2022. There will be a diversion in place, where you can use the nearby Harrogate Road Bridge (A658). The LFAS2 project team are working to minimise disruption for residents and businesses in the affected area. We'll communicate any road closures or temporary traffic measures in advance of proposed works.



Sheet piling around the cofferdam



Sir James Bevan and Cllr Hayden at the flood storage area



Cllr Wadsworth & Cllr Hardcastle at the flood storage area

The annotated aerial view below gives an idea of the scale and type of work we'll be carrying out.



1. Work to strengthen Apperley Lane Bridge

We'll be working to strengthen the historic Apperley Lane Bridge, working on the bridge and in the channel, as part of wider works in the area. We'll ensure that all works undertaken are done in a manner sympathetic to that of the listed bridge.

2. Pumping station at junction between Apperley Road and Harrogate Road

We're installing a pumping station near the George & Dragon Pub to manage flood risk in the area. This will pump excess surface water into the river when the existing drainage system becomes overwhelmed.

3. Woodhouse Grove School

We're constructing a sheet pile and concrete wall by the all-weather pitch and the Pavilion. We're regularly engaging with the school and users of these facilities to update them on our schedule.

4. Embankment Construction

We're installing a 60 metre embankment with a box culvert (water drainage channel) and an 80 metre embankment on the right bank by the gate at Bottom Farm.

5. Works at Carr Beck

We're constructing sheet pile and concrete walls on the right bank by Waterloo Crescent, and a concrete wall on the right bank at the rear of Shaw House Farm.

Community successes

Our contractor, BAM Nuttall, recently awarded the LFAS2 project team the 'Enhancing Lives' project award, in recognition of our outstanding contribution to enhancing the lives of our people and communities through our work. We have welcomed an Engineer's Assistant to the team, through the government funded Kickstart scheme. This provides funding for six month work placements for 16-24 year olds, offering work experience and the opportunity to learn new skills.



Innovation and Efficiencies

Our contractors BAM Nuttall and Mott MacDonald have had preliminary discussions with Basalt Technologies, to explore the use of basalt fibre instead of steel reinforcement in concrete. This new material is advantageous in that it:

- produces 60% less CO2 emissions than its steel equivalent.
- is two times stronger than steel.
- is 4.5 times lighter than steel.
- is easier to handle and transport, saving time in logistics and installation.

We hope to incorporate this product in some slabs and minor structures in the flood storage area near Calverley.

Keep in touch

For general information about the scheme, visit our webpage at www.leeds.gov.uk/fas. You can also follow us on Twitter at [@leedsfas](https://twitter.com/leedsfas) for project updates.

The Leeds Flood Alleviation Scheme project team would like to wish all readers a joyous Christmas and New Year.

Step 1 and 2 Zone plans

