

What is an ecological network and how do I create one?

Nature without borders

In the past, conservation has concentrated on the need to protect key sites of wildlife interest as nature reserves and designated wildlife areas. This was essential to prevent many of our rarest habitats and species from becoming extinct. However, nature doesn't recognise fences and nature reserve boundaries. Most species and habitats need to move and migrate, depending on seasonal and climatic changes, the need to breed and the need to find food and shelter. One example is the otter, which needs a territory of up to 40km of river with around 30 resting places and numerous feeding sites. A small beetle may require just a few hundred metres as its territory, while a bird may need to migrate thousands of miles between breeding sites and overwintering sites.



The otter needs a number of interconnected wetland sites to be able to breed and feed effectively © T Maddox

Although nature reserves are essential to protect key wildlife areas, the habitats which surround and link them are vital too. We have become aware that despite the existence of nature reserves, rare and protected species and habitats are still declining. One of the fundamental reasons for this decline is that wildlife needs a number of different areas of 'prime' habitat, interconnected through a patchwork of less suitable habitats through which it can move. Humans have put up a number of 'barriers' which prevent wildlife moving around within and between these prime areas, such as towns and roads.

Is creating an ecological network as complicated as it sounds?

No. It may sound complicated but it can be as simple as planting a hedgerow to connect two small woodlands to allow species like bats and dormice to migrate.



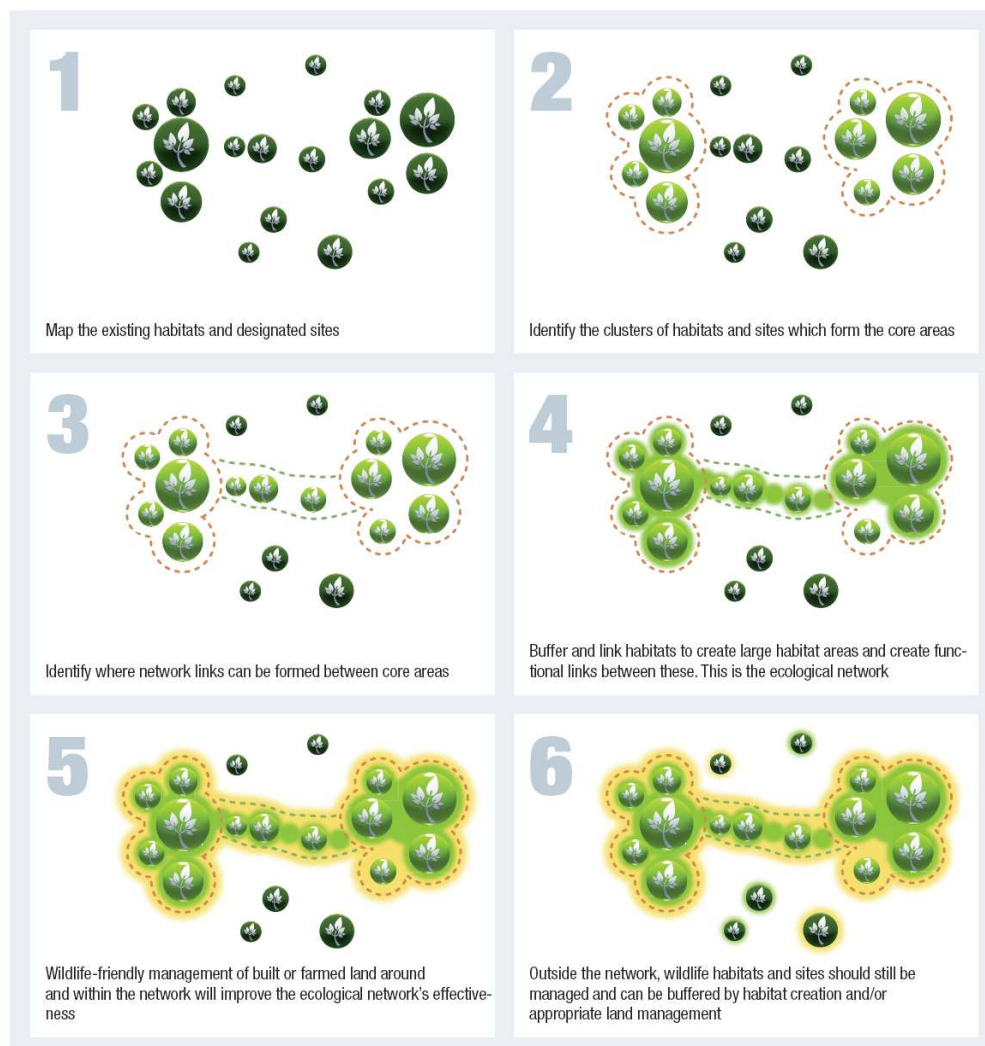
Or have a garden, and make it wildlife friendly by adding nectar rich plants, ponds and a compost heap.

An example of a species which benefits from a countryside which is easier to move through is the damselfly. Some damselflies can only migrate a few hundred metres to find food and a mate. Having a pond on your land can provide wildlife with water when it most needs it - almost like an oasis in a desert. Ponds are one of the single most important things you can have on your land to help wildlife.



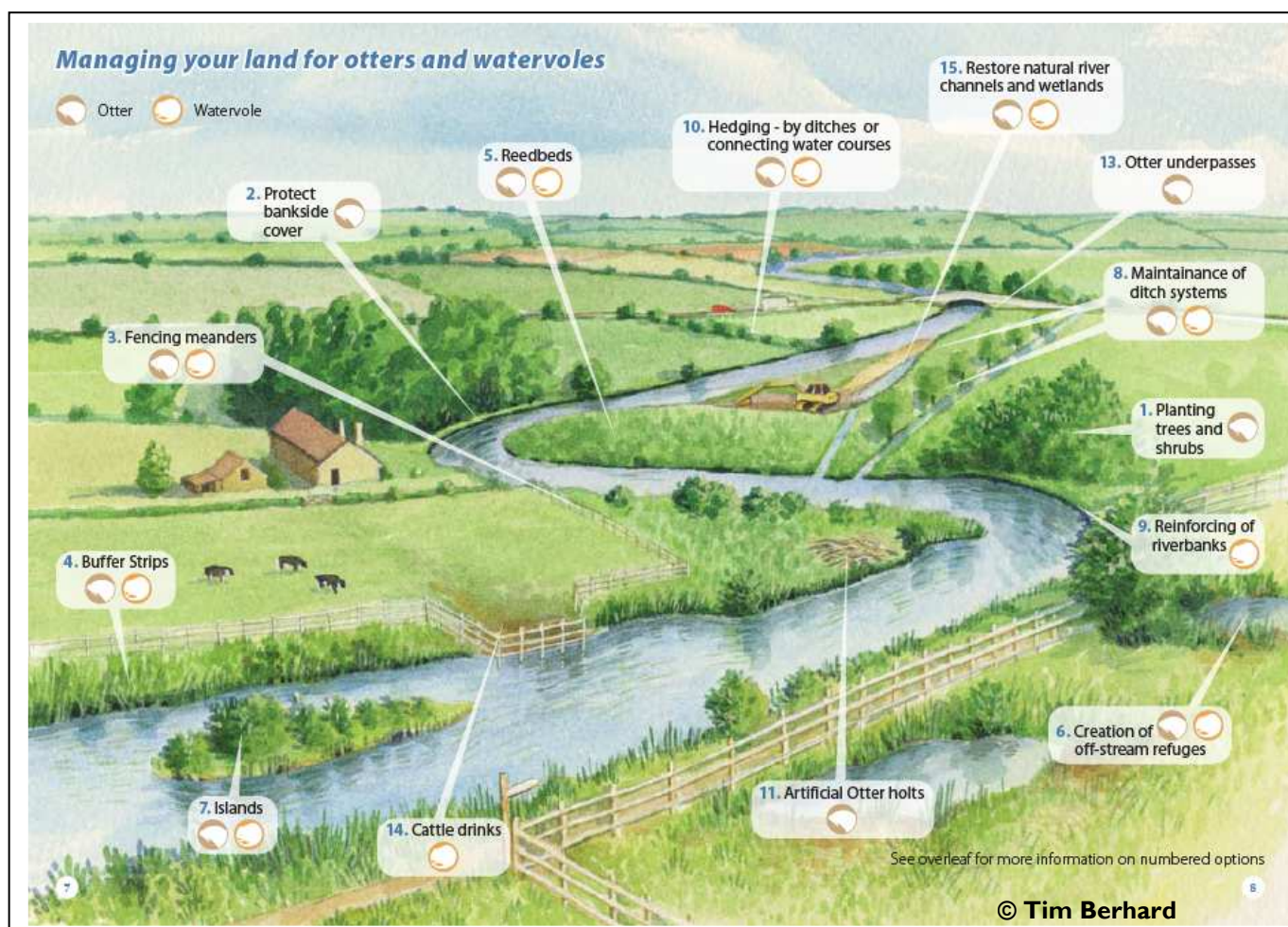
A network of ponds across the countryside and in urban areas creates 'stepping stones for species which can't travel far. The Emerald damselfly is a weak flier and needs wetland areas close together to survive © C Murray

How does an ecological network work?



Principles of an ecological network

The diagram overleaf shows how to create an ecological network at the landscape scale. By doing your bit at a local scale, you can become a wildlife friendly link in the chain and create wildlife corridors. Take a look at your land and see where wildlife thrives. Then try to work out a way to link the different areas together.



The nocturnal otter needs secluded wetlands, riversides and woodlands in which to feed, breed and shelter, but has to navigate around towns, roads and dry areas to get there. You can help by creating wildlife corridors on your land.

How can I create an ecological network on my land?

- **Create a mosaic.** Have wet and dry, and 'open' and 'closed' habitats on your land, from open water, to marsh and wet woodland, to species rich meadow, to hedgerows, to woodland.
- **Keep it local.** Try to create habitats which are present in your local area i.e. don't create a conifer woodland when all around you is broadleaved woodland.
- **Cross borders!** Talk to your neighbours and create a network of wildlife corridors across the boundaries of your land which lets wildlife move through the wider countryside.
- **Go manual.** Try to use big machinery as little as possible to manage your land. Less intrusive methods of management such as grazing and cutting by hand are less damaging to wildlife.
- **Go organic.** Try to avoid lots of chemicals and fertilisers on your land. Pesticides can 'sterilise' a landscape and make it barren for wildlife. They can damage the ability of wildlife to reproduce, and reduce insects numbers, making it harder for birds and other animals to find food.
- **Have old and new** habitats on your land at different stages of growth. i.e. have ponds at all stages of succession from totally open, through to old, silted up ponds covered in trees.
- **Don't be too clean!** We have a habit of 'tidying up' our countryside. Most of the messy bits are incredibly good for wildlife, such as standing and fallen dead wood and patches of scrub.

- **Remove obstacles to wildlife.** An area of concrete or an intensive arable field can be a barrier which prevents wildlife getting to where it needs. Make your concrete more wildlife friendly by replacing it with grass or a Sustainable Urban Drainage System (SUDS), or put buffer strips and beetle banks in arable fields.
- **Cut corners!** Remember that wildlife doesn't travel in straight lines. Animals will travel whichever way gives them cover from predators, food and shelter. The easiest route for a newt to travel may be the line of 'least resistance' and 'least energy'. Think about whether you can fence the corners of your field or the meanders of a river to allow grassy and scrubby margins to grow, and to provide an easy route for wildlife to take.
- **Provide refuges.** Think about whether you can create bays and junction ponds on your ditches which act as refuges for wetland wildlife when you have to manage them. A small bank of flowers and grass might be a great refuge for bees, butterflies and other useful insects.



Perhaps your land provides a vital link between the land and the sea?

Can I get help to create an ecological network?

Environmental Stewardship grants are set up to encourage the creation of grass margins, the good management of hedgerows, a reduction in the use of chemicals, and the expansion of good wildlife features and protection of core wildlife areas. Consult your local Natural England officer for details.

Local Authorities often have wildlife enhancement grants. If you have a plan to create or manage a wildlife area you may be able to apply. SORP also gives free advice to landowners on how to manage their land for wetland wildlife and how to create wetland wildlife corridors. If you live in the West Weald in Sussex/Surrey, there is a designated project officer available to give you advice on how to help improve one of the best ecological networks in Sussex www.westweald.org.uk . However, by managing your land in a way which is sympathetic to wildlife you will be helping improve our ecological network.



How does your land fit into the wider ecological network?

Further information and contacts:

Sussex Otters and Rivers Project

(01273) 497555

www.sussexotters.org

Environment Agency

Ask for your East Sussex (KES) or West Sussex (SSD)

Fisheries, Recreation and Biodiversity team

08708 506506

www.environment-agency.gov.uk

Natural England

0845 600 3078

enquiries.southeast@naturalengland.org.uk

www.naturalengland.org.uk/regions/southeast/contacts.htm

England Woodland Grant Scheme (Forestry Commission)

www.forestry.gov.uk/forestry/INFD-6DCCEN

01223 346004 (Helpline)

Sussex Biodiversity Record Centre

www.sxbrc.org.uk

01273 497521

Sussex Wildlife Trust

www.sussexwt.org.uk

01273 492630

A living landscape for the Sussex

Reference – South East Biodiversity Forum – Key messages – Ecological networks



Even a pile of dead wood or a gravel bar in a river can provide a home or a stepping stone for a wide variety of wildlife such as insects and fish.

