



Caru Gwenyn
Bee Friendly



Llywodraeth Cymru
Welsh Government



ACTION GUIDE

Everything you need to know to make your organisation or community Pollinator-Friendly.

CONTENTS

WELCOME TO THE BEE FRIENDLY ACTION GUIDE	4
IS IT ONLY BEES?	4
HOW DID WE GET HERE?	5
WHY HELP POLLINATORS	6
BEE FRIENDLY	6
SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES	8
GETTING INVOLVED WITH BEE FRIENDLY	8
BEE FRIENDLY – THE 4 THEMES:	10
Theme 1 – Food – provide pollinator friendly food sources	10
Theme 2 – Five star accommodation – providing places for pollinators to live	12
Theme 3 – Freedom (from pesticides and herbicides) – avoiding chemicals that harm pollinators	14
Theme 4 – Fun – Involving all the community	17
HUNTING FOR SOLITARY BEES	19
APPLICATIONS AND RENEWALS	20
RESOURCES AND SUPPORT	21
RESOURCES TO HELP YOU	21

“ SO IMPORTANT ARE INSECTS AND OTHER
LAND-DWELLING ARTHROPODS THAT IF
ALL WERE TO DISAPPEAR, HUMANITY
PROBABLY COULD NOT LAST MORE THAN
A FEW MONTHS. ”

E.O Wilson.,The Diversity of Life 1992



WELCOME TO THE BEE FRIENDLY ACTION GUIDE

Bees, butterflies and other pollinators are in trouble due to a variety of factors.

The good news however is that we can help.

And our new **Bee Friendly** scheme aims to do just that!

This is a brand new initiative aimed at communities and community organisations, schools, public bodies, town and community councils, businesses, universities and colleges, places of worship... and many other organisations, all around Wales.

DID YOU KNOW?

They may be tiny but bees are essential to a healthy environment and healthy economy. We rely on them and other insects to pollinate most of our fruit and vegetables – it would cost UK farmers £1.8 billion a year to pollinate their crops without bees.

We think it is the first co-ordinated national scheme of its kind and has at its heart – making Wales a Pollinator-Friendly country.

IS IT ONLY BEES THEN?

No – all pollinators are included.

Pollinators include honey bees, bumble bees and solitary bees, some wasps, butterflies, moths and hoverflies, and some beetles and flies.

If a bee or a moth or a butterfly could talk, what do you think they would ask of us? Probably to look after and enhance their food sources, to protect and enhance places they live and shelter in, to stop using chemicals that can be harmful, and to tell as many people as possible about the issues they face - so that more and more people get involved and take action.

This is why we are asking you to join with us in taking action on 4 main themes – **FOOD, FIVE STAR ACCOMODATION (HABITAT), FREE FROM (PESTICIDES) AND FUN** – to create a nation of Pollinator-Friendly communities, schools, businesses, universities, colleges, public bodies, places of worship and other organisations.

So if you would like to live in **Bee Friendly Town** or **Community**, or work for **Bee Friendly Business**, or study at **Bee Friendly School**, **University** or **College** for example, then read on to find out more about our fun new scheme.

Together we can make a real difference to pollinators in Wales as we aim to become the first **Pollinator-Friendly** nation in the world!

DID YOU KNOW?

97% of traditional lowland grassland meadows in England and Wales were lost between 1930-84.

HOW DID WE GET HERE?

Many groups and individuals have been working to protect species, habitats, nature and ecosystems in Wales for many years.

In 2013, the Welsh Government launched an action plan to protect pollinators in Wales, called the **Action Plan for Pollinators** (<http://gov.wales/docs/desh/publications/130723pollinator-action-plan-en.pdf>).

A Taskforce group of organisations and individuals was set up to look into ways of implementing the action plan.



WHY HELP POLLINATORS?

- » Pollinator populations have been in severe decline for the past thirty years. There is evidence for widespread declines in solitary bees, bumblebees, and some hoverflies
- » Pollinators are essential to pollinate commercial crops, soft fruit, orchards, horticultural crops, and wild and garden flowers
- » Diverse and attractive natural environments are good for pollinators, and are good for people too
- » Natural green spaces and contact with wildlife is essential for our wellbeing
- » The buzz of bees creates a sense of place and is the sound of our summer
- » Many pollinators, especially flies and moths, are vital food for birds. It is not only the buzz of bees we want to bring back to our communities, but the cries of swifts and housemartins as they swoop across the rooftops.

BEE FRIENDLY

The **Bee Friendly** scheme is a new, fun and innovative way to help get communities and organisations across Wales active in learning more about pollinators and habitats, and finding local solutions to help bees and other pollinators to thrive. Enhancing the natural environment in this way will also make places more attractive for local people and visitors and add to a community's sense of wellbeing.

Although the scheme is called **Bee Friendly**, we want people to take action to help all our pollinators, and not just bees.

Bee Friendly is divided into four themes. The first three themes reflect what pollinators need to thrive; an environment which has varied and nutritious food sources, water, and nesting sites and is free from pollution and pesticides. The fourth theme reflects the importance of community engagement and inclusion.

The four themes are:

1. **Food** – providing pollinator-friendly food sources in your area
2. **Five Star accommodation** – providing places for insect pollinators to live
3. **Freedom from pesticides and herbicides** – committing to avoid chemicals that harm pollinators
4. **Fun** – involving all the community and telling people why you are helping pollinators.

As community groups and organisations, or public bodies with local stakeholders, or businesses with local customers, you are ideally placed to know the most appropriate action that you can take in your area. The opportunities for action for a school in Newport, for example, may be different to those for a village in Anglesey or a business in Newtown.

We have offered some suggestions for actions based on our previous experiences but we would very much encourage you to work out your own plan of action that takes into

consideration the possibilities and opportunities available in your community or organisation, for example.

The following pages offer some ideas for action and also some links for more information.

The most important thing though is to have some fun with this scheme and to involve as many people as possible in becoming **Bee Friendly**. Remember it's not just about bees, it's about all pollinators – you can take action to encourage hoverflies, butterflies, and moths.

photo credit: Jan Miller at www.7wells.co.uk



photo credit: © Steven Falk



SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES

The Welsh Government's Natural Resources Policy Statement recognises pollinators are in decline and this risks our capacity to produce food, timber and fibre. Providing more urban green infrastructure and better lowland habitat measures are priorities. Managing green spaces and taking other action to support pollinators is an example of the Sustainable Management of Natural Resources in practice.

Taking action under the four **Bee Friendly** themes will deliver multiple economic, social and environmental benefits for local communities and contribute to the wellbeing goals under the Wellbeing of Future Generations (Wales) Act 2015.

GETTING INVOLVED WITH BEE FRIENDLY

What do we do?

The idea is that together, we work towards a Wales where more people know more about the issues affecting pollinators, and are taking more action to protect them and their habitats and food sources. If we all work together we can hopefully add the title of Wales being the world's first Pollinator-Friendly Nation to that of Wales being the world's first Fair Trade Nation.

Our idea is that groups taking part in this scheme, pick out at least one idea for action from each of the 4 themes in the following pages. We have suggested some ideas to help your thinking but if you have other ideas for actions within these themes that you think are appropriate to your area or organisation then please feel free to incorporate these ideas.

The most important thing is that all participating schemes work on at least one idea from each of the 4 Themes (**FOOD, FIVE STAR ACCOMODATION (HABITAT), FREE FROM (PESTICIDES) AND FUN**).

A suggested plan of action:

- » Get together with like-minded individuals within your community or organisation or business to work out an action plan for your scheme
- » Work out what your ideas are for the Food Theme, the Five Star Accommodation Theme, the Free From Theme and the Fun theme (Pick out ideas that you think are relevant to your area or organisation and try to pick ideas that are achievable and fun. This will make things much easier, especially if you are a new group)
- » Let us know that you wish to take part by filling in the application form on the Wales Biodiversity Partnership website
- » Advertise in your local area to let people know what you are doing and invite more people to join your project
- » Publicise what you are doing through social media – use photos to show the difference you have made
- » Buzz in to action
- » Tell us your progress across all 4 themes – the OPAL Polli:

Nation Survey¹ can be used as a standard method of monitoring pollinators, both before and after carrying out your actions

- » Celebrate officially becoming a **Bee Friendly Town** or **Community** or **Community Group**, or **Bee Friendly Business**, or **Bee Friendly School**, **University** or **College**, or **Bee Friendly Public Body** or other type of organisation or group.



¹ www.opalexplornature.org/wales

BEE FRIENDLY – THE 4 THEMES

THEME 1 – FOOD – PROVIDE POLLINATOR- FRIENDLY FOOD SOURCES IN YOUR AREA

WHY IS THIS IMPORTANT?

What did you have for
breakfast today?
Jam on toast?
Fresh fruit?
Dried fruit in your muesli or
some grilled tomatoes with
your fry-up?
Maybe fruit juice or a coffee?

All of this was brought to you
by bees. It's tempting to think
bees just provide us with
honey – but in fact they're
behind much of the food we
eat, including most fruit and
vegetables.

Bees are crucial to our
economy – without them it
would cost UK farmers
£1.8 billion a year to pollinate
our crops. In a world without
bees, our food would cost a
lot more to produce and our
economy would take a
big hit².

DID YOU KNOW?

Pollinators need food in the form
of pollen and nectar foraged
from a variety of flowering plant
species; and diverse vegetation
structure, e.g. hedgerows,
scrub and tall grass for shelter,
nesting and overwintering such
as burrows and holes in tree
trunks. The larval stages of
many pollinators also have many
differing requirements. In order
to support a variety of pollinator
species, nectar sources need
to be available from early spring
through to late autumn.

Ideas for actions – chose one of
these or come up with your own
and tell us about it

- » Provide pollinator friendly
food areas – See the plants
for pollinators list on the
Wales Biodiversity website
which includes a selection of
forage plants useful for adult
butterflies, moths, hoverflies,
bumblebees and solitary bees
(which together make up the
vast majority of pollinators in
Wales). Plants recommended
as larval food plants for
butterflies and some moths
have also been included
[www.biodiversitywales.org.
uk/Wales-Action-Plan-for-
Pollinators](http://www.biodiversitywales.org.uk/Wales-Action-Plan-for-Pollinators)

- » Plant native species which supply suitable food for caterpillars (which will also be good for butterflies and moths)
- » Create wildflower meadows, or plant cultivated flowers, shrubs or trees that provide pollen and nectar for bees and other pollinators e.g.: in parks, road verges, civic spaces, playing fields, and on land around offices and depots
- » Sow native wildflower mixes on roundabouts or in place of formal bedding plants
- » Cut grass less often – In general 2-3 cuts a year, one early; one late. Leave some grass longer; cutting only once a year. Remove grass cuttings to prevent smothering of delicate herbs by cut grass. Allow flowering herbs to flower and set seed
- » Work with local householders to encourage them to grow pollinator friendly flowers and plants – aim to have plenty of nectar-bearing flowers out in as many months as possible, including early spring and late summer and autumn
- » Encourage use of open-shaped flowers where insects can reach the nectar and pollen
- » Plant more old-fashioned varieties of plant which tend to have more nectar than more modern forms and hybrids, and choose varieties with single flowers
- » Remember that butterflies and moths have different needs to bees in terms of their larval food plants
- » Plant night-scented plants which are good for moths
- » Leave wild areas to allow larval food plants such as nettles to grow.



THEME 2 – FIVE STAR ACCOMMODATION – GIVING PLACES FOR INSECT POLLINATORS TO LIVE

WHY IS THIS IMPORTANT?

Since 1900, the UK has lost 20 species of bee, and a further 35 are considered under threat of extinction. None are protected by law. Across Europe nearly one in ten wild bee species face extinction.

DID YOU KNOW?

Bee and pollinator health and declining populations have been increasingly highlighted as a cause for concern in the UK and globally. Honeybees showed a 23% decline in Wales between 1985 and 2005. Butterflies, hoverflies and many species of moth are also declining across Wales. Wildflower meadows and other important semi-natural habitats have also decreased in area.

IDEAS FOR ACTIONS – CHOSE ONE OF THESE OR COME UP WITH YOUR OWN AND TELL US ABOUT IT

» Create suitable habitats for hoverflies to lay eggs in,

promoting pollinators in your garden, by creating a hoverfly lagoon³) or creating a pond or “boggy places”

- » Avoid destroying existing nesting habitats for ground nesting solitary bees and bumblebees
- » Identify and protect or provide areas of long grass, hollow trees, cavities large and small in walls for bees to nest inside
- » Identify areas of short mown grass or embankments that currently support colonies of ground-nesting bees
- » Identify old walls that currently support colonies of solitary bees nesting in crumbly mortar, and ensure that these walls are not re-built or re-pointed without making arrangements to retain the solitary bees
- » Develop and maintain strips of tussocky grass (cut every 2-3 years to prevent scrub invasion) as nesting areas for above-ground-nesting bumble bee species
- » Plant a thicket of Goat Willow (*Salix caprea*), the leaves of which provide food for caterpillars, and the flowers of

which an early-season pollen source for queen bumblebees

- » Plant a hedgerow of native shrub species
- » Install bee hives on your land (see under resources for the Welsh Beekeepers Association website to find out what is involved in this, and links to Beekeeping Associations throughout Wales. The WBKA have a scheme where people wanting a beekeeper to put a hive on their land can enter their details)

A bug hotel provides space for solitary insects to nest in. They are fascinating to watch and a good way of learning about solitary bees. Build and maintain at least one bee/bug hotel in a suitable location (In full sun, facing south or south east. a metre off the ground, with no vegetation blocking the entrance, and with a strong roof to deflect rain).

Monitor the bug hotel from year to year, cleaning and replacing nesting tubes and materials as necessary.



photo credit: © Laura Curry

THEME 3 – FREEDOM (FROM PESTICIDES AND HERBICIDES) – AVOIDING CHEMICALS THAT HARM POLLINATORS.

WHY IS THIS IMPORTANT?

In recent years there have been increasing concerns around certain pesticides called neonicotinoids. They are a systemic pesticide which means they are taken up by the plant and transported to all the tissues (leaves, flowers, roots and stems, as well as pollen and nectar).

Recent research suggests that three neonicotinoid pesticides (clothianidin, imidacloprid and thiamethoxam) may have an adverse impact on the health of bees. Such concerns led the European Commission to restrict the use of the three neonicotinoids for seed treatment, soil application (granules) and foliar treatment on bee attractive plants and cereals. There are also concerns about their negative impact on butterflies as well as increasing evidence that they can also remain active in the soil for months, either being taken up unintentionally by crops in the following season or being transported in soil dust to contaminate flowering weeds or contact insects directly.

Several neonics are available to the public as treatments for lawns, houseplants and pot plants and greenhouse crops⁴.

DID YOU KNOW?

In April 2016, Devon County Council agreed an action plan to protect bees from harmful pesticides and will endeavour to ban their use on Council owned land.

Ideas for actions – chose one of these or come up with your own and tell us about it

- » Work with local householders to encourage them to reduce and eliminate their use of pesticides that kill insect pollinators
- » Work with local householders to encourage them to reduce and eliminate their use of herbicides that kill “weeds” which can rob pollinators of food and homes
- » Work with the Community Council or Local Authority to encourage them to do more for pollinators including reducing or eliminating the use of chemicals harmful to insect pollinators on land that they control

» Work with local allotment holders to involve them in creating and managing pollinator habitat on allotments and to reduce pesticide and herbicide use

» Raising awareness more generally about the effects of pesticides on pollinators.



DID YOU KNOW?

Bees and their produce have been important in Wales from the earliest of times. The Laws of Hywel Dda deal with bees and their habits and produce. In the middle ages, mead was very important. Mead is an alcoholic drink made from honey and according to the Welsh laws, townships were expected to pay part of their taxes to the King in the form of mead. The Welsh words 'mêl' (honey), 'medd' (mead) and 'meddwi' (to get drunk) all share the same root.

The willingness of a patron to share his mead was a measure of his generosity according to the early poets. In the early Welsh poem 'y Gododdin', composed in the 6th century, the warriors of the Welsh-speaking kingdoms of the "Old North" (northern England/southern Scotland today) lost to the Anglo-Saxon invaders at the great battle of Catraeth (generally assumed to be Catterick) due to the overconsumption of mead. Many houses and farms in Wales include the element 'gwenyn' (bee).

THEME 4 – FUN – INVOLVING ALL THE COMMUNITY

WHY IS THIS IMPORTANT?

Places that are good for pollinators are good for people too! Bees, butterflies and wildflowers are, after all, synonymous with beautiful summer days. Engaging as many people as possible, and in particular younger people, will help them learn to love nature and could instil in them a desire to find out more and to protect their environment for future generations.

Involving as many other people in your **Bee Friendly Wales** project is probably the single best thing you can do. Bringing more people on board can help ensure that your project reflects local needs, has local support, helps provide new ideas and different perspectives and can in turn help identify new partners to work with.

And...most importantly...
it's FUN!

IDEAS FOR ACTIONS – CHOSE ONE OF THESE OR COME UP WITH YOUR OWN AND TELL US ABOUT IT

- » Work with at least one local school, nursery, youth group or other local community group to have an annual ‘pollinator day’ where children can dress up in fancy dress, learn about pollinators, do a range of craft activities and maybe even come up with a bee-rap?
- » Organise or attend at least one event per year to promote action to help pollinators (this could be a stall at the local fair or school fete, an evening film showing or public talk or maybe even something like a special local honey tasting event for staff at your business for example)
- » Take part in National Biodiversity Week to highlight the work you are doing to help pollinators – and also Celebrate Pollinator Awareness Week
- » Take part in National Moth Night – the annual celebration of moth recording throughout Britain and Ireland by enthusiasts aimed at raising awareness of moths among the general public
- » Take part in the Big Butterfly Count – a nationwide survey aimed at helping us assess the health of our environment. It was launched in 2010 and has rapidly become the world’s biggest survey of butterflies. Over 52,000 people took part in 2015
- » Give awards for the best pollinator garden in any local “In Bloom” competitions, and/or hold a competition for the best pollinator-friendly workplace / business or school garden
- » Work with other groups in your community on pollinator projects
- » Encourage gardeners, children and schools to go on a hunt for one of the common solitary bee species, and to submit any records – see the boxes below for suggestions
- » Tell the local press what you are doing, and why
- » Produce publicity about what you are doing for your customers, clients or partners
- » Become a **Bee Friendly Champion** – inspire other organisations or communities to sign up to the **Bee Friendly Scheme**.



“TEACHING A CHILD NOT TO
STEP ON A CATERPILLAR IS AS
VALUABLE TO THE CHILD AS IT IS
TO THE CATERPILLAR.”

Bradley Millar

HUNTING FOR SOLITARY BEES

In summer, hunt for the **Wool Carder Bee**. Great fun to watch as it patrols territories around flowers and chases other insects, very easy to find as it always visits the garden flower called Lamb's Ear.

This bee species is under-recorded in Wales, so schools who submitted records are also contributing to science.

SEE

www.bwars.com/content/anthidium-manicatum-wool-carder-bee-survey

In autumn, hunt for the **Ivy Mining bee**. Very easy to identify as it only visits flowering ivy, at a time when other solitary bees are not around.

Very interesting because it is slowly colonising Wales via the Severn Valley so its progress across Wales can be monitored by looking at the online distribution map on the BWARS site. Again, this contributes to our scientific knowledge of the bee.

SEE

www.bwars.com/content/colletes-hederae-mapping-project



APPLICATIONS AND RENEWALS

Making a successful application:

To become a **Bee Friendly** community or organisation you will need to show you have successfully taken action around the 4 **Bee Friendly** themes.

Please keep a record of all your achievements, activities and media coverage.

Make contact with a **Bee Friendly** Champion to seek advice and support.

When you're ready and confident the requirements for each theme are met:

- 1. Download the application form** from the Wales Biodiversity Partnership website.
- 2. Complete the application form** with details around each of the four themes. Completing the form electronically makes processing the application quicker and more efficient.
- 3. Email the completed application form** with any supporting information such as photos and media coverage to natureconservation@wales.gsi.gov.uk

If you cannot submit the form electronically, please send it to;

Bee Friendly
Biodiversity and Nature
Conservation Branch
Welsh Government
Rhodfa Padarn
Llanbadarn Fawr
Aberystwyth
SY23 3UR

WHAT HAPPENS NEXT?

Bee Friendly will confirm your application has been received and if necessary, request any additional information needed.

A **Bee Friendly** Champion will assesses your application and give you feedback.

If your application is successful – celebrate! A certificate and **Bee Friendly** Identity/logo for you to use will be awarded to the group. You will be able to use to use your **Bee Friendly** identity/logo on all your materials.

If your application is unsuccessful, use the suggestions in the feedback to develop activity and resubmit the application when you feel the necessary progress is made.

MAINTAINING BEE FRIENDLY STATUS

All **Bee Friendly** schemes must maintain status by submitting a renewal application one year after status is achieved.

Make sure progress around the goals is recorded and keep details of any events you do, your progress locally, photos, media coverage and any other information you feel is relevant.

On your renewal application, one of our **Bee Friendly Champions** will work with you to provide advice.

RESOURCES AND SUPPORT

For general enquiries about **Bee Friendly**, applications and renewals please contact: natureconservation@wales.gsi.gov.uk

**Bee Friendly
Biodiversity and Nature
Conservation Branch
Welsh Government
Rhodfa Padarn
Llanbadarn Fawr
Aberystwyth
SY23 3UR**

Resources for **Bee Friendly**, and the latest **Bee Friendly** news and information

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

RESOURCES TO HELP YOU

GENERAL INFORMATION ABOUT POLLINATORS

- » Bumblebee Conservation Trust <http://bumblebeeconservation.org/>
- » Friends of the Earth – bee cause www.foe.co.uk/what_we_do/the_bee_cause_home_map_39371
- » **Bee Friendly** Monmouthshire <http://beefriendlymonmouthshire.org/>
- » Bees for development www.beesfordevelopment.org/

GARDENING FOR POLLINATORS

- » Plants for pollinators list & Wildlife gardening pack www.biodiversitywales.org.uk/Wales-Action-Plan-for-Pollinators

- » Royal Horticultural Society – Perfect for Pollinators
www.rhs.org.uk/science/conservation-biodiversity/wildlife/encourage-wildlife-to-your-garden/plants-for-pollinators
- » Wildlife Trusts – Wildlife Gardening
www.wildlifetrusts.org/how-you-can-help/wildlife-gardening
- » Wildlife Gardening Forum
www.wlwf.org/
- » Royal Horticultural Society Grey to Green scheme
www.rhs.org.uk/science/gardening-in-a-changing-world/greening-grey-britain
- » RSPB's Make a home for wildlife in your garden:
ww2.rspb.org.uk/makeahomeforwildlife/givenatureahomeinyourgarden/
- » Butterfly Conservation's gardening advice:
<http://butterfly-conservation.org/292/gardening.html>
<http://butterfly-conservation.org/3114-5576/gardening-for-butterflies-and-moths.html>

- » Plantlife's gardening advice
www.plantlife.org.uk/wildflower_garden

BEEKEEPING

- » Welsh Beekeepers Association
www.wbka.com/
www.wbka.com/hive-locator/
- » National bee unit (bee base)
www.nationalbeeunit.com/

COUNTING POLLINATORS

- » National Moth Night
www.mothnight.info/www/
- » Big Butterfly Count
www.bigbutterflycount.org/
- » Open air laboratories – polli:nation
www.opalexplornature.org/polli-nation
- » Blooms for Bees
www.bloomsforbees.co.uk/

OTHER INITIATIVES

- » Grow Wild
www.growwilduk.com/content/about-grow-wild

CASE STUDIES

- » Case Studies – on WBP website
www.biodiversitywales.org.uk/Wales-Action-Plan-for-Pollinators