

RESIDENTS GUIDE
FOR
**HOMES,
GARDENS &
GREEN SPACES**

PROTECTING NATURE & BIODIVERSITY





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INTRODUCTION

With a few simple changes even the smallest of outside spaces can support a range of wildlife. By providing the food, shelter and habitats increasingly absent or under threat in the surrounding countryside our homes and gardens can make a significant contribution to protecting nature and boosting biodiversity in Stansted.

Who this is guide for

Residents with small to medium gardens, balconies or other small outside spaces.

Why you should help

UK species have declined by 19% on average since 1970, largely due to land use change and urbanisation. Since 1970 more than half of UK flora has been lost.

The UK is estimated to contain over 22.7 million gardens, which can act as excellent wildlife safe havens and corridors within an urban environment.

You can make a difference within your local community by providing a welcoming environment for wildlife in your garden, regardless of how much space you have.

Enclosed are a variety of different wildlife friendly projects and products that can be added to urban gardens to give nature the helping hand that it needs. All of these projects can be an excellent (and fun!) way to teach children about nature, and to help to pass on knowledge of British wildlife to the next generation.



HOW TO START A WILDLIFE GARDEN FROM SCRATCH

Provide shelter

Depending on the space available, this could mean planting native trees or shrubs like silver birch or holly, either into flowerbeds or within a plant pot.



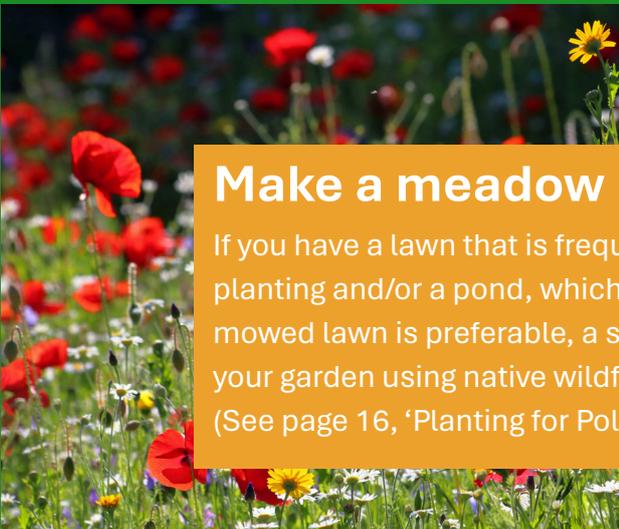
Use all available space

Consider green walls and green roofs (See pages 17 and 18, 'Green walls' and 'Green roofs').



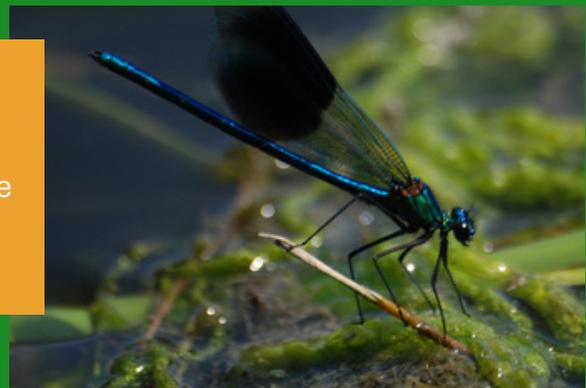
Make a meadow

If you have a lawn that is frequently mown, consider replacing it with native planting and/or a pond, which will provide more benefits to wildlife. If a mowed lawn is preferable, a small meadow can be planted in a corner of your garden using native wildflowers, which will help to support pollinators (See page 16, 'Planting for Pollinators').



Create a pond

Ponds are amazing habitats for water-loving wildlife, and even the smallest space can provide these aquatic habitats (See page 15, 'Ponds in pots').



WILDLIFE FRIENDLY GARDENING TIPS

Use peat-free compost: Peat is found within peatlands, which are invaluable habitats providing over a quarter of the UK's drinking water, as well as storing huge amounts of carbon. The extraction of peat is contributing to climate change and species declines across the globe.

Avoid astroturf: Astroturf provides no benefit to wildlife, as well as being made of plastic which will never biodegrade. If you need a low maintenance lawn try alternative species. Low-growing, mat-forming plants such as herbs and sedums can create a lawn-like turf. Add stepping stones to avoid damage from footfall.

Plant native species: Native plants and wildlife have co-evolved over millions of years to live in harmony, and many animals and invertebrates rely on native plants to survive. They require less water than non-natives, saving time, money and resources (See p. 16). If you opt for non-native species, choose ones that flower early or late in the season, providing a longer flowering period for pollinators - and for you!

Create a compost heap: Compost heaps can be a fantastic low-effort method to provide habitat for a range of minibeasts, as well as reducing the amount of waste sent to landfill. You can also use the compost to improve your soil and encourage growth in your garden.

Avoid pesticides and embrace the wild: Don't keep things too neat; leaf litter and woodpiles provide shelter for invertebrates, amphibians and reptiles during the colder months (see p. 10). Pesticides are harmful to wildlife and to us. Encourage natural predators and use companion and rotation planting to create a healthy, thriving garden.

Provide year-round habitat: By planting native flora (p. 16 and back cover) and providing log piles and bug hotels (p. 13) in combination with ponds (p.15), bird and bat boxes (p. 7 'Bird boxes' and p. 9 'Bat boxes'), hedgehog houses (p. 11) and bird feeders (p. 5), you will create a garden that is a year-round safe-haven for local wildlife. You'll witness the changing behaviours of wildlife throughout the seasons, from hibernation to breeding, all happening in your garden!

Did you know: Stansted is located within a B-line, a flower-rich corridor (or insect superhighway!), forming part of a network across the whole of the UK and linking wildlife-rich habitats together. The creation of wildflower-rich areas could occur on a range of scales in the landscape surrounding Stansted, as well as within urban greenspaces and gardens. Search 'Buglife - B-Lines' online for more info.



FEED THE BIRDS



Bird feeders are a wonderful way to connect with nature, regardless of how much space you have available. Feeders vary in size and function, and can attract a variety of different species.

Why is it important?

- Almost 30% of the UK's birds are on the Birds of Conservation Concern Red list.
- Supplementary feeding can increase survival rates and reproductive success, particularly during harsh winters and throughout the breeding season.
- Migratory birds can use feeders along their migration route, as food may not always be available due to changes in the timing of food supply as a result of climate change.

Choose and install your feeder

- Buy squirrel/ rain proof feeders that drain easily.
- Remove build-up of old food and clean up food from underneath feeders.
- Rotate position of feeders around garden regularly.
- Plant bird friendly native vegetation within the same area of the feeders.
- Position away from predator access points (fences, near bushes etc.).
- Locate away from nest boxes, in an area with high visibility for the birds.
- Put in a visible location so that you can observe your visitors!
- Disinfect feeders at least once a week and rinse water vessels daily to avoid the spread of disease.
- Trichomonosis is a harmful disease commonly found in greenfinches - maintain good hygiene and avoid table feeders to reduce the spread.
- If you see a sick bird, stop feeding immediately and disinfect feeders.

Different types of feeders

- **Seed feeders** - ideally with metal hardware (squirrel resistant).
- **Suet and nut feeders** - Steel mesh feeder.
- **Nyjer feeders** - for nyjer seeds (squirrel resistant, perfect for attracting smaller species such as goldfinches).
- **Window feeders** - provide a unique view of feeding but need to be cleaned more frequently.
- **Hopper or 'house feeders'** - Can hold lots of seed and protect from rain, but need to be cleaned more frequently.

Different feeds attract different species

- **Blackbirds** - mealworms and suet nibbles on the ground;
 - **Blue/ Great tits** - seeds, suet and peanuts from feeders;
 - **Finches** - sunflower hearts from feeders;
 - **Goldfinches/ Siskins** - Nyjer seeds from special feeder;
 - **House sparrows, dunnocks, collared doves** - small seeds on ground;
 - **Robins, blue tits, pied wagtails** - mealworms.
-
- Suet balls are great in winter and popular with most birds - hanging suet balls are easy to install and can even be made yourself;
 - Make sure that feed does not contain any fillers and is of good quality;
 - Leftover fruits can even be left out - just beware of certain fruits being toxic to pets.

Where can I find out more?

Cleaning birdfeeders - <https://www.wildlifetrusts.org/actions/how-clean-nestboxes-and-bird-feeders>

Make your own bird feeder - <https://www.wildlifetrusts.org/actions/how-feed-birds-your-garden>

Or search online for -

- 'RSPB - feeding birds near me'
- 'BTO - feeding garden birds'
- 'Songbird Survival - Gardens for birds'
- 'RSPB - bird feeder buying guide'
- 'Vine House Farm - BTO bird food'





BIRD BOXES

Bird boxes provide warm, dry and safe shelter for birds to raise their young. They also serve as roosting sites during harsh winters.

Why are they important?

- **Habitat loss:** Widespread habitat loss across the UK has reduced the availability of natural nesting sites for birds.
- **Urbanisation:** Building renovations and loss of mature trees in Stansted have decreased the opportunities for nesting urban birds, particularly house sparrows, swifts and house martins.
- Without suitable nesting sites, birds are forced to nest in suboptimal conditions, often in places that may clash with human activities.

Installing or building a bird box - top tips

- **Think variety:** Bird boxes can be built or bought in various designs suited to different species.
- **Target species:** Focus on installing boxes for species that are struggling with population declines, particularly swifts.
- Garden birds such as tits, house sparrows, wrens, starlings and redstarts can use generalist bird boxes, with different sized holes attracting different species:
 - **26mm** - small Tit species and wren;
 - **32mm** - Tits, Redstart, Nuthatch, Sparrows, Flycatchers;
 - **Oval** - preferred by Redstart.
- Boxes should be fixed two to five metres up a tree or wall, keep boxes away from feeders, fit a metal plate around the entrance hole and avoid boxes with perches.
- Do not fit boxes too close to other boxes and do not use a combination nestbox/bird table.
- Buy or make a box made from insulating materials (wood/woodcrete) of at least 15mm thickness and use screws that will not rust (stainless/galvanized steel). Avoid metal or ceramic boxes.
- Box should be at least 130 square centimetres on the inside to maximise reproductive success, and should ideally include a way to access the box for cleaning.
- Boxes should be installed in winter/ early spring and mounted out of direct sunlight and prevailing winds.
- To reduce parasites and disease, it is ideal to clean nest boxes between 1st Sept-31st Jan every year. Some birds use nest boxes to shelter in during winter months; if you find a bird while cleaning boxes, leave it undisturbed.



Swifts in Stansted

You have no doubt seen, or heard, Swifts during the summer months in Stansted. These super-migrators travel over 7000 miles every year to breed across Europe and the UK, before returning to Africa for the winter. Sadly, swifts are under threat and are on the **UK Red List of Birds of Conservation Concern**, largely due to the loss of their nesting sites. Swifts nest in small gaps in buildings, returning to the same site each year, but renovation work frequently blocks or destroys these sites. Installing swift boxes can provide protected nesting habitat.

Installing a swift box

- Swifts nest in colonies; install multiple boxes per building to attract them. Three boxes mounted together is ideal.
- Plant invertebrate-friendly native plants near to boxes to provide suitable foraging habitat.
- Install nest boxes at least 5m high, in or around building eaves, located away from vegetation to avoid predator access.
- Use an oval or rectangular hole of 30mm x 65mm, with internal dimensions of 400mm x 200mm x 150mm.
- Swifts return to the same nesting site every year, but can be attracted to uncolonized areas by playing 'swift response calls' in the morning and evening from May-July.

Want to find out more?

Cleaning nest boxes - www.wildlifetrusts.org/actions/how-clean-nestboxes-and-bird-feeders
Swift bricks & boxes - www.actionforswifts.com

Or search online for -

'BTO - nest boxes essential guide'
'RSPB - Ultimate guide to nest boxes'
'Wildlife Trusts - how to build a swift box'
'Action for Swifts swift response calls'



BAT BOXES

Bat boxes are artificial roosts designed to encourage bats into areas where there are few roosting sites. A wide range of bat boxes are available to suit a variety of species and design requirements. Bat boxes can be mounted externally on buildings, built directly into the wall structure or mounted on trees.

Why are they important?

With the loss of foraging habitat, building renovations closing access to potential roosts and new buildings sealed from animal access, bats' ability to find suitable accommodation is reduced. Bat boxes are important for providing this species with alternate accommodation when theirs is lost, but is also a way to encourage wildlife into properties or gardens.

Common and soprano pipistrelle bats have been recorded in Stansted and are the species most likely to use artificial roosts.

Installing or building a bat box - top tips

- There are various bat boxes which can be bought already built or you can make your own (see the links and suggestions below).
- Boxes are more likely to be inhabited if they are located where bats feed and it may help to place the box close to features such as tree lines or hedgerows, which bats are known to use for navigation and can provide immediate cover for bats leaving the roost.
- Fix as high as possible in a sheltered, wind-free position, exposed to the sun for part of the day.
- Access to any bat roosting features should not be lit and should also be at a reasonable height to avoid predation (at least 2m if possible, preferably 4-5m).

Be aware that all UK bats and their roosts are protected by law, which means it is an offence to deliberately disturb a bat, damage or destroy a bat roost, intentionally or recklessly disturb a bat at a roost, or obstruct access to a roost. Once up, a bat box cannot be opened legally without a licence. Your local bat group can assist with conducting checks of bat boxes.

Want to find out more?

Build your own bat box - www.wildlifetrusts.org/actions/how-build-bat-box

The Bat Conservation Trust - www.bats.org.uk
or search for 'RSPB bat boxes'.



LOG PILES FOR AMPHIBIANS

Log piles provide shelter and food sources for a range of wildlife, as well as being valuable habitats for amphibians, such as the common frog and toad, and the great crested newt, to spend the cold winter months.



Why are they important?

The decay process in log piles supports beetle larvae, insects, and other organisms that thrive in decomposing wood. This creates a reliable food source for birds and amphibians such as toads and frogs. The gaps and crevices in the logs also offer ideal hiding spots for amphibians to escape extreme weather conditions, such as heat or frost, and to lay eggs.

Making your own log pile - top tips

- Find a shady, quiet spot in your garden. The pile should be out of the way, so wildlife using the logpile can feel safe.
- Dig a hole about 30-45 cm deep. This depth will give amphibians and other wildlife using the logpile to overwinter enough space to burrow down and find stable conditions during the winter.
- Place stones and logs in the hole, leaving gaps between them. These gaps will create tunnels and hiding spots where the amphibians can rest and stay protected.
- Pile leaves, bark, and other natural materials on top of the stones and logs. This helps trap moisture and keeps the log pile nice and damp—perfect for amphibians.
- Cover with a few more branches or leaves to keep it sheltered and out of sight, but make sure not to block the gaps. This cover will help the den stay cool and protected from the weather.

Things to remember

- If you have pets make sure the log pile is placed somewhere they can't easily access. This ensures the amphibians remain safe and undisturbed.
- If you add extra material like leaves or soil, don't pack it too tightly. Amphibians need air and moisture to circulate in their den, so too much compaction could limit their ability to breathe or stay hydrated.
- To encourage more wildlife, try placing a pond in a pot nearby and planting pollinator-friendly plants.

To find out more search online for -

'RSPB - make a house for frogs and toads' and 'Froglife - log piles'

HEDGEHOG HOUSES AND HIGHWAYS

A **Hedgehog House** provides a safe space to shelter from cold weather, garden tools, predators and cars throughout the year. It can also be used for hibernation over the winter months and for nesting mothers and hoglets.

Hedgehog Highways are hedgehog-sized holes in hedging or fences which link parcels of land, ensuring boundaries are permeable to hedgehogs. These holes should measure 13x13cm and should link as many pieces of land as possible.

Why are they important?

Hedgehogs are a priority species under the UK Biodiversity Action Plan and are listed as a Species of Principal Importance (SPI) in England under the NERC Act (2006). Their decline is due to agricultural intensification, habitat loss and fragmentation, reduced prey availability and roadkill (approximately 100,000 are killed on roads annually).

As hedgehog numbers have declined in the countryside, populations in suburban areas have become increasingly important, with residential gardens providing safe spaces to forage and seek refuge. However, fences and roads can block their access to suitable habitat.

Hedgehog houses and highways help to increase hedgehog numbers by providing shelter, places to safely hibernate and improve connectivity between the habitats they rely on for breeding and foraging.

Installing or building a hedgehog house - top tips

- Ready built houses are available to buy but it is easy and fun to build your own.
- Cut your timber to the required dimensions (see the links and suggestions on the next page).
- Assemble the main chamber and entrance tunnel separately; attach feet and a hinge flap for cleaning access. Drill a hole that could fit a hosepipe at the back of the box for extra ventilation.
- Pick a shady, sheltered, and quiet spot to put your hedgehog house.
- Cover with polythene sheeting (making sure it's still accessible for cleaning later on), and pack soil and dead leaves around the outside, leaving the entrance and ventilation free of debris.
- Clear out the hedgehog house once a year (late March to early April).
- Do not clean out if a hedgehog is in residence!





Providing a log pile or compost heap are also good options for providing space for hedgehogs to nest, while also attracting insects for them to eat.

Making a hedgehog highway

- Measure and mark a 13cm x 13cm hole at the bottom of a fence panel.
- Using a coping saw, cut out the marked hole.
- If there are any rough edges, use sandpaper to smooth them down.
- Put your fence panel back up.
- Alternatively you can remove a brick from the bottom of your wall or dig a channel under your wall/fence/gate.

Companies offering fences with hedgehog highways already installed can be found here at www.hedgehogstreet.org/fencing-companies/

Feeding hedgehogs

- You can use plain kitten biscuits or meat-based wet dog or cat food. You can also use specialist hedgehog food but it isn't regulated and can vary in quality so always make sure to check.
- If food isn't eaten overnight, remove and replace with fresh offerings in the evening.
- Research suggests that unpredictable supplementary feeding is beneficial e.g. moving the feeding spots around and scattering food in a more natural way. This will also reduce risk of competition for food.

Want to find out more?

Build a hedgehog home (full dimensions and step-by step instructions) - www.wildlifetrusts.org/actions/how-build-hedgehog-home

Feeding hedgehogs - www.britishhedgehogs.org.uk/feeding/

Hedgehog friendly fencing - www.hedgehogstreet.org/fencing-companies/

Or search online for -

'The State of Britain's Hedgehogs report 2022'

BUG HOTELS

A bug hotel is a structure created to provide shelter for invertebrates and can come in a variety of shapes and sizes depending on the purpose, or type of invertebrate it is catered for.



Why are they important?

- Invertebrates need safe spaces to shelter, hide from predators and raise their young. Urban areas typically provide limited spaces for invertebrates – therefore creating a bespoke shelter for them in your garden can be of real value to local invertebrate populations.
- You can help them by building or providing a bug hotel in your garden or outside area.
- They can be good for lots of different types of invertebrate such as ladybirds, solitary bees, bumblebees, woodlice and spiders.
- Natural pest management: in turn, some invertebrates using these structures, such as ladybirds, lacewings and earwigs, can help you by keeping populations of garden pests such as aphids under control.

Building your own bug hotel - top tips

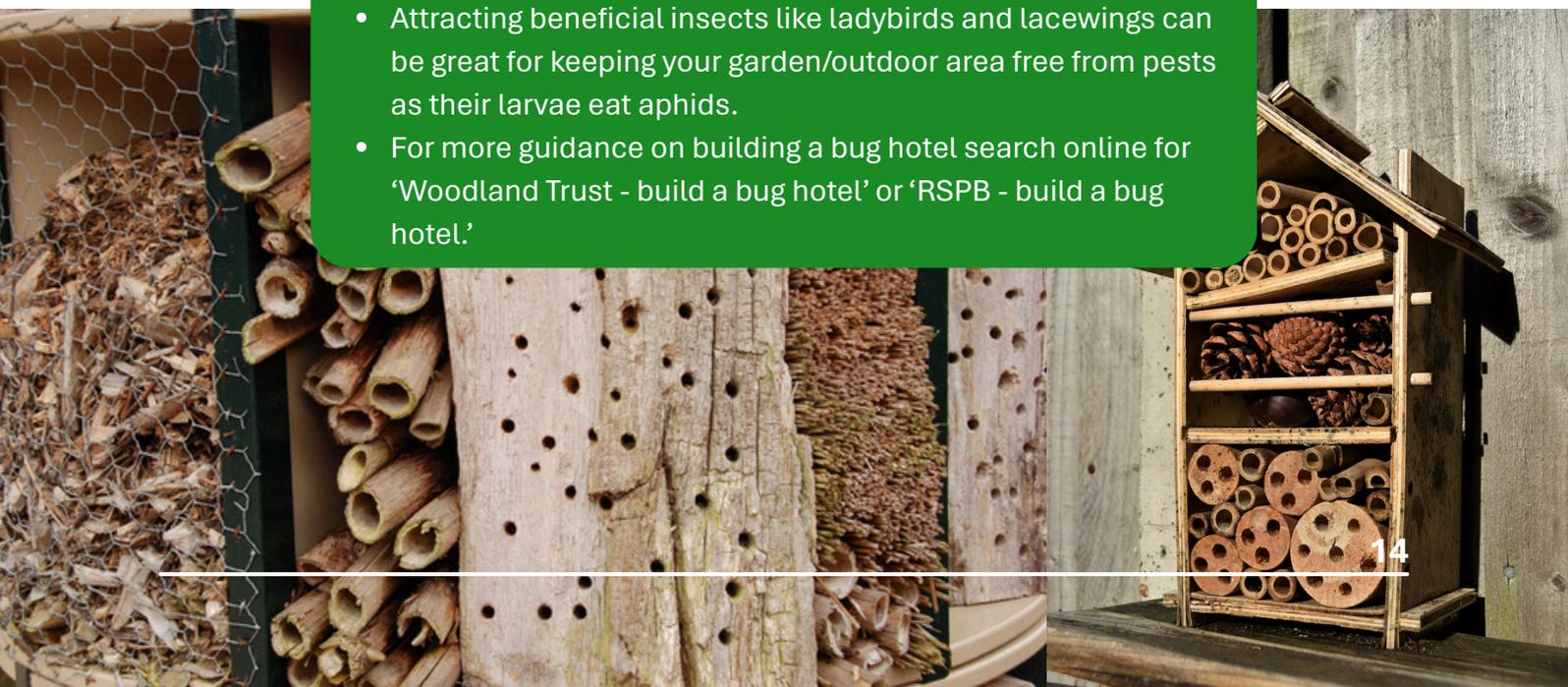
- Choose a level site where the ground is firm. The location will determine which visitors you get e.g., woodlice enjoy cool, damp conditions, solitary bees prefer a sunny, south-facing spot.
- Start with a strong, stable framework that's no more than a metre high. Old wooden pallets are perfect for a large hotel as they're sturdy and come with ready-made gaps. Divide your structure into small sections; the idea is to provide all sorts of different nooks and crannies, crevices, tunnels and shelter spaces.
- Lay some bricks on the ground as sturdy corners and place the structure on top.
- Stuff your sections with different natural materials. Different materials can attract different visitors: dead wood and loose bark for minibeasts like beetles, centipedes, spiders and woodlice; holes and small tubes for solitary bees made out of bamboo, reeds and drilled logs (no plastic!); dry leaves, sticks or straw for ladybirds and other beetles and bugs; Corrugated cardboard for Lacewings.
- When you think you've gone high enough, put a roof on to keep it relatively dry. Use old roof tiles or some old planks covered with roofing felt.

Extra things you can do

- You could give your hotel a 'green' or 'brown' roof by putting a bit of rubble or gritty soil on top. In time some hardy flowering plants may take up residence on the roof and provide a splash of colour – as well as food for pollinators.
- Sow wildflower seeds around the hotel to give food for butterflies, bees and other pollinating insects.
- Bug hotels can also be tailored to attract one specific species/ species groups. For example -
 - **Log pile lodge:** Decaying wood is really important for wildlife. To make a log pile, simply collect small logs, large sticks and pieces of rotting wood. Pile them up in a damp, shady area of your garden, then stuff some dead leaves in the gaps. Good for: centipedes, woodlice and beetles who like to burrow into decaying wood.
 - **Pine cone palace for ladybirds:** Gather some pine cones and bundle them together closely so the scales interlock. Stuff some dried leaves in the gaps. Place the pine cones in a quiet corner of your garden shed or garage. Good for: ladybirds and lacewings who will love to crawl into the crevices and hide among the leaves.
 - **Pot pad:** Collect dried out, hollow stems and pack them into an old terracotta plant pot. You'll need to cut or break the stems to the right length and pack them tightly so they don't fall out, but not so tightly that they get squashed. Find a dry spot that catches the winter sun and make a little 'nest' for your pot using a pile of stones. Place it so the open end is pointing downwards slightly to stop it filling with rain. Good for: solitary bees who lay their eggs in hollow stems then seal the ends with mud.

Helpful hints

- If you have vegetable beds, keep the hotel a good distance away from them just in case you attract slugs!
- You can build your bug hotel at any time of year, but you'll find lots of natural materials around in autumn.
- Ensure not to use plastic materials (e.g., plastic tubes) as this can produce damp and spread disease amongst the insects.
- Attracting beneficial insects like ladybirds and lacewings can be great for keeping your garden/outdoor area free from pests as their larvae eat aphids.
- For more guidance on building a bug hotel search online for 'Woodland Trust - build a bug hotel' or 'RSPB - build a bug hotel.'





PONDS IN POTS

A washing-up bowl, large tub, or disused sink can all be repurposed as ponds for smaller spaces and enhance the biodiversity of your home.

Why are they important?

Even a small pond can be home to valuable and varied species. Ponds provide essential water, food supply, and shelter for wildlife that is often hard to find in urban areas.

Make your own pond in a pot - top tips

- Find a container with a minimum size of 60cm diameter and 40cm depth.
- Choose an accessible spot which has some sunlight but not for the whole day as the water will warm up too much.
- Check the container is watertight by filling it with a small amount of water. If it is not, line it with a flexible pond liner to keep the water in.
- Add in some gravel, pebbles, and/or rocks into the bottom of the pond and build a ramp so that frogs, toads, and other wildlife have a safe way in and out of the pond. This can be using large stones, logs, bricks or any untreated wood.
- Fill up the pond, ideally using rainwater instead of tap water
- Now, you can customise your pond through different plants. It's a good idea to have a good mix of plants so the inhabitants of your pond can have a varied habitat. Some species could include:
 - Miniature waterlily (*Nymphaea "Pygmaea Helvola"*)
 - Lesser spearwort (*Ranunculus flammula*)
 - Starwort (*Callitriche stagnalis*)
 - Flowering rush (*Butomus umbellatus*)
 - Water forget-me-not (*Myosotis scorpioides*)
- Let wildlife come to your pond in their own time and enjoy your efforts!

Make sure the pond is in a safe space as even small ponds can be a danger to unsupervised children.

To find out more search online for - 'Wildlife Trusts - how to create a mini-pond' and 'RHS - wildlife container pond'

PLANTING FOR POLLINATORS

A pollinator friendly flower container is a planter comprised of native flowering plants and plants that flower in different seasons to provide continuous supply of food for pollinators throughout the year.

Why is this important?

- Butterflies, moths, bees, and hoverflies all need sources of nectar and pollen to thrive. As they travel from flower to flower, they also pollinate them, enabling them to set seed or bear fruit.
- Pollinators are key to biodiversity and the production of many fruits and vegetables we enjoy. But as our towns and countryside change, there are fewer flowers to feed on.
- This is especially important in urban areas where greenspaces and flowering plants are scarce.
- Setting up a pollinator friendly container can provide a helping hand for the survival of various pollinator species.

Plant your own - top tips

- There are lots of different options for containers, such as old tyres or wooden pallets as raised flower beds. Position your chosen container in a sheltered sunny spot.
- The containers can be sown with a wildflower seed mix or planted with plugs designed to support pollinators and using peat-free compost.
- Flower types: Plugs/seed mixes should include species with differing flowering times, providing a continuous supply of flowers from spring to autumn, to cater for pollinators being active at different times of the year. Plant species from different plant families will provide a variety of flower shapes which in turn support a range of bee and pollinator species, whose mouth parts have evolved to use one or more of these flower types.

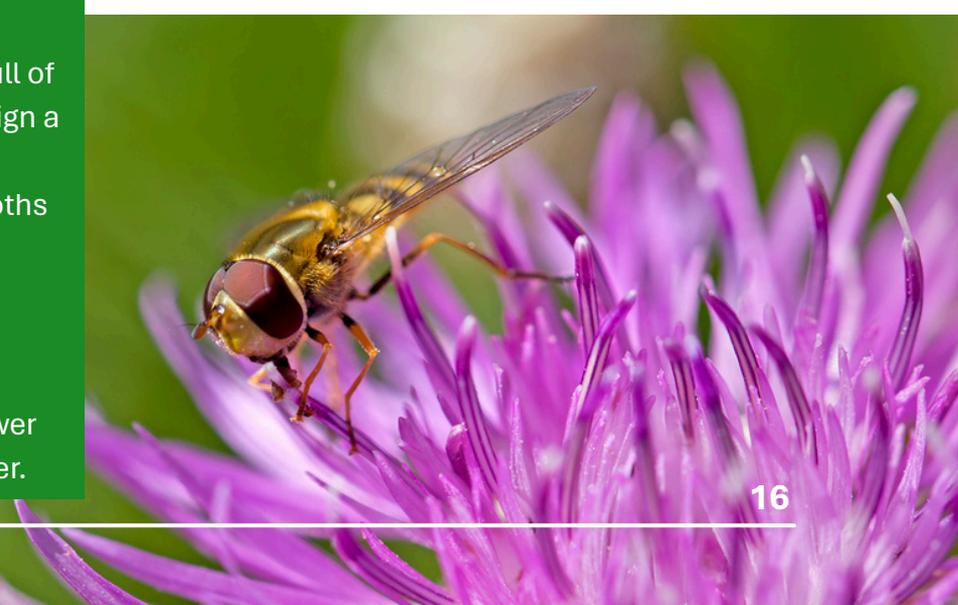
Extra hints

- If you have space in your container, include areas of large rocks, bare ground, leaf litter and deadwood to provide spaces for nesting and basking.
- Herbs are highly attractive to pollinators as they are packed full of nectar. Include in the mix or design a dedicated herb garden.
- Provide a night-time feast for moths and plant some night-scented flowers.
- Avoid seed mixtures with a high proportion of grass species; the grasses will outcompete the flower species and dominate the planter.

To find out more search online for -

‘Bumblebee Conservation - Bee the Change’
‘Wildlife Trusts - plants for pollinators’

For a list of nectar rich plants see the back cover!



GREEN ROOFS

A green roof is a roof of any building that is partially or completely covered in plants and vegetation and contain multiple layers to support the vegetation, including waterproofing and drainage.

Why are they important?

- Green roofs compensate for the lack of space in urban areas and add greenery which benefits wildlife as well as our wellbeing
- The habitat created on green roofs attracts a range of pollinators and other invertebrates, which otherwise struggle to find places to forage and shelter in urban areas. These invertebrates in turn provide food for birds and bats.
- A network of green roofs throughout an urban area can create a corridor of wildlife habitat, connecting surrounding green spaces together.

Install your own green roof - top tips

Residential green roofs can be placed on small sheds, bin and bike stores – make sure to ensure that the roof that you are planning on planting on can take the additional weight of the green roof. Smaller green roofs only require 5 basic layers:

- **Waterproof membrane** – to prevent leaking through the roof;
- **Root barrier** – to stop roots from damaging the waterproof membrane and causing leaks in the future;
- **Drainage** – to stop water from collecting on the green roof – this can be achieved through adding a suitable slop to the green roof and adding guttering or a rain chain;
- **Growing medium** – a peat-free substrate mix that is the right fit for your plants;
- **Plants** – making sure to have the right plant in the right place so they can thrive.

Pollinator friendly planting will boost the positive effects of your green roof as well as create a beautiful array of flowers. Some good species to include are:

- Bird's foot trefoil *Lotus corniculatus*;
- Yarrow 'Sammetriese' *Achillea millefolium* 'Sammetriese';
- White stonecrop *Sedum album*;
- Oregano *Origanum vulgare*.

Extra hints

- Kits are available which contain all the layers needed in blocks or mats which fit together, complete with pre-sown plants.
- As well as plants, if your roof can take the weight, add different substrates (gravel, sand piles) and small wood piles to the roof. This will increase the variety of habitats available for invertebrates, giving them places to bask and shelter.

To find out more, search online for -

'Wild London - add a green roof to your shed' and 'RHS - build a green roof.'

GREEN WALLS

Green walls are walls with vegetation growing on them, enhancing otherwise featureless areas of bare wall. They may be natural, such as brick or stone-built walls which have been naturally colonized by lichens, mosses, ferns and flowering plants or they can be large scale engineered green walls. The process of allowing and encouraging plants to grow on and up walls allows the natural environment to be extended into urban areas.

Why are they important?

Green walls are important for wildlife; providing a food source for invertebrates on which, in turn, other invertebrates and birds may feed. They also provide breeding and nesting habitat for invertebrates, birds (such as wrens, blackbirds, song thrushes and house sparrows) and possibly bats and are ideal for including artificial animal breeding structures such as nest boxes or bat roosting boxes. These can combine with green roofs to provide a route for wildlife between habitats at ground and roof level.

Other benefits include reducing stormwater runoff, providing buildings with insulation while also keeping homes cool in the summer, and contributing to the improvement of urban air quality.

Create your own green wall

- top tips

Ground-based green walls:

- Plant climbers, wall shrubs or fruit 45cm (18in) from the base of a wall to allow rain to reach the root zone, use plenty of compost soil.
- The plant should be angled toward the wall to enable it to grow against it. If needed, the wall surface should be first clad with wires or trellis.
- Water newly planted climbers and wall shrubs regularly for at least the first five growing seasons.

Living wall systems:

- For smaller budgets there are two options: there are simple grow-bag-type products for walls, or small panels which can be attached to walls which you can plant in. These are available from garden centres.
- Introduce the plants at as small size as possible, ideally as plugs as establishment is more likely to be successful at this stage of development.
- For larger systems you can use plants grown in cells containing compost or other growing media which are connected to drip irrigation, but these may require professional installation.

Different plant species are tolerant of shade and others of sun, so different species may need to be considered depending on the location of the walls.

NECTAR-RICH PLANT SUGGESTIONS

Common name	Systematic Name	Flowering season
Aster	<i>Aster sp.</i>	Late summer
Bird's-foot trefoil	<i>Lotus corniculatus</i>	Late spring-summer
Bugle	<i>Ajuga reptans</i>	Spring
Bush vetch	<i>Vicia sepium</i>	Late spring-summer
Catmint	<i>Nepeta sp.</i>	Late spring-late summer
Chamomile	<i>Chamaemelum nobile</i>	Late spring-summer
Common knapweed	<i>Centaurea nigra</i>	Summer-late summer
Common Poppy	<i>Papaver rhoeas</i>	Summer
Cornflower	<i>Centaurea cyanus</i>	Late spring-summer
Cowslip	<i>Primula veris</i>	Spring
Germander speedwell	<i>Veronica chamaedrys</i>	Late spring-summer
Grape hyacinth	<i>Muscari sp.</i>	Late spring-summer
Kidney vetch	<i>Anthyllis vulgaris</i>	Late spring-summer
Lavender	<i>Lavandula sp.</i>	Late summer
Lungwort	<i>Pulmonaria officinalis</i>	Early spring
Marjoram	<i>Origanum majorana</i>	Summer-early autumn
Meadow clary	<i>Salvia pratensis</i>	Summer
Meadow cranesbill	<i>Geranium pratense</i>	Summer
Oxeye daisy	<i>Leucanthemum vulgare</i>	Late spring-summer
Viper's bugloss	<i>Echium vulgare</i>	Summer
Wild thyme	<i>Thymus polytrichus</i>	Late summer- early autumn

