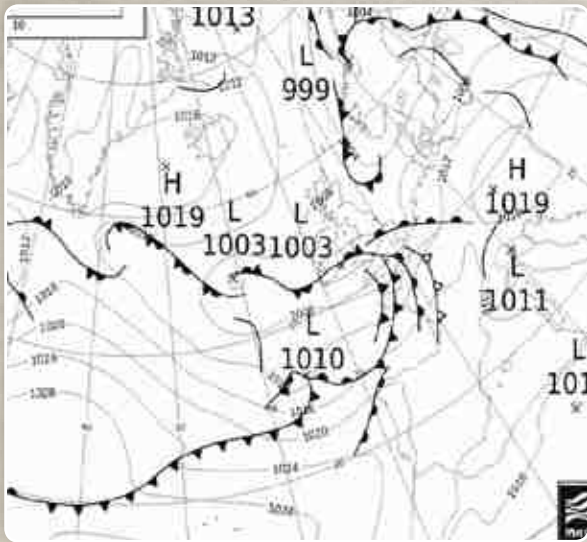
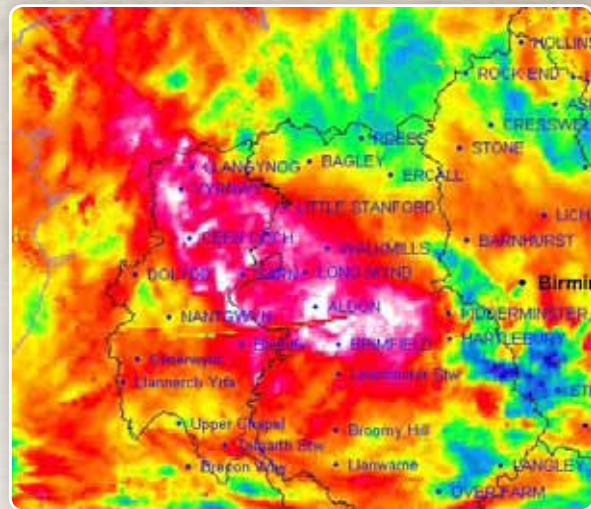


More Record Floods in 2012

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Map 1. Surface pressure Map 13 July 2012



Map 2. Rainfall Radar map between 1500 GMT on 130712 to 0500GMT on 140712

Five years ago in a previous Review article titled 'The Great Flood of June 2007', there was speculation as to whether such summer storms might happen again soon. That year the jet stream was pinpointed as the culprit for directing so much rain towards England and that was to be the case again in 2012. Normally it sits over Scotland deflecting the wet Atlantic storms to the north of us, but it wandered south opening the door to depression after depression.

Usually our summers can cope with rain storms as conditions are usually dry with plenty of soil capacity available, but in 2012 by the end of June we had already had the wettest quarter on record. This was even more amazing when you consider that up to the end of March the country was issuing drought orders and hosepipe bans. Lacking the usual soil moisture deficit at that time of year the land was hardly ready for more rain when a heavy downpour of about 30mm came on the 6th July. This really soaked everything and meant that conditions couldn't have been worse for what happened the following week. By the 12th of July conditions in the Atlantic had contrived to arrange a complex row of weather fronts which were approaching Ireland (map 1). As these fronts converged during the next day over the Bristol Channel, a huge convective storm developed as it tracked across south Wales and in to Shropshire with intense bursts of rain. Between Oswestry and Ludlow over 55mm of rain fell during the 13th with 20mm alone falling in one hour producing rapid runoff in the River Rea and Dowles Brook (map 2). The highest recorded daily total was at Bayton which had 63.2mm during that day. Rather like the storm in 2007, this storm didn't extend east of the River Severn which meant that very little rain was recorded

at Kidderminster. Falling on the catchments of south Shropshire the storm produced the second highest level ever recorded at the Dowles Brook gauging station exceeding the flood in July 2007, but falling short of the June 2007 record flood. These events have been preserved at Knowles Mill just upstream of the gauging station on the mill doorway (photos 1 and 2). These flood marks are useful because they show the older floods, like the mark for June 1924, the other record summer flood.

As a result of the 2012 storm many bridges were affected such as Furnace Mill, as well as those on the Baveney (photo 3) and Mad Brooks. The floods on the River Rea were even more severe rising to its highest level ever, exceeding the 2007 floods by 0.4 metres and the depth of water on the bridge at Newnham would have been 0.6 metres with 1.5 metres on the approach road (photo 4). Newnham Bridge coped well being slightly newer but sadly the one at Neen Sollars didn't fare so well losing the upper walls leading to its closure for several months (photo 5).

All this rain caused havoc in the area with people having to be rescued from inundated properties at Cleobury Mortimer, Neen Sollars and in the Wyre Forest. The weather took its toll on some of the region's biggest and most popular events, with the Bromyard Gala, Marcle Steam Rally and Burwarton Show being cancelled because of the summer downpours. June, July and August 2012 was the second wettest run of months after 1912.

What's interesting about these recent floods is not just that they are unusual being summer events, but that they are much higher than previous records. The 2007



1. Knowles Mill showing level of flood 2012 (red) Mike Averill



2. Knowles Mill flood marks Mike Averill

and now 2012 floods exceeded the previous floods by 1.48m on the Dowles Brook and at Newnham Bridge by 2.42 metres which is a much greater margin than might be expected. Normally flood records increase by very small amounts.

One final statistic is that the four month period from April to July was the wettest on record for the Midlands with over twice times the annual average.

These summer floods can be very damaging to wildlife as birds and animals can be in the middle of bringing up young. Some species such as Kingfishers, Dippers and bats can be caught out as they rely on river banks and bridges for nest and roost sites. Let's hope they can be resilient during these changes in our weather.

Data and rainfall map from the Environment Agency.



4. Flood wreck marks on Newnham Bridge Mike Averill



3. Bridge damage Lower Baveney 17/7/12 Mike Averill



5. Neen Sollars Bridge after storm of 13/7/12 Mike Averill