

## Get wise to 'flash' flooding Be prepared

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| <p><b>What to do:</b></p> <p>Unfortunately advance warning of 'flash' floods cannot always be given as some sewers, main drains, streams and watercourses can rise so quickly that it is impossible to predict where a flood might occur.</p> <p>Don't wait for a flood to happen before you prepare to deal with it. Having the relevant information and equipment together beforehand could help and save a lot of problems.</p> <p>Keep this leaflet in a handy place - it gives you useful telephone numbers, although you need to bear in mind that in an emergency these lines will be busy. Include your own insurance company details also.</p> <p><b>Be prepared:</b></p> <ul style="list-style-type: none"><li>• Make sure your insurance policy covers for flood damage.</li><li>• Make a list of valuable items and keep it safe in case you need to make an insurance claim.</li><li>• Make sure you know where to switch off the electricity, gas and water supply.</li><li>• Prepare an emergency evacuation pack, e.g. include items such as warm clothing, overnight clothing, wellington boots, first aid supplies, medical card, medicines, toiletries, personal papers and documents, form of identification, money, etc.</li><li>• Make advance arrangements to stay with family or friends in case you may need to evacuate your property. Can your pets be accommodated also?</li></ul> <p><b>If you are evacuated</b> It is unlikely the Police will keep a permanent presence in the flood area, therefore lock all doors and windows. Take the emergency evacuation pack with you.</p> <p><b>Flood water</b> Do not drive or wade through flooded areas - drain covers may have lifted and electricity/telephone wires could still be live.</p> <p><b>After the flood</b> Do not switch on electricity/gas supply until you have first checked it is ok to do so.</p> | <p><b>Useful telephone numbers:</b></p> <p><b>Worcester City Council:</b> If you need help call the Council on 01905 722233 (office hours only).</p> <p><b>Worcester City Council's out of hours emergency number</b> is 0845 056 8035.</p> <p><b>For emergency accommodation</b> call the City Council's Strategic Housing Services Section on 01905 722494. Out of hours 0845 056 8035.</p> <p><b>Floodline (The Environment Agency):</b> 08459 881188. Enter the quick dial number for the area (i.e. the River Severn) press 052322. For Barbourne area the quick dial number is 0523342. For Blackpole and Perdiswell the quick dial number is 0523341.</p> <p><b>Severn Trent:</b> 0800 783 4444.</p> <p><b>Worcestershire County Council - Highways:</b> 01905 722233 and out of hours 0845 056 8035.</p> <p><b>Worcestershire County Council - Emergency Planning Unit:</b> 01905 766176 or 01905 763763 (out of hours).</p> <p><b>H&amp;W Fire and Rescue Service:</b> 999</p> <p><b>West Mercia Police:</b> 0300 333 3000</p> <p><b>National Flood Forum</b> <a href="http://www.floodforum.org.uk">www.floodforum.org.uk</a> has practical information. See over for useful information on localised or flash flooding, highway flooding and flooding from sewers.</p> <p><b>Local radio stations</b> give out regular updates, so please tune into local radio for more details. BBC Hereford and Worcester - 94.7, 104 or 104.6 FM<br/>Wyvern FM: - 96.7, 97.6 or 102.8 FM</p> <p><b>Write in the telephone numbers that you may also need to use, e.g.</b></p> <p><b>Insurance Company:</b></p> <p><b>Electricity/Gas suppliers:</b></p> <p>For more general information on flooding please see the City Council's Flood Emergency Plan which can be viewed or downloaded from <a href="http://www.worcester.gov.uk">www.worcester.gov.uk</a>. A hard copy is available by calling 01905 722203.</p> |
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## **LOCALISED OR FLASH FLOODING**

Localised or flash flooding is usually a result of storm level torrential rain and often results in problems in urban areas. Heavy rainstorms can mean that drainage systems and sewers fill to capacity very quickly and over-top.

Flash flooding can become a big problem if the weather has been very dry for some time before a storm breaks, as the land can become baked hard and cannot absorb the rain when it comes. It can then run off the land and lead to flooding.

Flash flooding can be very localised but can do as much damage as flooding from rivers or other watercourses.

Localised flooding can also happen following a period of prolonged rainfall when the ground becomes saturated and cannot absorb any more water so it flows off the land.

Watercourses are often culverted (meaning that previously open channels are diverted through pipes) during the building of new developments to channel water away from or even underneath buildings. These culverts can work well for many years but can also cause flash flooding problems following rainstorms or prolonged rain as culverting dramatically reduces the capacity of a watercourse.

Flash flooding can also be made worse when the capacity of small watercourses or culverts is reduced by blockages of rubbish/fly-tipping.

Rubbish can also travel down watercourses until it reaches culverted sections and block them. To help avoid this riparian owners are encouraged to keep watercourses that run through their land clear of debris that might cause problems further downstream.

## HIGHWAY FLOODING

Roads and paths are usually drained into highway drains that run alongside them.

In rural areas roads usually drain into ditches along the edges of the roads. In heavy rain or storm conditions or following periods of prolonged rain these drains can also sometimes find it difficult to cope with run-off from roads and paths and this may result in flooding.

In rural areas keeping drainage ditches clear and free of obstructions is the responsibility of the landowners whose land they flow through (known as riparian owners). Excess water usually gradually drains away into the adjoining land. Landowners are encouraged to maintain land ditches and avoid reducing capacity by culverting. This ensures good flow and reduces the risk of flooding. Improvement work on land drains is carried out by the highway authorities, local authorities and landowners.

Highway drains are the responsibility of the highway authorities, (in Worcestershire this is the County Council), who maintain them and attempt to keep them clear so that they can cope with run-off. Excess water build up in urban areas is sometimes diverted away from the highway into 'soak-aways' near to the drains and then gradually into the ground.

New developments can increase run off due to an increase in the numbers of roads, driveways and hard landscaped gardens and some are now built with balancing ponds to compensate for the loss of land for rainwater to soak in to.

Developers are also now encouraged in some areas to avoid too much hard landscaping in new housing estates and also to include 'green open space' which can absorb some of the run off from roads following periods of heavy rain.

## FLOODING FROM SEWERS

Localised flash flooding from blocked or overloaded drainage systems can occur at times of heavy rainfall. This type of flooding is unpredictable and often occurs in unexpected locations depending on the location and intensity of rainfall. Such drainage systems include open drainage ditches & culverts and buried drains and sewers. Where flooding occurs from foul sewers the floodwater will be contaminated with sewage. In some cases, contaminated floodwater can flow back through foul sewers causing flooding inside buildings.

More than 10,000 homes are currently at high risk (10% annual chance) of sewer flooding and government statistics put the value of assets under risk from sewer flooding at £270m.

The water companies, in Worcestershire this is Severn Trent, are responsible for the foul sewerage system and the surface water sewerage system if it has been adopted. They do not have responsibility for any other watercourses or land drainage systems.

If floodwater has been contaminated a filthy layer of silt is usually left behind when the water recedes. Contamination can add to the cost of cleaning and disinfecting buildings that have been flooded and pose risks to health. Protective clothing should be worn whilst cleaning after the flood and other hygiene precautions should be taken.

Advice on health and safety precautions to be taken when restoring flooded buildings can be found on the Environment Agency's website: [www.environmentagency.gov.uk](http://www.environmentagency.gov.uk) or by calling their Floodline on 0845 988 1188

General flooding can create blockages in drains and sewers that can lead to the backflow of sewage into properties through low level drain gulleys, toilets, and washing machine/dishwasher outlets. Backflow through drains is particularly likely where floodwater is prevented from entering the property using temporary barriers and where the flooding depth outside is above the internal level of the drain entry points.

This flooding can often be effectively controlled by installing non-return valves within the private sewer of a property upstream of the public sewerage system. Further details are provided by the CIRIA publication 'Low-cost options for prevention of flooding from sewers'. Anti-flooding devices require careful installation and must be regularly maintained. Maintenance depends on the type of device fitted, but is normally required every six months.

Some properties have Private sewage systems and flooding of these systems can also create a back-up of sewage into the property. Damaged septic tanks, cesspools, or small package sewage systems should be inspected by a qualified engineer before the drainage system is used after a flood.