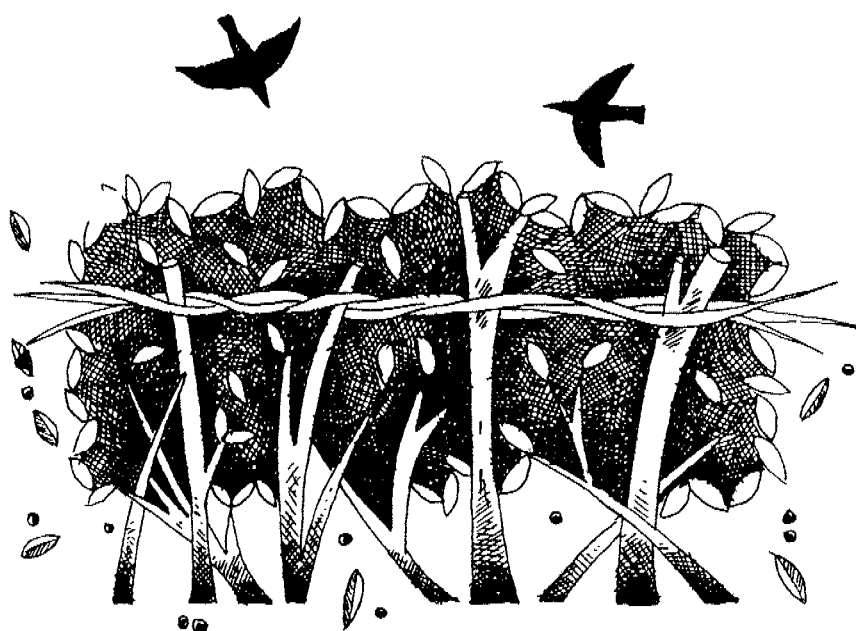


Habitat Restoration Project: Factsheets and bibliographies

No. 260 - English Nature Research Reports



HABITAT RESTORATION PROJECT

working today
for nature tomorrow

English Nature Research Reports

Number 260

Habitat Restoration Project: Fact Sheets and Bibliographies

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Phil Horton
Habitat Restoration Project Manager
September 1997

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Introduction

A great deal of information is now available on habitat restoration, including the excellent leaflets produced by organisations such as the Game Conservancy Trust, FWAG and RSPB. This very abundance can be confusing for those wanting assistance in designing habitat creation schemes. Therefore a series of fact sheets has been designed to bring together the basic information needed to start a scheme, and to provide details on where to find further material. They are intended for the use of Conservation Advisors, those undertaking research into habitat creation and others involved in such projects. There are seven in the series; a general introductory sheet, one covering each of lowland heathland, woodland, lowland grassland, wetland and linking habitats, and a final sheet giving details of ways to enhance the wildlife value of arable land.

Each sheet summarises the various techniques which can be used to create the relevant habitat, and it is expected that they will be used in conjunction with other publications available on the subject. In order to facilitate this, a brief list of useful publications is given at the end of each sheet. More comprehensive bibliographies have also been produced to support the fact sheets. These list books, reports, symposium proceedings etc. as well as leaflets produced by various conservation and land management organisations. For each publication a brief precis of its content is given, together with a note on the likely usefulness of the information to habitat creation projects. There is a degree of repetition in the listing of sources, since some contain information relevant to two or more habitats. It should be stressed that the bibliographies are not intended as a comprehensive review of the scientific literature on habitat creation. In addition to material specifically relating to habitat creation, some general references on the wildlife and management of each of the main habitats, and on evidence of loss and fragmentation, have been included.

Every effort has been made to ensure that the fact sheets summarise current best practice for habitat restoration. We would however be grateful for any suggestions for improving on the information presented and for what additional sheets that might be useful. Suggestions should be sent to Jeanette Hall (Lowlands Team, Northminster House, Peterborough, PE1 1UA. E-mail: lteam.en.nh@gtinet.gov.uk).

The views expressed in this publication are those of the authors and do not necessarily reflect those of the statutory nature conservation agencies in the UK.

General information about habitat creation

English Nature's Habitat Restoration Project

In 1996, English Nature initiated a national Habitat Restoration Project to look, in consultation with farmers and landowners, at how the variety and abundance of wildlife (biodiversity) in the countryside might be increased. Changes in agriculture, particularly the replacement of traditional farming methods by more intensive management, have resulted in there being less wildlife in our countryside than in the 1940s. These changes include the conversion of many semi-natural habitats such as unimproved grasslands, heathlands, ancient woodlands and wetlands to arable land or improved grassland. Activities such as drainage, ploughing and re-seeding of grasslands, the removal of hedgerows to accommodate bigger farm machinery, the increased use of pesticides and artificial fertilisers and the abandonment of traditional management have all contributed to the decline in many of our native animal and plant species. Further losses of wildlife habitat have occurred through other causes such as urban development, road construction and mineral working.

The wildlife-rich habitats which remain are often fragmented into small parcels of land isolated from one another. Some examples of this loss and fragmentation of habitat are given below.

Loss and fragmentation of wildlife habitats

Lowland heathland

There are 32,000 ha of lowland heath remaining in England, representing one sixth the area (190,000 ha) which existed in 1800. Since 1940, 41,000 ha have been lost, a decline of 56%. In 1759, the Dorset heaths consisted of ten large blocks separated only by rivers. By 1978 they had become divided into 768 separate fragments.

Woodland

Ancient, semi-natural woodland (I. e. sites which have been continuously wooded for at least 400 years) occupy 2.6% of the land surface of England. Since the 1930s, 7% of ancient woodland has been cleared, and a further 39% has been replanted mainly with introduced coniferous trees. In north-west Essex, 286 ancient woods totalling 2914 ha in 1805 had been reduced to 165 woods covering 1255 ha in 1980. There were 16 woods greater than 40 ha in 1805, reduced to 8 in 1945 and just 3 in 1980.

Lowland grassland

Semi-natural grasslands of high botanical value constitute only 3% of permanent grassland in the English lowlands. 97% of unimproved grasslands in England and Wales were lost between 1930 and 1984, and losses are still continuing at a high rate. In Worcestershire, 37% of unimproved neutral grasslands were lost, and 28% damaged, between 1980 and 1991/92.

Wetland

The UK has only 6530 ha of remaining reedbed, fragmented into 926 sites mostly less than 1 ha in area. Between 1945 and 1990 the net loss of reedbed in the UK has been estimated at 10-40%. In England, there has been a net loss of 5-10% between 1979 and 1993.

Hedges

In Britain as a whole, 28,200 km of hedgerows were lost between 1977 and 1984 as a result of removal and neglect, and a further 121,000 km were lost between 1984 and 1990. In 1990, a total of 428,000 km of hedges were estimated to remain. Further losses have occurred during the 1990s, with a net loss of 18,100 km each year between 1990 and 1993.

One of the aims of the Habitat Restoration Project is to promote the creation of new habitat to link and expand these islands of semi-natural habitat, and to help slow, or to reverse, habitat fragmentation. New approaches to management of agricultural land, such as permanent set-aside and grant schemes such as Countryside Stewardship and Environmentally Sensitive Areas, provide increasing opportunities for the establishment of habitat creation schemes in England.

Habitat creation fact sheets

This series of fact sheets has been prepared to provide guidance on how to plan and implement habitat creation schemes for wildlife. For the purpose of the fact sheets, habitat creation is defined as the construction of simple communities of native species of wildlife conservation value on areas of land with no significant ecological interest at present. For agricultural land, this typically means arable land or improved grassland. The restoration of existing semi-natural habitats and the transplanting of semi-natural habitats from one site to another are separate topics and are not covered by the fact sheets.

There are six fact sheets in addition to this introductory leaflet. Five cover the creation of lowland heathland, woodland, lowland grassland, wetlands and linking habitats (e.g. hedges), and the sixth deals with wildlife-friendly farming methods on arable land. Each fact sheet is divided into sections covering such topics as site assessment and planning, ground preparation, vegetation establishment, initial aftercare and long-term management. A list of publications giving more detailed information on habitat creation and management is included for each habitat.

The guidance in the fact sheets is aimed primarily at wildlife conservation and concentrates on imitating, as far as possible, semi-natural plant communities. Whilst created areas of habitat are not a substitute for existing semi-natural habitats, they are likely to support a diverse range of animal and plant species and have significantly greater wildlife value than the land they replace. Habitat creation projects may have educational, recreational, sporting, landscape and other benefits as well as wildlife conservation.

General guidelines applicable to all habitat creation projects

Adequate planning, funding, monitoring and long-term management is essential for the success of habitat creation schemes. The following general guidelines should assist in the planning of schemes and help prevent inappropriate projects. It is important to bear these in mind when considering the options for habitat creation set out in the remaining fact sheets in this series.

- Carry out a Site Suitability Survey of the proposed site and adjacent land. This should include a consideration of wildlife value, past management (including fertiliser use), soils (pH, nutrients) and topography.
- The archaeological interest of sites should be investigated before any work is carried out. The County Ecologist should be able to provide advice in the first instance.
- Draw up a Project Plan detailing the objectives of habitat creation, the resources available to carry out the project, the design of the scheme, and the methods of ground preparation and vegetation establishment.
- The requirement for long-term management and monitoring (and the resources needed to achieve this) must be fully considered from the outset.
- Do not create new habitats on sites with significant existing wildlife value, such as planting woodland on flower-rich grassland or digging ponds in the marshy corners of fields. Remember that even apparently unfavourable habitats like improved, botanically-poor grassland can sometimes be very important for wildlife, for example by providing feeding habitat for badgers and wildfowl.
- High soil fertility (especially nitrogen, potassium and phosphorus levels) is likely to be the main obstacle to the success of many habitat creation schemes on arable land and improved grassland. Positive action to reduce soil fertility may be required before vegetation establishment can proceed.
- Ensure that the chosen habitat is appropriate to the site. The new habitat should relate to existing semi-natural habitats, must be compatible with the soils on the site, and also be appropriate in a landscape context.
- Habitat creation schemes will be of most benefit for wildlife conservation where they extend, link, or form “stepping stones” between existing areas of semi-natural habitat.
- Make the new area of habitat as large as possible, within the constraints imposed by the resources available for establishment and management.
- Plants used in the establishment of new habitats should be native to Britain, of British stock, and preferably derived from existing semi-natural areas close to the proposed habitat creation site.
- Wherever possible, seek expert advice from conservation organisations when planning a habitat creation project.

Sources of further information and advice

The following organisations (or their regional offices) may be able to provide advice on the planning and implementation of habitat creation schemes.

English Nature

Northminster House
Peterborough PE1 1UA
01733 455101

The statutory agency responsible for advising Government on nature conservation in England. Helps farmers to maintain and enhance the wildlife interest of SSSIs through the Wildlife Enhancement Scheme (WES)

Ministry of Agriculture, Fisheries and Food

Conservation Management Division
Nobel House
17 Smith Square
London SW1P 3JR
0171 238 6448

The statutory agency for agriculture and agricultural policy. Responsible for administration a range of schemes to conserve and enhance countryside. These include Environmentally Sensitive Areas (ESAs), Countryside Stewardship and Set-aside, including the various Habitat Schemes and the Farm Woodland Premium Scheme. Produces a range of information leaflets.

Forestry Authority

Great Eastern House
Tenison Road
Cambridge CB1 2DU
01223 314546

The statutory agency for forestry and forest policy. Responsible for administration a range of schemes to maintain and extend our woodland including the Woodland Grant Scheme (WGS) and the Woodland Improvement Grant (WIG).

Countryside Commission

John Dower House
Crescent Place
Cheltenham
Gloucestershire GL50 3RA
01242 521381

The statutory agency which works to conserve and enhance the beauty of the English countryside and to help people enjoy it. Can provide grants for projects which help to develop its current strategies.

Farming and Wildlife Advisory Group

National Agricultural Centre
Stoneleigh
Kenilworth
Warwickshire CV8 2RX
01203 696699

FWAG's mission is to unite wildlife and landscape conservation with farming and forestry. It is able to provide advice on all aspects of habitat restoration and management, including provision of fact sheets. Can assist with the design and implementation of habitat restoration through its whole farm 'Landwise' planning process.

The Game Conservancy Trust

Burgate Manor
Fordingbridge
Hampshire SP6 1LF
01425 652381

The Trust is a research-based organisation, run as a charitable trust, to ensure the future of game and wildlife habitat. It is able to provide advice on many aspects of habitat restoration and management, including provision of fact sheets.

The Wildlife Trusts

The Green
Witham Park
Waterside South
Lincoln LN5 7JR
01522 544400

The national association of the Wildlife Trusts - a nationwide network of local Trusts which work to protect wildlife in town and county. The county trusts are able to give help and advice on all aspects of habitat restoration and management.

The Royal Society for the Protection of Birds

The Lodge
Sandy
Bedfordshire SG19 2DL
01767 680551

The RSPB is Britain's largest national conservation charity concerned with the conservation of wild birds and the environment. Can provide detailed advice on habitat restoration/management for farmland and other birds, including provision of fact sheets.

The Woodland Trust

Autumn Park
Dysart Road
Grantham
Lincolnshire NG31 6JJ
01476 74297

The Trust is Britain's largest national conservation charity concerned solely with the conservation of woodland. It can provide help and advise on all aspects of woodland creation and management.

The Wildfowl and Wetlands Trust

Slimbridge
Gloucestershire
GL2 7BT
01453 890333

The Trust works to save wetlands and conserve their wildlife through its international programmes of research, conservation and education. It can provide help and advise on all aspects of wetland creation and management.

The British Trust for Conservation Volunteers

36 St. Mary's Street
Wallingford
Oxfordshire OX10 0EU
01491 839766

UK's largest practical conservation charity. Each year supports over 84 000 volunteers in positive steps to improve their environment. Produces a range of habitat management hand books and can provide a skilled work force to carry out restoration schemes.