

Durngate Sluices, Winchester

Ruth Andrews

The River Itchen is a chalk stream and is fed by groundwater. During prolonged periods of rainfall the groundwater levels rise resulting in an increase of the water level in the river, but this happens fairly slowly; there are not sudden flash floods like in some parts of the country. Historically the River Itchen flooded in 1852, 1903, 1928, 1935, 1947, 2001, and 2014. This did most damage in 2001, but the highest level of flood water was recorded in 2014. .

The river's flow through Winchester is restricted by the sluices at Durngate, City Mill, and Wharf Mill; all 3 mills were built across the main channel of the river. In 2014, as seen here at City Mill, emergency measures were put in place, but it was obvious that a long-term solution was needed.



Upstream of Durngate sluices there an extensive flood plain, historically occupied by water meadows. It was decided that this land would make a suitable overspill area, which would require minimal work to hold back the water.

North Winchester Flood Water management Scheme was funded by Hampshire County Council, Winchester City Council, the Environment Agency, and Southampton University. Phase 1 implemented in 2016 involved the construction of brick walls with rising barriers in the gaps and strategic earthworks.

Phase 2 in 2019 provided three new sluice gates on the remaining uncontrolled channels of the River Itchen. The sluice gates are adjustable so they can help to manage the flow of river water – the gates will be able to hold back up to 250,000m³ of water, equivalent to around 3.2 million bathtubs of water (*how many double-decker buses is that?*).



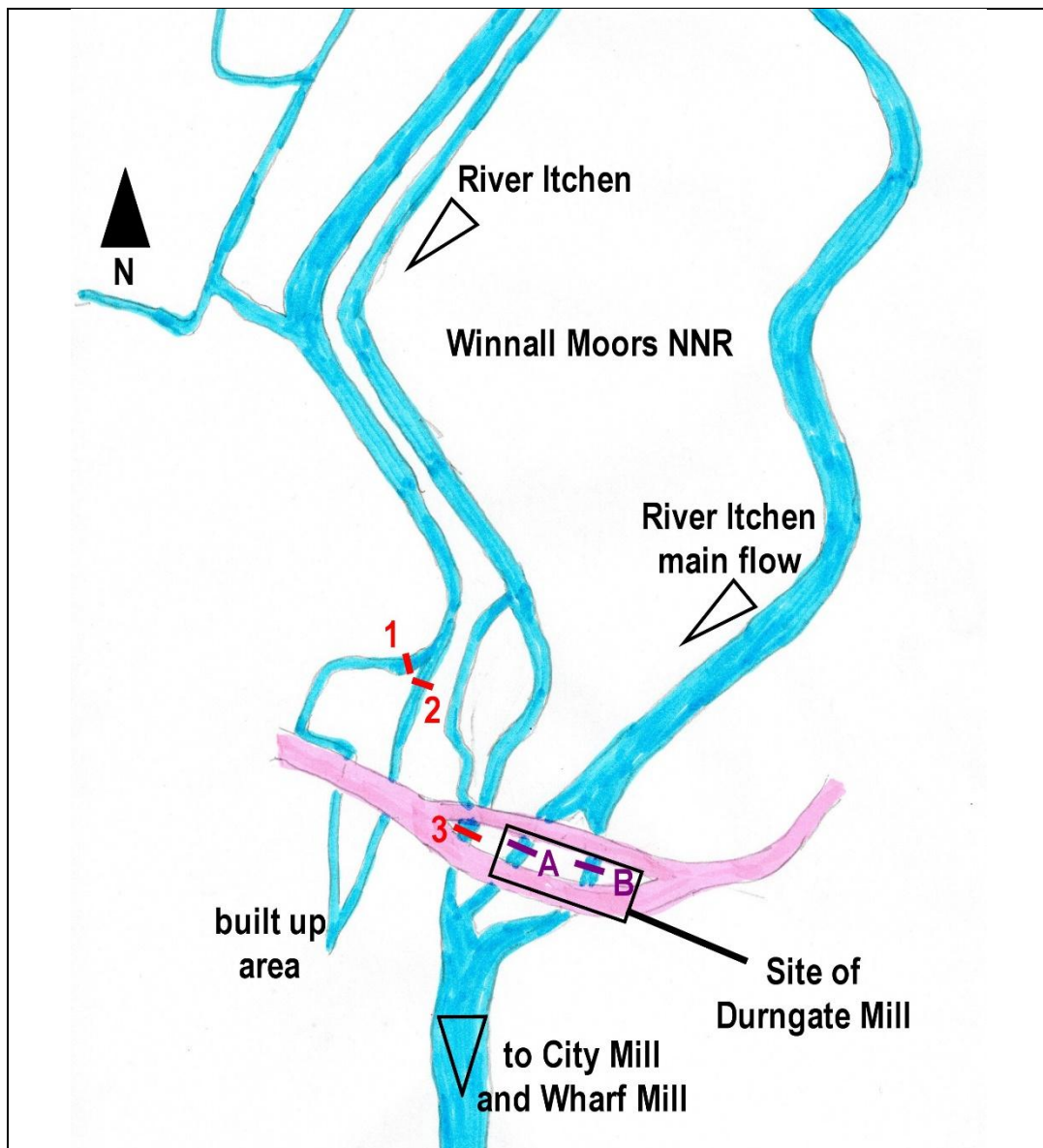
New sluices left to right 1, 2, 3

Two of the gates are located either side of Durngate car park (*1 and 2 on the map*) with the third (3) between the road and pedestrian bridge at the entrance to Winnall Moors. So if they are closed because of rising water levels, Winnall Moors NNR will be inundated.



Dungate Mill sluices A and B

Unfortunately the existing sluices at the Durngate Mill site, a single sluice (A) and a double sluice (B) across the divided main river flow, have not been replaced and look to be in poor condition.





Site of Durngate Mill showing old sluices (foreground) and new sluice 3 in the distance and right

A note about Durngate Mill

Just before the mill was demolished in 1966, it was surveyed by members of the Winchester Model and Engineering Society, J Reynolds, C Burrell, and D Bignell. It is well worth reading their detailed report and accompanying diagrams, which can be found at

<http://www.hantsfieldclub.org.uk/publications/hampshirstudies/digital/1960s/vol24/Reynolds&others.pdf>

The mill straddled the main stream of the River Itchen. The river divided immediately above the mill, forming two separate races which passed below the floor to unite again at the southern end of the garden. Each branch sub-divided within the building to form a head race and a by-pass, each with its own sluice gate operated by rack and pinion gearing.



Durngate Mill in 1966, shortly before it was demolished, viewed from the east side.
John Reynolds