Culverts are usually pipes or channels that carry streams under roads. If they are "owned" by the highway authority, it is our responsibility to ensure that they are functioning properly.

## Combined drain and channel blocks

Recently we have been introducing a new type of road drain which is a special type of concrete kerb that incorporates a drainage channel. This is often used where the road is flat which would make the traditional gully less effective. They look similar to ordinary concrete kerbs but are larger with hole next to the edge of the road at regular intervals. We also arrange to have these cleaned and flushed as required but if you do spot one that is blocked it would be helpful if you could let us know.

## Road flooding

Despite our best efforts, a sudden storm or downpour will invariably result in more water on the road than the gullies or ditches can cope with and the result is water accumulating on the road. Increasing paving on residential drives and other areas does not help as this can result in greater run-off on to the road instead of water draining through the soil as occurs on grass or gravel paths. In severe weather the capacity of the drainage system, or the sewer system maintained by South West Water, is simply overwhelmed by the amount of water trying to run off from the road and this is when some flooding can occur.

## Climate change

All the predictions about future weather conditions suggest that the likelihood of extreme weather events, including very heavy rainfall, is likely to increase. We are trying to 'future proof' our drainage system to respond to these predictions. One of the things we are doing is to fit, where there is room, larger pipes whenever we are replacing or installing new gullies. We are not able to do this on all roads at present as the costs involved are too great, but we can take all the opportunities presented to us to try to increase the capacity of the drainage systems.

We will continue to look for ways to increase the capacity of the road drainage systems, and to work with our partners, to ensure that we reduce as much as we can the number of times that water accumulates on the road.

We are also trying to introduce drainage systems that store the water off the road in a controlled way. This helps to reduce surges in adjoining streams and rivers and is called 'sustainable drainage'.

For more information:
www.devon.gov.uk/roads


BT 0845 calls cost a maximum 5p per minute. Other providers may vary

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# Drainage from roads

Devon County Council

Water on our roads is not a good thing. Too much surface water:

- **Creates unpleasant conditions for pedestrians**
- **can cause cars to aquaplane**
- **can cause spray which affects visibility**
- **can turn to ice during the winter making life even more difficult for drivers, cyclists and pedestrians.**

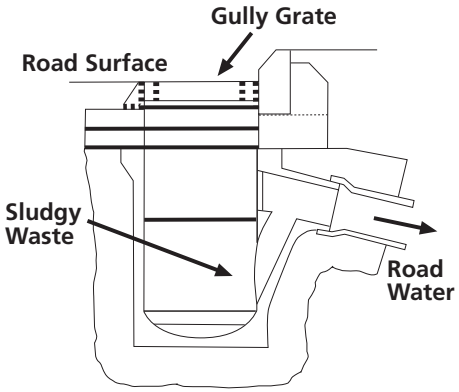
In addition, water going into the road structure can reduce the life of the road by causing structural damage.

Our job in Devon County Council is to ensure Devon's roads are built and maintained in such a way so as to reduce the amount of standing water, and it is in all our interests that we limit the water on or in our roads as much as possible. It is also the Council's job to ensure that, as far as we can, our roads are kept clear of rain water.

Roads are designed so that water drains away from the road surface and goes to the edge. What happens then depends on where the road is and what has been put in place. For most residential and urban roads the water is then channelled into gullies, covered by a grate.

Devon has approximately 170,000 gullies and we aim to empty them annually of the stones, soil and rubbish that collects at the bottom. Some that are known to block up more frequently, such as those close to sea fronts which get clogged with sand, are emptied more often.

## How gullies work




**Detail of Roadside Gully**

Beneath the familiar gully grating is a concrete or brick built chamber or bowl that collects dirt and other rubbish and usually has water at the bottom. Some gully drains are 'trapped' which means that the outlet pipes are designed in such a way as to avoid foul smells coming back through the pipework and into the street.

There are a number of reasons why gullies can stop working and we are always grateful for help in identifying problem gullies.

### What to look out for:

- Water stays touching the top of a gully grate an hour or so after heavy rainfall (but please note that gullies should usually have some water in them)
- Soil and other rubbish is covering the grating.
- Water is not draining away and there is standing water around the gully
- Grates and frame are broken, severely sunken or misaligned.

Please report blocked gullies by contacting the My Devon Customer Service Centre or using the on-line reporting facility on the Devon County Council website:
**www.devon.gov.uk/roadmaintenance**

A problem with a gully may occur if the drain or sewer that it is draining into gets blocked. This can sometimes lead to water coming back onto the road. When this happens we will work with our partners, such as South West Water, to clear the problem as soon as possible. If you see such a problem please contact us via the My Devon phone number overleaf.

## Other forms of drainage

We also have about 40,000 open drains or holes in the verge, hedge or bank that permit the water to drain from the road. Examples are:

- easements and 'buddle holes' - a hole or pipe that carries water through a hedge or bank
- 'grips' - a ditch across the verges which drains water into a back ditch.

We aim to clean these drainage systems on an annual basis in problem areas.

Ditches along the side of the road are the responsibility of the whoever owns the land on which they are situated, they should maintain and keep the ditch capable of carrying water away from the road.