

The future for special sites and habitats

The Wildlife Trusts' paper for *Tomorrow's England*

By John Everitt

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To adapt to climate change, England's wildlife will need to move along 'climate corridors' up and down the country, or to shadier slopes or cooler valleys. Wildlife has done it all before, after the last ice age, but this time the change is faster and there are unexpected obstacles: cities, motorways and expanses of hostile countryside. If we don't give our wildlife enough room to manoeuvre, a collapse in biodiversity is inevitable. For decades we have been slowing the decline in biodiversity by protecting small oases of wildlife as an emergency measure. Now, in the face of climate change, it is essential that we link these oases and restore our ecosystems and natural processes at a speed and on a scale that we would once have felt was impossible. Different parts of the country will need to take different approaches, depending not only upon natural habitats but upon local social and economic needs. And change on this scale needs deep-rooted support across many constituencies.

Traditional nature conservation

Nature conservation in England has traditionally focussed on the preservation of special sites. This is both necessary and urgent, but it is less than the basic minimum required to conserve nature in the long term. This site-based approach provides the following:

Key benefits:

- It ensures that, within limits we maintain the best of what we have
- It encourages the valuing of key assets
- It promotes the concept of sustainable management in sensitive areas, where people take responsibility for conservation and management

Key disadvantages:

- It can place nature in a ghetto, with wildlife limited to special areas, to be enjoyed by the privileged
- It can promote the view that nature is only where we allow it, and must be controlled and restricted
- It may encourage a Disney-esque view of 'good' and 'bad' nature: we allow the 'right' and disallow the 'wrong'
- It encourages a prescriptive view of nature, where narrow objectives are set for it, and it is then controlled and manipulated to deliver
- It can allow wildlife to be separated from a wider environmental sustainability agenda: Nature may be allowed in special places, but the 'real world' of wider sustainability issues holds sway over the vast majority of the landscape
- It can separate nature from natural processes – making nature conservation a separate subject from climate, nutrient cycling, hydrology and so on

Landscape scale: the future of nature conservation

Landscape-scale nature conservation is not simply about bigger special sites. It is a different philosophy that requires us to:

- Understand nature; appreciate it and work with it
- Understand the processes that give rise to habitats, and provide conditions suitable for the species
- Understand how these processes can be influenced or copied
- See wildlife and nature as synonymous with natural processes, and the ecological functioning of the area, region or planet
- Understand the interaction between cultural and natural landscape.

The core principle

Take an example: imagine a wet meadow, important for wildlife, in a river valley. A traditional habitat management approach would aim to bring that habitat into favourable condition through appropriate management – maybe expanding it by including neighbouring areas as a contribution to Biodiversity Action Plan targets. This would benefit wildlife, and those who are interested in wildlife. A landscape-scale or landscape ecology approach would address the processes that drive the ecological interest of the meadow – hydrology and grazing – and look at how these functioned in the whole valley. It is a step-change, from managing the meadow to influencing the processes that work on the whole valley. Working in this way would improve a larger area for wildlife. But it would also improve the ecological functioning of the valley, with spin-off benefits such as better flood management and aquifer recharge. And this wouldn't just interest nature-lovers. It would interest everybody.

To recreate genuine living landscapes, we need to embrace this approach:

- Move from dominators and controllers of nature to appreciators and influencers of nature
- Move from nature as special interest to nature as providing our living conditions – locally, regionally and globally
- Move from a situation of nature in boxes to nature in the neighbourhood and nature in the landscape.

Why step outside designated local areas?

The policy of protecting remaining habitat patches through designations such as SSSIs and Wildlife Sites has achieved much to date, but is unlikely to sustain our wildlife in the long term. Within designated sites, most species of higher plants and vertebrates are conserved to at least some extent, although lower plants and invertebrates are less effectively represented. However, even the well-conserved species have a questionable future, because many of the sites are not viable, either ecologically or economically.

Many protected sites across the country are compromised by their small size, isolated geographic position, or their sub-optimal quality. This is further exacerbated by the threat of climate change. The conservation literature in England is full of accounts illustrating how the richness and abundance of Britain's biodiversity continues to decline under the current protected area system and the application of existing conservation tools.

Conservation at a landscape-scale focuses on restoring the underlying ecological functions that maintain species populations within the habitats of concern. By increasing habitat patch size, quality and concentration in the landscape, and the ecological permeability of intervening land, we can help species to 'percolate' through the countryside, increasing immigration and emigration rates, and reducing population isolation and vulnerability.

While the landscape approach in no way dispenses with the need for intervention management, it does offer the prospect of less artificial and costly 'propping up' of patches of habitat which are currently at risk of losing species to a hostile surrounding landscape. It therefore potentially offers much greater flexibility in the management needed to maintain these larger agglomerations of habitat.

How big is 'big'?

While the landscape-scale approach involves moving away from small sites, a question remains as to how we define an area within which landscape-scale conservation will take place. At one extreme, identifying no boundaries recognises the way nature works in practice, but it makes practical action backed up by effective policy difficult to implement. In some instances, self-defined areas naturally present themselves, such as a river catchment or a small and well-defined range of hills. But in much of lowland Britain it is difficult to identify such natural boundaries. Various approaches have been used instead:

- The natural extent of geological or topographical features
- Historical reference, for example the former range of a habitat type, such as the forests of the Sussex Weald
- Areas of opportunity, such as the Cotswold Water Park, where gravel extraction provides extensive habitat creation opportunities
- Ecological viability models, which seek to define areas based on the ecological needs of one or more habitats and their constituent species.

Climate change effects on special sites and habitats

- Hot, dry summers
- Unseasonable storms
- Winter floods (perhaps also autumn and spring)
- Fires on heathland and grassland / woodland

Changes required for special sites and habitats

- Increasing habitat and microclimate choice within sites
- Increased permeability of landscapes creating habitat matrix, removing barriers to dispersal
- Enlarging habitats and providing buffers
- Increasing corridors, stepping stones and connectivity

Case study examples

- **Low Weald**

The Low Weald of West Sussex and south Surrey is a diverse landscape containing some of England's best ancient woodland, as well as other wildlife-rich habitats. Sussex Wildlife Trust is leading a project to enhance, create and reconnect habitat here within an area of 93 square miles. Local communities and farmers have agreed a shared vision for the project area. The aim is a landscape akin to the original forest, with glades, pastures and wetlands as well as dense woods. Large, free-roaming animals will graze in core woodland areas and the natural processes of decomposition and regeneration will be encouraged. Between these core areas the Trust is working with farmers to encourage them to farm more sensitively for wildlife.

- **Severn and Avon Vales**

Worcestershire, Gloucestershire and Warwickshire Wildlife Trusts are working with the Environment Agency, Natural England and others on the large-scale Severn and Avon Vales Partnership. This has identified 18 priority areas for creating floodplain in the Seven and Avon river valleys. One of these areas, Longdon Marsh, covers 4,000 hectares. Together, they form a string of beads along the necklace of the river channel. Among other things the project has set up a capital grants scheme to top up the funds available through Environmental Stewardship. This has encouraged many

farmers to enter the Higher Level Stewardship and restore wetland on their landholdings. The project is also setting up a box scheme for wetland, conservation friendly

- **Blackwater Estuary**

In 2002, Essex Wildlife Trust breached the sea wall at Abbots Hall farm on the Blackwater estuary to create 81 hectares of salt marsh and grazing marsh. Funded by the Heritage Lottery Fund, WWF (UK), Environment Agency and Natural England, it was the largest coastal re-alignment in Europe. The new marshes quickly established a wide range of plants used by many invertebrates and coastal birds. They also support three commercial fish species and trial oyster beds. The main farm still grows arable crops where Essex Wildlife Trust demonstrates a wild range of wildlife-friendly farming methods.

- **Mendip Hills and Braydon Forest**

Working with Natural England, and with funding from the Tubney Charitable Trust, the Somerset and Wiltshire Wildlife Trusts are reconnecting grassland habitats on a landscape scale in the Mendip Hills and the Braydon Forest area respectively. As well as targeting Environmental Stewardship advice, these long-term, multi-partner projects aim to make locally-harvested wild flower seed and green hay available to farmers, alongside helping to source suitable cattle and machinery. The Wiltshire Wildlife Trust has also set up its own farm with native cattle and introduced traditional haymaking to manage a network of meadows in the north of the county.

- **Birmingham and the Black Country**

While it may conjure images of endless buildings, Birmingham and the Black Country is in fact one of the England's most diverse areas for wildlife, with more rivers and canals than Venice. Alongside a million people live otters, water voles, peregrines, great crested newts, threatened crayfish, and huge numbers of unusual plants. Capitalising on this hidden richness, the local Wildlife Trust has been working with local authorities and others to achieve a 'transformation of the environment', with cross-party and central Government support. The Trust plans to create strategic 'multi-use green corridors', rich in wildlife. These will link the key population centres, key nature reserves and other natural heritage features. Perhaps the most dramatic proposal is a 'green bridge' nature reserve linking Dartmouth Park to West Bromwich town centre, flying over its bypass.

How do we make this happen?

We are at a turning point in the way we manage our environment. Agriculture is beginning to encompass stewardship of the countryside, planning policy is embracing creative conservation, climate change demands sustainable water management solutions, and we are realising how green surroundings improve our economy, health and wellbeing. We must harness these changes. Transforming our environment is possible when Government, industry and society work towards a common purpose, with a combination of policy change and incentives. Our rivers, for example, have been dramatically transformed in the last 30 years by an improvement in water quality. We must use such examples to spur us on. With 50 years of conservation legislation to learn from we need to accelerate our efforts to think bigger and longer term: whole river catchments, robust habitat complexes such as woodland and grassland, entire tracts of upland, and major coastal realignment. We can re-connect the fragmented habitats in our towns and countryside to transform our landscape within a generation. This is our

image of the future; living landscapes that support, provide, inspire and renew. Through them we can halt biodiversity loss, create truly sustainable communities, reconstruct a resilient countryside able to adapt to climate change, and enjoy business that grows as a result of, rather than at the expense of, a healthy environment. It is a tantalising future that offers a better quality of life for us all. And it is within our grasp if we can embrace the vision, commitment and determination to make it happen.