

# Managing brownfield and industrial land... for bumblebees

A wide diversity of habitats have developed on brownfield and industrial land. These sites contain various soil types as a result of human activities such as quarrying, industry, construction, transport networks and so on. Such habitats are often found to have unusual groupings of plants and insects, and can be a stronghold for many of our rarer bumblebees.

## Why manage brownfield and industrial land?

Brownfield and industrial sites frequently contain plants which are valuable for insects. This includes 'ruderal' plants – the first plants to colonise areas of bare ground. Species such as common and purple toadflax, teasel, bird's-foot-trefoil, red bartsia, common figwort, St John's wort and red clover are able to thrive in areas where there is little or no soil, where coarser vegetation such as vigorous grasses and bramble may take several years to establish.

If undisturbed, many ruderal plants also continue to flower during late summer providing bumblebees with essential late-season nectar and pollen.

## About managing brownfield and industrial land

Many brownfield and industrial sites contain a mosaic of different habitats and therefore a number of management options are needed.

The aim of managing such sites should be to retain the variety of habitats including bare ground, short ruderal, tall ruderal, and scrubby/denser areas.

## Ruderal habitats

The aim of managing ruderal habitats is to stop the eventual encroachment of coarse and scrubby vegetation.

To maintain food supplies for bumblebees small areas of vegetation should be cleared every year (or every few years), rotating the area cleared each year. Clearance or disturbance should ideally take the area back to bare ground. As a guide, it is best to clear the vegetation once woody or coarse vegetation begins to encroach – this may take several years depending on the site.

Contouring of the substrate (soil or ground cover) by creating ridges and banks helps to create micro-habitats, which will allow a greater diversity of plants to colonise.

Using a variety of substrates in one area will encourage a greater diversity of plants.

## Key facts

 **Upkeep**  
Rotational disturbance

 **Suitable for**  
a mosaic of habitats

 **Sustainability**  
Long Term

 **Bumblebee rating**  
♥♥♥♥♥

## Rare or protected plants

It is important to ensure that habitat management does not impact negatively on any rare or protected plant species. Many brownfield and industrial sites are known to support populations of rare plant species such as deptford pink, field wormwood and bee orchid. As such, it is advisable that a botanical survey is undertaken, along with requesting a search of records from the local biodiversity records centre.

## Invasive non-native plants

It is important to be aware of the presence of any invasive non-native species, especially species such as Japanese knotweed and Himalayan balsam. If such species do occur on or near your site, you must avoid undertaking any work which may cause them to spread.



## Sensitive management to help conserve bumblebees

<i>Management</i>	<i>When</i>	<i>Why</i>
Rotational clearance and disturbance.	October to February	Halts succession and allows flowering ruderal plants to thrive. Always undertake clearance outside of the bird breeding season.
Maintain habitat corridors.		Connecting up patches of habitat using strips, e.g. along roadside and railways, helps stop habitats fragmenting.
Contour substrate to encourage development of microhabitats.	October to February	Creating microhabitats helps to encourage a more diverse habitat to develop.
Pollinator friendly planting in flower beds.	Spring – autumn	Formal beds, planted with bee-friendly plants can provide a valuable resource for bees. See the Bumblebee Conservation Trust's <b>Bee kind</b> tool for a list of bee-friendly flowers.
Switch from amenity grassland cutting to meadow grassland management (see Factsheet 2).	Mid-July to August	Sensitive management will help more wildflowers to establish and will reduce the dominance of coarse grasses. Cutting before mid-July would stop many wildflower plants producing seeds.
Restore areas of rank grassland or create new species-rich grassland if the conditions are suitable – see Factsheet 4.		Restoring grassland by managing it more sensitively, adding seed, or creating new grassland, will encourage wildflowers to establish, which will provide foraging areas for bumblebees.

### Infrastructure

Roadsides and railway lines can help to connect up areas of habitat by providing strips on which ruderal plants can thrive. Retaining these strips is important. Planted screening is often used along road and rail networks. Consider switching screen planting to native trees such as willow (which will provide an early nectar source for bumblebees) rather than non-native species such as leylandii which have very little value to biodiversity.

### Other habitats

It is also important to consider other habitats which may occur on brownfield and industrial land, such as wetland and heathland. Sensitive management of such habitats should be considered.

### Funding

Funding to support this kind of habitat management may be available under agri-environment schemes or through local projects. If your land is in an agri-environment scheme please discuss any changes with your agreement advisor. For advice on how to manage your land sensitively for bumblebees, please contact BBCT.

### Get in touch

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