

## Introduction

This publication has been prepared by Westmeath County Council in recognition of the importance of the natural heritage in the county and is intended to increase public awareness of biodiversity and the natural environment.

Ireland is signatory to the UN Convention on Biological Diversity and all citizens, state agencies and government departments are obliged to safeguard the biodiversity of the areas where they live and work. The National Biodiversity Plan was published by the Irish Government in 2002 and aims to ensure the conservation and sustainable use of biodiversity at a national level.

In the Westmeath County Development Plan 2002-2008 it is the aim of the Council to:

*"maximise the benefits to the county from its heritage assets, in terms of biodiversity, environmental quality, character and distinctiveness"*



Under the Planning and Development Act 2000 Development plans are required to include objectives in relation to:

*"the conservation and protection of the environment including in particular the archaeological and natural heritage and conservation and protection of European sites and any other sites which may be prescribed".*

This leaflet has been prepared to advise local authority officers on biodiversity issues and promote the consideration of biodiversity and natural heritage as part of the planning process.



## Other Aquatic Habitats

County Westmeath has a number of particularly important lakes and rivers that are valuable wildlife habitats and provide amenities for recreation and fishing. Lakes over limestone with alkaline (or calcareous) waters often harbour a number of interesting aquatic plants and are also a habitat for the endangered White-clawed Crayfish. Lough Owel and Lough Lene (both SACs) are fine examples of this type of lake. Rivers such as the Shannon, Inry, the Brosna and the tributaries of the Boyne are excellent habitats for aquatic plants, fish and invertebrates. Canals also provide important wildlife habitats for aquatic plants, birds and mammals especially in urban areas.



### Woodlands

Although over 85% of Ireland was once covered by broadleaved woodland, this is no longer the case and less than 1% of the country is covered by native woodland. Woodlands comprised of native species support much greater biodiversity than commercial conifer plantations. There are

some important pockets of woodland in County Westmeath including dry woodland with oak, ash and holly, and wet woodlands with downy birch, alder and willows. A number of these have been designated as SACs or NHAs.

Hedgerows are also important wildlife habitats that can be regarded as mini-woodlands. Particularly important as corridors along which birds and mammals can travel safely, they are under threat from poor management, building development and agricultural improvement. Two thirds of breeding birds nest in hedgerows. Their heritage value as traditional field boundaries in County Westmeath is also significant.



### Grassland

Natural grasslands support diverse plant and animal communities, often rich in species numbers of both plants and invertebrates. County Westmeath has some interesting areas of dry limestone grassland. This type of grassland is often rich in orchids and is sometimes found on eskers, a landscape

feature for which Co. Westmeath is nationally important. An esker (Irish: eisicir) is a long sinuous sand and gravel ridge which were originally formed under the ice-sheets which covered Ireland during the Ice Age. Eskers are at risk from development pressures including road building, housing, sand and gravel extraction.

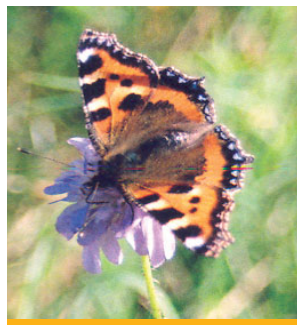
## What is Biodiversity ?

Biodiversity: Biodiversity, or Biological Diversity, is the term given to the entire web of life on earth. Biodiversity is everywhere from window boxes to roadside hedges to lake shores and includes everything from the tiny garden ant to the 300 year old Oak Tree. Biodiversity includes diversity of individuals within a species (genetic diversity), diversity of species within an ecosystem or habitat (species diversity) and the diversity of ecosystems or habitats (habitat diversity).

Natural Heritage: Natural heritage describes the natural rather than man-made features of the countryside, such as plants, animals, habitats and rock formations in the landscape.

Habitat: A habitat is a place or site where an organism, creature or plant, is naturally found, i.e. the 'home' of an organism. A habitat contains the right combination of factors to satisfy the needs of the organism, including food, shelter, water, light or shade. Habitats are the building blocks of the natural environment and thus a wide diversity of habitats ensures greater diversity of all types of wildlife.

## The Need for Conservation



Biodiversity Conservation is about sustaining and using wisely the whole variety of life.

Most habitats are home to a number of species, which are all dependent on the habitat and their interactions with each other. If a habitat is damaged or degraded, conditions may alter so that some species can no longer survive.

Isolated species with small populations are potentially affected by very small changes in their environment and they can disappear into extinction almost before it is realised that they are threatened.

Arctic Char, a species of fish which survived from the last Ice Age about 10,000 years ago, was only ever recorded in Westmeath from Loughs Owel and Ennell, but has not been seen since 1908 and is now thought to be extinct in the county and is declining elsewhere in Ireland. Other species of fauna whose population is under threat include the Irish Hare and the Comcrake while the Corn Bunting is thought to no longer breed in Ireland due to changes in agricultural practices which have impacted on seed-eating birds.

Conserving our biodiversity is important for a number of reasons;

- It provides the building blocks of life; the raw materials for our food, clothes and medicine.
- Our trees and woodlands act as carbon sinks and our marshes and callows provide floodplains.
- It forms landscape character and attracts tourism and revenue from leisure interests such as fishing and wildfowling.
- People value the very existence of species and habitats.
- It has aesthetic and spiritual values - everyone appreciates the sight of the first summer swallow or the sound of the elusive cuckoo.

## Habitats in County Westmeath

There are a number of diverse habitats found in County Westmeath. In addition to legally designated areas (SACs or NHAs), there are many other important sites for wildlife. The local or regional significance of these habitats should be recognised through appropriate management.

### Wetlands

Wetlands, broadly speaking, are areas of marsh, fen, peatland or water whether natural or artificial, permanent or temporary with water that is static or flowing, brackish or salt.

Wetlands are significant habitats in County Westmeath. They provide habitats for unusual communities of species that can survive in aquatic and semi-aquatic conditions. The amount of drainage and water present at these sites are their most important feature, as increased drainage or flooding can cause drastic changes and loss of species.

*Wetlands found in County Westmeath include:*

**Raised Bogs:** Raised bogs are dome-shaped masses of acid peat occupying former lakes or shallow depressions in the land surface that developed after the last Ice Age. Raised bogs are an uncommon habitat world-wide and are listed as an Annex I priority habitat type under the EU Habitats Directive.



**Fens:** An even more unusual wetland habitat, they often mark the transition stage from a pond or lake to raised bog. Fens are often found by rivers and lakes but also occur in low-lying areas. Fen vegetation differs from acid bog because of the alkaline nature of the soil, with a wide variety of plants including orchids, insectivorous plants, grasses, sedges and rushes. The Westmeath fens, in particular, are

the habitat for several very rare plants, including the Round-leaved Wintergreen and some insect species, which are declining elsewhere in Europe, including the rare Irish Damselfly - a type of dragonfly - and several species of water beetle which have survived since the Ice Age.

Scragh Bog, a Special Area of Conservation (SAC) near Mullingar, is a prime example of a fen, at the centre of which a raised bog is beginning to form.

**Callows:** Callows are seasonally flooded, semi-natural grasslands found in lowlands along and beside rivers. The best examples are the Shannon Callows near Athlone, often flooded in winter and are grazed meadowland in summer. Traditional management methods provide a habitat for a rich flora of tall herbs and grasses, with rare fauna like the Comcrake. As a wetland they provide wintering grounds of international importance for some species of wildfowl including



Whooper Swan and Greenland White-fronted Geese, but are under threat from agricultural improvement and development pressure.

## Biodiversity & Development in County Westmeath



## Good Practice Guidelines for the Local Authority



Westmeath County Heritage Forum



F6ram Oidhreachta na h-Iarmh6

AN CHOMHAIRLE OIDHREACHTA



THE HERITAGE COUNCIL

# Here's how you can contribute to ensuring effective conservation of biodiversity in the development process.

## Habitats Directive

With the introduction of the EU Habitats Directive (92/43/EEC) which was transposed into Irish law as the Natural Habitats Regulations, 1997, the European Union formally recognised the significance of protecting rare and endangered species of flora and fauna, and also, more importantly, their habitats. Member states were directed to provide lists of sites for designation.

## Natural Heritage Areas

Natural Heritage Areas (NHAs) are heritage sites that were designated for the protection of flora, fauna, habitats and geological sites of national importance. Management of NHAs is guided by planning policy and the Wildlife (Amendment) Act 2000. It was from these NHAs that the most important sites were selected for international designation as SACs and SPAs.

## Special Areas of Conservation and Special Protection Areas

There are two types of EU site designation, the Special Area of Conservation (SAC) and the Special Protection Area (SPA). SACs are designated for the conservation of flora, fauna and habitats of European importance and SPAs for the conservation of bird species and habitats of European importance. These sites form part of "Natura 2000" a network of protected areas throughout the European Union.

Annex I of the Habitats Directive lists habitats that must be given protection. Certain habitats are deemed 'priority' and have greater protection. Irish habitats include raised bogs, active blanket bogs, turloughs, heaths, lakes and rivers. Annex II of the directive lists species whose habitats must be protected and includes Lesser Horseshoe Bat, Otter, Salmon and White-clawed Crayfish.

In order to protect internationally important habitats, the Habitats Directive places restrictions on the management of land that has been designated as an SAC or SPA. Works that are not defined as "Development" under the Planning and Development Act (2000) may be considered as 'Notifiable Actions' i.e. actions that may damage the wildlife interest of the site. These actions may only be carried out with consent from the Department of the Environment, Heritage and Local Government. Examples include the alteration of a watercourse, the reclamation, burning, infilling of raised bog or bog woodland. Lists of "Notifiable Actions" are available from the National Parks and Wildlife Service of the DoEHLG.

There are other categories of protected areas in Ireland including National Parks, Nature Reserves, Wildfowl Sanctuaries and Refuges for Flora and Fauna., Ramsar Site, Salmonid Water, Biogenetic Reserve, and UNESCO Biosphere Reserve. Most of these are also designated Natural Heritage Areas.

## Wildlife Legislation

The following table outlines the main legislation and International agreements relevant to the conservation of biodiversity.

### National Legislation

- The Wildlife Act (1976)
- The Wildlife (Amendment) Act (2000)
- The Flora Protection Order (1999)
- The European Communities (Natural Habitats) Regulations (1997)

### European Legislation

Council Directive on the Conservation of Wild Birds (79/409/EEC) 'The Birds Directive'  
Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) 'The Habitats Directive'

### International Conventions

- The Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971) 'Ramsar Convention'
- The Convention on Biological Diversity (1992)
- The Convention of Conservation of European Wildlife and Natural Habitats (1979) 'Bern Convention'
- The Convention on Migratory Species (1979) 'Bonn Convention'



## General Developments

### Pre-planning assessment

The following should be kept in mind when considering a development proposal:

- What habitats are on the site?
- Is the site within or near to an SAC, SPA or NHA?
- Are there trees protected by a Tree Preservation Order?
- Will the proposed development remove field/roadside boundaries
- Will the proposed development require an EIA or ecological assessment?

### When reviewing site information or assessments

- Check for rare or protected plants and animals (Consult Annex I of the EU Birds Directive and Annex II of the EU Habitats Directive, Flora Protection Order Species, Red Data Book Species and Birds of Conservation Concern list).
- Check for habitats listed in Annex I of the EU Habitats Directive. Most important are Annex I habitats deemed to be priority types. Of the sixteen priority habitats in Ireland, Active Raised Bog and Bog Woodland are most likely to be found in Co. Westmeath.
- If a listed habitat or species is recorded during a site survey it is important that the NPWS is kept informed of all possible impacts. It is best to treat these sites as if they are designated, even if this is not yet so.

### Aftercare

- Certain conditions imply required aftercare after development completion (e.g. trees or hedges can require maintenance until they are established). Specify aftercare and maintenance as part of the original planning condition if possible.
- If a condition has specified habitat retention, there must be a management plan for future preservation. Management measures can be discussed in the environmental assessment and can be part of a Request for Further Information.
- Petrol interceptors and silt traps will only remain successful as mitigation measures if properly maintained and serviced. This can be specified in planning conditions.

Monitoring of developments is desirable to check compliance to conditions. For sites of environmental importance this could be achieved through co-operation with local NPWS staff.

## Planning Implications

Planning applications which fall inside SACs or SPAs or in areas adjacent to these, where there is a possibility of significant effect must be referred to National Parks and Wildlife Service of DoEHLG for assessment.

Any development likely to have a significant effect on the conservation interest of an SAC/SPA site requires an environmental assessment, possibly an EIA. Assessment should take into account not just the specific impact, but also the cumulative effects of other developments.

Developments that cause no significant damage to the ecological interest of these sites may be permitted.

Where an assessment of the impact of a development indicates that significant damage may be caused to an SAC or SPA by its implementation, an alternative should be sought. In the absence of any alternative solution, a derogation may be obtained, but only on grounds of overriding public interest, including those of a social or economic nature.

In SACs and SPAs hosting priority habitats or species, derogations will only be granted for reasons of overriding public interest relating to human health or public safety, or considerations of beneficial consequences of primary importance for the environment, or further to an opinion from the EU Commission with regard to other imperative reasons of overriding public interest. Consent must be sought from the Minister of Environment, Heritage and Local Government prior to carrying out 'notifiable actions' within SACs and SPAs.

## Natural Heritage Areas

The Wildlife (Amendment) Act 2000 provides the mechanism to designate and protect Natural Heritage Areas. To date, five NHAs have been designated in Co. Westmeath and those areas that are identified as proposed NHAs are protected through the planning laws only. Once NHAs are designated it will be required to:

1. Consult with NPWS of the DoEHLG regarding all development applications in or adjacent to NHAs.
2. Assess the likely impacts of any developments on the conservation value of the NHA.
3. Refuse development where it would have a significant negative impact on the conservation value of the site. Consent for developments which are likely to have significant adverse impacts should only be given where there are imperative reasons of public interest and where there is no viable alternative solution.
4. Obtain the consent of the Minister of DoEHLG to carry out any potentially damaging works on an NHA.



## Sources of Information

### Irish Red Data Books

The Irish Red Data Books list the rare and threatened vascular plants and vertebrates (mammals, birds, amphibians and fish) in Ireland. Useful sources of reference include Curtis & McGough 1988, Stewart & Church 1992, and Whilde 1993.

### Birds of Conservation Concern in Ireland (BoCCI)

BirdWatch Ireland and RSPB Northern Ireland have agreed a list of priority bird species for conservation action on the island of Ireland.

Red List = birds of high conservation concern, with three categories: declining breeders, historically declining (since 1900) and global conservation concern. 18 species: Black-necked Grebe, Common Scoter, Hen Harrier, Red Grouse, Grey Partridge, Quail, Corncrake, Lapwing, Curlew, Red-necked Phalarope, Roseate Tern, Barn Owl, Nightjar, Ring Ouzel, Chough, Twite, Yellowhammer, Corn Bunting (now extinct).

Amber list = birds of medium conservation concern, with three categories: moderately declining breeder, wintering or passage species of international importance or localised and European conservation concern.

Green list = all other regularly-occurring birds in Ireland whose conservation status is currently considered favourable.

### Irish Wetland Bird Survey – IWeBS

The aim of I-WeBS is to monitor the numbers and distributions of water birds wintering in Ireland. Wetland sites are counted between September and March annually with results published every few years. The survey is co-ordinated by BirdWatch Ireland.

## Environmental Impact Assessment (EIA)

Consideration of ecological impacts of sub-EIA threshold developments Schedule 5 of the Planning Regulations (2001) gives threshold levels for developments requiring an EIA. Sub-threshold developments can also have impacts, perhaps where a development is close to a designated area. Planners may request an EIA for a sub-threshold development if there are concerns or potentially significant impacts. Standalone ecological or hydrological assessments can also be requested.

Remember that a development can impact at some distance (e.g. by contamination of a river catchment). A site may be more likely to negatively impact a habitat with which it shares a catchment area than another habitat in a different catchment, even though the second is much nearer to the development.



The following points should be considered when assessing the ecological content of Environmental Impact Statements produced for EIAs:

Habitats should be surveyed and described according to The Heritage Council publication 'A Guide to Habitats in Ireland' (2000) and displayed on a map showing the distribution and area of each type. Preferably, a copy of the proposed development overlaid on the habitat map should be provided.

The international, national, regional, county and local importance of habitats should be evaluated and any correspondence with Annex I habitats indicated. The report should include the likely impacts on each habitat and on surrounding areas and designated sites.

It is important that relevant plant and animal groups are surveyed at appropriate time of year considering breeding, wintering and hibernation patterns. Consultees should include the National Parks and Wildlife Service (NPWS), Regional Fisheries Board and relevant NGOs including BirdWatch Ireland and Bat Conservation Groups.

## Plants Listed On the Flora Protection Order

A licence is required from Department of the Environment, Heritage and Local Government (DoEHLG) to proceed with developments where they are likely to impact on species listed under the Flora Protection Order. This might occur where developments such as roads are impacting on large areas. Environmental Impact Assessments for such developments should identify whether there are any protected plant species along the proposed routes. This information is available from DoEHLG.

## Non Designated Sites

There are many important wildlife habitats in County Westmeath that have not been designated but even though they may not merit national designation are important in a local context and act as stepping stones in a wider ecological network. These include ponds, small woods and hedges. Article 10 of the Habitats Directive states that "Member States shall endeavour where they consider if necessary in their land use planning and development policies and, in particular with a view to improving the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora".

NPWS staff, local NGOs and Heritage Officers can advise on the ecological value of local sites and importance of habitats that may be impacted by development proposals.

## Landscaping with Native Species

The use of native tree species indigenous to the area should be specified for use in landscaping plans and proposals for aftercare of developments. Plants should be sourced from local nurseries where possible.

Species that were present in Ireland before the last Ice Age are generally considered to be native. Analysis of ancient pollen grains preserved in deep peat deposits can tell us what species were found in this country thousands of years ago. Native species are generally more beneficial to wildlife than non-native or introduced species, since fauna have adapted to live with native plants over time (e.g. there is a greater diversity of insects found on native species). These insects in turn provide a food source for birds and mammals.

Native plants are:

- Better adapted to the climate and micro-climates found around the country
- More suited to the landscape
- More likely to attract wildlife
- More disease resistant than introduced species and so more likely to be successful in your garden

A list of native trees and their site suitability is given in the Biodiversity Guidelines for Householders and Developers brochures in this series. Remember, not all broadleaved species are native e.g. Horse chestnut, sycamore and beech and support less biodiversity. Trees or shrubs should be sourced from a nursery which guarantees a supply from native stock and it is best not to use varieties of natives such as 'corkscrew' hazel.

## Mitigation Measures

EPA guidelines require that potential impacts of a development should be assessed, classified and discussed. Mitigation measures should be proposed to avoid, remedy or reduce any negative impacts. Some potential impacts and possible mitigation measures are shown below:

Development Type/Activity	Possible Negative Impact	Mitigation Measures
Residential/Tourist/Entertainment	Sewage Pollution	Ensure adequate percolation area is specified, treatment system if necessary. Consider use of constructed wetland/reedbed treatment system which also provides a new wildlife habitat.
Residential/Tourist/Entertainment	Loss of wildlife corridors, Habitat loss and fragmentation	Specify designs which fit natural contours and leave habitat blocks connected. Specify retention ponds, other water features and wildlife corridors. Condition for replacement trees and hedges (ask that native species be used). Specify bird and bat boxes to be deployed where habitat has been lost.
Sand and gravel extraction, construction near to watercourses	Siltation: damage to fisheries and wildlife, increased water turbidity, loss of amenity	Ensure silt is not directly released into watercourses, keep activities away from river and stream banks where possible, water must pass through settlement ponds or tanks before being pumped into watercourses.
Sand and gravel extraction	Loss of habitat	Where appropriate some of pit face can be left for breeding Sand Martins.
Demolition/renovation of old buildings	Loss of bat roost sites, trapping of bats	A full bat survey should be performed. If bats are present, NPWS staff must be informed. A licence is required for any works on bat habitats. Advice should be taken on the best time of year for the work to be done. Gaps in brickwork may be left when repointing, or special bat bricks may be used.
Demolition/renovation of old buildings	Loss of Barn Owl roost and breeding sites in ruins and old farm buildings.	A survey should be performed. If owls are present, NPWS staff must be informed and advice should be taken on the best time of year for the work to be done. Nesting boxes can be erected where nest sites have been lost.
Forestry plantation	Loss of habitat. Acidification of water bodies.	Specify restoration post harvesting, if applicable. Mixed conifer/broadleaved plantings sustain higher biodiversity levels than conifer only plantations. Avoid large plantations by lakes or along riverbanks; these can cause water acidification.
Road construction	Loss of habitat. Habitat fragmentation. The cutting of traditional wildlife routes.	Avoid important habitats if possible. Specify habitat replacement/creation where possible (e.g. new tree planting with bird and bat boxes). Special tunnels for Otter and Badger may be applicable where traditional travel routes are cut. NPWS can advise.