

Leeds flood alleviation scheme

What is the Leeds Flood Alleviation Scheme (FAS)?

The Leeds Flood Alleviation scheme (FAS) comprises a series of flood defences and modifications to weirs in the city centre. The purpose of lowering the weirs is to reduce the height at which flood water moves across the city.

The scheme completed in October 2017 and the moveable weirs are maintained and operated by Leeds City Council.

How do we ensure flood risk is not increased as a result of a FAS?

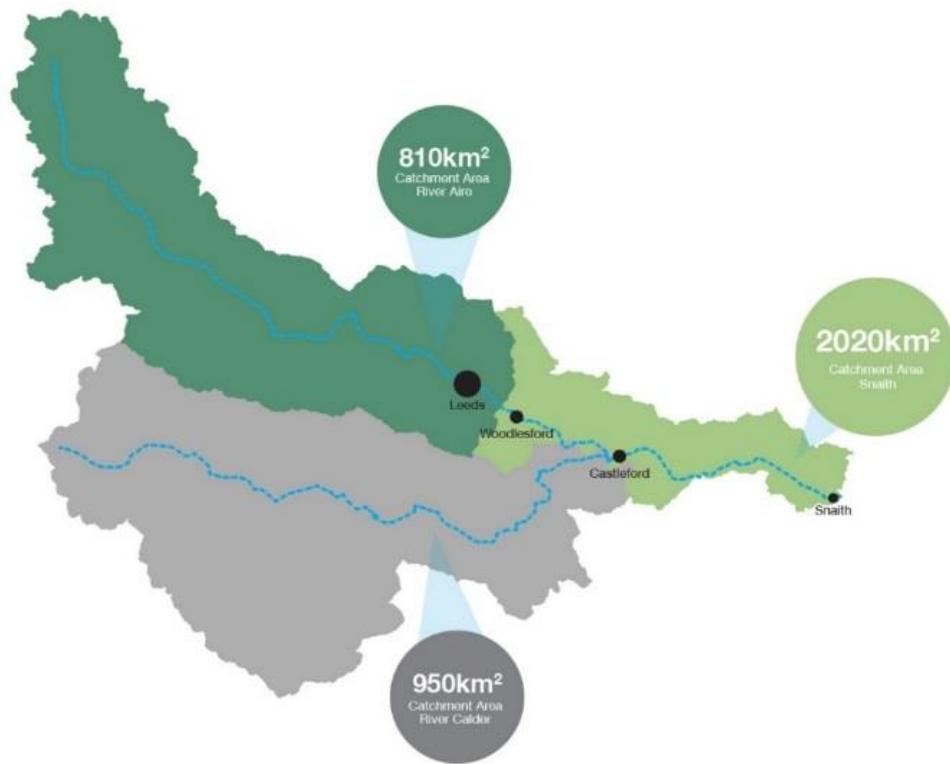
When a FAS is put forward for planning permission, it is accompanied by a Flood Risk Assessment. In order to secure planning permission, this assessment has to demonstrate that any changes in flood risk are mitigated. The assessment compares flood levels without the FAS and flood levels with the FAS in place, using a computer model of the river.

The Flood Risk Assessment for the Leeds FAS identifies that there was a minor change to flood risk for a limited distance along the River Aire. These impacts were found to extend to just beyond the village of Woodlesford. At this location, the FAS was shown to increase peak flood levels by 2cm, which is just under an inch. To manage this risk, flood defences were constructed in Woodlesford before the main FAS was built. This was the basis on which planning permission was secured.

How does the Leeds FAS interact with river levels at Snaith?

Flood Risk at Snaith is unaffected by the Leeds FAS:

- The Leeds FAS Flood Risk Assessment showed, from modelling, that the impact on river levels only reached as far as Woodlesford which is 6km (just under 4 miles) downstream of Leeds. Snaith is 44km (27 miles) downstream of Leeds.
- The ability of river levels in Leeds to influence flood levels downstream on the River Aire is strongly influenced by relative catchment size. The catchment size of Leeds is a very small proportion of the catchment size at Snaith which also includes the River Calder (see diagram below).



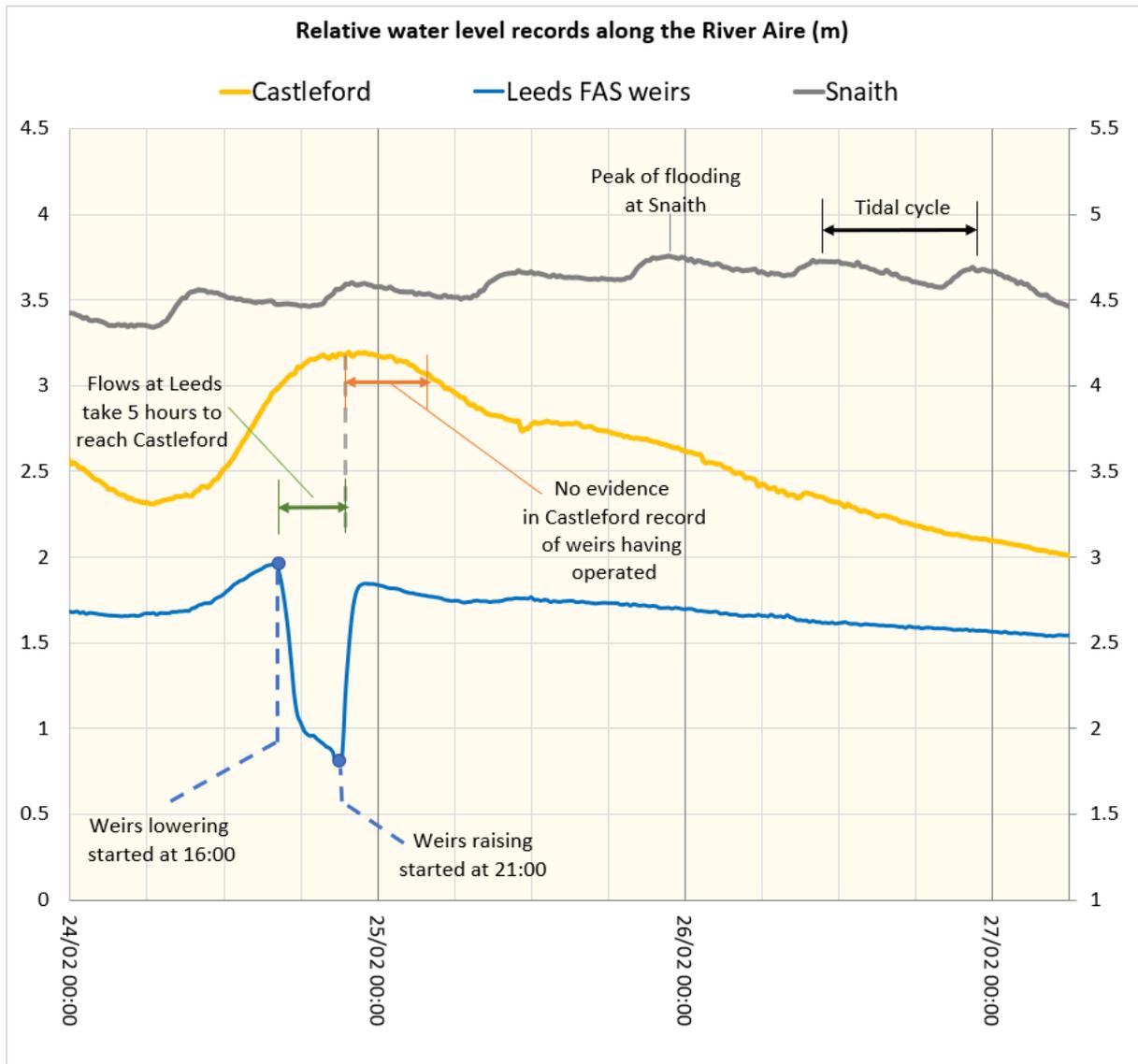
How were levels in Leeds comparable with levels in Snaith during the recent flood events?

During recent heavy rainfall, flood peaks have passed through Leeds on 9, 16, 22, 23 and 24 February 2020.

The notable highest flows were on 9 February, the weirs were operated during this period. No flooding occurred to Snaith during this time. Flows in Leeds on 22, 23 and 24 February were a third lower than on 9 February. Conversely Snaith experienced flooding during this time. This shows how far removed flooding at Snaith is from what happens at Leeds.

The high levels at Snaith on the 25 February were caused by filling of the River Aire floodplains over several days, high tidal levels and significant contributing flows from the River Calder. There is no indication that this flooding was made worse by the Leeds FAS.

The Leeds FAS weirs were lowered on a single occasion on the 24 February at 16:00hrs. Gauge information downstream of Leeds, at Castleford, gives no indication of any influence of the weirs on downstream flows. See graph below that also shows levels at Snaith for comparison.



Further information

Check your flood risk and sign up for free flood warnings by visiting www.gov.uk/flood or call Floodline on 0345 988 1188

For more information about the Leeds Flood Alleviation Scheme visit www.leeds.gov.uk/fas