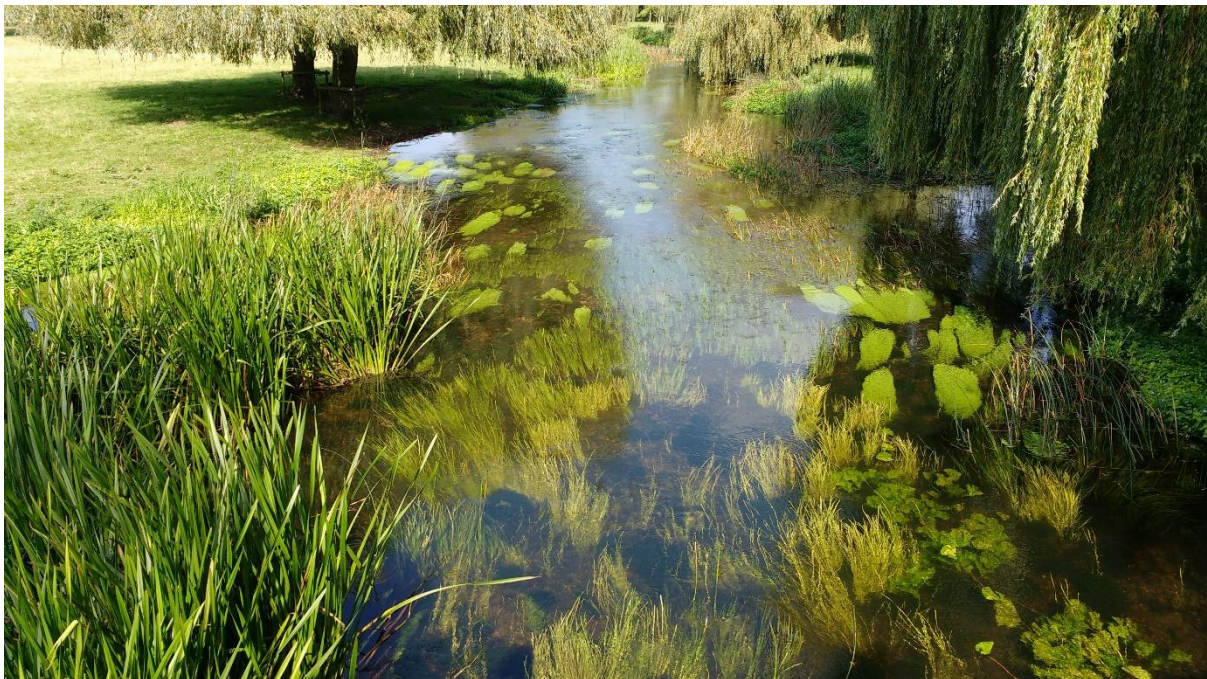




How to Garden Using Water Wisely



East Kent is one of the driest parts of England with low rainfall and high temperatures causing households to turn on the taps to water their gardens regularly throughout the summer. However, this is causing severe cases of water stress across the Stour catchment. Groundwater currently supplies 80% of the Stour catchments drinking water and also provides a vital base flow to the river system (EA Stour Catchment Data Explorer, 2020). By 2045 the population in the South East is likely to have increased by 20% with half a million new homes being built; this could consequently require a further 170million litres of water a day (Southern Water, 2018).



In order to meet the needs of our ever-growing population but also support and protect our natural environment we need to use water wisely and save it where possible. As consumers there are many things we can do to become more water efficient particularly in the garden, below are some suggestions.

Know your soil and soil type

Knowing the composition of your soil will not only help you save water but also allow you to pick plants which will thrive in those conditions. The soil types in the Stour Catchment vary depending on proximity to river, geology and landscape. Your soil is also going to change as you add compost, mulch and other organic matter, so it must be regularly monitored to check your watering scheme is still adequate.

Plant wisely

There are many flowering plants which require less water than others so are relatively drought resistant but also great for pollinators. Examples include; lavender, verbena, buddleia, foxgloves, mullein and cat mint.



Make sure the plants you choose grow well in the soil type you have e.g. don't plant a moisture loving plant in dry, stony soil.

If you don't know what soil type you have and/or are unsure on what plants will grow well, speaking to neighbours about what they find grows well is a good place to start. Also visiting local gardens on open days as well as garden centres may inspire you!

Succulents are a great option for planters and more rocky outcrops as many are hardy in drought conditions due to their thickened, fleshy structure. They can come in a variety of colours and shapes and can be planted in a variety of containers, in the UK we seem to have a fondness of planting them in troughs or old sinks! Similarly sedums require little water and are well suited to surviving through drought periods.

Maybe it is time to think about a garden review; does your garden require lots of water every year? Perhaps its worth considering a change to your planting to something which is still beautiful but uses less water.

Many native wildflowers are considered weeds by gardeners but they don't require endless amounts of watering, require little maintenance, provide wildlife with nectar and food, and look fantastic! So let an area of your garden go wild!

When and how to water

Do you need to water everything? Established, perennials shouldn't need watering as a rule, although they may not look at their best during a drought period, they can grow stronger in the longer term as they will put down deeper roots to cope. Similarly established trees and shrubs.

When checking to see if watering is required, look at the soil a spade depth down as the soil on the surface will naturally dry out quicker due to its exposure. If the soil is damp further down, then no watering is needed and water can be saved.

To create a healthier plant, it is recommended to water them well every few days to encourage roots to grow deeper. If watered lightly every day, roots may be encouraged to grow closer to the surface increasing their vulnerability to drought. It is also better to water in the evenings when the temperature is cooler and there is a lower rate of evaporation. Keep an eye on the weather forecast and water plants well before a dry period is predicted to keep soil moisture levels stable. During periods of drought, try not to disturb the topsoil as this uppermost layer could be protecting moisture being stored in the soil below.

Ensure when you water that the water is actually being absorbed by the soil and not running off the leaves. The best way to do this is to point the spout of your watering can or end of hose at the base of the plant rather than showering the whole plant. If you have multiple small pots which require watering they could be placed in a tray of water, allowing enough time for the water to be absorbed and the soil to moisten. But make sure you take them out of the tray before they become waterlogged! For larger plants such as shrubs or newly planted trees, a pipe or cut plastic bottle can be inserted into the soil next to the base of the plant as a form of irrigation; water is poured down the bottle/pipe directly to the roots.

Watering cans allow for small portions of water to be used at one time rather than a continuous flow of a hose, thus reducing wastage. If a hose is used, where possible ensure a spray gun or similar attachment is used which stops the flow of water when the trigger is released and saves water being lost as you walk to and from different part so the garden and the tap. Some adaptors also allow hoses to be run slowly meaning water is given a chance to sink into the soil rather than running straight off.



Mulching

This is the process of covering the surface of the soil in a biodegradable or non-biodegradable material which can help retain moisture in the soil below. Mulches can also suppress the growth of weeds.

Biodegradable mulches are useful in releasing nutrients into the soil as well as helping improve the structure of the soil. Some of the best types of mulch are leaf mould, garden compost, wood chippings, seaweed and well-rotted manure. In order to keep the nutrients and soil structure the layers must be replaced when the chosen mulch material has rotted down fully.



Non-biodegradable mulches do not help increase nutrients in the soil or improve the structure as they do not rot down but they can help maintain moisture. Examples include slate, shingle, pebbles and other aggregates.

It is recommended to apply mulches in late spring and autumn when the soil is moist and warm.

Fruit and Veg

Seedlings require watering as they only have small roots and need to establish but once a plant is established it should need less watering. When planting out large plants like courgettes, squashes and cucumbers make a small ridge around the plant and this will help to keep the water close to the plant. The amount of watering will be dependent on a number of factors including organic matter and the type of fruit or vegetable you are growing.

Water Butts



Based on the average rainfall in the South East you could fill your water butt up to 450 times a year with rainwater. Ultimately a water butt can only hold so much water and once full in the winter another one will be required to make the most of the rainfall but any water collected is better than none. Always consider what will happen once the water butt is full, as overflowing water butts may cause some small-scale flooding! Southern Water offer discounted water butts and kits (<https://www.southernwater.co.uk/help-advice/water-butts>) and butts can also be purchased from garden centres and DIY stores. Any container under a downpipe will help collect water though.

Grey Water

It's not just rainwater that can be reused, grey water is the water from our baths, showers and washing up which can also be used in the garden. Significant infrastructure can be installed into houses to siphon off and collect this type of water but a bucket outside the door where bowls of water can be emptied into is just as useful. Household soaps and detergents are harmless to plants but those containing bleach, disinfectant, dishwasher salt or strong cleaners can not only harm the plants but also damage the soil structure and be a health risk so should continue to be sent down the drain. Grey water should be used on soil and not used to top up ponds as the detergents and soaps can cause irritation and harm to amphibians and other freshwater life. It is also not recommended for use on crops/vegetable plots.

Lawns don't need watering!

Don't worry if your lawns turn yellow/light brown in the summer, as soon as it rains the grass will bounce back again. A newly laid lawn will need watering in its first summer when its root system is still developing. One hour of sprinkler use on a lawn can be the same amount of water a family of four would use in one day!

Another way of protecting your lawn through droughts is reduce the number of times grass is mown and increase the height of the mowing. Taller grass will create more shading and thus more drought tolerance.

Pots

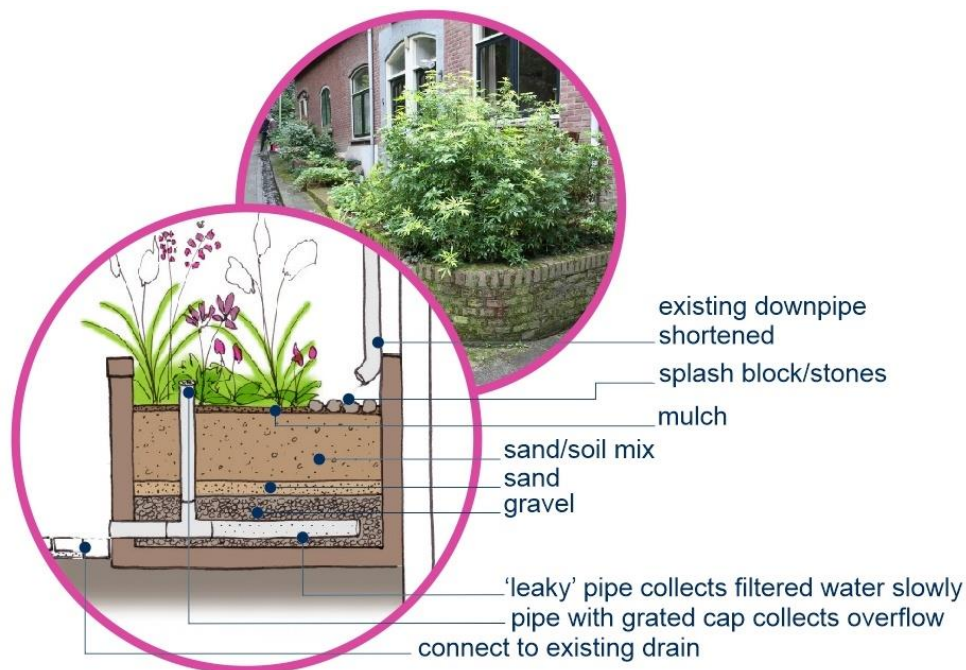
Terracotta pots are a traditional option for planters in the garden, however, they are not the best in retaining water. Terracotta is a porous material meaning it can allow water to seep out gradually.

Glazed or heavy-duty plastic pots are not porous and will therefore retain water. You can also help plants who do not like full sun by gathering pots together and the plants creating shade for one another as the sun moves through the sky.

Think carefully about whether you need to grow plants and especially trees in pots as they require a lot more watering than those allowed to grow in the ground that can develop deeper root systems.

Rain Garden Planters

A rain garden planter is a form of sustainable drainage system (SuDS) which mimics natural drainage by slowing the flow of rain water entering sewer networks and improve the quality of surface water which eventually enters our watercourses by filtering out pollution. Designed to take water from domestic roofs, a rain garden planter is a flower bed with piping installed for water to infiltrate the soil from the downpipe and any excess water exiting via a leaky pipe at the bottom of the planter and going down an existing drain. More information on rain garden planters can be found on the Slow the Flow website- <http://slowtheflow.net/you-can-slow-the-flow-at-home/>



Rain Gardens

This involves the creation of a planting area where surface water run off collects and can be temporarily stored by the planting area becoming boggy during heavy rain showers. The area should be where there is a shallow area of ground or a dip where surface runoff will gather. If the low lying area isn't close to any hard standing then channels can be created to link the two locations. The plants planted should be able to withstand waterlogging for up to 48hours. Rain gardens are relatively low maintenance once plants are established and can reduce erosion through the slowing of heavy rainfall. More information on rain gardens can be found on the RHS website-

<https://www.rhs.org.uk/advice/profile?PID=1009>

How does a rain garden work?

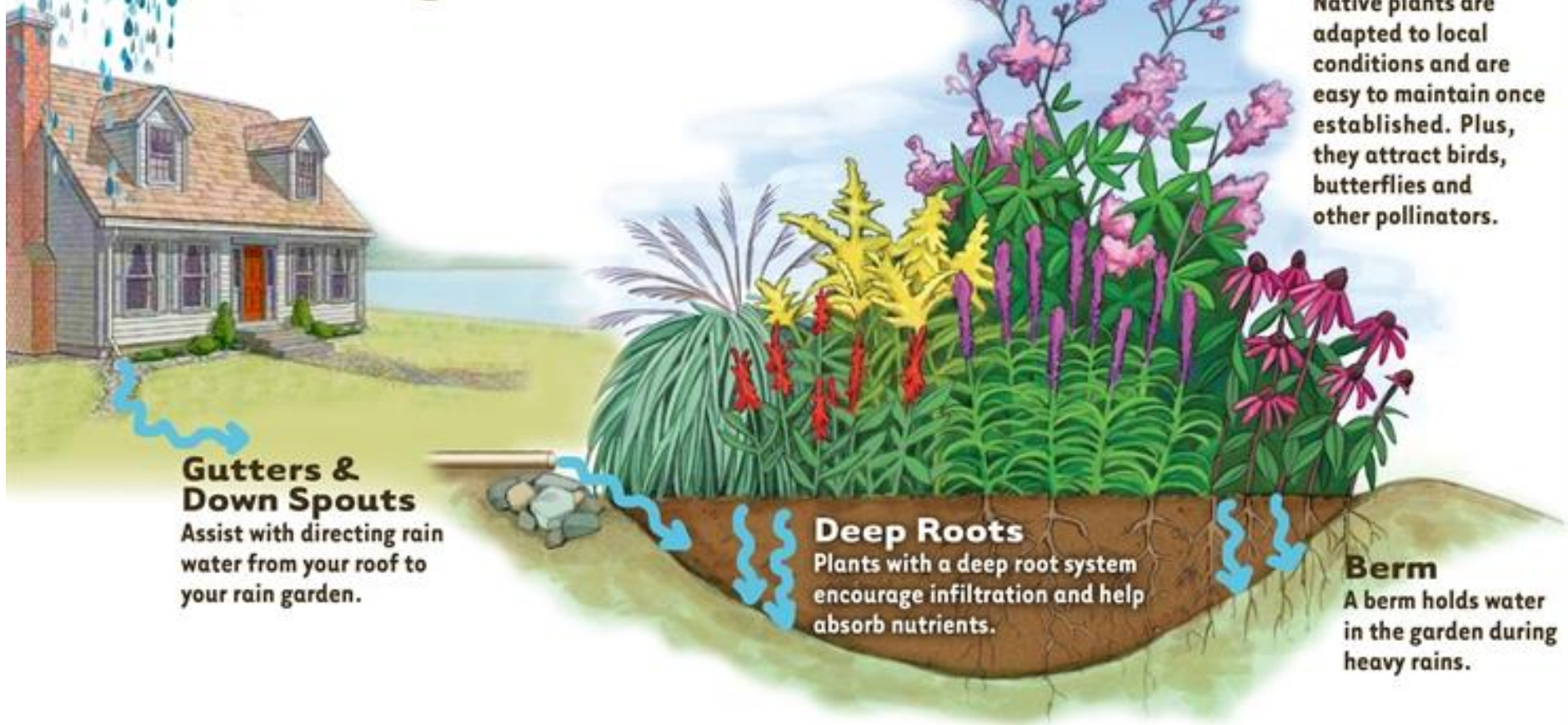


Photo from <http://www.londonmiddlesexmastergardeners.com/rain-gardens/>