

Flooding Investigations



Climate change is contributing to an increased frequency of heavier rainfall events in Scotland. The current drainage infrastructure, which includes the network of road gullies, surface water pipes, combined sewers and fast flowing urban watercourses and culverts serves our towns and cities across Scotland well. However, these will be under increased pressure, leading to more chance of flooding with the occurrences of extreme rainfall predicted to increase both in frequency and intensity.

Responsibilities around flooding can be complicated as a number of agencies have responsibility for dealing with different aspects of flooding in Scotland. All public organisations are placed under a duty to work together to reduce overall flood risk by the Flood Risk Management (Scotland) Act 2009.

Conventional urban drainage infrastructure is complex, and ownership and duties are split between various agencies, local councils and landowners. Scottish Water is primarily responsible for draining foul and surface water from roofs and paved areas of properties and managing flood risk from the sewer network. During severe rainstorms, drainage systems are often temporarily unable to cope with the volume of surface water they receive in a very short period of time. This may come from land, buildings, footpaths and roadways which can result in our sewers surcharging, causing sewer flooding to homes, gardens and roadways. Below-ground piped systems can never be built large enough to cope with the most severe rainfall events.

Next steps following a flooding event

In the event of sewer flooding from our sewers, we will do all we can to assist.

Once Scottish Water is notified of suspected flooding experienced by our customers, we will assist with any clean up required where appropriate and disinfect the affected area.

We will carry out an initial assessment to identify likely causes of the flooding experienced. If the flooding is caused by a blockage in or an operational issue with in the public sewer, Scottish Water will work to resolve the issue in a timely manner.

Our flooding investigation process

If no operational issues are found to have caused flooding, Scottish Water follow a standard process to determine the root cause(s), the mechanism(s) and impact(s) the sewer flooding has had on our customers and communities, to understand the level of risk of a repeat event.

We make sure we investigate the problems that have the biggest impact on our customers first, therefore we are required to prioritise those customers who have experienced internal sewer flooding of their properties. This is followed by those impacted by external sewer flooding, although these are prioritised predominantly on sensitive, critical services such as schools and hospitals.

We assess the risk of flooding from our sewers in line with a standard UK Water Industry approach. Rainfall is one of the primary indicators for flood risk overwhelming the sewers. It is important to determine the rainfall classification for each flooding incident.





Investigation summary

Our in-depth flooding investigation process can take some time to complete depending on the scale, complexity and priority of the incident. Typically, these include the following steps:



Rainfall analysis carried out to indicate to help indicate the likely primary cause

* Please refer to Rainfall Classification information below.



A full review of any historical flooding incidents



Review the layout and operational status of the sewer networks



Interviews with customers affected



Liaison with other flood risk agencies to gain a common understanding



Determine the capacity of the sewer network



Next steps

If your property is deemed to be at risk of internal sewer flooding due to overloading of our sewer network, or you have experienced repeat internal sewer flooding and continue to be at risk during severe events, Scottish Water will explore what, if anything, can be done to reduce the risk and impact of future events through property level mitigation measures.

There may be some situations where, unfortunately, nothing immediate will be done. This is all dependent on feasibility, cost and consideration of flood risk transfer to neighbouring properties.

Property level mitigation measures provide a good level of protection against a repeat event of internal sewer flooding.

If your property is deemed to be at risk of sewer flooding due to overloading of our sewer network under normal rainfall conditions, your property will be added to our **Sewer Flooding At Risk Register**. For properties on the register, a project may be introduced to investigate the potential to provide a longer term solution to reduce the sewer flooding risk to a water industry standard level.

Scottish Water's current investment criteria is to invest for properties that experience a 10% risk (or greater) of internal sewer flooding in any given year.

External sewer flooding in gardens or roads, though inconvenient, is generally considered to have a lower priority than internal flooding. Therefore, investment for network improvements to reduce the risk of sewer flooding is prioritised for customers affected by internal sewer flooding under normal rainfall conditions.

For more information on what you can do to help please visit www.scottishwater.co.uk/Your-Home





Guide to rainfall classification

One of the first stages of our investigation process is to understand the rainfall intensity that led to flooding at your property.

Rainfall events are defined in terms of their depth, duration and intensity.

Rainfall classification is defined below in millimetres per hour (mmph).

The guide to rainfall below is based on Scotland-wide average rainfall analysis over a 60 minute duration (mmph may vary by region).



Light rainfall = less than 10mm of rainfall averaged over 60 minutes



Moderate rainfall = between 10-20mm of rainfall averaged over 60 minutes



Heavy rainfall = between 20-30mm of rainfall averaged over 60 minutes

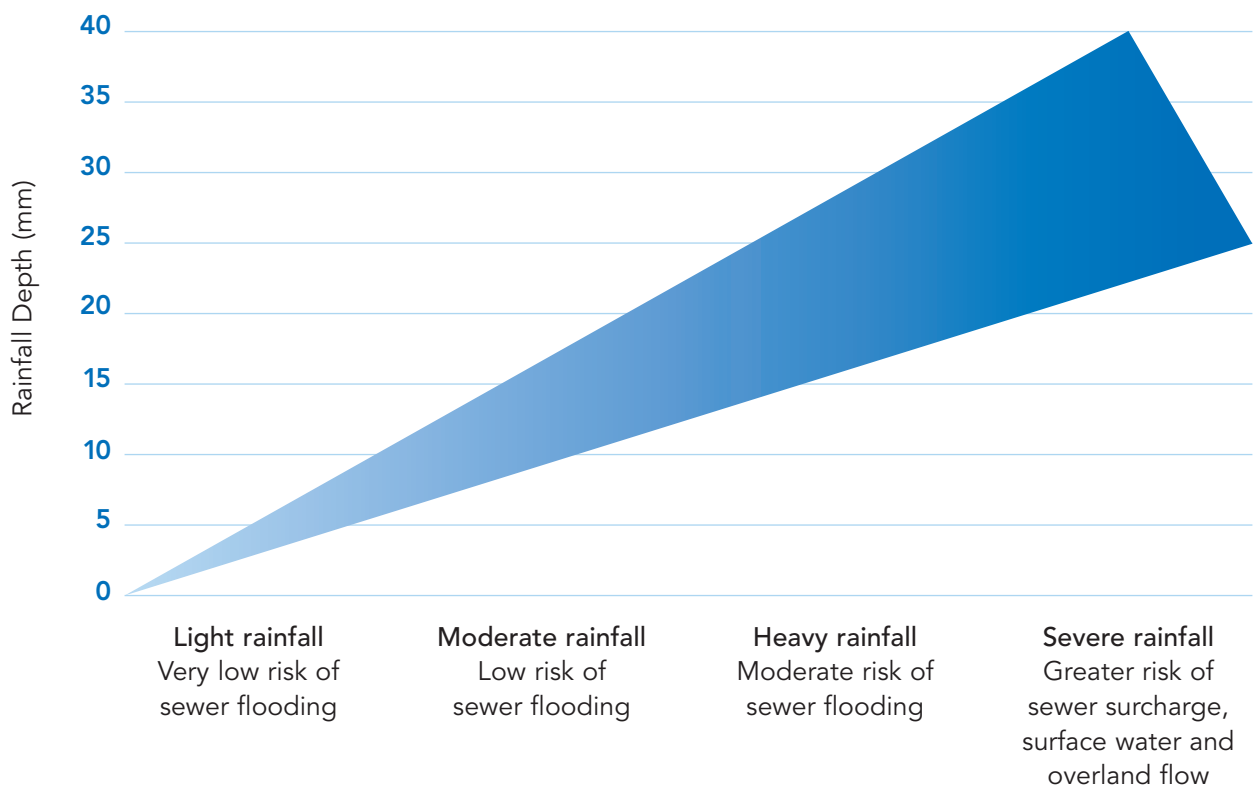


Severe rainfall = anything over 30mm rainfall averaged over 60 minutes

Figures are average and collated in conjunction with SEPA Study – [SEPA Your Guide to Using the Flood Guidance Statement](#). [Click Here](#)

Sometimes, if the depth of rainfall falls in a shorter time period (for example 16mm falls in 10 minutes) this may also be classed as severe rain and would be above our agreed level of service.

Additionally, consideration must be given to factors such as ground conditions, recent weather events, neighbouring water courses and surrounding landscape which affect how urban drainage systems cope with rainfall and contribute to flooding.



Rainfall Classification

Climate change is predicted to increase the frequency of severe rainfall events, and place even greater pressure on the piped drainage systems which have a finite capacity, which may lead to an increased risk of surface water and sewer flooding.

It is recognised by the Scottish Government that there is a need for cross sector effort to manage surface water more sustainably and create climate resilient places and help take this pressure off the pipe drainage systems in our towns and cities.



Useful Contacts

Our website contains further information about our services. You can also find us on Facebook and Twitter for current service updates. Scottish Water has a suite of videos that can help you understand flooding and be better prepared should it happen visit these today by visiting:

www.scottishwater.co.uk/PrepareFloodingVideo

Scottish Environment Protection Agency (SEPA)

Information on Scotland's environment, pollution prevention, regulation and other environmental initiatives.

SEPA Pollution Hotline

0800 80 70 60 (24 hour service)

Floodline Service

0345 988 1188 (24 hour service) www.sepa.org.uk

Met Office

Weather and climate change forecasts.

www.metoffice.gov.uk

Scottish Flood Forum

A Scottish based charitable organisation that provides support for and represents those who are affected by or are at risk of flooding. Helpline – 01698 839 021 (24 hour service) www.scottishfloodforum.org

Citizens Advice Scotland

The Citizens Advice Service can help with a range of issues that may arise if you have been affected by sewer flooding. See www.citizensadvice.org.uk/scotland for self-help information or to locate your nearest Citizens Advice Bureau.

Contacting a plumber

We would always recommend the use of licensed plumbers. Scottish Water supports and promotes the WaterSafe scheme. WaterSafe is a dedicated online search facility to help customers to find the nearest qualified plumbing and heating professionals in their area. To find a licensed plumber in your area, visit WaterSafe at www.watersafe.org.uk



We want to make it easy to contact us – here's how:

We always have someone here to take your call, you can write to us or alternatively you can contact us through our website.

Alternative formats of this leaflet can be made available free of charge. For information on Braille, large print, audio and a variety of languages, please contact us.

If you have a disability, medical condition or other reason where you will need additional assistance from Scottish Water then please contact us and we can add your name, address and requirements to our confidential Priority Services Register.

We record all calls for quality and training purposes.

CLICK

Report an incident



www.scottishwater.co.uk



help@scottishwater.co.uk



facebook.com/scottishwater



[@scottish_water](https://twitter.com/scottish_water)



Customer Helpline 0800 0778778

Please quote this reference code when contacting us: **SWFact 18 06/23**