Winchester Flood Defence Scheme, Phase 2

Brian Shorter, the Chair of STAP, recently spent some time with Darren Lewis, who is the Winchester City Council Chair of the scheme, talking about it and looking at Phase 1 and the site of Phase 2.

Darren had contacted WinACC, as a leading local environmental organisation, so that we know what is going on, and can support the scheme. As a retired civil engineer and volunteer with the Hampshire and Isle of Wight Wildlife Trust I found it a fascinating couple of hours.

We looked at Phase 1, which was completed in 2017, and comprises a system of flood walls, gates and banks to protect primarily St Bede's school, Winchester College of Art and Riverpark sports centre, which had suffered the effects of flooding. Anyone visiting the areas around Riverpark and the college will be familiar with the low walls, banks and slotted gaps into which flood gates can be placed.

Darren explained that after the flooding of 2014, it was accepted that it was important that work was done to protect the city from further flooding, whose frequency and volume is likely to increase as a result of climate change. Minds were particularly concentrated by the findings of a structural survey of City Mill that it was in danger of collapse without urgent work, partly because of damage sustained in 2014. Then, the maximum flood level at the mill in was 36.0m (above sea level). Engineers have calculated that a flood any higher than 36.0m could cause the mill to collapse if it is not substantially strengthened. Such a collapse would block the river channel, and possibly cause serious damage to City Bridge. Apart from one or more valuable historic structures being destroyed, substantial flooding would then occur in the city.

At present there is a sluice gate on the main river Itchen at Durngate Bridge to help alleviate flooding. But because the river has a wide floodplain there are a number of other channels carrying water that effectively bypass this sluice and allow water to enter the city. Most are familiar with the old routes of two of them, through their names - Middle Brook Street and Upper Brook Street. Some of these channels now pass under the town for some stretches, but become visible in places, such as Abbey Gardens.

The Phase 2 scheme is designed to control the remaining four uncontrolled channels. This means installing sluice gates upstream of the town, which can be used to restrict flow at times of heavy flooding, together with banks or walls to stop water overflowing Think of the result as being a very low dam with holes of controlled size through which water can flow, while much of the water is held back in what is Winnall Moors Nature Reserve. The reserve is a natural flood plain which in times of high rainfall would already be flooded to an extent; so this scheme, in extreme conditions, will be adding slightly to the capacity of the flood plain for short periods.

We walked from the College of Art to Durngate Bridge, via the car park. Darren showed me the two channels which will have sluices installed, and the route of the low bank to the north of the car park and the Trinity Centre. We then stood beside Durngate Bridge, and looked down on the existing weir, and then twenty metres towards the town to the flow from two joining channels passing beneath the bridge with no control. It's here that another new sluice gate will be installed.

Because Winnall Moors Nature Reserve, which is a Site of Special Scientific Interest (SSSI), will occasionally be flooded to a greater extent than would currently be the case, an Environmental Impact Assessment of the scheme has been carried out. Wildlife surveys have been undertaken in the reserve to assess the numbers of protected species, such as bats (one or two mature trees must be removed), otters, water voles, and certain plants. Measures will be put in place to mitigate possible impacts, such as additional bat boxes, fish passes and elevated artificial water vole burrows. General

environmental improvements will also take place, such as transit holts to encourage the movement of otters up and down stream or to give them a refuge area from dogs etc.

Interestingly, as Darren explained, the scheme will also have a significant wider environmental benefit to the Winnall Moors SSSI. At present, flows in the smaller channels within the reserve cannot be controlled, so in dry periods flows are sometimes very low. Putting sluices on the smaller channels will mean that the water levels of the streams can be influenced upstream not only during floods but also during drought conditions. Controlling the levels and thus moving the water around will help support streams suffering from low flows and make the entire area more resilient to drought, which is another probable impact of climate change for the UK.

Funding for the scheme is currently coming from the Environment Agency and Winchester City Council, although other sources of funding are being explored. The scheme is expected to be constructed in the autumn of 2019 and should take three to four months to build. The town will then be protected from the worst likely flood events for many years to come.

A consultation event is planned, probably on February 21st and 22nd, to show to the public the scheme plans and background, and to get feedback from them. Venue and dates will be confirmed soon by WCC, but look out for more information on the WCC website and Facebook page.

Finally a thought; WinACC's primary aim is to encourage people and policymakers to do their share to reduce the catastrophic impacts of climate change. Many impacts are even now occurring though, and few scientists doubt that one of these is an increased frequency of extreme weather events. This includes heavier rainfall, hence flooding, and more prolonged dry spells. While it would have been prudent to go ahead with this scheme even with no climate change impact, climate change has made it more important. It is interesting that, though its primary aim will be to protect the city and its valuable heritage, it will also help manage Winnall Moors reserve more effectively.