

Highway Drainage & Flooding

A short guide for Parish Councils



This short guide explains the highway drainage services that we provide and how they are delivered. It explains our legal obligations and also the roles and responsibilities of others.

The Highway Drainage System

1. Which drainage assets is the KCC Highway Drainage & Structures Team responsible for maintaining?

The Highway Drainage & Structures Team maintains the following drainage assets:

Asset	The amount we look after
Roadside drains	250,000
Ponds and Lagoons	250
Pumping Stations	15
Soakaways	8,500

2. What is the purpose of the highway drainage system?

Highway drainage systems are designed to:

- Remove surface water from the road to maintain road safety and minimise nuisance,
- Provide effective sub-surface drainage to prevent damage to the structural integrity of the highway and maximise its lifespan, and,
- Minimise the impact of highway surface water on the adjacent environment including properties

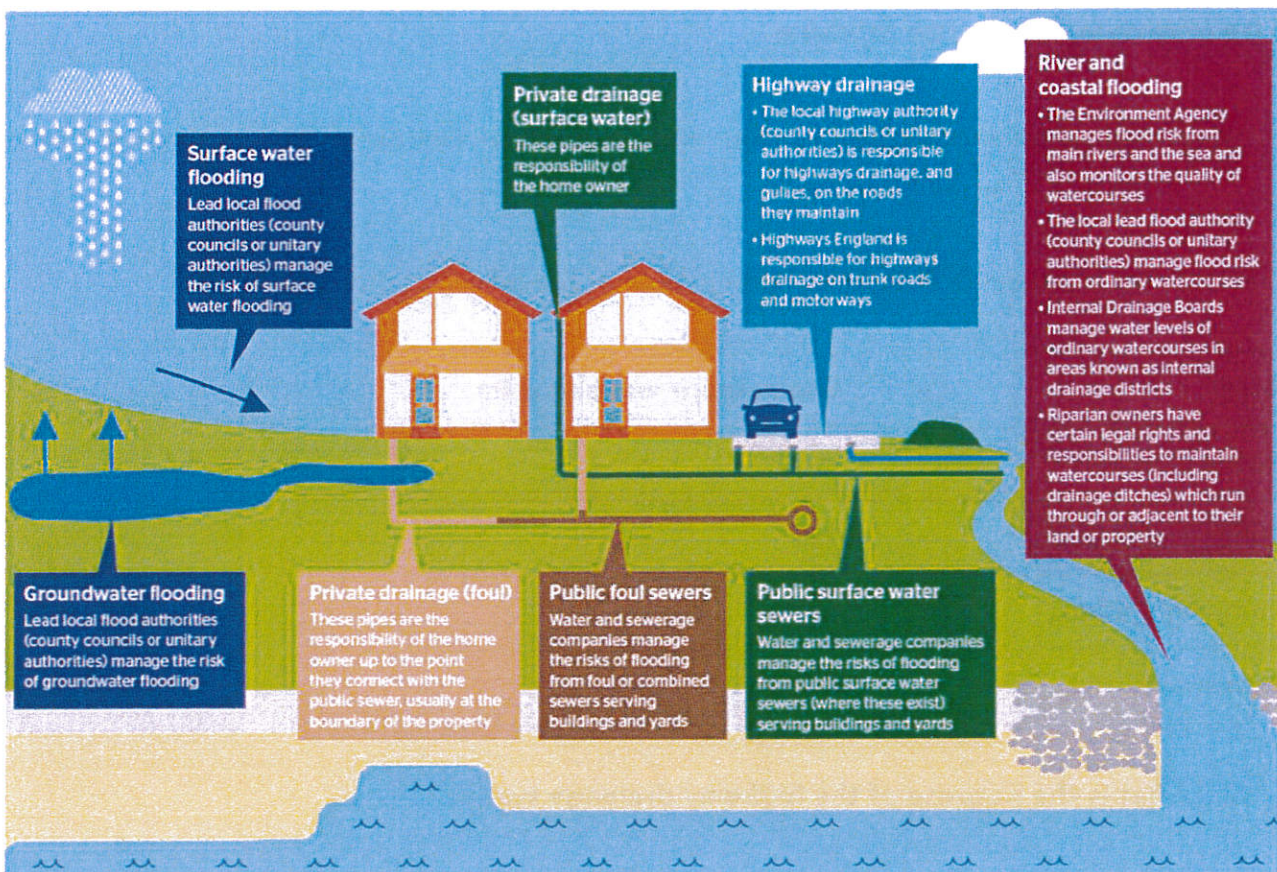
Highway drainage systems are not designed to:

- Remove surface water from adjacent land or properties

- Provide an overflow system for land drains, water course, rivers or sewers
- Accommodate the volume of water that falls onto the road during very intense or prolonged rainfall events

3. Who else is responsible for drainage assets in the County?

Responsibility for managing flood risk and maintaining drainage infrastructure is shared by a number of organisations:



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4. Where can Parish Councils go if they are unsure who is responsible for a specific drainage asset?

You can call the County Council on 03000 41 81 81 and talk to the agents in our Contact Point. If they are unable to assist you they will pass you through to the Drainage & Structures Team. We have a team of Technicians who will be happy to assist you.

Maintenance of roadside drains

5. How is maintenance of the highway drainage system delivered?

There are two types of maintenance: planned maintenance and targeted maintenance.

We carry out planned maintenance on main roads – these are mostly A roads and the key routes that connect County's towns and villages. Roadside drains are cleaned once every 12 months as part of a cyclic programme of work. This is the most cost effective way to work on these roads and enables us to minimise the disruption caused to local residents.

We also carry out planned maintenance at around 250 locations which we know are particularly vulnerable to serious flooding when the drains become blocked. The drains at these locations are cleaned once every 6 months.

All other drainage assets, including soakaways, highway ditches, highway ponds, culverts and grips, are maintained on a targeted basis. This means that maintenance work is arranged in response to enquiries and reports of flooding.

6. How is targeted maintenance prioritised?

When we receive a report of flooding or an enquiry from a customer the first thing that we do is check our records to see if we already know about it and have works planned.

If no works are planned, the site is inspected. The Highway Steward or Drainage Engineer looks at how much work is required, what traffic management is needed and the risk that flooding poses to road users and residents. Some of the things that they think about include the following:

- The type of road, for example, whether it is a high speed road, a main road, an estate road or a country lane
- The amount of traffic that uses the road, for example is it a main route in and out of a town or is it a minor road only used by a handful of drivers each day
- The impact if the road is closed, for example, the road might only be used by a handful of people but it may also be the only route to get to their homes
- The impact on residential property, for example, when the drains are blocked do homes get flooded

Cleansing is carried out within 2 hours, 24 hours 7 days, 28 days or 90 days of the inspection depending on the level of risk. The following photos provide a guide of the timescales for response:



Reactive response required: 2 hours



Reactive response required: 24 hours – 7 days



Routine cleansing required: 28 days – 90 days



No action required: Intervention level not met

In order to use our limited funding in the most effective way, works are delivered on the basis of the highest risk sites first.

Sometimes the weather can create an increased need for reactive maintenance and works such as flood clearance. We ensure that funding is available to respond to these situations.

7. What do the drainage operatives do when they clean the drains?



First an operative inspects the drains and notes any damaged or missing covers. If a cover is missing, it is reported to the team in the depot so that a temporary cover can be put in place to make the drain safe.

Next any silt and debris is removed from the drain with a large vacuum pump.

Finally the crew flood test the drain by filling it with water and checking that it is able to flow away.

On completion of each job, the operatives record the number of drains that they have cleaned and any defects that they have found are recorded.

8. How much does it cost to clean a standard roadside drain?

Depending on the location and number of drains to be cleaned, the cost of cleansing ranges from around £5 per drain to £190 per drain.

We plan our work carefully to try and minimise the cost per drain so that we can do as much work as possible with the available funding.

9. What can Parish Councils do to ensure that their drains are maintained effectively?

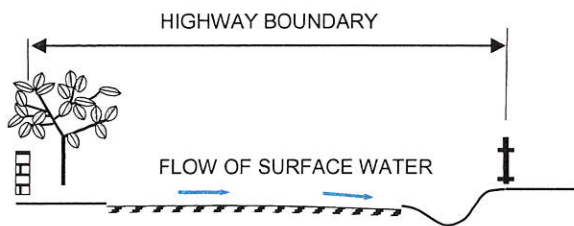
If you or a resident in your division has blocked drains that are posing a risk to safety or affecting resident's homes then please report them. The best way to do this is with the online fault reporting tool which also allows you to track you enquiry: <http://www.kent.gov.uk/roads-and-travel/report-a-problem>

Please give us as much detail as you can about the location of the drains and the impact that they are having on safety, property and the local community.

Maintenance of roadside ditches

10. Who is responsible for maintaining roadside ditches?

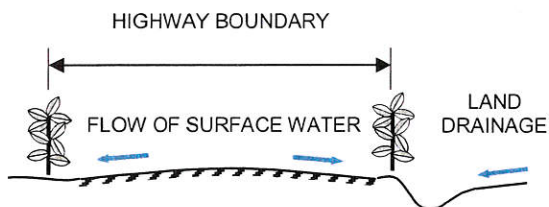
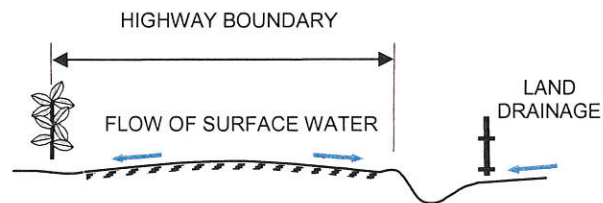
There are three categories of roadside ditch:



A ditch created by the Highway Authority (KCC) and owned by them solely for draining the highway is their responsibility.

Common law imposes a duty on the owner of land adjoining a highway to maintain ditches that provide natural drainage for both the land and highway.

A ditch on the road side of boundary fences and hedges taking land drainage as well as highway drainage is the responsibility of the adjacent landowner



A ditch on the field side of a boundary fence or hedge taking land drainage as well as highway drainage is the responsibility of the adjacent landowner

As the Highway Authority, we have a prescriptive right to drain the highway to any adjoining roadside ditches. We might do this by piping water from a drain into the ditch or by cutting grips between the road edge and the ditch. In these cases, the drains, pipes and grips which channel the water into the ditch remain the maintenance responsibility of the Highway Authority.

11. What can KCC do if landowners do not maintain their roadside ditches?

If poorly maintained ditches are causing water to flow onto the highway and making it hazardous to highway users, we can use our powers granted under the Highways Act 1980 to take enforcement action. This process is very similar to the process we use for dealing with private vegetation affecting the highway:

First we will write to the land owner asking them to contact us to discuss the condition of their ditches. This letter is accompanied by photographs showing the flow of water onto the road.

If we do not hear from the land owner we will write to them a second time advising that if they do not respond to our first letter we may be forced to take action and will seek to claim back the costs incurred.

If we continue to receive no response, we will write to the land owner for a third time advising that if they do not contact us within the next 14 days we will take action to stop water flowing onto the road and claim back the costs incurred.

It can take up to six months to complete the enforcement process as we need to give landowners time to take action, carry out inspections and fit any works that we might do into our routine works programme – if the works are not urgent for safety reasons, we prefer to do ditching in the drier months.

Prevention of water flowing onto the highway

12. What can KCC do if landowners do when water is flowing from adjacent land onto the road or footpath?

If inadequate drainage is causing water to flow onto the highway and making it hazardous to highway users, we can use our powers granted under the Highways Act 1980 to take enforcement action. This process is the same as the process explained above for dealing with poorly maintained ditches.

Drainage Repairs and Improvements

13. How do KCC know when repairs and improvements are required?

When flooding occurs the first thing we do is clean the drains that are already there. If this doesn't stop the flooding then we may need to repair or improve the drainage system.

If the cleansing crew is able to find an obstruction or break when they jet the pipes, we can arrange for a crew to dig down on the blockage, investigate what is causing it and repair the pipe. If the location of the problem is unclear we can check the condition of the pipes with a CCTV camera.

Sometimes repairing the drainage system doesn't stop the flooding for example when a soakaway has failed or when the system has insufficient capacity. In these instances we need to consider improving the drainage system.

14. How are repairs and improvements prioritised?

When repairs or improvements are needed our Drainage Engineers look at how much work is required, what traffic management is needed and the risk that flooding poses to road users and residents:

- Is frequent flooding posing a risk to highway safety?
- Is frequent flooding affecting homes or businesses?
- Is frequent flooding affecting the condition of the road?
- If frequent flooding causing disruption to the movement of traffic on the network?

When we don't have enough budget to do everything, works are then prioritised and delivered on the basis of the highest risk sites first.

15. Can Parish Councils influence where we do repairs and improvements?

We need to make sure that we invest the budget that we have consistently across the county and the approach outlined above enables us to do this.

If there is a site in your Parish that is causing particular concern, report it to us and encourage the residents who are affected to do the same – we often look at the number of enquiries we have received to help us understand the frequency and level of disruption caused by the flooding. The best way to do this is with the online fault reporting tool which also allows you to track your enquiry: <http://www.kent.gov.uk/roads-and-travel/report-a-problem>. You will be able to see when the site has been inspected, whether or not we plan to do further work and when the works are completed.

We have more information, including a short film, on our website explaining in more detail how we maintain our roadside drains:

<http://www.kent.gov.uk/roads-and-travel/what-we-look-after/drainage-systems>

