

Nature Conservation in Europe: Approaches and Lessons

Annex UK.5. Example Ecological Network Initiatives in the UK: the B-Lines Initiative and the National Ecological Network in Scotland

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B-Lines initiative

B-Lines¹ is a UK wide initiative involving over a hundred of local authorities, Wildlife Trusts and other organisations and funded by all four UK devolved administrations. The lines are determined on the initial basis of a line of least resistance using Linkage Mapper, which runs a cost-benefit analysis of all possible connections between habitat polygons, while working through a resistance layer of background habitat (scored for permeability) based on the Centre of Ecology and Hydrology Landcover 2007 data. Local workshops then refine the lines, and the resulting maps are published online by Buglife.

The public are encouraged to take action to restore flower rich habitat along the lines and to input their actions on the interactive online maps. There are several substantive projects that are restoring flower-rich habitat in the B-Lines, for instance Get Cumbria Buzzing² run by the Cumbria Wildlife Trust. However, as yet none of the countries have introduced new funding streams or initiatives that could convert sufficient land to achieve the 10% of the length of B-Lines into the appropriate stepping stone habitats that is deemed necessary for them to function as landscape corridors to mitigate the impacts of climate change on wildlife.

National Ecological Network in Scotland

The Scottish Government has adopted an ambitious and proactive approach to improving the connectivity of protected areas through its third national planning framework (NPF3)³, which contains a commitment to create a national ecological network (Davies *et al.*, 2018). This is based on a concept, developed at a Scottish Wildlife Trust conference in 2013, intended to be built around four key components of connectivity:

1. Landscape connectivity – through linear strips of native vegetation along roadsides, around field margins and along river and ditch banks.
2. Habitat connectivity – through stepping stones that allow species to move between larger patches of habitats.
3. Ecological connectivity – that supports the life-cycles of plants and animals both temporally and spatially by providing shelter, food and breeding and resting sites.
4. Evolutionary connectivity – that allows genetic exchange and evolutionary modification within wildlife populations.

However, Scotland's NPF3 has failed to deliver a spatial planning approach at the national scale as it was never formally labelled as a development plan that would have required Scottish Ministers to report on progress. It is hoped that the fourth NPF will have much firmer commitments for nature recovery networks⁴.

¹ www.buglife.org.uk/our-work/b-lines/

² www.wildlifetrusts.org/get-cumbria-buzzing

³ www.gov.scot/publications/national-planning-framework-3/

⁴ NFP4 was published in February 2023, just as this annex was going to press – see www.gov.scot/publications/national-planning-framework-4/

A number of projects are now delivering on the concept, albeit in a somewhat piecemeal way. For example, Buglife Scotland's B-Line project⁵, aims to create wildflower forage and nesting habitats for pollinators along the 134 miles of a long-distance footpath, the John Muir Way. Cairngorms Connect, a partnership project between RSPB Scotland, NatureScot, Forestry and Land Scotland and Wildland. It involves neighbouring landowners, over some 600 km², that aim to restore water courses and floodplains to a more natural state, and also to enhance native woodlands through management and by encouraging recolonisation, including to the natural tree line, and to restore bogs and bog woodlands.

For now, it is likely that such bottom-up initiatives will deliver some of the connectivity required at a local to regional scale; but policy targets to drive change and funding to create the capacity across all geographic areas will be required to make a holistic difference at the national scale.

References

Davies, S., Hughes, J. & Wilson, B. (2018) Creating a National Ecological Network in Scotland. *British Wildlife*, **29**, 411–417.

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⁵ www.buglife.org.uk/our-work/b-lines/b-lines-scotland/