Three Rivers District Council A Guide to Greening YOUR Home



# WORKING TOGETHER FOR A BETTER FUTURE



## **CONTENTS**



Greening *YOUR* Home:

Insulate to End Heat Waste	Page 4-5
Generate Green Energy with Renewable Technologies	Page 6-7
Let It Drain	Page 8
Get Ahead, Go Electric	Page 9
Lights Out To Help Nocturnal Wildlife	Page 10
Greening <i>YOUR</i> Garden:	
Mind The Gap To Save Hedgehogs	Page 11
Give Nature A Home	Page 12-13
Save Our Streams	Page 14
Turn Scraps to Soil	Page 15
Turf for the Earth - Choose Natural Grass or Let your Lawn Grow	Page 16
Rewild your Garden	Page 17-23
Plant for the Planet	Page 24-25

## Introduction - A Guide to Greening YOUR Home



The Earth has now warmed by approximately 1.2°C above pre-industrial levels on average , concentrations of carbon dioxide in the atmosphere are the highest they have been in the past 3.6 million years , extreme weather events linked to climate change are intensifying worldwide, and the past decade was the warmest on record.

Meanwhile, a biodiversity crisis continues to advance, threatening 1,446 species with extinction in Hertfordshire. The UK is one of the most nature-depleted countries in the world and in Hertfordshire alone, over the last 50 years, 76 species became locally extinct, including the nightingale, the white-clawed crayfish, the burnt orchid, and the pearlbordered fritillary.

Amid the climate and ecological emergencies we face, it is more important than ever that we act to protect and enhance the environments in which we live. In doing so, we can safeguard the irreplaceable array of services a healthy environment offers us; from clean air and water, food, fuel and medicine, to flood protection, fertile soils, carbon storage and climate regulation.

Renovating your home can be the perfect time to incorporate changes to reduce your home's energy and water use, and enhance its value to nature.

This guide contains an array of changes (many of which are easy and affordable) that you can make to help your home work with nature and become a healthier, more pleasant place to live.

Read on to find out how you can green your home!

# Planning Permission for Changes to Your Home:

This guide details a number of ways you can improve your property. Some of these changes may not require the submission of a planning application to the Council before works take place as they are classed as 'permitted development', but others will require planning permission. Some guidance on permitted development can be found <u>here</u>.

- If you believe your works fall within permitted development guidance, you are strongly encouraged to seek the Council's formal approval of this through the submission of an application for a Lawful Development Certificate (visit <u>the planning portal</u> for more information).
- If you require planning permission, or are in any doubt, please seek pre-application advice from Three Rivers District Council's Planning department before any works take place. Details of this service can be found <u>here</u>.

https://library.wmo.int/doc\_num.php?explnum\_id=10618 Despite pandemic shutdowns, carbon dioxide and methane surged in 2020 - Welcome to NOAA Research Climate change: Big increase in weather disasters over the past five decades - BBC News Climate change: Last decade confirmed as warmest on record - BBC News Hertfordshire's State of Nature Report 2020\_0.pdf (hertswildlifetrust.org.uk) Biodiversity loss risks 'ecological meltdown' - scientists - BBC News Hertfordshire's State of Nature Report 2020\_0.pdf (hertswildlifetrust.org.uk)

## **Insulate to End Heat Waste**

Home energy use accounts for 15% of the country's greenhouse gas emissions (more than all the emissions from agriculture in the UK), and 28.8% of the emissions in Three Rivers.

Improving your home's energy efficiency through insulation and renewable energy technologies can deliver a variety of benefits to you and help our planet too.

Insulation stops heat from escaping your home in cold weather, and entering your home in warm weather. A typical house with no insulation will lose 33% of heat through walls and 25% through the roof. One of the best things you can do to make your home more efficient is to get it properly insulated, especially if you live in an older property.

#### Insulating your home can:

- ✓ Significantly reduce heat loss
- ✓ Reduce your energy bills
- ✔ Keep you warm in winter, and cool in summer
- ✓ Lower your carbon footprint
- Improve your property's EPC rating, making it more attractive to buyers
- ✓ Improve the comfort of your home and prevent damp

## There are many areas of your home that can be insulated:

**Roof and Loft:** Insulating your loft, attic or roof is an easy, inexpensive and effective way to reduce heat loss and reduce your heating bills. If you already have loft insulation, you could still benefit from a top-up. If your insulation is 100mm or less, you can increase it to the recommended level of 270mm.

**Wall:** Uninsulated walls are a major source of heat loss in homes.

# Houses generally have either solid walls or cavity walls:

Cavity Walls:

Solid Walls:



#### **Cavity Walls:**

If your house was built after the 1920s, it is likely to have cavity walls. Many cavity walls can be insulated by injecting insulation material into the cavity from the outside.

#### Solid Walls:

Pre-1920 older houses are more likely to have solid walls. Solid walls can be insulated either from the inside or the outside.

External Wall Insulation involves fixing a layer of insulation material to the wall, then covering it with a special type of render (plasterwork) or cladding. The finish can be designed to retain the character of the property and will often improve it. It can be smooth, textured, painted, tiled, panelled, pebble-dashed, or finished with brick slips.

Internal Wall Insulation involves fitting rigid insulation boards to the inside wall, or by building a stud wall filled in with insulation material such as mineral wool fibre. It is generally cheaper to install than external wall insulation but will slightly reduce the floor area of any rooms in which it is applied and can be quite disruptive.

**Floor:** Insulating your ground floor and any floors above unheated spaces such as garages, is a great maintenancefree way to keep your property warm. 10-20% of heat loss from a building can be through the floors if they're not insulated to a reasonable standard.

**Draught Proofing:** Draught insulation is a quick, cheap and effective way to save you energy and money by preventing heat loss. Draught excluders block any gaps where heat can escape and cold air can get in such as windows, doors, letterboxes, fireplaces, chimneys, and loft hatches.

**Double or Triple Glazing:** Energy efficient double or triple glazing helps to keep the heat in, insulates your home against external noise and reduces condensation build up on the inside of windows.

4

## **Insulate to End Heat Waste**



	Average Yearly Carbon Savings (kgCO2/yr):	Average Yearly Energy Bill Savings (£/yr):
Cavity Wall Insulation	670kg	£285
Solid Wall Insulation	910kg	£390
Loft Insulation	600kg	£255
Floor Insulation	180kg	£75
Solar Panels	940kg	£295-505
A++ Double Glazing	410kg	£175

Insulation estimates based on a gas-heated semi-detached home. Figures are based on fuel prices as of April 2022.

Solar Panel data is dependent on location and assumes a Smart Export Guarantee. Data from the Energy Saving Trust.

#### **Top Tips:**

- When installing any type of insulation or draught proofing, it is important that intentional ventilation like vents, grilles or airbricks are never blocked or sealed, as air needs to flow in and out of your house tokeep it fresh, dry and healthy.
- There are many different types of insulation material to choose from with each having different costs and benefits – financial, practical, and environmental.
   Insulation made of sheep's wool or recycled materials are some of the most environmentally friendly materials you can use.
- You can usually save money on these home improvements if you install them when you are having other building or decorating work done.
- Three Rivers District Council could help you make energy saving home improvements with grants to part- or fully-fund energy efficiency measures. See what grants are available to upgrade your home <u>here</u>.



## **Generate Green Energy with Renewable Technologies**

Generating your own heat or electricity from renewable sources reduces reliance on fossil fuels, and can protect you against future energy price rises.



#### Solar Photovoltaic Systems:

Solar photovoltaic (also known as solar PV) systems convert energy from the sun into electricity. By installing solar panels, you can:

- ✓ save money on your electricity bills by harvesting this free energy;
- ✓ reduce your carbon footprint by around one tonne of carbon each year depending on your location.

Solar panels can be mounted on a roof, or any other unshaded spot. Roofs facing south, east or west with a pitch angle between 10° - 60° are ideal for solar panels. Three Rivers' southern geography puts it in the sunniest part of the country.

During the daytime (even on cloudy days), when solar rays hit the solar panels they produce low voltage direct current electricity. A device called an inverter converts this into mains voltage alternating current which can be fed directly into your home's electricity circuit.

Electricity generated this way can be used to power all your electrical appliances, including technologies like hybrid or electric vehicles, or a heat pump, helping to future-proof your home.



#### Solar Thermal Systems:

Solar thermal panels provide free hot water for your taps, baths and showers when the sun shines.

Solar thermal systems use energy from the sun to heat water for storage in a hot water cylinder or thermal store.

As the amount of available solar energy varies with the seasons, a solar water heating system will not provide 100% of the hot water required throughout the year, but they should provide around 90% of your hot water requirements in summer, and around 25% of your hot water requirements in winter.

A conventional boiler or immersion heater can be used to make the water hotter, or to provide hot water when solar energy is less available, like in the winter months.

#### By installing a Solar Thermal system you can:

- ✓ Reduce your hot water costs throughout the year
- ✓ Lower your carbon footprint by using zero emission energy to heat your water.

## **Top Tips:**

- Adding a battery to your system allows you to store energy generated during daylight hours so you can still use solar electricity after the sun goes down.
- You can find out how much money you could save with solar by using the Energy Savings Trust's <u>Solar</u> Energy Calculator.
- In Britain, the <u>Smart Export Guarantee</u> pays you for any surplus electricity your solar panels generate!

## **Generate Green Energy with Renewable Technologies**



#### **Heat Pumps:**

A heat pump is an energy efficient low-carbon heating system that captures heat from outside and transfers it in to your home.



There are many different types of heat pump, the two most common types are air source heat pumps and ground source heat pumps. Air source heat pumps (ASHPs) absorb heat from the air whereas ground source heat pumps (GSHPs) absorb heat from the ground. Once heat is absorbed from the environment (the air or the ground), it is transferred to a fluid, which is then compressed to increase its temperature. This heat is then transferred from the compressed fluid into your home's central heating system (in an air-to-water or ground-to-water heat pump), or passed into hot air blowers (in an air-to-air heat pump).

Heat pumps are especially suited to homes that are already well insulated, are off the gas-grid (using electric storage heaters, oil, liquefied petroleum gas, or coal to heat a home), or those with old heating systems needing replacement.

The financial savings you can make with a heat pump varies depending on a range of factors including: the type of heating system it's replacing, the brand, model and size of heat pump, the size and age of the property, as well as whether you need to install anything extra like radiators or underfloor heating.

In capturing heat that is already present in the environment, heat pumps themselves emit no carbon dioxide emissions, so you can heat your home, but not the planet. As the UK's electricity supply is becoming increasingly low-carbon with greater renewable energy supply, electricity-powered heat pumps too are becoming greener each year.

## **Top Tips:**

- Not all homes are suited to a heat pump system, and even when they are, different homes will suit different systems. Therefore, if you are considering a heat pump, you should consult an expert to decide which system will be best for your home.
- As heat pumps use electricity, finding a low-cost electricity tariff can help keep your running costs low.
- The Government's newly announced <u>Boiler Upgrade</u> <u>Scheme</u> offers property owners £5,000 capital grants towards the cost of replacing fossil fuel heating systems with heat pumps. The grant scheme opened for applications in April 2022.

#### **Additional Information:**

- When finding an installer for insulation measures, ensure they are Trustmark accredited and a member of the National Insulation Association (NIA), the Cavity Insulation Guarantee Agency (CIGA) or the British Board of Agrément (BBA). For solid wall insulation, check that they are members of the Insulated Render and Cladding Association. For sprayed or injected polyurethane foam installations, choose a member of the British Urethane Foam Contractors Association.
- When finding an installer for renewable energy technologies, ensure they (and their product) are <u>Microgeneration Certification Scheme (MCS)</u> certified, and confirm they have Trustmark accreditation.
- For any type of insulation or renewable energy, always check the installer's experience, customer reviews, and guarantees, consumer protections and maintenance services.
- You can find out more about any of the energy efficiency measures and renewable energy technologies above on the <u>Energy Savings Trust</u> website.



## Let it Drain with Permeable Driveways

Climate change is increasing the frequency and intensity of heavy rainfall events in winter, overloading local drain systems that were not designed to cope with the intensity of rainfall we now experience. The combined effect of many households paving over front gardens with driveways made of impermeable hard surfaces increases the amount of surface water runoff, and heightens the risk of local flooding.

## Planning permission may be required:

Planning permission is required if more than 5m<sup>2</sup> of a new or replacement driveway is to be covered with traditional, impermeable materials with no border or lawns to drain into.

#### You can help reduce local flood risk by:

- Maximising "soft" green, vegetated landscaping. Front gardens reduce pressure on drainage systems by allowing water to permeate through the surface in to the ground below.
- Using gravel, permeable block paving, porous asphalt or porous concrete, which all allow water to drain through the surface.
- Creating two wheel tracks with a hard surface and filling in the surrounding area with permeable gravel or grass.
- Directing water from conventional impermeable surfaces like concrete, to a green border or soakaway.



# Retaining front gardens has a number of benefits including:

- ✓ Adding value to your property by enhancing its curb appeal.
- ✔ Reducing flood risk
- Reducing particulate pollution and improving mental health through the 'restoration' effect' of experiencing greenery.
- $\checkmark$  Providing screening and privacy.
- Combatting the urban heat island effect where traditional hard surfaces absorb heat in the day and release it at night, making it hot and difficult to sleep in the summer.
- ✓ Supporting local biodiversity by providing habitat.



## **Top Tips:**

To maximise the parking space available while allowing rainwater to drain, consider the following:

- Swap a brick wall for a hedge this will not only serve as a channel for rainwater to drain away in to, it also provides birds with a place to shelter, and insects with a source of food.
- Choose low-growing plants suited to your driveway's position- cars can park over low-growing plants, so you can utilise the wasted space between your car wheels to improve your driveway's drainage.
   For sunny driveways, try creeping Jenny, (Lysimachia nummularia), bugle (Ajuga reptans), and thymes (Thymus serpyllum).

For more information and inspiration on front garden designs, visit the *Royal Horticultural Society's <u>website</u>* or check out their *Front Garden Guide*.

## Go Ahead, Go Electric with Electric Vehicle charging points

In 2020, the Government announced that it will end the sale of all new petrol and diesel cars and vans by 2030, as part of the plan to tackle air pollution and climate change. In the UK, new registrations of electric plug-in cars increased from 3,500 in 2013 to more than 166,000 by August 2018, and this trend of electric car ownership shows no signs of slowing.

#### Battery-powered electric vehicles:

- ✓ produce zero exhaust emissions, helping to reduce air pollution
- ✓ have lower fuel and maintenance costs
- ✓ are extremely quiet, reducing noise pollution
- ✓ pay no road tax or congestion charge
- ✓ get free prioritised parking in some places
- $\checkmark$  can be charged by solar panels for free

If you are renovating your home, it is worth considering installing an electric vehicle charging point if you think you may be buying an electric or hybrid vehicle now, or in the near future.

The UK Government encourages the use of electric vehicles by providing funding towards up to 75% of the cost of installing an electric charging point at a residential property, through the <u>EV Chargepoint Grant</u>.

Be sure to follow the general planning guidance at the top of this document (p.3) before undertaking any works.

#### Planning permission may be required:

<u>Planning permission</u> may not be required for the installation of a wall mounted electrical outlet or electrical upstand, **but this depends on a number** of conditions including whether your house is a Listed building, where on the property the equipment would be installed, and whether the area is lawfully used for off-street parking.

For more information on planning requirements, visit *threerivers.gov.uk* 



## Lights Out to Help Nocturnal Wildlife

Just 22% of England has night skies completely free of light pollution.

Artificial light at night has negative and sometimes deadly impacts on many nocturnal species by disrupting their natural behaviours.

Fortunately, light pollution is easy to avoid - by ensuring well-designed outdoor lighting is used only where and when needed.

#### You can help tackle harmful light pollution by:

#### Lighting only what you need:

Focus lighting only on the object or area you need to see e.g. steps and the lock on the front door. Avoid lighting up trees as this disturbs the homes and feeding sites of bats and birds. Keep your curtains or blinds closed at night to help prevent light spilling from inside your home, to outside.

#### Directing the light carefully:

Keep lights close to the ground (or as low as possible), directed and shielded to avoid light spilling in to the surrounding area and sky.

#### Using only the brightness necessary:

Make sure your lights are of the lowest intensity/ brightness appropriate for the purpose.

#### Keeping the light warm-toned:

Look for LED lights with warm white, orange, or red colouring (longer wavelengths), rather than cool white or blue. These warmer colours are much less disruptive to most animals, including humans!

#### Limiting the time the lights are on:

Use light controls such as motion-sensors and timers to manage the duration your lights are on for.















## Mind the Gap to Save Hedgehogs

Britain's native hedgehog population has plummeted over recent years; declining by half in the last two decades, with less than 500,000 now remaining in the UK. Hedgehogs need to be able to roam in search of food, mates and nesting sites - the average hedgehog roams 1 mile every night. However, walls and fences restrict their ability to travel.

You can help hedgehogs and other wildlife by creating a 13cm x 13cm hole at the bottom of your fence panel, or digging a channel beneath garden boundaries to help create a network of habitats for hedgehogs to move through.

The very best thing you can do is turn a fence into a hedge. Hedges are the most wildlife-friendly garden boundaries. They provide shelter, food and a safe route in and out of your garden for a wide range of wildlife.





## **Give Nature a Home**



More than 41% of UK species studied have declined over the past 50 years, and 1 in 10 species are now threatened with extinction in Great Britain.

With habitats becoming smaller and more fragmented, plants and animals are finding it increasingly difficult to find places to live and the foods they need in our towns and cities.

There are an estimated 24 million gardens in the UK, covering an area greater than all the National Nature Reserves combined. Our gardens are therefore vitally important habitats for wildlife! Every space, whether large or small, can give a home to nature.

You can incorporate some simple and inexpensive features in to your property or garden, to help support wildlife in Three Rivers. These include:

#### Providing bird boxes and bat boxes:

This can be a great way to support our wildlife as natural roosting and nesting sites become increasingly hard for animals to find.

**Bird nesting boxes:** Different nest box sizes and designs attract different birds – you can <u>make</u> your own or buy pre-made ones suited to different species

Boxes should point in an east-facing direction on walls, fences or trees, at least 2 metres above the ground.

**Swift boxes and bricks:** Swifts like high, deep crevices to nest, but because we've lost many old houses and buildings, and roof spaces are filled or mended, their numbers have declined dramatically. Give swifts a place to nest and breed with nesting accommodation either within brickwork (swift brick) or externally (Swift box).

Place boxes or bricks 5 metres high on the vertical wall of a building, ideally under the eaves, and out of direct sunlight. During renovation work, you can ask your builders to fit a swift brick or several into the fabric of the outer house wall.

**Bat boxes:** bats need summer roosting sites and places to breed and to hibernate. Bat boxes can be <u>made</u> or bought and should be secured either on mature trees within a hedgeline, or on houses close to hedges or trees. They should be installed at least 4-5m above the ground on southerly to westerly aspects that are sheltered from strong winds and sources of lighting. All British bats are insecteaters, so having them in your garden will help to control pests!









## **Give Nature a Home**



#### Providing hideaways for insects:

**Insect Hotels:** Support beneficial insects in your garden by <u>making</u> or buying an insect hotel.

**Bee Hotels:** Solitary bees are important pollinators. Help them by providing a place to nest in your garden. Bee hotels can be bought or <u>made</u>. Locate bee hotels in a sheltered, sunny position about 1.2 metres from the ground close to pollen-rich flowers.

**Log Piles:** Logs and dead wood can offer a home to a wide variety of plants, lichens, fungi and animals. Locate log piles in shadier parts of the garden.

**Hedgehog Homes:** You can help support this struggling species by making or buying a <u>hedgehog home</u>. Locate the home in a quiet part of the garden with good plant cover (preferably under a hedge, or against a wall or fence), out of direct sunlight and sheltered from the wind.

**Bird Baths:** Giving birds a place to bathe and drink is a great way to help them out. Change the water in your birdbath regularly to keep it clean for your feathered visitors.

**Ponds:** A pond can be one of the best ways to attract wildlife to your garden.

You can <u>make a mini pond</u>, or you can create a <u>proper</u> <u>pond</u> - whatever you choose, make sure there are stones and branches in there so animals can get in and out. The pond should be filled with rainwater and located in a partsunny, part-shady spot so it doesn't go stagnant. Grow aquatic plants in it to keep the water oxygenated.











## Save our Streams with Water Butts

Hertfordshire is one of the driest counties in the country yet people in Hertfordshire are amongst the highest consumers of water in the UK.

In Three Rivers, our water comes from <u>globally rare chalk</u> <u>rivers</u> - which number just 260 worldwide. These unique and precious habitats are not only threatened by over-use, pollution, and a growing population, but are under threat from climate change which will make our summers hotter and drier, increasing the likelihood of rivers drying up.

Collecting rainwater in water butts attached to the down pipe of a roof (including shed roofs) can help to conserve water by reducing mains water usage for activities that do not require drinking quality water - like watering your garden or washing vehicles.

Three Rivers residents can get <u>discounted water butts</u> from Get Composting and <u>free water-saving devices</u> from Affinity Water.

#### Using a water butt will:

- ✓ Reduce household water bills.
- ✓ Help your plants thrive as rainwater is full of the nutrients your garden needs to flourish.
- ✔ Reduce pressure on public water supply.
- ✓ Protect our chalk rivers and our local wildlife.
- Help lower the risk of local flooding by reducing the amount of rainwater discharged to drains and sewers during heavy rainfall.

If every household in the UK got a standard water butt this would save about 30,000 million litres of water each summer!





## Turn Scraps to Soil by Composting

Up to 60% of household waste is organic and can be recycled. By composting your kitchen and garden waste, you can easily recycle waste that would otherwise go to landfill, into rich, organic fertiliser that is great for soil, plants and biodiversity, and will cost you nothing!

Three Rivers residents can get <u>discounted compost bins</u> from <u>Get Composting</u>.





## **Top Tips:**

- Put your compost bin in a sunny or semi-shaded position, directly on soil or turf to allow good drainage of excess water, and to help worms and other decomposers to get in and break down the content.
- If you can only put your compost bin on a hard surface, such as concrete, put some twigs, leaves or existing compost under it.
- Feed your heap with a 50/50 mix of green and brown materials. Aim for a mix of thin alternating green (nitrogen-rich) and brown (carbon-rich) layers.
   *Green includes* fresh grass clippings, weeds, tea bags, coffee grounds, hay, cut flowers, and raw fruit or vegetable waste.

*Brown includes* sticks and dried grass, wood chippings, shredded paper, woody prunings, eggshells, cardboard, hair and fur, wool, and dead leaves.

- Avoid adding meat, cooked food (bread, cooked rice, leftovers etc.), dairy products or pet waste.
- Turn the compost periodically to introduce air and speed up the composting process.
- If you use a compost heap rather than a bin, be aware that animals, including hedgehogs, may choose to hibernate in it. If possible, avoid moving the heap during the winter months and if you are having a bonfire, check for hedgehogs first!



# 

## Turf for Earth - Choose Natural Grass or Let Your Lawn Grow

Natural living grass provides your garden with a host of valuable benefits, including cooling the environment in warm weather, filtering air and water pollutants, absorbing rainwater and reducing flooding, stabilising soil, and giving a home to wildlife.

Wherever possible, keep natural grass in your garden and avoid petroleum-based plastic grass.

Wildflower meadows are increasingly rare – the UK has lost more than 97% of them since the 1930s.

If you stop or reduce mowing to whole or part of your lawn, for a month or a season, you can create a thriving wildlife habitat. "Short grass" plants already present like daisies, buttercups, and clover will have the chance to grow and bloom, in-turn attracting pollinating butterflies, bees and beetles.

There are three main approaches to reduced mowing – whichever you choose, it is best to keep it roughly the same each year so your plants learn when to set seed:

**The Temporary Meadow:** Let your grass grow naturally for a month in June, and mow and collect cuttings as you normally would outside that time. This will allow low growing flowers such as Daisy, Bird's-foot Trefoil, Selfheal and Red Clover to flower, and support early pollinators. Cutting in April and May is important to reduce the competition of the grass and benefit the flowers.

**The Spring Meadow:** To improve the impact for wildlife further, don't mow your lawn at all until mid-June. Then mow as normal until the grass stops growing in late autumn. This is particularly good for early flowering species like Cowslips, Bugle, Snake's-head Fritillary and Cuckooflower.

**The Summer Meadow:** Mow your lawn in early July and then leave it until October before mowing again – even if it is still flowering. This will mimic traditional hay meadows, allowing flowers to compete against the grass successfully and delivering the greatest benefits to wildlife. Adding Yellow Rattle seed to the area after the autumn cut reduces the vigour of the grass, helping to create flower-rich hay meadow.





## **Top Tips:**

- After you mow, leave the clippings for a few days to let any seeds fall and help insects escape. Then rake up and remove the clippings so you don't add nutrients to the soil. (Nutrient-rich soil favours thick grass growth, over the growth of wildflowers.)
- Give your meadow a boost by adding wildflower seed. Take small (30cm x 30cm) turfs from the area to expose the soil and seed into these in autumn. These areas will then help to spread wildflowers further in to the meadow. Make sure the seed is native and appropriate for the area e.g. native meadow mixes.

#### By mowing less, you will:

- ✓ Have a lawn that is more resistant to pests, weeds, and drought
- ✓ Save time
- Create valuable habitat for local wildlife
- ✓ Add interest to your garden with vibrant wildflowers
- Reduce climate-warming emissions from fossil-fuelled mowers and trimmers



One of the best ways to support local wildlife is to fill your garden with as many native plants, shrubs, or trees (those that grow naturally in Britain) as possible, as they will provide food and habitats for insects and animals living nearby. Our wildlife has evolved to depend on native species, so they are much more likely to survive when they are around.

See the list of recommended plants for bees, butterflies and birds on the next pages.



### **Top Tips:**

- Grow a range of plants that flower and seed throughout the year to provide food for insects and animals that are active and feeding over different seasons.
- Planting hedging in your garden can really help wildlife; providing nectar, fruit and places for them to nest or shelter. You can plant a single species, or ideally, a mix of different species to maximise biodiversity in your garden.
- Scented plants fill the garden with a pleasant aroma and attract pollinators like bees and butterflies.
- Choose drought-tolerant plants that will cope best with our warming climate and reduce the need for watering.
- For small spaces like patios or balconies, you can plant up pots or hanging baskets with an array of wildlife-friendly plants including thyme, lavender, sage, trailing nasturtium, crocus, single flowered dahlia, climbing honeysuckle or sweet peas.
- Peat extraction destroys rare habitats and releases large quantities of greenhouse gases into the atmosphere. Help save our remaining peat bogs by always using peat-free composts and mulches.



	<b>Plants for Bees</b> Make your garden a haven for bees by planting pollen and nectar-rich flowers.	
Plant Type	Plant Name	
Annuals	Common poppy (Papaver rhoeas) Love-in-a-mist (Nigella damascena) Common Sunflower (Helianthus annuus) Toadflax (Linaria maroccana) Cornflower (Centaurea cyanus) Pincushion flower (Scabiosa) Nasturtium (Tropaeolum majus) Heliotrope (Heliotropium aborescens) Poached Egg Plant (Limnanthes douglasii) Borage (Borago officinalis) Annual Honesty (Lunaria annua) Blue Tansy (Phacelia tanacetifolia)	
Bulbs and Perennials	Catmint (Nepeta) Salvia (Salvia nemorosa) Dusky Cranesbill (Geranium phaeum) Cranesbill (Geranium x cantabrigiense) Italian Aster (Aster amellus) Allium Snowdrop (Galanthus) Sedum (Hylotelephium) Crocus (Crocus) Hemp agrimony (Eupatorium cannabinum) Toadflax (Linaria pururea)	
Wildflowers	Foxglove (Digitalis purpurea) European Blackberry (Rubus fruticosus) Wild Teasel (Dipsacus fullonum) Devil's Bit (Succisa pratensis) Red Clover (Trifolium pratense) Common Dandelion (Taraxacum officinale) Bird's-foot Trefoil (Lotus corniculatus) Heal-all (Prunella vulgaris)	





Borage (Borago officinalis)



Common poppy (Papaver rhoeas)



Cornflower (Centaurea cyanus)



Poached Egg Plant (Limnanthes douglasii)



Foxglove (Digitalis purpurea)



Snowdrop (Galanthus)



Red Clover (Trifolium pratense)



	Plants for Bees	
	Make your garden a haven for bees by	
Dianat Trun a		
Plant Type		
Herbs	<ul> <li>Many of these plants are drought-resistant, so they will adapt better to our changing climate.</li> <li>Creeping Thyme (<i>Thymus serpyllum</i>)</li> <li>Lemon Thyme (<i>Thymus pulegioides</i>)</li> <li>Oregano (<i>Origanum</i>)</li> <li>Rosemary (<i>Salvia rosmarinus</i>)</li> <li>Hyssop (<i>Hyssopus officinalis</i>)</li> <li>English Lavender (<i>Lavandula angustifolia</i>)</li> <li>Round-leafed Mint (<i>Mentha suaveolens</i>)</li> </ul>	
Shrubs and Trees	Cotoneaster Mahonia Firethorns ( <i>Pyracantha</i> ) Common Ivy ( <i>Hedera helix</i> ) Wild Rose ( <i>Rosa 'Geranium'</i> ) Goat Willow ( <i>Salix caprea</i> ) Honeysuckle ( <i>Lonicera</i> ) Broom ( <i>Cytisus or Genista</i> ) California Lilac ( <i>Ceanothus</i> )	







Common Ivy (Hedera helix)

English Lavender (Lavandula angustifolia)



Honeysuckle (Lonicera)



	<b>Plants for Butterflies</b> Enjoy the beauty of butterflies by growing some of their favourite plants.	
Plant Type	Plant Name	
Spring and Early Summer Nectar Plants	Bugleherb (Ajuga reptans) Japanese Crabapple (Malus x floribunda) Grape Hyacinth (Muscari neglectum) Milk Thistle (Silybum marianum) Winter Heather (Erica carnea) Sweet Alyssum (Lobularia maritima) English Lavendar (Lavandula angustifolia) Cornflower (Centaurea cyanus) Melancholy Thistle (Cirsium heterophyllum) Red Valerian (Centranthus ruber) Aubretia (Aubrieta) Dame's Rocket (Hesperis matronalis) Ragged Robin (Lychnis flos-cuculi) Plume Thistle (Cirsium rivulare) Wallflower (Erysimum) Hebe Red Campion (Silene dioica) Cuckooflower (Cardamine pratensis)	
Late Summer and Early Autumn Nectar Plants	Summer Lilac (Buddleja davidii) Purple Loosestrife (Lythrum salicaria) Dahlia American Aster (Symphyotrichum) Sedum (Hylotelephium) Common Mignonette (Reseda odorata) Heather (Calluna vulgaris) Catmint (Nepeta) Hemp-agrimony (Eupatorium cannabinum) Purpletop Vervain (Verbena bonariensis) Field Scabious (Knautia arvensis) Greek Oregano (Origanum onites) Red Valerian (Centranthus ruber) Southern Globethistle (Echinops ritro) Hebe	





Milk Thistle (Silybum marianum)



Aubretia *(Aubrieta)* 



Sweet Alyssum (Lobularia maritima)

Wallflower *(Erysimum)* 



Dame's Rocket (Hesperis matronalis)



Hemp-agrimony (Eupatorium cannabinum)



Ragged Robin (Lychnis flos-cuculi)



Hebe



	Plants for Butterflies Enjoy the beauty of butterflies by growing some of their favourite plants.
Plant Type	Plant Name
Caterpillar Food Plants	Adult butterflies and moths will feed on almost any flower's nectar, but their caterpillars are selective and may only have one or two plant species they can live on. Buckthorn ( <i>Rhamnus cathartica</i> ) Nasturtium ( <i>Tropaeolum majus</i> ) Common Nettle ( <i>Urtica dioica</i> ) Garlic Mustard ( <i>Alliaria petiolata</i> ) Common Nettle ( <i>Urtica dioica</i> ) Garlic Mustard ( <i>Alliaria petiolata</i> ) Common Ivy ( <i>Hedera helix</i> ) Common Honeysuckle ( <i>Lonicera periclymenum</i> ) Annual Honesty ( <i>Lunaria annua</i> ) Bird's-foot Trefoil ( <i>Lotus cornicultus</i> ) Common Holly ( <i>Ilex aquifolium</i> ) Cuckoo Flower ( <i>Cardamine pratensis</i> ) Alder Buckthorn ( <i>Francula alnus</i> )
	ridor Edoration (Frangula alfido)



Buckthorn

Common Holly (*llex aquifolium*)



Garlic Mustard (Alliaria petiolata)



Common Nettle (Urtica dioica)



	<b>Plants for Birds</b> These plants will provide food and shelter for a wide range of birds.
Plant Type	Plant Name
Berrying and Fruiting Shrubs	Chinese Photinia (Photinia davidiana) Dog Rose (Rosa canina) Field Rose (Rosa arvensis) Sweet Briar Rose (Rosa rubiginosa) Moyes Rose (Rosa moyesii) Blackberry (Rubus fruticosus) Perfoliate Honeysuckle (Lonicera caprifolium) Firethorns (Pyracantha) Wayfaring Tree (Viburnum lantana) Guelder Rose (Viburnum opulus) Birchleaf Viburnum (Viburnum betulifolium) Oregon Grape (Mahonia aquifolium) Cotoneaster (Cotoneaster simonsii) Common Ivy (Hedera helix) Common Hawthorn (Crateagus monogyna) Wild Privet (Ligustrum vulgare) Common Elder (Sambucus nigra) Barberry (Berberis valdiviana) Cuckooflower (Cardamine pratensis)
Berrying and Fruiting Trees	Chinese Crabapple (Malus hupehensis) Bird cherry (Prunus padus) Blackthorn (Prunus spinose) Rowan (Sorbus aucuparia) Wild Service Tree (Sorbus torminalis) Whitebeam (Sorbus aria) English Yew (Taxus baccata) Lebanese Wild Apple (Malus trilobata) Midland Hawthorn (Crataegus laevigata) Common Hawthorn (Crataegus monogyna) Wild Cherry (Prunus avium) Cotoneaster





Blackberry Rubus fruticosus)



Dog Rose (Rosa canina)



Oregon Grape (Mahonia aquifolium)



Firethorns (Pyracantha))



Rowan (Sorbus aucuparia)



Wild Cherry (Prunus avium)







	<b>Plants for Birds</b> These plants will provide food and shelter for a wide range of birds.
Plant Type	Plant Name
Seed-bearing Plants and Trees	Spear Thistle ( <i>Cirsium vulgare</i> ) Lemon Balm ( <i>Melissa officinalis</i> ) Musk Thistle ( <i>Carduus nutans</i> ) Black Alder ( <i>Alnus glutinosa</i> ) Turkish Hazel ( <i>Corylus colurna</i> ) Wild Teasel ( <i>Dipsacus fullonum</i> ) Greater Knapweed ( <i>Centaurea scabiosa</i> ) Devil's Bit Scabious ( <i>Succisa pratensis</i> ) Silver Birch ( <i>Betula pendula</i> ) European Hornbeam ( <i>Carpinus betulus</i> ) Common Dandelion ( <i>Taraxacum officinale</i> ) Field Scabious ( <i>Knautia arvensis</i> ) Common Sunflower ( <i>Helianthus annus</i> ) English Lavender ( <i>Lavandula angustifolia</i> )





Musk Thistle (Carduus nutans)



Field Scabious (Knautia arvensis)



Lemon Balm (Melissa officinalis)



Common Sunflower (Helianthus annus)



Silver Birch (Betula pendula)

## Plant for the Planet: Plant New Trees and Keep Existing Ones

It is estimated that 1.5 billion new trees need to be planted across the country to help the UK become carbon neutral by 2050.

Trees lend gardens shade, privacy, fruit, colour, fragrance, flowers and height, and they provide valuable environmental benefits to us like reduced noise pollution, improved air quality, protection from flooding and soil erosion, and absorption of carbon dioxide which helps to combat climate change.

Trees also give local wildlife valuable food, shelter and nesting sites.

If you want to plant a tree, native trees – trees that occur naturally in Britain – are generally best.

To plant the right tree in the right place, follow our Top Tips:

#### **Top Tips:**

- Consider your requirements before buying a tree what final size can you accommodate; do you want your tree to be deciduous or evergreen, vigorous or slow growing?
- Examine your site conditions: is the soil dry or moist, rich or poor in nutrients, in a sunny or shaded position?
- Choose tree species that already thrive in your area.
- Buy British sourced and grown trees to have trees that are well adapted to local conditions, and to prevent the spread of imported pests and diseases.
- Buy a seedling aged 2–3 years old, between 60-90cm tall (a 'whip') for the fastest growth rates.
- Plant your tree when the roots are dormant, typically, from mid-November to late March. Avoid planting in very wet or frozen soil.
- Follow the planting and care advice that comes with your tree, advice given by a garden centre advisor, or on the <u>Woodland Trust</u> website.



Instead of buying a tree, you can also grow your own tree from seed. <u>The Woodland Trust</u> has advice on growing a tree from seed.

Looking after your tree, especially in the first few years of its life, is important to make sure it survives and thrives. <u>The Woodland Trust</u> has advice on caring for your trees and <u>The Royal Horticultural Society</u> has advice on tree maintenance.

If you already have a healthy tree growing in your garden, simply let it be!





#### Unauthorised work to protected trees:

The Town and Country Planning Act 1990 gives Local Authorities the powers to prosecute tree owners or persons who undertake unauthorised works to protected trees or cause damage to them. These may be trees protected by a Tree Preservation Order, or trees in a Conservation Area, which the authority judges would have warranted protection by a TPO.

In a Magistrates' Court, the maximum penalty is a fine of up to £20,000 per tree for destruction and £2,500 per tree for damage. In a Crown Court, the amount of the fine is unlimited.

If you are unsure if your trees are protected, you can contact Three Rivers District Council for advice.

#### **Trees for Pots**

Patio fruit trees English Yew (clipped) *(Taxus baccata)* Holly (clipped) *(Ilex aquifolium)* 

#### **Trees for Small Gardens**

#### Native:

Small fruit trees (apples, crab apples, pears and cherries) Hazel (Corylus avellana) Hawthorn (Crataegus monogyna) Spindle (Euonymus europaeus) Rowan (Sorbus aucuparia)

#### Non-Native:

Chinese Dogwood (Cornus kousa) Vilmorin's Rowan with pink berries (Sorbus vilmorinii) Rowan with yellow berries (Sorbus aucuparia 'Joseph Rock') Myrtle (Myrtus communis) Strawberry Tree (Arbutus unedo) Juneberry (Amelanchier) Alder Buckthorn (Frangula alnus)

#### **Trees for Large Gardens**

#### Native:

English Oak (Quercus robur) Silver Birch (Betula pendula) Lime (Tilia x europaea or Tilia cordata) Scots Pine (Pinus sylvestris) Wild Cherry (Prunus avium) Common Beech (Fagus sylvatica) Hornbeam (Carpinus betulus)

#### Non-Native:

Norway Spruce (*Picea abies*) Sweet Chestnut (*Castanea sativa*) Walnut (*Juglans regia*)