

## **Looking back on the York floods of November 2000, by Mark Fuller, then Duty Operations Officer (now Project Manager for the Foss Barrier)**

Mark Fuller joined the Environment Agency on the day that it was formed in 1996. In November 2000, he had recently returned from a holiday of a lifetime to New York before joining the Agency's Incident Team, and then playing an active part in managing the biggest flood on the River Ouse that York had ever seen.

At that time, when he took up his role of Operations Duty Officer, Mark already had a few floods under his belt. Back then, Tony Blair was Prime Minister, Apple had yet to release its first IPOD, desks had a physical in-tray and out-tray instead of electronic versions, pagers and fax machines were commonplace and mobile phones (yes there were mobile phones) were used just for making phone calls, perhaps writing the odd text and playing the snake game or Tetris.

In the week before the 2000 floods, Mark was on standby duty. It had been a quiet weekend, but on Monday 30 October, the York Area Incident Room was opened as soon as he got into the office.



*Photo: Sandbags on the downstream end of Clifton Ings at Water End stopping excess water from flowing through York.*

He said: "We very quickly saw that this was going to be a big flood. We used the AVM machine to send voice messages directly to residents at risk of flooding. This had only recently come into use and replaced the previous warning system that involved faxing pre written warnings to professional partners. Our internal workforce was stretched and we asked for help from other Environment Agency departments and other areas who weren't experiencing floods."

### **A personal view of what happened**

After floods in June that year and a wet summer, catchments were quickly saturated by rain in the autumn. This created a problem with forecasting which was based on monitoring the upper catchments (where flooding usually arose from snowmelt) but rainfall meant that the rivers in the middle stretches started rising first, so detecting the early warning signs of a flood was difficult. Also the theory then was that we would never get a flood from the west (i.e. the Ouse Catchment) and the east (the Derwent) at the same time. The November 2000 floods blew that theory to pieces.

Pretty much all of our rivers were experiencing record breaking water levels. As the peak of the flood came down the Swale, Ure and Nidd, we saw flooding in the usual areas, including Ripon, Boroughbridge and Lower Dunsforth. Cawood and Selby were mostly spared but major flooding happened in Barlby and our depot in Riccall was flooded. On the Wharfe, flooding was seen in Tadcaster, Ulleskelf and Ryther and the Derwent saw flooding in Malton

and Stamford Bridge, just twelve months on from the 1999 floods in the same places. In the north, properties flooded at Stokesley, Croft, Neasham and Stockton.

One of the main areas of concern was York, where the flood defences built after the 1982 floods were tested beyond their designed capacity at several locations, including Water End, Lower Bootham, North Street and on the River Foss.

Because of the uncertainty around forecasted water levels, we made the decision to sandbag all the flood defences. This made great photo opportunities for the media. However our engineers were concerned about the additional loading that the sandbags could place on our defences. Hundreds of sandbags were laid against the Lendal Arch floodgate in an attempt to stem a small amount of seepage. It didn't work. When the peak had passed and water levels started falling, the weight of the sandbags began to push the twin doors of the floodgate open and almost flooded the area. We instructed the Army to go back out and take all the sandbags away.



*Photo: Sandbags placed at Lendal Gate were used by members of the public to climb up and see over the gate.*

We also discovered a breach in the Clifton Ings bank. Staff from the Riccall depot went slowly out along the flood bank with a dumper truck loaded with sandbags to plug it.

At the other end of Clifton Ings, water had found its way across a field, around the end of the Barrier Bank, into Blue Beck and back into the Rawcliffe housing estate. Our staff used a bulldozer to try to fill the low ground to stop the flow but, working at night in difficult conditions, this wasn't possible and around 80 properties flooded.

The Foss Barrier ran for a record 17 continuous days, operating all eight pumps. There was also a real danger that water from the Ouse would flow over Tower Street and into the Foss Basin, effectively outflanking the Foss Barrier. Sandbags were redeployed to Tower Street and the army, who at that time were sandbagging at Leeman Road, were rushed there with a police escort.



*Photo: During the flood huge amounts of debris accumulated against the screens at the Foss Barrier, putting the pumps at risk of overheating*

“Operation staff reported that it was like "desert storm" when a huge convoy of army lorries loaded with sandbags came across Skeldergate bridge and placed themselves at the command of the Environment Agency site controller.”



Environment Agency staff working at Cawood on Halloween reported seeing lit pumpkins on top of the floodwall at midnight. As the washlands filled, there were issues with water spilling out of Cawood/Wistow Ings and threatening to flood the village at high tide. So the Army were called in to build an emergency sandbag wall at the edge of the Ings and major flooding was avoided.

*Photo: Sandbags on top of the flood defences in the village of Cawood to prevent 'overtopping'.*

Water overtopped a section of the floodbank at Barlby to a depth of up to 0.3 metres and over 150 properties were flooded. Chinook helicopters were used for a massive deployment of sandbags to strengthen and raise the riverbank defences. Over 7,500 properties in Selby and Barlby were protected.

Just when we thought things were over, water started to appear in fields alongside the road between Bubwith and Howden, several miles from the River Derwent. Another army helicopter was used to fly over the flood water to help us identify a breach on both sides of a clough headwall. The Chinooks were called back for emergency work to airlift sandbags from Brighton airfield so the army could use them to plug the gaps.

There was also serious concerns about a flood bank near Wressle that failed. Preparations were made to evacuate parts of Howden if we could not stop the floodwater as houses there are built on the old course of the Derwent and the river was trying to reclaim its old river bed.

The River Derwent in Malton and in Stamford Bridge peaked at a level higher than in 1999. Many properties that had just been renovated were flooded again. Pumps and patrols were deployed to try to minimise the damage and disruption.

In summary it was a very busy and stressful time for everybody involved. At that time a 17 day flood seemed like a long event but was actually much shorter than recent floods. We faced a huge demand for meetings with affected communities after the event. Thanks to investment afterwards, many of these areas that were without defences then are now much better protected.