

Reducing rainwater runoff from your property



How to: cut your water bill, attract wildlife to your garden and reduce your water use while doing your bit to reduce flooding in Chesham

Reducing runoff from your property: it's easy to do and brings many benefits

Holding rainwater on your property rather than letting it run off your land contributes to reducing localised flooding, but can also bring many other benefits to your household and the environment. This leaflet gives a brief overview of some of the ways you can do this: creating a raingarden, planting a tree, installing a water butt, reducing water resistant (impermeable) surfaces and building a green roof, among others. The FloodSmart website has a lot more information about all of these ideas and techniques.

Only part of the solution

Many things contribute to cause flooding. Similarly, many different solutions have to be put in place to reduce flooding. Sometimes, the weather is such that even these will do little to eliminate the problem fully in some areas.

Putting in place the recommendations in this leaflet won't fix the problem. However, they can help natural and man-made drainage systems cope better with rainfall. They are one piece of a complex puzzle.

Install a water butt

Water butts are the simplest way to collect rainwater; a tank is connected to your downpipe to collect water from your roof. More complex systems, for example using underground tanks and pumps, also exist, and can even provide water for toilet flushing. More information about water butts is on the FloodSmart website.



Advantages

- Standard water butts are cheap to buy and easy to install.
- They reduce the quantity of mains water used and lower your water bill if you're metered.
- They provide water for gardening or car washing.
- Water butts are available in different sizes, including tall and thin tanks for limited spaces.
- If you disconnect your downspout from the main drainage system, your water rates may be reduced – you'll need to check with Thames Water.

Things to bear in mind

- You might need to cut a section in your downpipe – do get approval from the property owner.
- More complex systems may require professional help to install.

More information on collecting rainwater can be found on the FloodSmart website.

The flood connection

Flooding is caused by several factors, many of which are difficult for individual residents to influence directly.

However, one of the causes of flooding is the fact that roofs, roads and driveways have progressively covered up more and more land. These are impermeable or sealed surfaces, meaning that rainwater can't be absorbed by the soil but instead runs off somewhere else quickly.

When all of these impermeable surfaces add up, they have a significant impact on flooding, particularly during periods of very intense rainfall that drainage systems have not been designed to cope with. This problem will only get worse: it is predicted that climate change will increase the intensity of rainfall. You can do something about this though, by implementing some of the ideas outlined in this leaflet.

Plant a tree – plant a few trees!

Trees, like all plants, absorb water and release most of it back in the air. Their leaves and branches also intercept rain, slowing down its progress to the ground. In addition, tree roots help water penetrate deep into the soil, where it is stored and released slowly rather than running off quickly and overwhelming drainage systems.

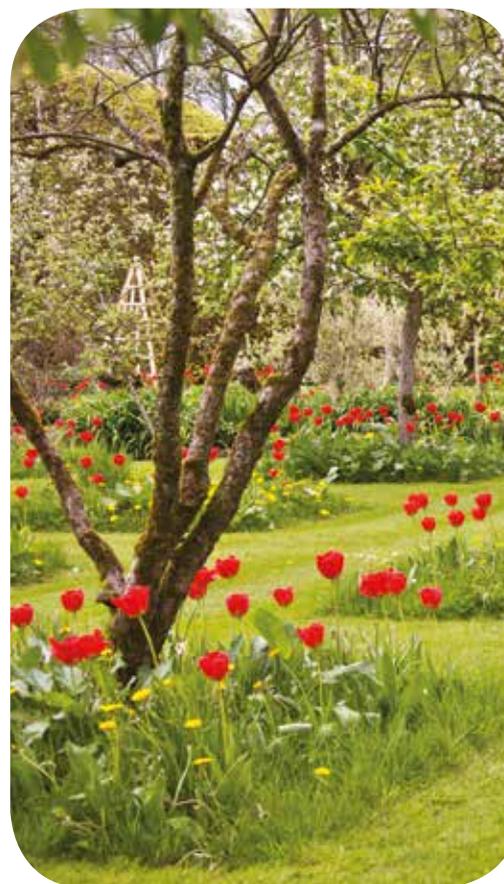
Advantages

- Trees attract wildlife: choose a tree whose fruit or flowers benefit birds and insects.
- The right choice of tree can enhance your garden and provide useful shade.

Things to bear in mind

- Prioritise native trees as they are best for wildlife.
- Choose a tree that is suitable for the space you have available.

The FloodSmart website includes more information on tree planting.



Create a raingarden

Raingardens are typically sunken areas of ground planted with vegetation that is chosen for its ability to cope with occasional flooding; they are not ponds, and are periodically dry. The water held there can then slowly drain into the soil or be absorbed and returned to the air by the plants. They don't have to be very large; all you need is an area to which you can divert your downpipe or the runoff from a big paved surface.



Advantages

- They look great and attract wildlife: butterflies, birds and others.
- Their adaptable plants will endure occasional flooding but also drought.
- They can help to purify water by filtering out pollutants.
- They can even be created in planters.

Things to bear in mind

- You do need to identify a suitable receiving drain for any overflow.
- Try and prioritise native plants.

For more information on location, soil types, choice of plants, ground slope, sizing and other considerations, visit the FloodSmart website.

Reduce water-resistant surfaces on your property

Having less paved-over ground in your front garden or driveway, or choosing permeable materials if you do pave, can help reduce flooding. Water can then be held by the soil rather than rushed through to drains, allowing these to cope better with heavy rain.

Advantages

- Many permeable (porous) solutions are a lot more attractive than concrete or asphalt.
- Planning permission is not required, however if you were to create an impermeable surface of over 5m², then it would be.
- Permeable materials are alternatives to hard surfaces that collect pollutants which run off to drains and then to watercourses.

Things to bear in mind

- Consider your needs; for example, loose gravel is not suitable for wheelchair users.
- It is best to use an experienced landscape or driveway contractor.
- Some options might be best to do as part of a planned landscaping change because of their cost.
- Adding a shed or conservatory to your property also reduces permeable areas.

For more information on the pros and cons of various permeable paving solutions, go to the FloodSmart website.



Grow a green roof

A green or living roof is a roof or deck onto which vegetation is intentionally grown or habitats for wildlife are established. Green roofs not only reduce the amount of water that runs off a roof but also slow this water down, allowing drainage systems more time to cope.

Advantages

- Green roofs increase the lifespan of your roof.
- They don't have to be on a big roof – you can even build one on your shed.
- Depending on the design, green roofs can insulate buildings from extreme temperatures.
- They attract wildlife, enhance well-being and can be used to grow edible plants.



Things to bear in mind

- Considering this option as part of a planned roof change will make it more cost-effective.
- You may need to hire a trained installer.
- Make sure you understand the maintenance requirements, which vary according to the design.

There are different types of green roof; these are designed differently, have different maintenance requirements and provide different types of benefits. For more information, see the FloodSmart website.

The drought connection

Rainfall patterns and other factors mean that in one year the same parts of the UK can face flooding in one season and a hosepipe ban due to water use restrictions the next. Luckily, many of the solutions summarised in this leaflet can also help reduce the negative impacts of drought. For example, a water butt can be used to water your plants, a tree provides shade and a green roof helps keep your house at a comfortable temperature.

Every little helps

You may wonder why it is important for you to take action on your property. After all, what real impact can planting one tree or installing one water butt have? Like many things though, such as recycling, this requires everyone to do their bit in order to improve things for all of us.

It might help to think of it the other way around: it is not one house or one driveway that has partly caused the problem of increased runoff, but rather the accumulation of many houses, driveways and roads. The solution will also require accumulation, so why not start with you?



Other ideas

There are many other ways, big and small, to reduce runoff from your property:

- Don't leave bare earth exposed: plant it, or use mulch, straw or wood chips.
- Is your garden unnecessarily steep? If possible, reduce its slope.
- Add organic matter to your soil to help it retain more water.
- Dig a swale, which is a shallow depression that can hold rainwater.



About FloodSmart

FloodSmart has been set up to increase awareness and understanding of flood risk in Chesham and to provide help and advice so that people can minimise the risk of their property flooding. It will also encourage community-led responses to flood risk and look at ways in which flooding can be reduced in the town by making improvements in infrastructure and changes in how flooding is considered in town-wide planning decisions.

www.buckinghamshirepartnership.gov.uk/floodsmart/reduce-runoff/



FloodSmart is part of Defra's Flood Resilience Community Pathfinder scheme, an initiative supporting innovative and community-led ways of preventing and responding to flooding around the UK.

It's a partnership project involving including Buckinghamshire County Council, which is managing the project, the National Flood Forum, the Environment Agency, Chiltern District Council and Chesham Town Council. It is overseen by the Buckinghamshire Strategic Flood Management Committee.