

Creating a Coherent Ecological Network for Norley



Cheshire
Wildlife Trust

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Background

Norley Parish Council are currently drafting their Neighbourhood Plan and have sought advice from Cheshire Wildlife Trust to help provide information for their aim to

‘Identify, create, enhance, and maintain existing and new protected areas and associated buffer zones and wildlife corridors within the Parish in collaboration with landowners and other stakeholders in the Parish’.

In 2010 Professor Sir John Lawton submitted a report to DEFRA entitled ‘Making Space for Nature: A review of England’s Wildlife Sites and Ecological Network’. The report identified that we need a step change in our approach to wildlife conservation from trying to hang on to what we have, to one of large-scale habitat restoration and recreation, under-pinned by the re-establishment of ecological processes and ecosystem services, for the benefits of both people and wildlife. The report also identified that this vision will only be realised if we work at local scales in partnership with local people.

The natural environment is fundamental to our well-being, health and economy and provides us with a range of ecosystem services such as food, water, materials, flood defences and carbon sequestration – and biodiversity underpins most, if not all, of them. The pressures on our land and water are likely to continue to increase and we need to learn how to manage these resources in ways which deliver multiple benefits, for example, achieving profitable and productive farming while also adopting practices which enhance carbon storage, improve flood water management and support wildlife.

England’s wildlife habitats have become increasingly fragmented and isolated, leading to declines in the provision of some ecosystem services, and losses to species populations. Ecological networks have become widely recognised as an effective response to conserve wildlife in environments that have become fragmented by human activities.

Ecological networks generally have five components (see Figure 1) which reflect both existing and potential ecological importance and function.

- *Core areas*

These are areas of high nature conservation value which form the heart of the network. They contain habitats that are rare or important because of the wildlife they support or the ecosystem services they provide. They generally have the highest concentrations of species or support rare species. They include protected wildlife sites and other semi-natural areas of high ecological quality.

- *Corridors and stepping stones*

These are spaces that improve the functional connectivity between core areas, enabling species to move between them to feed, disperse, migrate or reproduce. Connectivity need not just come from linear, continuous habitats; a number of small sites may act as ‘stepping stones’ across which certain species can move between core areas.

- *Restoration areas*

These are areas where measures are planned to restore or create new high value areas (which will ultimately become 'core areas') so that ecological functions and species populations can be restored. They are often situated so as to complement, connect or enhance existing core areas.

- *Buffer zones*

These are areas that closely surround core areas, restoration areas, 'stepping stones' and ecological corridors, and protect them from adverse impacts from the wider environment.

- *Sustainable use areas*

These are areas within the wider landscape focussed on the sustainable use of natural resources and appropriate economic activities, together with the maintenance of ecosystem services. Set up appropriately, they help to 'soften the matrix' outside the network and make it more permeable and less hostile to wildlife, including self-sustaining populations of species that are dependent upon, or at least tolerant of, certain forms of agriculture. There is overlap in the functions of buffer zones and sustainable use areas, but the latter are less clearly demarcated than buffers, with a greater variety of land uses.

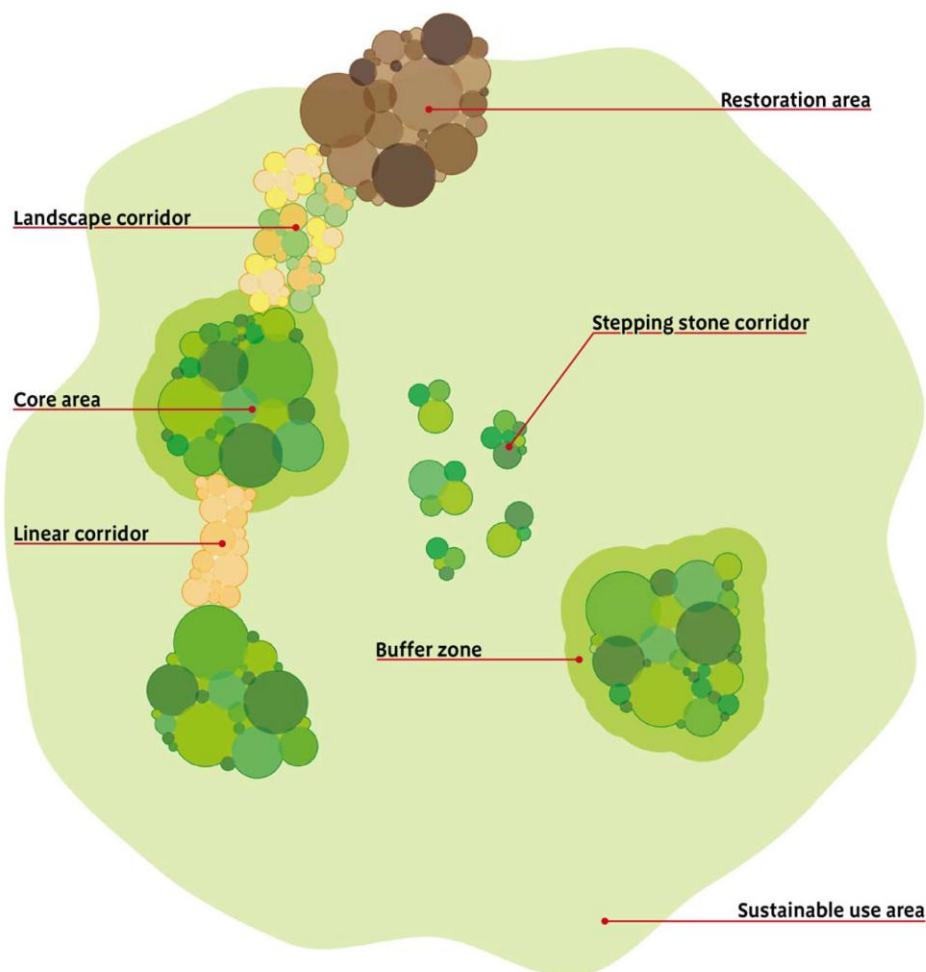


Figure 1. The components of ecological networks (Making Space for Nature report)

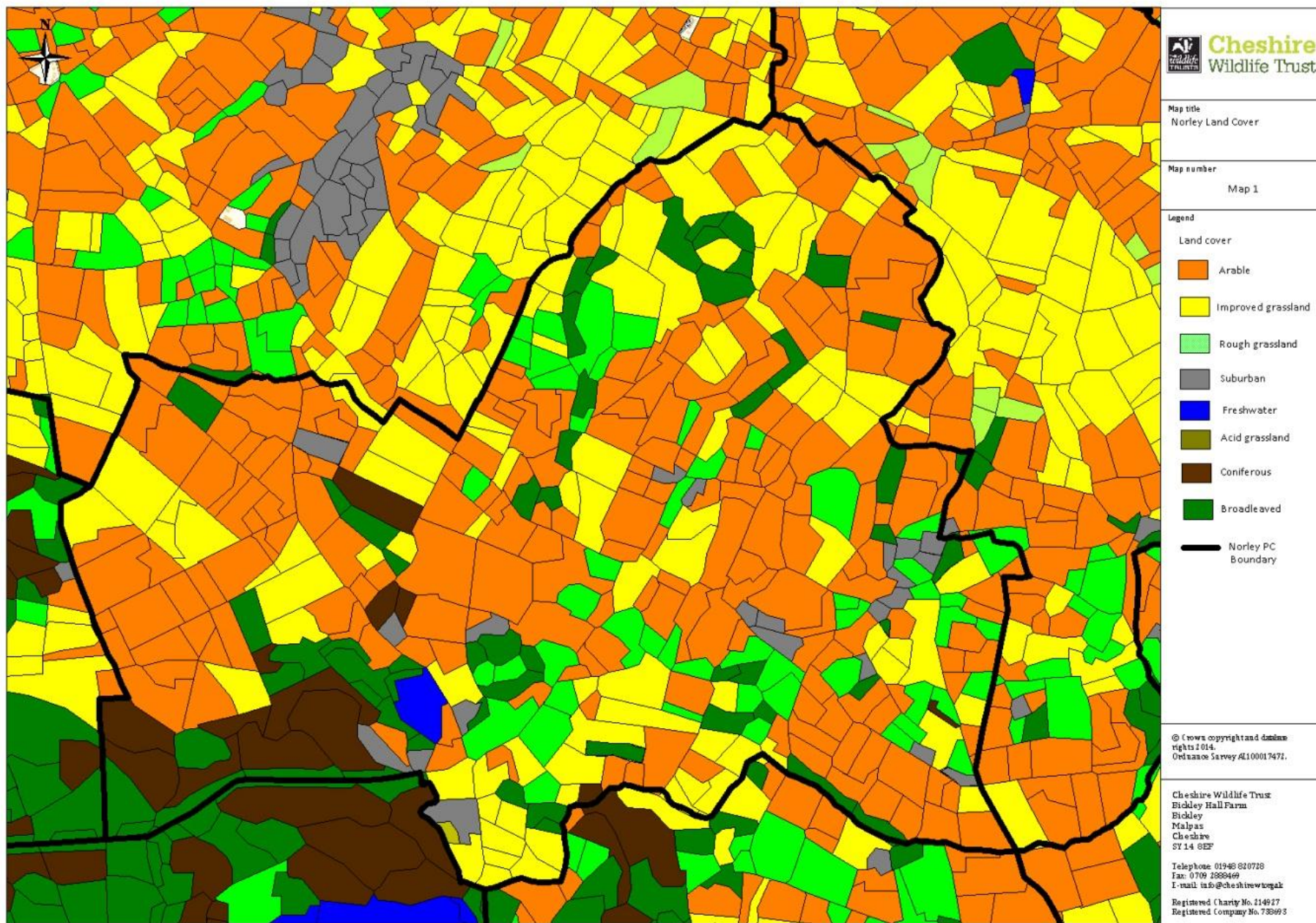
The principles of creating a coherent ecological network have since been embedded within many planning and policy documents. The Natural Environment White Paper 'The Natural Choice' which was published in 2011 reiterated a Government commitment to move from net biodiversity loss to net gain, by recognising the importance of supporting healthy, well-functioning ecosystems and establishing more coherent ecological networks.

The National Planning and Policy Framework published in 2012 also includes the establishment and conservation of a coherent ecological network as a core principle including:

- The planning system should contribute to and enhance the natural and local environment by establishing coherent ecological networks that are more resilient to current and future pressures.
- Local planning authorities should set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.
- To minimise impacts on biodiversity planning policies should identify and map components of the local ecological networks, including the hierarchy of sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation; and promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations.

Between 1999 and 2003 the then Cheshire County Council were a partner within the Life EConet Project. A project supported by the Life-Environment Programme of the European Commission to demonstrate in Cheshire and Emilia-Romagna and Abruzzo (Italy) how ecological networks can help achieve more sustainable land use planning and management, as well as overcome the problems of habitat loss, fragmentation and species isolation. Norley lies within the area identified as a Meres-Mosses Development Area. The Meres-Mosses Development Area suggests a minimum area of lowland peatland habitat needed to create viable habitat networks but recognises that it is difficult to link the peatland clusters due to their naturally isolated nature. Peatlands often form complexes with other habitats and linkages with other wetland habitats are suggested.

Detailed mapping is required to help identify specific local ecological networks. At present the available local data for land use is in the format of Land Cover Map 2000. Land Cover Map 2000 (LCM2000) is a parcel-based classification of satellite image data showing land cover for the entire United Kingdom derived from a computer classification of satellite scenes obtained mainly from the Landsat sensor. Land Cover data can be used to help identify ecological networks however ground-truthing and more specific habitat mapping such as Phase 1 surveys are preferable to gather specific information on natural habitats. Map 1 identifies the current Land Cover after refinement from ground-truthing.



Beginning to Create a Coherent Ecological Network

In order of priority the following principles should be followed in order to create a coherent ecological network for Norley:

1. Improve the quality of the core wildlife sites within Norley Parish.

There are two RAMSAR, SSSI sites within Norley Parish and six Local Wildlife Sites (see Map 2). According to Natural England Flaxmere Moss SSSI was assessed in 2012 as in unfavourable declining condition and Hatch Mere SSSI was assessed in 2009 as unfavourable recovering. A project led by Cheshire Wildlife Trust entitled Delamere's Lost Mosses funded by WREN Biodiversity Action Fund will see habitat management taking place on Flaxmere Moss over the next couple of years. Key to reversing its unfavourable condition will be sustaining positive habitat management in the long term. Hatch Mere is managed by Cheshire Wildlife Trust who are liaising closely with Natural England with regards to its management.

According to Cheshire West and Chester Council all the local wildlife sites apart from Delamere Forest are recorded as not in positive management. In order for a Local Wildlife Site to be recorded as in positive management all four of the following should be met:

- The conservation features for which the site has been selected are clearly documented.
- There is documented evidence of a management plan/management scheme/advisory document which is sufficiently targeted to maintain or enhance the above features.
- The management requirements set out in the document are being met sufficiently in order to maintain the above features. This should be assessed at 5 year intervals (minimum) and recorded 'not known' if the interval is greater than 5 years.
- The Local Sites Partnership has verified the above evidence.

Other semi-natural areas of high ecological quality should be identified by undertaking Phase 1 habitat mapping. Identification of these areas would also influence targeting in relation to the following points.

2. Increase the size of current wildlife sites.

Opportunities should be explored to increase the size of any wildlife sites. Through liaising with local landowners and the Local Wildlife Sites Partnership designated site boundaries could be extended if priority habitat exists adjacent to the sites or working with land owners to restore or create new priority habitat adjacent to the designated sites. By increasing the size of wildlife sites more species and larger populations of species will be able to thrive helping to reduce the chance of local extinctions.

3. Enhance connections between sites and create new wildlife sites.

Opportunities should be explored to restore and create more priority habitat between current wildlife areas (Map 2). This will enable species to move more easily between current wildlife areas and increase their population sizes. Enhancing connections can range from creating new hedgerows to increasing the number of sites of priority habitat. As the designated sites are woodland and wetlands, seeking opportunities to enhance, restore and create wetlands and woodlands would be most beneficial.

It is possible that there are areas of priority habitat that exist in Norley outside of the designated sites. A full Phase 1 map of the parish, which involves more detailed mapping of habitats than land cover mapping, would help to identify these areas.

4. Improve the wider environment including buffering wildlife sites.

Map 1 identifies buffer zones around current wildlife sites. An area of interest of 100 metres around current designated sites has been suggested. Opportunities should be explored to help buffer the habitats within the designated sites and where possible restore and create similar habitats to that which they are buffering or manage the land in a way which doesn't damage the priority habitat within the designated sites. Working with landowners to improve the wider environment of Norley Parish should focus upon the sustainable use of natural resources and appropriate economic activities. A more sustainable way of managing the wider environment will make the landscape less hostile to wildlife.

Before restoring or creating new priority habitat ecological advice should be sought to evaluate whether the proposed sites currently hold ecological interest which may lead to a different outcome of the type of priority habitat to be enhanced or restored.

As well as working with the local community to enhance the biodiversity of Norley it is also suggested that there is close liaison with the local authority in any of their proposals to map an ecological network for Cheshire West and Chester Council.

Next Steps

The next steps to creating a coherent ecological network for Norley are suggested as:

- Liaise with land owners to progress all of the local wildlife sites in to positive management.
- Undertake phase 1 surveys to identify where there may be undesignated good quality wildlife sites.
- Explore opportunities to increase the size of current wildlife sites and create new wildlife sites.
- Liaise with landowners to manage the surrounding land in a sustainable way and to help buffer existing wildlife sites.

