

Newsletter

2025 Spring/Summer update



Mitigating sewer flooding in the Misbourne Valley



Community Update

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I'm pleased to be able to share with you some of the work we have been focused on to reduce the impact of sewer flooding across the Misbourne Valley. The valley experiences flooding from many sources, not just sewers, and resolving all the issues will require a continuous multi-agency response. We are working closely with the local councils and other responsible flood authorities to align our plans.

Since September 2023, we've experienced some of the wettest months on record, which has meant our foul sewer, at times, has been overwhelmed.

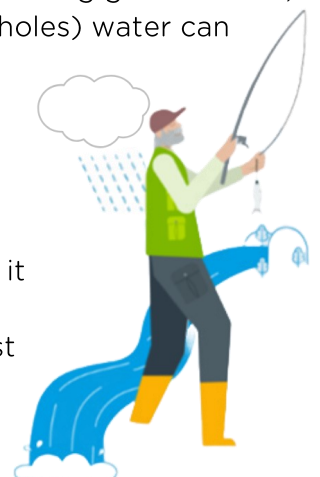
We've been hard at work since last year addressing the issue from multiple angles, such as reducing surface water and groundwater infiltration into sewers through sewer lining and manhole sealing. We've also been installing advanced filtration at our storm tanks in Amersham, to reduce the impact on the river when they discharge. In Chalfont St Peter, we've installed new manholes and connections to allow for a better-positioned tankering point, so we can tanker away excess flows, without having to close the High Street.

Understanding the area and our operations

The River Misbourne is a chalk stream that rises near Great Missenden and flows for 27km, to its confluence with the River Colne at Denham. It is fed by groundwater and both the groundwater and river levels vary significantly between the summer and winter months. Our sewer network also starts in Great Missenden, and largely follows the river valley through Amersham, the Chalfonts before reaching Maple Lodge Sewage Works in West Hyde.

During wet winter/spring periods, water can appear on the ground through either rising groundwater, surface runoff or flooded watercourses. If it flows over our chamber covers (manholes) water can spill directly into the sewers causing 'inundation'. In addition, when groundwater levels rise above our sewers, the pressure of the water can force its way into the pipes (both those we own, and those owned by customers). This is called 'infiltration', it can occur on brand new pipes as well as older ones.

The sewer system in the catchment is 'foul', this means it's designed to take only wastewater from your property. Although it can cope with some extra rainwater, it can become overloaded when significant volumes of river, surface water and groundwater are entering the system. When this happens, it will spill at the lowest points of the network. The winter from Oct 23 to Mar 24 was the wettest on record, which is why the sewers were unable to cope.



What's happened so far?

1

New tankering point in Chalfont St Peter: In December last year, our team built two new manholes which, during prolonged flood events, would allow tankering to take place away from the High Street and keep traffic moving.

2

New emergency pumps: We have installed emergency pumps on the A412 (outside HS2) and at our West Hyde sewage pumping station to pass forward more water when dealing with abnormal flows.

3

Survey work: We've completed 7.8km of CCTV surveys in the sewers to identify which sections of pipes are suffering most from infiltration. We have also been surveying manhole shafts, including ones that are 40m (130 feet) deep which required the use of drones.

4

Sealing chambers and lining sewers: We began work last year to seal 30 manholes and re-line c.1.7km of sewers to reduce the risk of surface water and groundwater ingress

5

Flow monitors: We've installed flow monitors across the catchment to help us better understand how much surface and groundwater enters the sewer network. Results so far show the catchment is more storm responsive than we thought, which means lots of surface water from roofs/driveways/roads is being directed into the foul sewer.

6

Amersham filtration screens: The Amersham storm tanks were designed to store wastewater during heavy rainfall, and release it gradually to the downstream network when the storm has passed. This reduces the risk of flooding in Chalfont St Peter. However, when the tanks are full and the downstream network is overloaded, the tanks discharge to the river. We have now installed micro-filtration screens which will remove particles to 5 microns (0.005mm) to reduce the impact on the river. Normal design standards for storm overflows is 6mm



On the Ground



Flood action group meeting at the start of 2025 discussing the ongoing progress to mitigate flooding across the Misbourne Valley.

While attending to the High St in Chalfont St Peter, Customer Rep for Thames Water Neil noticed some rubbish and a scooter in the river.

Neil said: "Myself and my colleague Kera were in Chalfont St Peter to check in with local businesses and residents following a period of heavy rain. Whilst checking the river levels by the precinct I noticed a child's scooter had been discarded in the river, which was of course unsightly and potentially an issue for local wildlife so as I was wearing my wellies I decided to wade in and remove it as my good deed for the day! Just a small thing I could do to help and that's what were here for!"



How to take action

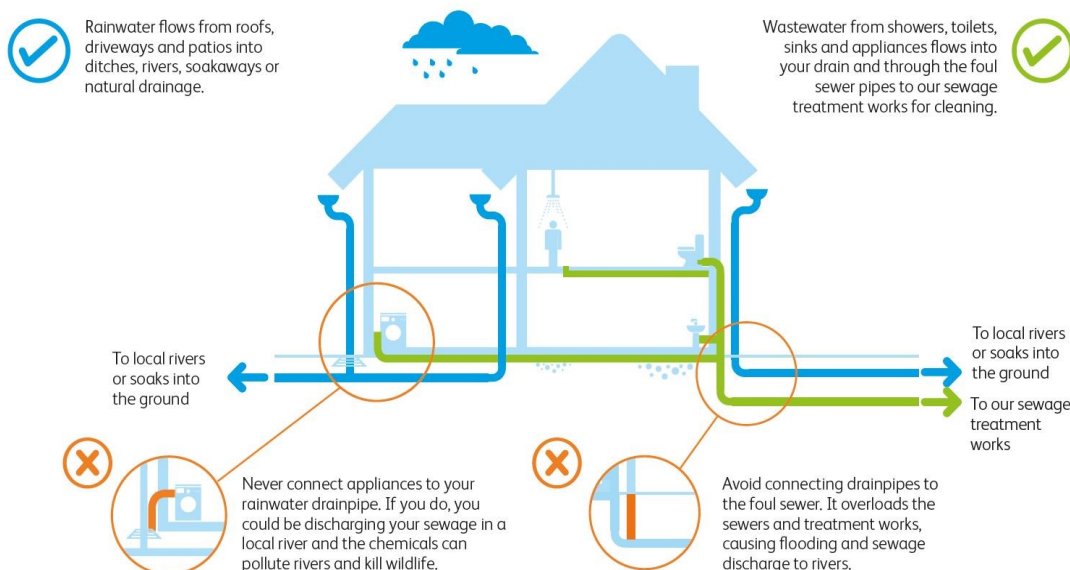
Our sewer network in the Misbourne Valley is foul, this means it is designed to transport wastewater from toilets, sinks and showers to our Maple Lodge sewage works. It is not designed to take large volumes of surface water, from roof connections or driveway runoff. As there are no surface water sewers in the area, surface water would originally have been directed to gardens, ditches, watercourses or soakaways.

Over time, more and more properties have connected rainwater drainage to the foul system. This is why the network is now very responsive to rainfall. It is a particular problem in the wetter winter months when the network is already suffering from infiltration.

On average, a family of four generates **560 l/per day**, whereas during heavy rainfall, an average roof and driveway collects **5,500 l/per hour**! Diverting rainwater away from the foul sewer will make a big difference.

The diagram below shows where wastewater and rainwater from your property should be directed:

Property misconnection problems



Long-term sustainable surface water management



Regularly check your home for a build up of leaves and debris blocking the surface water drains and gullies.



Planting shrubs, hedges and trees can help absorb excess water in the ground and provides a happy home for critters and other wildlife.



Use permeable surfaces like gravel, stone and grass instead of tarmac and concrete to improve your sustainable drainage and help the water get back into the ground.



Harvesting rainwater with a water butt is a smart way to store surface water for plants.

Stay updated

- We will be adding further information over the course of the next few months on our website, so please do keep an eye out by scanning the QR code.
- You can also contact us 24/7 on 0800 316 9800 quoting Ref: BB00807502.

