

What Causes Surface Water Flooding?

Surface water flooding presents a greater risk to people and property than any other type of flood, threatening over 3 million properties across England. Unlike river or coastal flooding, surface water flooding can occur far from any river or stream, often catching people off guard in areas where it's least expected, simply because rainwater has nowhere to drain. This risk is increasing as intense rainfall events become more frequent due to the impacts of climate change.



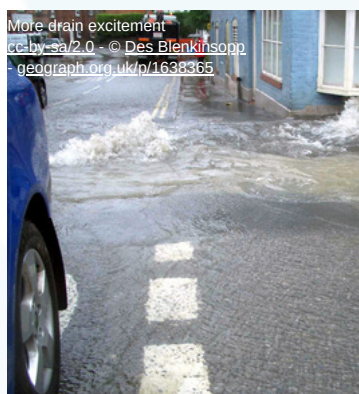
Ground Conditions

When the ground is either dry and baked or saturated and waterlogged, the soil's ability to absorb rainwater is significantly reduced. As a result, rainwater flows overland, which can lead to surface water flooding.



Drainage

Roadside gullies can become blocked by silt, leaves, rubbish or other waste, which prevents them from effectively draining surface water. When surface water drains reach capacity or cannot discharge quickly enough, water backs up and overflows, leading to surface water flooding.



Infrastructure & Development

Buildings, roads, car parks and other impermeable surfaces contribute to surface water issues. A growing trend of paving over gardens for driveways at the front of properties adds to this problem. It's important to note that if the paved area exceeds 5m², planning permission is required for traditional, impermeable driveways unless they allow water to drain to a permeable area.



Topography

Steep-sided valleys and hills can channel significant amounts of rainwater downhill, often towards properties below, leading to surface water issues. In low-lying coastal areas, storage and pumping systems may be necessary to manage surface water effectively. However, if these systems exceed capacity or pumps fail, surface water flooding becomes highly likely.