
Making greenspace for bumblebees



Creating bumblebee and people friendly community greenspace

Most people are aware that bees are important and that bees seem to be in trouble. Many people have heard about the decline in bee species through factors such as loss of habitat, over-use of pesticides and disease.



Introduction

This guide is designed to support Community groups, Housing Associations, Local Authorities, Schools and other organisations wishing to develop a bumblebee-friendly greenspace within their community or local

environment. It provides guidance on the process of designing, funding and creating community greenspace which is beneficial for our native bumblebees, but also provides a beautiful, safe place for people to enjoy.

Photo: Stuart Macpherson

Creating a bumblebee friendly community greenspace – key steps



Photo: Clare Flynn

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Photo: Graeme Flynn

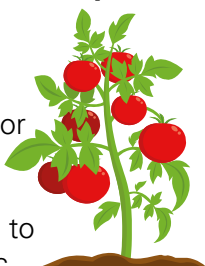
Why make your community greenspace bumblebee friendly?



Bumblebees are important

Not only do bumblebees represent a very evocative and beautiful part of our native British wildlife, they are also **responsible for the pollination of many plants, both wild and cultivated.**

Their hairy bodies, reliance on flowers for food and their ability to fly relatively long distances contribute to their role as fantastic



plant pollinators. Bumblebees are also able to 'work' in cooler temperatures and visit a variety of flowers throughout the growing season. **They contribute to the production of some of our most important food crops – peas, beans, tomatoes, apples and strawberries** to name but a few!



Bumblebees face many pressures

The effects of pesticides on bees has been well documented in recent years but perhaps the single biggest factor in the decline of our native bumblebees has been loss of habitat. Since the Second World War, **the loss of hay meadows, clover fields and native hedgerows due to more intensive**

agriculture, has had a dramatic impact on our wildlife. During the 20th century, two bumblebee species became extinct in the UK and several of our remaining species, for example the **Shrill carder bee, (*Bombus sylvarum*)** have suffered large declines in their range.



The Shrill carder bee – one of our most threatened species
Photo: David and Holly Harris



Our actions can have a positive impact



Gardens and other community greenspace, providing it has suitable flowers and sites for nesting, can provide a good habitat for bumblebees. It is vital therefore that we take opportunities to **further improve our green spaces for these important and charismatic insects.**

Growing pollen and nectar rich plants can be a treat for humans too, **providing colour, sound, smells and even taste when fruit or vegetables are grown!**

The interest and reward provided by a bumblebee friendly greenspace is of **value for human wellbeing and the development of knowledge and social connections** within our communities.



More information

If you require further information take a look at page 27 which provides links to the UK Pollinator strategies.





Before you begin



1. Who is planning the project?

This guide is primarily aimed at established organisations or community groups. For those who are not part of an established group or organisation, we strongly advise you consider forming a project group. This may also be an essential part of applying for funding.



Identify your site



2. Have you identified your site?

When looking for a site or considering an existing one, research is essential.

• Who owns the land?

Work in partnership with the landowner and discuss potential issues early on. If working with local authorities, establish a key person as the main point of contact and consult them on all decisions.



• Do you have permission to carry out the project?

Check with the landowner and check for any land protection or restrictions with your local authority. If the site already has protected habitats or species, it may not be suitable to alter it for bees!



• Is your site safe?

Check with landowner or local authority for how the site was previously used. Is the land stable?

Does it flood? Are there any issues with contamination, overhead cables or underground services? Hire a CAT Scanner to assess for underground services prior to work being carried out.

- **Is your site accessible?** Will your site be accessible for delivering materials, tools and plants? When the space has been developed, will it be accessible for all community users, including children, older people and those with mobility or sensory issues?

3. Creation and long-term maintenance



• Who will be involved in designing, creating and using the community space?

Consider who you will need to consult and engage with in order to inform local residents or potential users about the project. How will you develop a sense of ownership and foster interest for the future?

• Who will be responsible for longer term maintenance?

The level of maintenance required will depend on the size and features of the space created. You may have a group of dedicated volunteers (or are able to form one as part of your project). You may use voluntary groups or can work in partnership with local authority maintenance teams. You may need to create a simple written management plan (for example a mowing regime for a meadow, pruning times, or advice on when to weed).

Will you have the capacity to maintain what you have created?



Secure funding



4. Funding your bee-friendly greenspace

This stage may come before or after the detailed design stage and may range from raising relatively small amounts of money for smaller projects to applying for external grants for larger scale developments. Create a plan of

your costings based on what features you may wish to install, how you will pay for the design, who will carry out the works and any potential maintenance costs. Don't let this section put you off – there are many potential sources of funding, from local businesses to national funding schemes.



Photo: S Foster

Keep costs low

- Use seeds or cuttings to grow your own.
- Use recycled materials e.g. tyres and pallets.
- Ask for donations of plants, seeds, tools or labour from local businesses (exchange publicity to show your appreciation!)



National award schemes

There are a number of key organisations offering grants and advice to community based projects e.g.

www.biglotteryfund.org.uk

www.hlf.org.uk

www.growwilduk.com



NATIONAL
LOTTERY FUNDED

Tips for funding and sourcing your project

Photo: Jessica Beckitt

Local fundraising activities

Involve the local community in fundraising e.g. bumblebee fancy dress competition, bumblebee cake sale or a bumblebee inspired sponsored walk!



Local funding streams

Funding for projects may be available from:

Local Businesses

Local Councils

Charitable Trusts

(Ask your Local Authority)



Take your time

Having a long term planting plan allows you to spread costs and fundraise as you go along.





Whatever the scale of your project, from installing bee-friendly planters to the development of a large community garden, the design will depend on two main criteria – suitability for people and suitability for bees!

1. How do you make your design accessible, attractive and safe for people?

The suitability of your design to the needs of its users will maximise the benefits that a project can bring, including well-being, social inclusion and raising awareness of environmental issues.

Considerations

Safety



If children are going to use the site, prickly bushes and poisonous berries may not be suitable even if the flowers are good for bees. In areas where vandalism may be an issue, moveable planters may not be ideal.

Accessibility



Will the garden provide access and ease of movement for all users, including people with sensory issues or disabilities? Will you install seating and is it safe from being moved or damaged? Are planters at a suitable height so that children can enjoy planting or seeing the flowers? Are paths wide enough?

Information



Will you provide written information on boards or a sign for the garden? Do you have any logos that need to be included on the sign (e.g. a charity which has helped to fund the project)?

Awards



If you would like to enter for an award, you will need to establish their criteria right at the beginning of your design phase. Examples include:
www.greenflagaward.org.uk/
www.biodiversitywales.org.uk/Wales-Action-Plan-for-Pollinators

Maintenance



Having identified your capacity for ongoing maintenance, choose features which are appropriate. You may also need to consider if you require water for your planting scheme and if there a supply nearby. Are signs, planters and other features vandal proof?



2. How do you make your design accessible, attractive and safe for bumblebees?

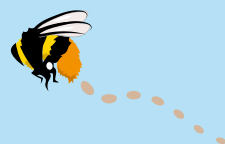
Bees' needs

In the UK we have 24 species of bumblebee. They are social insects, living in a colony with one queen and her worker daughters. Bumblebees do not live in hives and cannot make honey so cannot normally survive the British winter. Queen bumblebees hibernate and emerge alone in the spring to start a new nest and the annual life cycle begins...

Bumblebees depend entirely on flowers for their food – drinking nectar as a source of sugar rich energy and eating pollen for protein rich growth and development. They need to feed from when the queens emerge in the spring, right through to late summer when new young queens are preparing for hibernation. This means that in an ideal bee-friendly area, there should be pollen and nectar rich flowers available from March to late September. **Nesting and hibernation sites may also be incorporated into your design,** thereby providing help for bees at all stages of the lifecycle.

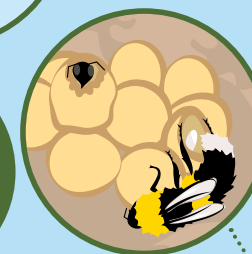
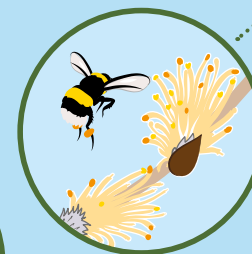


Photo: Clare Flynn



Autumn

New mated queens search for a place to hibernate. The old nest, including all males, will die off naturally.



The bumblebee year



Spring

Queen emerges from hibernation. She needs to feed on pollen and nectar, and find a nest site.

Queen lays eggs which develop into female worker bees. Queen then remains in nest and lays more eggs.

Late summer

Some eggs develop into males and new queens which leave the nest to feed and, if they're lucky, to mate!

Summer

Workers are busy foraging on flowers and caring for eggs and larvae in the nest.



Garden features suitable to a bumblebee friendly space



Wildflower meadow

No matter what the size, a patch of grass can be converted to a colourful, flower rich meadow!

Creation	Maintenance	Example plant species
<p>First year – let grass grow to see what you already have. Cut late summer/early autumn and remove cuttings (reducing soil fertility to encourage wildflowers).</p> <p>Second year – spring cut to further reduce grasses. Sow with native wildflower seed mix in spring or autumn to boost the process (mow and rake first).</p>	<p>Continue late summer /early autumn cutting with spring cut if necessary. Always remove cuttings if possible. Management of plants like docks and nettles may be required. No addition of artificial fertilisers or chemicals.</p>	<p>Bird's foot trefoil, red clover, common knapweed, common vetch and yellow rattle. All great food plants for bees.</p>



Flowering lawn

A neater alternative to a wildflower meadow, using plants which flower on short stems!

Creation	Maintenance	Example plant species
<p>Use seed on bare ground or plant plugs into an existing lawn. You may already have species in your lawn – allow it to flower to find out! Plant bee friendly bulbs such as crocus to provide spring nectar.</p>	<p>Cut every three weeks or so in the growing season, allowing plants to flower at about 5cm high. Management of plants like docks and nettles may be required. No addition of artificial fertilisers or chemicals.</p>	<p>Bird's foot trefoil, selfheal, lawn chamomile and red clover. <i>Crocus tommasinianus</i>.</p>

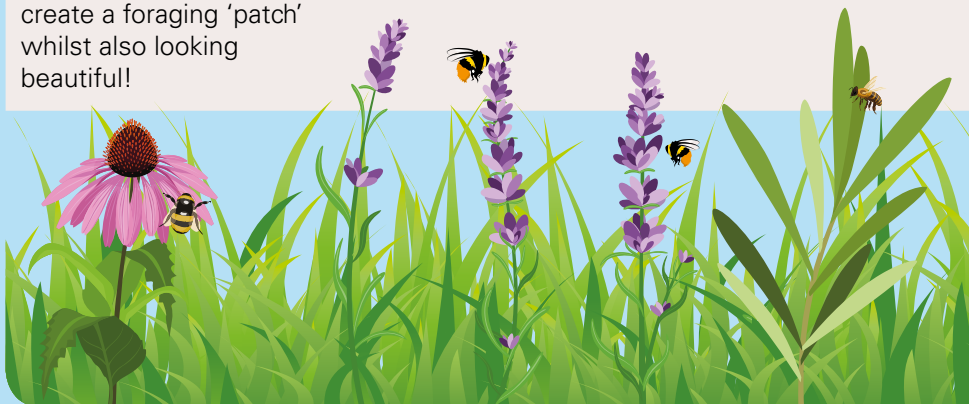




A perennial plant bed

A hardy perennial plant bed can provide pollen and nectar throughout the season and if designed carefully can be relatively low maintenance.

Creation	Maintenance	Example plant species
Cover area with thick weed blanket and top with ornamental gravel or woodchip. Cut slits in weed blanket through which to plant bee-friendly shrubs or herbaceous perennials. Choose hardy plants suited to the conditions of the site – soil, level of sun and moisture. Planting in groups will create a foraging 'patch' whilst also looking beautiful!	Once or twice yearly tidy up, weeding and pruning. Prevent plants becoming too big. Occasional plant replacement or additions.	Shrubs: winter heather, flowering currant, Californian lilac, open single flowered roses, Mahonia, Escallonia, lavender and rosemary. Herbaceous perennials: <i>Pulmonaria</i> , comfrey, cranesbill, globe thistle, Echinacea, foxglove sea holly, hyssop, <i>Sedum</i> .



An edible garden

Bumblebees are wonderful pollinators of many vegetable and fruit plants!

Creation	Maintenance	Example plant species
Fruit trees – require space and the right conditions. Soft fruit bushes – relatively easy to grow – try in pots or against a sunny fence. A vegetable garden – ground requires cultivation. Raised beds can provide a lower maintenance option. Herbs – like a sunny site and are ideal for containers.	Fruit and vegetable plants will require considerably higher maintenance and dedication than many other garden design features. Whilst hugely rewarding, the long term management of your edible garden features will require careful planning.	Apples, pears, plums and cherries. Raspberries, blackcurrants, red currants, strawberries, peas, beans, tomatoes, courgettes and cucumbers. Lavender, rosemary, thyme, comfrey, borage, chives and sage.



Photo: Nico Vereecken



Photo: Clare Flynn

A native or edible hedgerow

A hedgerow provides food and nest sites for a multitude of wildlife, including bumblebees! Choosing nuts and berries can provide a harvest for humans too.

Take care when choosing berries – are they safe?

Creation	Maintenance	Example plant species
Plant October to March when trees are dormant. Prepare ground by digging and removing weeds. Plant bareroot plants approximately 30cm apart, preferably through a weed blanket or mulch. Sow native hedgerow plants such as foxglove, hedge woundwort and bulbs at the shady base of the hedge.	Weed control in first few years. Annual pruning depending on how high you wish your hedge to grow. Careful trimming of growing tips in the first year or two can help the trees to become bushier.	Hazel (cobnuts), elder (flowers and berries), blackthorn (sloes), native roses such as dog rose, (hips) and crab apple. Nut trees will attract native mammals such as wood mice and bank voles. They create nests which are often used by bumblebees!



Common carder bee (*Bombus pascuorum*) on willow catkin

Photo: Val Ireland

A willow hedge or willow feature

Willow trees provide some of the earliest sources of food for emerging queen bumble bees in spring.

Creation	Maintenance	Example plant species
Willow should be planted bare root in the winter, away from pipes or other structures as the roots spread vigorously and seek out moisture. Create a living willow tunnel or a sculpture. Plant a willow hedge for shelter or try a willow fedge – a cross between a fence and a hedge!	Most willow varieties grow very quickly so annual pruning will be necessary, especially if you have close neighbours. The cut willow can be used for a variety of arts and crafts activities.	Willow varieties which bear catkins in the spring. In small spaces, choose a variety which doesn't get too big and can be used as a single 'feature' plant for example <i>Salix purpurea</i> 'Pendula'.





Tree bumblebee
nest in shed
Photo: Clare Flynn

Some bumblebees like to nest underground, often using old mouse or vole burrows, whilst some nest on the soil surface in tussocky grass. Some may choose an old bird box or roof space, mimicking their natural tendency to nest in trees.

Providing nest and hibernation sites

Leave:

- Compost heaps undisturbed
- Corners or margins of tussocky grass
- Piles of leaf litter in a shady spot
- Hedge banks untrimmed to encourage small mammals to create burrows
- Old nest boxes with some nesting material in – if the birds don't use it, the bees might!

If you are lucky enough to find a bumblebee nest – enjoy watching it from a sensible distance. Bumblebees are not aggressive unless provoked and the nest will only last for a few weeks.

See: bumblebeeconservation.org/about-bees/habitats/bumblebee-nests

Wildflower seeds

Contact your Local Wildlife Trust or Meadows group to ask if you are able to obtain seeds from a local source. The National Trust or other landowners may be able to provide wildflower-rich green hay which can be spread onto your meadow in autumn. Try to source locally grown, organic seed wherever possible.



Compost

You may have a compost heap as part of your design but if you are buying compost at the beginning of the project, buy peat free compost wherever possible. Privately owned garden centres may sell organic compost from a local supplier.



Tips for sourcing environmentally friendly materials

Plants

If buying from a nursery, try a local grower as they can tell you if any chemicals have been used. Avoid plants (including fruit trees and bushes) which have been grown with pesticides.



Planters and other features

You may be able to use recycled materials, e.g. tyres or pallets as part of your design but you may also purchase garden features made from recycled materials if your budget allows it. There are some excellent suppliers of recycled plastic garden features. Ensure any recycled wood (e.g. railway sleepers) does not contain harmful residues or wood treatment products.



The importance of talking to people

If your greenspace is in the heart of the community or open in any way to the public, then public consultation at the design phase is crucial. Effective communication and idea sharing will increase appreciation, ownership and ultimately the success of the project.

Schools

Present ideas for bee-friendly plants to the local school children – which are their favourites? Which colours do they like? Can the school be represented in the greenspace by a sculpture or some signs designed by the children? Run a competition to give the area a name!

Residents

Hold an afternoon tea or cheese and wine evening to present ideas and listen to views. What plants do people like in their own gardens? Present a display board of features and plants and ask people to 'dot vote' with stickers. Listen to views on safety or potential issues such as vandalism.

Parents

Create a pop up stand near the greenspace at a busy time of day such as the end of school. Use this as an opportunity to raise awareness of the project and discuss any concerns.

Officials

Remember to consult the local council and any other stake holders, including volunteer groups, throughout the process. Keep stakeholders informed of progress.

Communication

Depending on the scale of your project, develop communication accordingly. School newsletters, posters, leaflets and social media are all useful tools.

Tips for public consultation

Create your space



Photo: Ruby Cole, National Trust

Whatever the scope of your project, plan your practical work carefully.

Health and Safety

Ensure that all necessary safety procedures have been carried out prior to starting any work, including appropriate risk assessments on all planned activities and events.

Insurance

If you are carrying out public events and work parties you will need to be covered by public liability insurance.

Equipment

Ensure you have the correct tools and if necessary, the correct training to use and store them safely.

Professional Help

Will you employ a landscaper? This may be costly but can be very useful for some aspects of a project where skilled input and equipment is required.

Voluntary help

Is there a local voluntary conservation group or other organisation which can provide practical help at no further charge?

Local Community

It may be appropriate to include local community groups such as scouts, guides or schools in creating your space. Ensure activities are suited to the group, for example, children may enjoy planting bulbs whereas a youth group may contribute to planting trees or building raised beds. Ensure all volunteers are valued and thanked.

Season

Carry out the work at a suitable time in the year. For example, bulbs and trees are best planted in the winter, whilst meadow seed is best sown in the autumn or spring.



Photo: Clare Flynn

It may take several years for your plants and garden features to fully establish. Here are some tips for ongoing enjoyment of your community greenspace.

Opening event	Celebrate completion or first birthday with a community event to raise awareness and enjoyment of the area. For example, hold a picnic lunch, afternoon tea or 'Bee Friendly' plant sale.
Annual events	Organise bug hunts, bee survey days or tea parties to encourage communal use and on-going appreciation of the space. Wildlife organisations may be happy to help with this and lend some specialist support.
Monitor your wildlife	Spot and record the birds, butterflies, bees and other creatures that visit the area. Perhaps start a Bumblebee Conservation Trust Beewalk survey which runs through your community green space. Make contact with your Local Records Centre to start submitting the information you collect.
Encourage learning	Provide information about some of the wildlife visiting your site by installing information boards or more simply laminated lists of plants and creatures that have been spotted in a particular month or year. Keep a diary of wildlife spottings, group visits or work that has been done. A great way to recognise progress and thank people who have helped.
Stay safe	Monitor regularly for necessary maintenance, replanting or health and safety issues which may crop up as time goes by.

Case studies

1. The Mere Bee Metropolis, Ellesmere Shropshire



The Bee Metropolis



Photo: Shaun Burkey

Initial ideas: Stemmed from the felling of three local beech trees and the wish to recycle the wood into insect habitats.

Partners: Shropshire Council and Ellesmere Sculpture initiative.

Funding: Shropshire Council and Ellesmere Sculpture initiative.

Specialist advice: Bumblebee Conservation Trust.

Design features: A bee sculpture standing on a base of beech wood. The wood was drilled and piled so as to create a habitat for insects including solitary bees. The 12ft sculpture is surrounded by wildflower meadow areas, an oak fence and a carved wooden armchair. An interpretation panel provides information on the wildlife area and bee conservation.

Maintenance: The Mere volunteers helped with construction and maintenance,

particularly of the perennial wildflower areas.

Lessons learned: The wildflower areas required more maintenance than anticipated due to the rapid colonisation of weeds. Although these areas are intended to attract wildlife, the Council also wanted them to look attractive and demonstrate that 'wildlife friendly' doesn't mean 'neglected'.

Legacy: The project won a Defra Bees' Needs Award, providing further publicity and awareness of bee conservation. The Bee metropolis has become a feature of the Mere Park and is a favourite photo opportunity with visitors. It is hoped that this will encourage both visitors and future managers of the site to provide and promote bee friendly spaces, their creation and ongoing maintenance.

Case studies

2. Buzzing Communities Planting Scheme, Cardigan, Ceredigion



Planting bee-friendly herbs



Initial ideas: Wish to create bumblebee-friendly planting schemes on residential estates.

Partners: Mid Wales Housing and Bumblebee Conservation Trust.

Funding: Heritage Lottery Fund through Bumblebee Conservation Trust.

Design features (chosen through discussions with residents) – Recycled planters with herbs, native bulb planting around trees, planting of wildflower plugs in grassy areas to create flowering lawns.

Maintenance: Liaison with council maintenance teams, including mowing contractors prior to development. Provision of mowing regime to partners and residents.

Lessons learned: Planning of more positive and inclusive public engagement opportunities may have increased resident engagement with the project. On-going maintenance of the planters needed to be established prior to installation.

Legacy: The project helped increase awareness and interest in bee-friendly planting for some residents and for the local housing association staff. The practical activities were very much enjoyed by the children in neighbouring houses. The mown grassy areas now provide an attractive flowering habitat for bumblebees and other insects.

More information



Government Strategies

Wales: www.biodiversitywales.org.uk/Wales-Action-Plan-for-Pollinators

Scotland: www.nature.scot/pollinator-strategy-2017-2027

England: www.gov.uk/government/publications/national-pollinator-strategy-for-bees-and-other-pollinators-in-england

Ireland: www.pollinators.ie/

Community Projects and Green Spaces

www.growwilduk.com/

www.groundwork.org.uk/sites/projecttoolkit/pages/an-introduction-to-community-projects-tips

www.keepwalestidy.cymru/naturalbuzz

www.pollinatorexchange.org/

www.farmgarden.org.uk/

Bee and wildlife friendly gardening

www.bumblebeeconservation.org/land-management-advice/ (includes factsheets)

www.bumblebeeconservation.org/gardeningadvice/

www.buglife.org.uk/activities-for-you/wildlife-gardening

www.wildflowerlawnsandmeadows.com

www.plantlife.org.uk/uk

www.wildlifetrusts.org/gardening

www.rhs.org.uk/get-involved/wild-about-gardens

Voluntary organisations providing practical advice or help

www.groundwork.org.uk/

www.volunteermatters.org.uk/

www.tcv.org.uk/

Citizen science, wildlife spotting and recording

www.beewalk.org

www.ispotnature.org

www.irecord.org

www.bloomsforbees.co.uk

www.ceh.ac.uk/our-science/projects/pollinator-monitoring

Local Record Centres

Books

Bumblebees: An Introduction (2018)

By Dr Nikki Gammans, Dr Richard Comont, S C Morgan, Gill Perkins

Field Guide to the Bees of Great Britain and Ireland (2015) by Steven Falk and Richard Lewington

Plants for Bees: A Guide to the Plants That Benefit the Bees of the British Isles (2012) by Kirk, W. D. J., Howes, F. N.

RHS Companion to Wildlife Gardening (2016) by Chris Baines

The Community Gardening Handbook: Plant & Grow Together (2017) by Ben Raskin



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