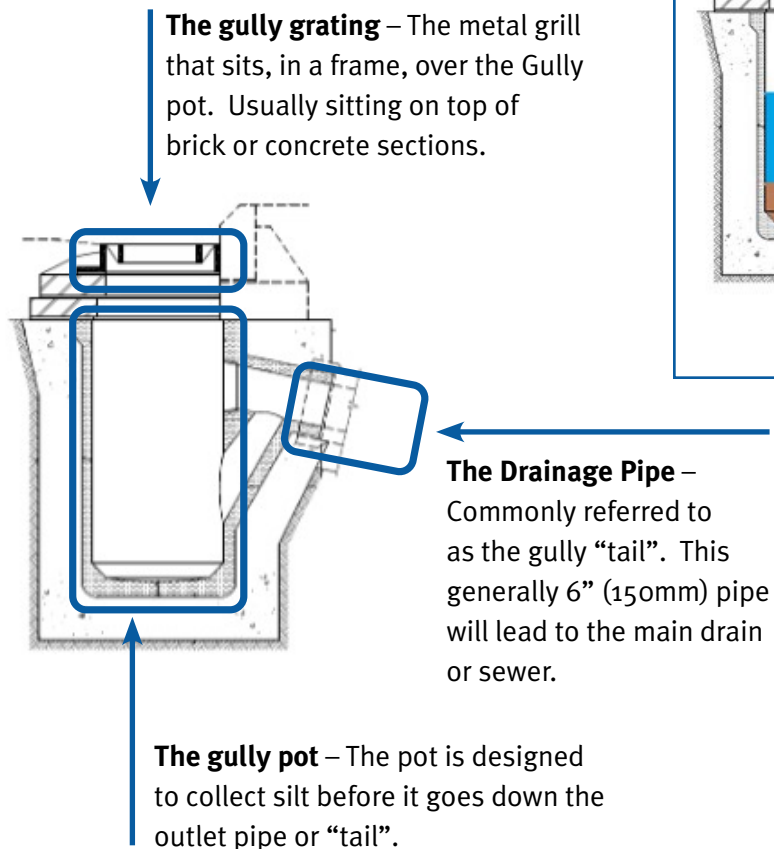


Road Drainage Explained

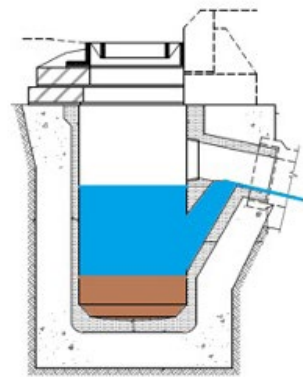
The purpose of this document is to explain the process of how customer reports of a non-functioning gully are handled from point of report to completion. The process is varied and can range from the simple removal of silt in the gully pot, through to digging up the road to repair a damaged drainage pipe; potentially a large distance from the drain in question. To assist customers who are unfamiliar with drainage systems and infrastructure a brief description of the drainage features is given below.

1. Drainage Systems Explained:

The typical features of a road drain:

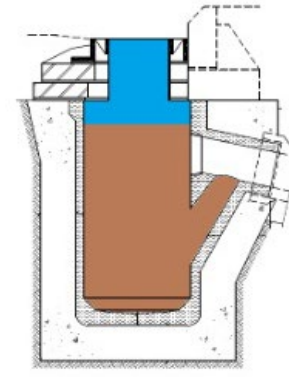


Properly Functioning Gully:



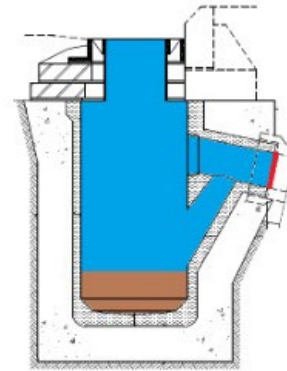
Some silt at the bottom
Water sitting in the gully up to the outlet level.
During dry periods this will evaporate away but following wet weather it is normal to have an amount of water sitting in the gully pot.

Blocked Gully:



Here the level of silt has risen significantly and has blocked the outlet pipe (bottom hole) and the rodding eye outlet (the top hole).
The rainwater cannot reach the drainage pipe and so in wet weather fills up the pot causing the gully to flood.

Damaged or Blocked Gully Tail:



Here the level of silt is not significant enough to block the gully pot but there is a collapse in the drainage pipe leading to the sewer and so in wet weather the rainfall cannot reach the sewer and so the pot fills with water causing the gully to flood.
Where the tail is partially blocked this may result in the water taking longer to clear – often referred to as a "Slow Runner".

2. Accurate Reporting:

The Gully team regularly get enquiries that are not managed by the team or in some instances even the responsibility of the City of Edinburgh Council. To help direct enquiries to the right place the following advice should be considered before reporting through the “Report a Blocked Gully” webpage:

Leaves in the Channel:

If the gully grating is covered in leaves or detritus, then the issue is not one with the gully but the cleansing of the adjacent “channel”.



This is managed by the City of Edinburgh Council’s cleansing department who can be contacted at waste@edinburgh.gov.uk

Sewer Backflowing:

Another common issue is where there is a problem with the main sewer being blocked or restricted and can lead to foul sewage and toilet paper backflowing out of the gully. If this is the case it is most likely a problem with the sewage system.

If the problem lies within the property boundary it is likely a private issue;

If the problem is out with the property boundary it is likely an issue for Scottish Water. Scottish Water can be contacted on **0800 077 8778** or see www.scottishwater.co.uk

Housing Downpipes:

Similarly, we receive a significant number of enquiries about housing downpipes which drain building roof water.

These drains are not maintained by the Roads Drainage team. In most instances this will be a private matter for the property owner or owners.

If the house is a council property you may be able to get further assistance by contacting housing:

0131 200 2345



www.edinburgh.gov.uk/council-house-repairs

If you are living in a building which has a shared maintenance responsibility, then the City of Edinburgh Council’s Shared Repair team may be able to assist:

0131 529 6778

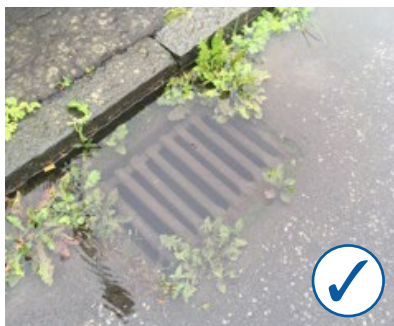
www.edinburgh.gov.uk/shared-repairs/shared-repairs-maintenance

Basements & Cellars:

Basements and Cellars require to be suitably waterproofed by the owner(s), even where the structure is under a public footpath or road. Footpaths are not designed to be impenetrable to water and there is the possibility of water ingress through the road or footpath structure. Roads gullies adjacent to these structures are generally connected into the nearest sewer and are not connected directly to the building sewerage. If water or sewage is coming into a basement or cellar from a toilet, sink, shower trap or internal drain then this will likely be coming from the property's drainage system and depending on the cause of the blockage or backflow then would be the responsibility of either the property owner(s) or Scottish Water. Scottish Water can be contacted on **0800 077 8778** or see www.scottishwater.co.uk/

Roads Gully Problems:

If the issue is not one of the above and look more like one of the below:



Gully clear but flooding during 'normal' rainfall



Gully blocked with vegetation



Gully full of silt

Then it is a likely a roads drainage issue and should be reported through the councils website at: www.edinburgh.gov.uk/gully

When doing so, please provide as much detail as you can, the more information provided helps to accurately understand the problem and can help to speed up the overall process.

3. Blocked Gully Lifecycle:

Step 1 – Empty and flush

The first step in the resolution process is to attend the gully with one of our Gully motors to attempt to empty and flush the gully pot. One of our 18t gully motors will attend and attempt to empty all the silt from the gully pot and flush the gully tail to ensure it is working.

If it can be emptied and flushed the Job and Enquiry will be completed.

However, it is not always possible to do so due to:

- **Restricted Access** – Can't attend due to parked cars / Roadworks / Building works / some other restriction
 - The team will attempt to reschedule the works as best possible considering the restriction presented.
- The Gully was accessed and cleaned but could not be flushed
 - This indicates an issue with gully tail that requires further investigation – this is passed to the jetting team.

Step 2 – High Pressure Jet & CCTV team

The jetting team pick up the job and attend site with the High-Pressure Jet and CCTV camera and attempt to unblock the drain line or establish the location and cause of the block or collapse.

If they can unblock the drain, then they will complete the Job and Enquiry. If they cannot then they will locate as best possible the location and type of block or collapse and record this information to pass to the next team.

There are several different possibilities that can cause a damaged gully tail, these include:

- **Mortar / Cement / Plaster / Paint** - poured down the drain system by contractors which then solidifies and blocks or restricts the drain.
- **Third party damage** – Other contractors dig up the road to install or maintain their apparatus and damage the drainage assets in doing so.
- **Tree roots** – Can in instances penetrate the drain line and create blockages.
- **Historic collapse** – Some of the drainage infrastructure is of a historic nature and through time can simply collapse or perish causing a block to the main sewer.

Step 3 – Gully Investigation Required

The final step in the process, if all else has been unsuccessful, is to dig up the area of the blockage or damage and repair it with a new section of drainage pipe. This requires co-ordination and planning to ensure safe and timely access of the network can be achieved, the position of other underground services is required, and a safe traffic management set up is required.

It is at this stage that 3rd party damage can be uncovered. When it is identified we seek to get the responsible party to make good the damage or seek agreement for the council to do so on their behalf and recover the associated costs.

The “dig up” process can be timely and requires a lot of dedicated co-ordination but will generally see a resolution to the issue. Once the drainage pipe is repaired and the roads is reinstated the Job and Enquiry are closed.

4. Climate Change and Flooding:

Exceptional Rainfall & Flood conditions:

During periods of exceptional rainfall intensity, it is possible for drainage systems to become overwhelmed. This is not from an inadequate design or maintenance, but simply that they were never intended to cope with the intense rainfall events we are now experiencing on an increasingly frequent basis.

Road drainage systems are typically designed for a 1:1 to 1:5 year rainfall event as per current standards (sewers are 1:30), but recent storms have been well in excess of 1:200 year return periods, therefore surface water flooding is expected.

The immediate reaction is to blame the number of gullies or number of functioning gullies. However, gullies being the cause of surface water flooding is rare, and usually as a result of the finite capacity of the main sewer into which the roads gully discharges. The result of this is that even adding more gullies into the network would not resolve the problem as there is nowhere for the water to go to. In severe cases the water in the sewer can become pressurised and seek to escape out through the gully or manhole cover.

During periods such as this the localised flooding can often dissipate quickly after the rainfall event and is evidence that the gully is fully functioning, as it has drained the water, but has suffered some form of capacity restriction.



Example: Surcharging Sewer System at Capacity

Other Sources of Help:

It is primarily for property owners to protect themselves from flooding although the following support is available:

- Information is available on the Council website at www.edinburgh.gov.uk/flooding.
- The Council provide a limited number of sandbags at fire stations throughout Edinburgh for public use.
- Property level protection is available to homeowners, further advice can be found at scottishfloodforum.org.

- Residents can sign up for alerts and monitor flood warning information issued by SEPA at www.sepa.org.uk/environment/water/flooding/floodline
- The public can report blocked gullies (considering the guidance above) by phone or online via the Council's website at: www.edinburgh.gov.uk/gully

How can I help?

There are several key things that residents can do or look out for to help prevent blocked gullies from arising:

- Where possible locally clear channels of leaves and detritus that if left unchecked can speed up the silting up of gully pots or temporarily block the gully grating.
- Remain vigilant when builders are working in your street – avoid pouring paints / cements / plaster down the drainage system.
- Observe the “No Parking” restrictions that are erected to help us gain access to the gullies in areas of heavy parking. Help to spread the message that it is only a short-term disruption that will help prevent blockages and flooding.