

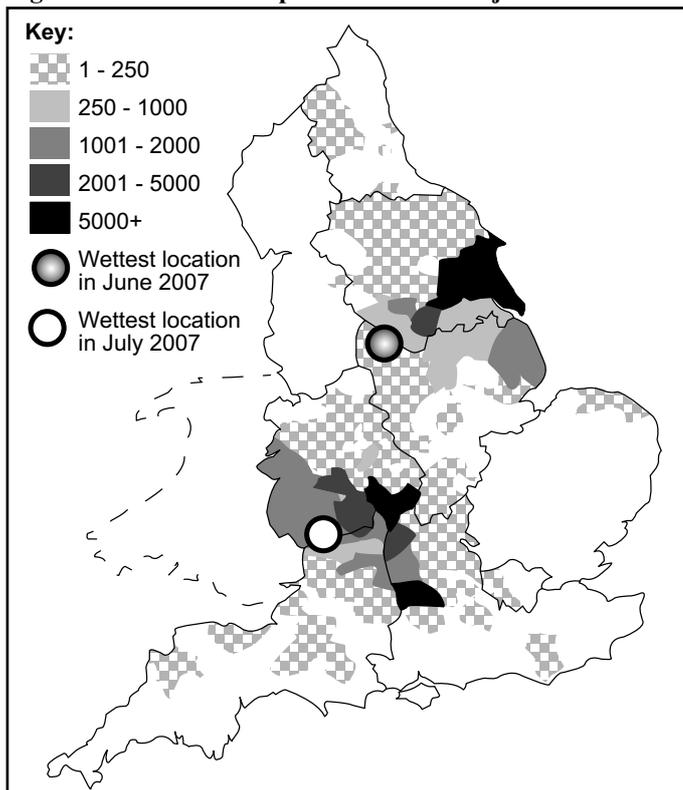


The economic, environmental and social impacts of the July 2007 floods in the Tewkesbury area

Introduction

The summer of 2007 was a time of very heavy rainfall and flooding over many parts of England. In June Hull was badly flooded as a result of heavy rain. Then in July devastating amounts of rain fell in parts of Gloucestershire and Worcestershire resulting in serious flooding. The two events were known as the Double Deluge. This article examines some of the key impacts of this flooding in Gloucestershire.

Fig. 1 The combined impact of the two major floods.



The costs:

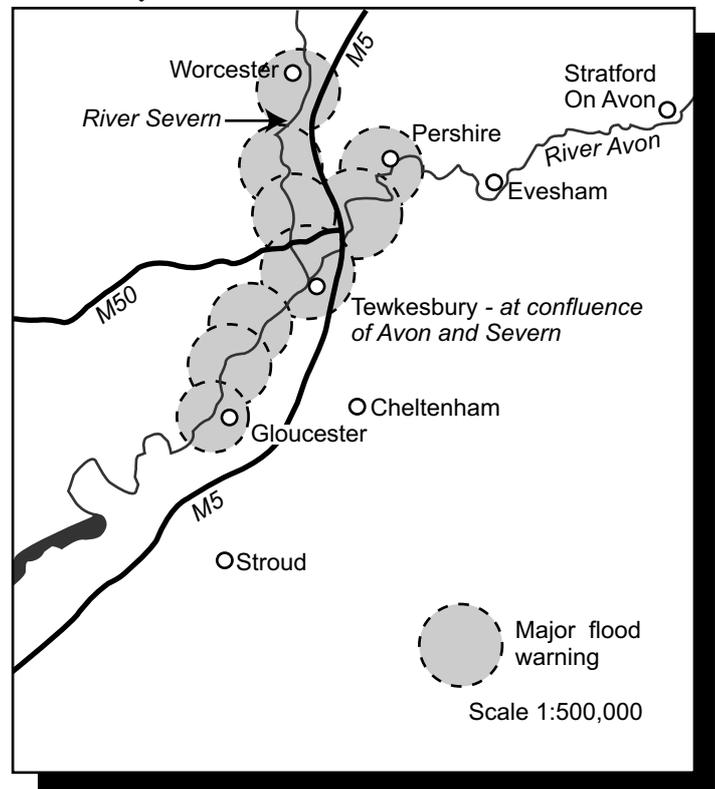
- 13 dead
- 40% of household and 25% of commercial claims settled by mid-November
- 414.1mm average rainfall across England and Wales
- 7,000 businesses flooded
- 120,000 household insurance claims
- 27,000 commercial claims
- 18,000 motor claims
- £3 billion overall cost to insurers - the largest single claims event in British history

The flooding

The immediate cause of the flooding in Gloucestershire and Worcestershire was very heavy rainfall on 20-21 July 2007, when 150 mm of rain fell in two days. This was the heaviest rainfall in this period for 50 years, and followed a very wet period which meant that the ground was already saturated. A series of bands of heavy rain moved north across England but particularly large amounts fell in Gloucestershire and Worcestershire. This meant that large areas along the river Severn were affected by flood water. For example the Worcestershire County Cricket ground was completely submerged under 1 metre of flood water. Tens of thousands of homes, roads, power stations and thousands of businesses in towns such as Worcester and Bewdley were also flooded.

The flooding was not confined to the river Severn. The river Avon also flooded in towns like Evesham and Pershore and at the point where the two rivers meet, namely Tewkesbury the flooding was at its worst (Fig. 2).

Fig. 2 The location of major flood warnings in the Tewkesbury area.

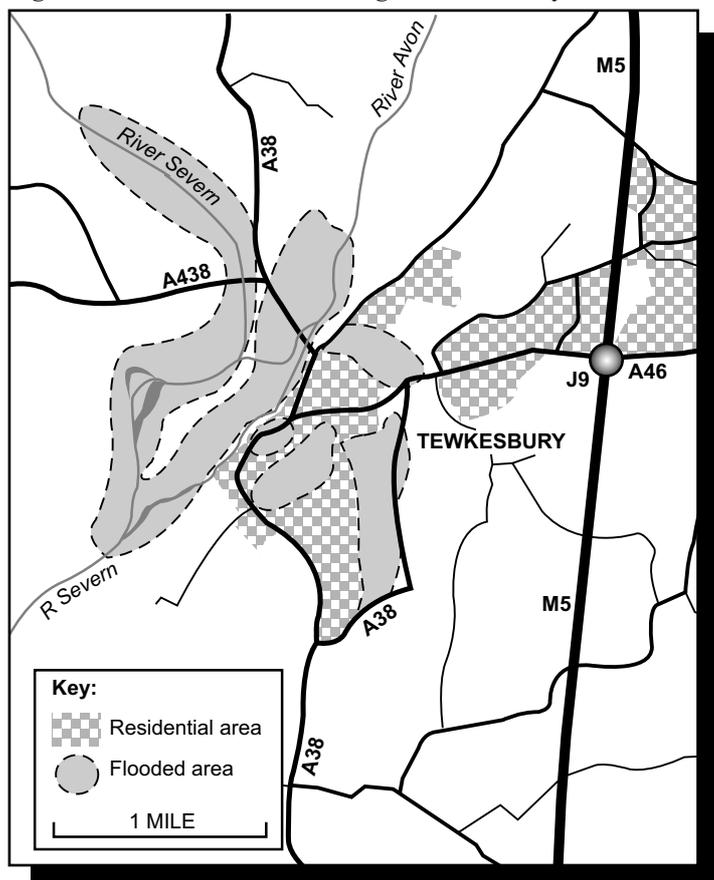


The immediate effects of the flood in Tewkesbury

By the 20th July 2007 Tewkesbury was cut off by the flood waters and the Abbey became an island and a place of refuge from the rising river waters. Canon Paul Williams asked the Council how he could help and they asked him to keep the Abbey open as an ark. So on the evening of Friday 20th July 60-80 people slept in the Abbey. Some people were so cold that they wrapped themselves in alter cloths to help keep warm. The canon says that there was a great sense of community at this time, of people helping each other and concern for each other.

At the same time the M5 motorway was closed by the flood waters, children had to be rescued from primary schools by tractor and a man died when his car was swept away in the flood. Homes and businesses near to the rivers were flooded to a depth of several metres by water that was badly polluted by sewage. An electricity sub station in Tewkesbury which supplied power to 500,000 homes was threatened by the rising water and 250 firefighters and others worked to make a barrier of steel and 6,000 sand bags which in the end were just enough to prevent disaster. However, the Mythe water treatment plant near Tewkesbury was not so fortunate and had to close due to the flooding. This meant that for a time 350,000 people in Gloucestershire had no water supply. About 140,000 people were without water for a week. Supplies of bottled water had to be brought in by lorry for about a week to keep people supplied.

Fig. 3 The main areas of flooding in Tewkesbury.



Economic impacts of the flooding

- Large numbers of people were forced to leave their homes and possessions and move to shelters above the flood waters. When the waters subsided homes were badly damaged. In many cases all carpets, kitchen cupboards, all appliances such as cookers, fires, fridges and freezers as well as central heating boilers had to be scrapped. Furniture, bedding and children’s toys were other casualties of the flooding.

- The downstairs areas of most houses were uninhabitable so people had to hire caravans which were installed on the drives or gardens of their homes in which they lived whilst repairs were made to their homes. There were whole streets where everyone was having to live in a caravan. By December 2007 2,000 people were still living in these caravans. This is because repairs to the houses took a long time. The houses took along time to dry out and because the polluted water meant that repairs involved the removal of the plaster in houses to at least 1 metre above the floor and then re-plastering. Life in the caravans was cramped and often uncomfortable, especially for families with young children. Some of these families produced a Christmas Card in December 2007 called “Away in a Caravan” which included pictures of the flooding and of life in the caravans. They sent the cards to the media, politicians and the public to remind them of their plight so long after the initial flood.
- Many businesses such as restaurants were badly affected by the flooding. They too lost cooking equipment, as well as chairs, tables, carpets and furnishings. Most were not renovated by December 2007 so lost even more potential income from the Christmas trade. One restaurant business estimated a loss of £80,000. The tourist trade was destroyed.
- Large areas of countryside were also affected by the flood waters. One farmer near Tewkesbury lost 40,000 acres of potatoes, carrots and onions. The same farmer also lost fields of mature (10 years old) Christmas trees which were covered by 1.5 metres of water and subsequently developed large dead brown areas and so were useless. Another farmer in the same area estimated that she had lost £100,000 as a result of the July flood.
- Since July 2007 there have been 5,000 houses drying out in Gloucestershire
- Gloucestershire is seeking £25 million from the government for flood damaged road repairs
- In total 163,000 households were affected by the July flood
- The bill for damages is likely to be over 33 billion
- 165,000 insurance claims had been lodged by December 2007

Social impacts of the flooding

- The sense of community developed in Tewkesbury during the flood has continued to some extent. This was demonstrated in December 2007 when there was further flooding in Tewkesbury and people did work together to help prevent this from becoming as severe as the one in July.
- By December 2007 there were still many people living in cramped caravans so the Abbey was opened after Christmas services for local children and families to enter and play in the large space available.
- Tewkesbury could be protected from flooding in the future by a lot of hard engineering. That is building walls and dykes along the rivers and by dredging and straightening the rivers. However, this would be extremely expensive and would change the nature of the town completely. So local people are against this option. Tewkesbury people have had to live with floods for many years in the past. They used to do this by building the house entrances higher, up some steps, so that they were above the flood level. And this type of flood is only expected once in 200 years, although global warming may make that more frequent.
- Tewkesbury’s Christmas lights were one of the casualties of the flooding. These had to be replaced, and the initial costs of this were paid for by donations because the insurance claim could not be paid in time.
- Many people report that they still have difficulty in sleeping at night especially when it rains, because they fear another flood.

Fig. 4 People and the floods - eye witness reports.



"I live in Birmingham and I have been stranded overnight in Tewkesbury because the roads are flooded really badly and my car is a BMW Z4 and is low to the ground so not good in flood water." Michelle



"We had to be rescued by tractor from our school because the water was so high." Aimee (aged 7)



"I have spent the weekend in Tewkesbury where I teach because I could not get home to Malvern." John



"I was stranded on the M5 overnight for 10 hours and had to sleep in my car. There were some older people in cars who were infirm and had no food or water. There were also babies who needed milk. Some people went round sharing biscuits and coke." Mike



"Why were the flood barriers stored a long way from Tewkesbury, so that they were on lorries stuck on the M5 when they were needed in the town?" Shirley



"Friday was my last day at school and the front of the school was flooded and we went to church. The water was all over the school field and it was about 5 inches deep." Jessica

Environmental impacts of the flooding

- The flooding took place on the floodplain of the rivers Severn and Avon. One of the reasons for the extensive nature of the damage was the fact that in the last 30 years there has been much construction of houses, factories and general infrastructure such as power stations in flood plain areas. This has been due to a general shortage of land, the relative cheapness of land on flood plains and the need to make greater use of areas such as flood plains which were seen as empty spaces to be developed. Traditionally flood plains were areas on to which rivers overflowed in times of flood. By building on these areas people have made themselves more vulnerable to the effects of flooding.
- The Environment Agency has begun a programme of digging out stream and even removing bridges so that water can drain away more quickly in future and so prevent flooding.
- The water treatment plant now has new flood defences in the form of steel walls.

In December 2007 when some people had just moved back into their houses after the repairs there was another flood warning to people living near the two rivers. New furniture had just been delivered together with new cooking equipment. All of these had to be raised high off the floor to protect them from the new floods. Luckily these were not so severe and retreated quickly. However, it does illustrate the point that people in towns like Tewkesbury will have to learn to live with flood menace for the foreseeable future. Overall in the UK 10% of people live in homes at risk from flooding. In December 2007 the Pitt Review was published into the flooding of July. The author of the report, Sir Michael Pitt was asked by ministers to identify the lessons to be learned and to make recommendations to help the country to deal more effectively with future flooding. The report made 15 urgent recommendations to reduce the impact of flooding. These covered managing the flood risk, groundwater monitoring, local and national planning and public preparedness.

Postscript

One year on from the floods, councils from across England confirmed that more than 10,000 people are still unable to return to their homes and were living in temporary accommodation. Issues included problems with insurance claims and also time needed for homes to dry out before they can be repaired. There was also a shortage of skilled tradesmen. However, Tewkesbury us back in business as a historic market town and tourist centre.

Further reading

- environment-agency.gov.uk
- news.bbc.co.uk
- www.greenpeace.org.uk
- www.tewkesburybc.goc.uk
- www.bgs.ac.uk
- thisistewkesbury.com (Tewkesbury Admag)
- www.webaviation.co.uk (aerial photos of floods)
- www.cabinetoffice.gov.uk/thepittreview

| Glossary | |
|--------------------|---|
| Ark | A place of safety from flood water |
| Floodplain | Area alongside a river onto which a river overflows in time of flood |
| Ground Water | The level of water in the soil |
| Saturated (ground) | Land in which all the air spaces in the soil have been filled with water. |

Acknowledgements

This Factsheet was written by David Flint who works at the University of Worcester and carried out research on the 2007 floods.
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