Bumblebee Conservation Trust

West Country Buzz

Bumblebee Conservation Guide for the North Devon Coast

The West Country Buzz project has been working along the North Devon coast since 2018, with the project due to complete in March 2024. Focusing on two of the rarest bumblebees in the county; the **Brown-banded carder bee** (*Bombus humilis*) and the **Moss carder bee** (*Bombus muscorum*), we have worked in partnership with a range of landowners, farmers and volunteers to create and restore well-connected flower-rich habitat throughout the project area to safeguard the future of these threatened species.

A network of people have received bumblebee identification training with new Beewalks set up throughout the project area helping to monitor our local bumblebee populations.

It is vital to maintain all of the excellent work that has gone into the project to ensure a legacy of the continuation of bumblebee-friendly habitats and monitoring across the North Devon coast.

Bumblebees need…

Lots of flowers

A variety of flowers to forage on from March to October

Abundant flowers within 1km of a bumblebee nest

Places to nest

Rough grassland & scrub for nesting – old mouse holes and bases of tussocky grasses

Nesting sites undisturbed throughout March to October

Safe hibernation sites

Bumblebee queens require a safe place to hibernate over winter – in loose soil or north-facing banks

Important Habitats

Flower-rich Grasslands

Across North Devon, historic loss of wildflower-rich grassland habitat has been a key driver of bumblebee declines. Many of the locations favoured by priority species, the Brown-banded carder bee in North Devon are close to the coast as land use change and intensive agriculture has restricted them to more semi-natural grasslands habitats. Restoration and creation of flower-rich grasslands is vital for bumblebee recoveries.

Key management recommendations:

- Cut hay meadows in late summer to provide flowers into September - cutting can be done on rotation to always leave some plants flowering.

- Shut up fields to allow flowers to bloom throughout April to August - rotational grazing can help to prolong the flowering season whilst still providing grazing.

- Grasslands with few wildflowers can be enhanced with green hay or the addition of seed. Yellow rattle is a key species that can establish quickly and reduce vigorous grasses (see page 5 for seed suppliers).

- Ensure to leave tussocky grass and scrubby areas for bumblebee nests that are undisturbed between March and October. Locating these areas near to flower-rich habitat allows bumblebees to find food more easily.

Key wildflower species for bumblebees:

- Red clover
- Bird's foot trefoil
- Knapweed
- Viper's bugloss
- Water mint
- Red bartsia
- Vetches (e.g. Tufted vetch)
- White dead nettle
- Devil's-bit scabious

Case Study: Wildflowers at Woolacombe Warrens

Woolacombe Warrens is a sand dune system stretching over 2km and managed by the National Trust. Through collaboration with West Country Buzz, it has been the receptor site for donor seed from nearby Braunton Burrows SSSI to restore the dune grasslands and increase floral diversity.

Over the past few years, a variety of wildflower seeds have been hand and brush-harvested from Braunton Burrows and spread on areas of Woolacombe Warrens and neighbouring Vention. Many plants are now establishing well, including Bird's-foot trefoil, Red bartsia, Viper's bugloss and Red clover.

Brown-banded carder worker bees have been spotted for the first time in 2023 at Woolacombe Warrens, demonstrating how creating ideal habitat can help this rare species and many other grassland species to thrive.

Other important habitats for bumblebees

- **Hedgerows** – flowering hedgerows containing species such as Blackthorn and Willow can provide early spring forage, whilst Bramble and Dog rose provide later summer forage. Cutting late in winter and on a 2-3 year rotation will allow hedges and ditches chance to flower.

- **Ponds and wetlands** – damp habitats can be host to a range of flowering plants around the margins, from Yellow flag iris in spring to Water mint, Tufted vetch and Purple loosestrife late in summer. Wetland habitats are especially valuable in dry weather and for late season floral resources.

- **Roadside verges** – many of our verges have the potential to be managed more sensitively for pollinators. Practising No Mow May and relaxing cutting regimes can allow plants to flower (e.g. cutting every 6 weeks), whilst collecting arisings will reduce nutrient enrichment.

- **Woodland and scrub** – sunny woodland edges with an abundance of flowering scrub are most valuable for pollinators. Existing woodlands can benefit many insects by letting in light through coppicing, ride widening and glade creation. New woodlands should avoid being planted on existing grasslands with bumblebee-friendly flowers and should consider allowing a good proportion of open space in the developing woodland (e.g. paths and glades) to allow important light for wildflowers and pollinators to thrive.

- **Orchards** – flowering fruit trees provide abundant nectar and pollen resources for bumblebees and solitary bees in spring. Planting local varieties can conserve cultural heritage and orchards can coexist with wildflower meadows.

Case Studies: Bumblebees on the farm

There are a range of **agri-environment options** that can benefit pollinators – they should ideally be evenly distributed across the farm with at least 2% of the farm as flower-rich habitat. Establishing habitat less than 500m apart caters for the flight distances of rare bees such as the Brown-banded carder from the nest.

Winter Bird Food (Option AB9) at Broadlands Farm – Sunflowers and Phacelia part of the seed mix to provide forage for bumblebees before providing food for farmland birds in winter.

Operation Pollinator Mix with just legumes (Option AB1) at Home Farm Marsh – this mix was sown as strips alongside arable fields to create a corridor for pollinators on site. A range of Red clover varieties, Bird's-foot trefoil, Wild carrot and Knapweed are part of the mix to provide for a range of pollinators, especially bumblebees.

This option complements other habitat restoration works on site, including sowing wildflower seeds and planting plugs alongside cutting and raking flowery banks and ditches to provide more floral resources for Brown-banded carder bees which have recently been recorded for the first time here.

- **Bare earth** - is important for hibernation, especially north-facing banks – a new queen will burrow into soil to overwinter. Sunny patches of bare earth can also be used for basking in cooler weather. Bare soil is also vital for many species of solitary mining bee to make their nest chambers.

- **Gardens** – many garden plants can complement our wildflowers, by extending the flowering season and providing a greater variety of flower shapes and sizes. For information on bumblebee-friendly flowers and improving your garden, visit: https://beekind.bumblebeeconservation.org/home.php

Case Study: Green hay

Middle Spreacombe Farm has spread green hay from species-rich wildflower meadows across 26.2 hectares over two years to increase the amount of wildflowers in the grasslands – it is an effective method of spreading local seeds from one site to another. The process of green hay involves the following steps:

1. Prepare receptor fields by cutting/grazing to ensure a low sward, then harrow to achieve >50% bare ground.

2. Cut and bale donor hay immediately and spread on the same day within a few hours of cutting.

3. Green hay should be spread thinly and evenly with a straw chopper/muck spreader.

4. Leave the hay for at least one week in dry weather, or three weeks in wet weather to allow seed to fall. After this period allow livestock to graze and trample in the seeds.

5. Initially, avoid prolonged grazing following spreading to allow seeds to germinate and lightly graze from January – mid-March if grass growth is becoming too long.

6. Yellow rattle can appear in the first year, other species can take a few years to establish.

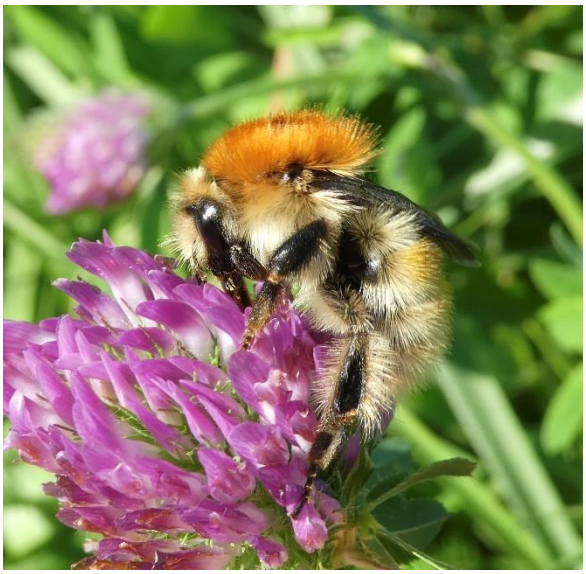
7. Ongoing management involves shutting up from April to August followed by a hay cut and aftermath grazing.

Green haying in mid-summer at Middle Spreacombe

Results from green hay at Middle Spreacombe – Yellow rattle flowering the following year alongside Red clover and Bird's-foot trefoil, attracting bumblebees.

Focus on the Brown-banded carder bee

Like all bumblebees, Brown-banded and Moss carder bees require flower-rich habitat, but have an even greater dependence on wildflower grasslands. Queens emerge in April/May and worker bees will forage around 500m from the nest, meaning they need an abundance supply of flowers from April through to the end of September. Early and late season flowers are of particular importance for queens to find sufficient food to establish colonies.



Seed suppliers

Devon-based seed suppliers such as Goren Farm are recommended as local seed is better adapted to local climatic and soil conditions: https://www.goren.co.uk/

Other seed suppliers include Emorsgate: https://wildseed.co.uk/

& Naturescape: https://www.naturescape.co.uk/

Record your sightings

You can help increase our knowledge of bumblebee distribution by adding a sighting to a recording database:

https://irecord.org.uk/

https://www.inaturalist.org/

You can also participate in our recording scheme, Beewalk – this involves carrying out a monthly survey on a fixed route from March to October. The data helps us understand how bumblebees are doing over time:

https://beewalk.org.uk/