

**B-Lines are mapped at a regional or county level, using national and local datasets and agreed by a partnership of experts including conservation partners, local authorities and other groups who understand the landscape. The aim is to map the best remaining wildflower-rich habitats and the best connections between them for pollinators, while considering where the best opportunities to restore habitats might be and how to link to neighbouring regions.**

## The principles

B-Lines mapping uses basic 'connectivity' modelling to find the best routes to connect habitat patches while crossing our landscape. It is designed to be both simple and pragmatic, using local expert knowledge and experience of the landscape to interpret habitat maps and identify key corridors. The first step is to collate habitat data for the mapping area, including wildflower-rich grasslands, but also other habitats that support pollinators such as lowland heathland, grassland mosaics, scrub, lowland fen, sand dunes, wood pasture and parkland. Protected sites such as Sites of Special Scientific Interest (SSSI) and non-statutory designated areas such as County Wildlife Sites are included where these support wildflower-rich habitats.

## Creating a core habitat map

A 'B-Lines Core Habitat Areas' map is created to represent the best remaining wildflower-rich areas, starting by categorising all habitat types as either Key, Beneficial or of limited quality for pollinators. Key habitats are thought to be the most wildflower-rich types, so therefore those which should be a priority to include in B-Lines. Beneficial habitats are considered likely to support good pollinator populations and support their movement across the landscape, with other habitat types then disregarded. In some instances this list can be adapted for local habitats.



*Completed B-Lines map for the UK*

As SSSIs are intended to represent our very best wildlife areas, SSSIs with key habitats are considered to be the highest priority parts of the network. To reflect the relative quality of different core habitats and importance within the B-Lines network, they are buffered to varying extents:

- Key habitats within SSSIs - buffered by 500m.
- Key habitats outside of SSSIs - buffered by 250m.
- Beneficial habitats within SSSIs - buffered by 250m.
- Beneficial habitats outside SSSIs - not buffered.

All of these core habitats and their buffers are then merged together to create one combined map of 'B-Lines Core Habitat Areas'.

Habitat type	Priority
Coastal sand dunes	Key
Coastal vegetated shingle	Key
Lowland calcareous grassland	Key
Lowland dry acid grassland	Key
Lowland heathland	Key
Lowland meadows	Key
Maritime cliff and slopes	Key
Open mosaic habitat on previously developed land	Key
Purple moor grass and rush pasture	Key
Scrub	Key
Traditional orchards	Key
Broad-leaved semi-natural woodland	Beneficial
Coastal and floodplain grazing marsh	Beneficial
Good quality semi-improved grassland	Beneficial
Lowland fens	Beneficial
Reedbeds	Beneficial
Saltmarsh	Beneficial
Wood pasture and parkland	Beneficial

*Table of B-Lines priority habitats for pollinators*

The best potential routes to connect the remaining wildflower habitats for pollinators are then calculated using Linkage Mapper software, while considering how difficult the landscape is for pollinators to cross. The maps produced show the best potential routes to connect the B-Lines Core Habitat Areas, which form the basis of the B-Lines mapping exercise.

B-Lines mapping workshops are then held, bringing together local experts and stakeholders to interpret the maps, and assess the best potential routes based on their own knowledge of the habitats on the ground and connecting the best remaining wildflower-rich habitats. Draft maps are produced by the workshop, which are then digitised and shared as part of a wider consultation to ensure that the best B-Lines map is produced to help support local pollinator populations.

By mapping B-Lines piece by piece, using a data-led and replicable methodology, then drawing on local knowledge, a complete national network of 3km B-Lines corridors has been mapped for the UK's pollinators.



### Identifying insect superhighways

To help identify the best connections between wildflower-rich habitat patches, a 'resistance layer' is also created, which represents how difficult the wider landscape is for pollinators to move across. This uses an appropriate habitat dataset (e.g. the Land Cover Map 2007) and scores for each habitat which are assigned by a panel of national experts.

### References & further reading:

This sheet can be accessed on the web at [www.buglife.org.uk](http://www.buglife.org.uk)

Buglife (2021) [B-Lines: Insect Superhighways](#)

McRae, B.H., Shah, V.B. and Mohapatra, T.K. (2018). Linkage Mapper Toolbox for the ArcGIS Platform (Version 2.0.0) [Software]. Available from: <https://circuitscape.org/linkagemapper/> [accessed 3rd September 2021]

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G.06, Allia Future Business Centre, London Road, Peterborough, PE2 8AN  
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