

- Biodiversity Appraisal
- Bio-Landscape Map
- Habitat Creation Targeting

Oxfordshire Wildlife and Landscape Study



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Looking down from White Horse Hill into the Vale of White Horse

The Oxfordshire Wildlife and Landscape Study (OWLS) is a three year national demonstration project started in 2001 that was set up with the objective of undertaking a Landscape Character Assessment (LCA) and Biodiversity Appraisal of the county and investigating the relationships between them. Analysis of the data included establishing a Geographical Information System (GIS) database and using it to create a series of layers as part of a framework for informing strategic decision making. It was part-sponsored by the Countryside Agency and English Nature and is seen as a useful pilot project for developing this kind of approach in the future.

The Survey

The Landscape Character Assessment and Biodiversity Appraisal were based on previous work developed by the Living Landscapes Project at Reading University. Landscape and habitat field data were collected for each of the 240 Landscape Description Units (LDUs) defined

in Oxfordshire. Field survey data was supplemented by additional information from sources such as individual wildlife site data and aerial photographs. The study also identified 24 Landscape Character Types (LCTs) within the county.

Bioscores and Biomaps

To analyse the landscape and biodiversity data, the project used a scoring system to assign bioscores to LDUs on the basis of the range and type of habitats they contain. Oxfordshire habitats were classified into six groups ranging from UK Biodiversity Action Plan (BAP) habitats, such as species-rich chalk grassland which score most highly, through to locally important habitats, such as species-poor hedges, which have the lowest scores.

The LDU bioscores were then grouped into six bands, colour-coded and used to produce a biomap for Oxfordshire. This map has been combined with the map of landscape types to produce a Bio-Landscape Map that illustrates which Landscape Character Types support a wide variety of habitats, and also shows variations within them. Maps highlighting the location and condition of priority habitats, such as calcareous, neutral and acid grasslands, have also been produced.

Biodiversity of Landscape Character Types

Descriptions of landscape and biodiversity have been prepared for each Landscape Character Type. Forces for change have been identified along with general and detailed strategies and guidelines for conserving and enhancing landscape character and biodiversity.

For example, the Vale Farmland Landscape Character Type is described as a gently rolling, arable landscape, with a well-defined hedgerow pattern mostly of hawthorn, but with hedgerow trees a significant feature. Tree-lined watercourses are also frequent but priority habitats are otherwise limited to occasional calcareous and neutral marshy grasslands. The landscape strategy and guidelines for this landscape include conserving and enhancing the hedgerow pattern, watercourse trees and hedgerow trees through appropriate management. Conserving the limited permanent pastures is also recommended, as is encouraging the reversion of arable to pasture, especially along watercourses.

Potential applications for OWLS

The study provides a spatial framework for helping to safeguard, maintain and enhance the landscape and biodiversity resource in Oxfordshire. Applications include:

- Providing a robust evidence base for the new planning system, through development plans such as Regional Spatial Strategies and Local Development Frameworks, and through planning obligations and conditions linked to individual planning applications.
- Informing agri-environment schemes, such as the new Entry Level Scheme, through appropriate guidance on landscape and biodiversity within different Landscape Character Types.
- Assisting in the biodiversity action planning process by helping to target Higher Level agri-environment



Chalk downland and slopes, White Horse Hill

schemes for particular priority habitats, such as calcareous grassland.

- Involving local communities, for example, through Parish Plans and Community Strategies.
- Providing the basis for an integrated GIS database in Oxfordshire.

The North Wessex Downs AONB has recently completed a Chalk Grassland Strategy. This involved the identification of several target areas for the restoration and expansion of chalk grassland habitat. The methodology for identifying these target areas was initially based on the OWLS database but this was further refined to take into account archaeology as well as landscape character and biodiversity. One of these target areas is the escarpment of the Downs lying across parts of Oxfordshire and Wiltshire. This area is now being considered in more detail to proactively encourage landowners to take up the potential availability of funding through the new Higher Level Scheme administered by Defra RDS. The local Farming and Wildlife Advisory Group (FWAG) and landowners are also being encouraged to use the new OWLS website to inform any Environmental Stewardship applications.

The database has also been used to inform the planning process in relation to a proposed large area of residential development to the west of Didcot. The initial landscape framework for the scheme was largely inappropriate to the local area. The OWLS landscape and biodiversity guidelines were used by the District Council and the developer's consultants to help redesign the layout in a way which would create landscape features and habitats appropriate to the landscape type and, as a result, help the development integrate more successfully with the surrounding countryside.

The future...

The OWLS project has provided a valuable database for a variety of users within and around Oxfordshire. It can be added to and modified as new data becomes available. It has the added strength of being able to view the data as a series of linked maps from national to parish level, whilst also providing a context for much more detailed habitat and species data, managed by the Thames Valley Environmental Records Centre. The study is available to the general public via the website below.

References:

Oxfordshire Wildlife and Landscape Study (2004) Craig Blackwell and Pantoula Nikolakaki, Oxfordshire County Council

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Visit the Oxfordshire Wildlife and Landscape Study website at: www.owls.oxfordshire.gov.uk

This case study can be downloaded from the Countryside Character Network Website: www.ccnetwork.org.uk/pdfs/lca_casestudy5.pdf