

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.

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".

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"

This leaflet has been produced in recognition of the fact that nature conservation "adds value" to new development. This information is designed to help developers understand the importance of biodiversity and natural habitats, the need for conservation in terms of planning and legal requirements including the Wildlife Act (1976), Wildlife (Amendment) Act 2000 and the EU Habitats Directive (1997) and advises how biodiversity conservation can be integrated into the development process.



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 has only been 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 Corncrake 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 Corncrake. 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.

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: eiscir) 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.

Useful addresses

Bat Conservation Ireland,
Deerpark House, Maio, Tierworker, Co. Meath.
Tel: 046 9242886

Birdwatch Ireland,
Rockingham House, Newcastle, Co. Wicklow.
Tel: (01) 281 9878 www.birdwatchireland.ie

Botanical Society of the British Isles
Mr. Con Breen, Westmeath Co. Recorder,
101 Bettyglen, Raheny, Dublin 5.
Tel: 01 8313573

Coillte Nurseries
Ballintemple, Ardrattin, Co. Carlow.
Tel: 0503 55621 www.coilltenurseries.ie

Conservation Volunteers Ireland
Stewards House, Rathfarnham Castle,
Rathfarnham, Dublin 14.
Tel: 01 4952878 www.cvi.ie

Coolatin Oaks Appeal Committee
Tullynally Castle, Castlepollard, Co. Westmeath.
Tel: (044) 61159

Crann
Crank House, Main Street, Banagher, Co. Offaly.
Tel: (0509) 51718 www.crann.ie

Dragonfly Ireland
8 Weaver's Court, Banbridge,
Co. Down BT32 4RP
e-mail: rst1@bann8.fsnet.co.uk

Design by Nature
Monavea Cross, Crettyyard, Co. Laois
Tel: 056 4442526 www.allgowlid.com

ENFO –
The Environmental Information Service
17 Andrew St., Dublin 2.
Lo Call (1890) 200191 www.enfo.ie

Green Schools
An Taisce Tailor's Hall, Back Lane, Dublin 8.
Tel: (01) 454 1819 www.antaisce.org

Inland Waterways Association of Ireland
c/o Rondavel, Owing, Piltown, Co. Kilkenny
Lo-Call 1890 924991 www.iwai.ie

Irish Peatland Conservation Council
Bog of Allen Nature Centre, Lullymore,
Rathangan, Co. Kildare
Tel: (045) 860133 website: www.ipcc.ie

Irish Seed Savers
Capparoo, Scarriff, Co. Clare.
Tel: (061) 921 866 www.catalase.com

Irish Wildlife Trust
Garden Level, 21 Northumberland Road,
Dublin 4.
Tel: (01) 6604530 www.iwt.ie

Native Woodland Trust
Stoneybrook, Kiltel, Co. Kildare.
www.nativewoodtrust.ie

Tree Council of Ireland
Cabinteely House, Cabinteely, Co. Dublin.
Tel: (01) 284 9211 www.treecouncil.ie

Department of the Environment Heritage
and Local Government
Custom House, Dublin 1.
Tel: (01) 888 2000 Lo-call: 1890 202 021
www.environ.ie

Environmental Protection Agency
P.O. Box 3000, Johnstown Castle Estate,
Wexford.
Tel: (053) 60 600 www.epa.ie

The Heritage Council
(An Comhairle Oidhreachta)
Rothe House, Kilkenny.
Tel: (056) 7770 777 www.heritagecouncil.ie

National Parks & Wildlife Service
Bellview, Old Dublin Road, Mullingar,
Co. Westmeath.
Tel: (044) 42661

Westmeath County Council Heritage Officer
Bernadette Guest, Westmeath County
Council, County Buildings, Mullingar,
Co. Westmeath.
Tel: (044) 32077

Westmeath County Council Environment
Officer
Eamonn Keaveney, Westmeath County
Council, County Buildings, Mullingar,
Co. Westmeath.
Tel: (044) 84232

The Hedge Laying Association of Ireland
The Secretary, Moyvore, Mullingar,
Co. Westmeath
Tel: 087 2794045

Biodiversity & Development in County Westmeath



Good Practice Guidelines for Developers



Westmeath
County
Heritage Forum



F6ram
Oidhreachta
na h-Iarmh6i

AN
CHOMHAIRLE
OIDHREACHTA



THE
HERITAGE
COUNCIL

Here's how your development can make a positive contribution to biodiversity conservation in Co. Westmeath.

Pre-Planning Discussion

The planning authority will highlight biodiversity issues at the pre-application stage and advise on ecological considerations such as proximity to designated sites of nature conservation importance. This will avoid delay later in the planning process and inform you of the level of information to be submitted with the application. Issues that need to be considered when preparing your development proposal include the following:

Is the site within or near an NHA, SAC or SPA?

Maps showing the extent of designated areas (NHAs, SACs and SPAs) are available for public viewing at local authority planning offices. Lists of designated sites are continually being updated. Site synopses are available from the DoEHLG.

What habitats are on the site?

There are many important wildlife habitats in County Westmeath that have not been designated. Even though they may not merit national designation they are important in a local context. Every site contains some natural heritage value however small.

Will the proposed development involve removal of field/roadside boundaries?

It is important to recognise that nature and wildlife cannot survive by merely protecting a series of isolated sites. Ecological corridors or stepping stones such as hedgerows, riverbanks, ponds and small woods are vital for the movement and cover of small birds and mammals and should be retained.



Are there any other rare or protected flora or fauna on the site?

In addition to protected habitats and designated sites, flora and fauna are protected under the Wildlife Act and the Flora Protection Order. Other sources of reference listing rare and endangered species include the Irish Red Data Books and the Birds of Conservation Concern in Ireland list.

Are there trees on the site protected by a Tree Preservation Order?

The Local Government (Planning and Development) Acts, 2000–2002 enable planning authorities, in the interest of amenity, to make tree preservation orders which prohibit the cutting of specified trees without consent. Contact your local authority Heritage Officer to obtain this list.



Will the proposed development require an EIA or ecological assessment?

If your development exceeds a threshold set out in Schedule 5 of the Planning and Development Regulations (2001) the development will require an Environmental Impact Assessment (EIA) to assess the possible impacts of the proposed development on the surrounding environment. An Environmental Impact Statement (EIS) reports the findings of the assessment. Preparation of an EIS must follow the EPA guidelines on the Information to be contained in

Environmental Impact Statements (EPA 2002).

The planning authority may request an EIA for developments that are close to the threshold, or for those that are close to and may impact on designated sites.



Impacts include those that occur during construction and any which may occur while the site is in operation/use afterward.

Consultation is an important part of the Environmental Impact Assessment process. It is important to consult with all relevant authorities in relation to the biodiversity of the site, including the National Parks and Wildlife Service (NPWS) local ranger or Development Applications Unit of the Department of Environment, Heritage and Local Government. The Regional Fisheries Board should be consulted if the development is in the vicinity of a watercourse and water quality data may be obtained from the EPA or local authority.

Non-governmental organisations are also important consultees and should include BirdWatch Ireland and local bat conservation groups. Contact details are provided at the back of this leaflet.

Alternatively, the planning authority may request an ecological report for a site. This should follow a similar format to an EIS but deal mainly with the impacts of the proposed development on the habitats and species of the site and highlight any impacts on NHAs, SACs or SPAs in the vicinity.

Aftercare - Monitoring and Management

Features that have been suggested as mitigation, or which have been specified as planning conditions, require aftercare after development completion. Some examples include:

- Trees planted for habitat or landscaping can require maintenance until they are established, especially if mature trees have been planted
- Hedges must be appropriately managed and avoid the bird nesting season of March 1st to August 31st
- Ponds must be cleared to avoid infilling

Remember features that have been either retained or created require continued commitment in order to keep them in good condition. Larger pieces of habitat will require a management plan to keep them in the desired state. For example, a wildflower meadow will quickly become rank and ultimately be replaced by scrub if it is not regularly mown or grazed.

- Local authority planners may seek information about management measures as part of a Request for Further Information.
- Aftercare and maintenance conditions may form a component of your planning permission.
- Management measures should be discussed in the EIS, if applicable.

Local authorities or other official bodies may check compliance to conditions specifying management and maintenance.

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.

Development and Construction

Attractive environments where due consideration is given to the conservation of biodiversity are essential to social and economic well-being.

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

Protection of existing habitats and species

Consider the features of your site before finalising a design. This can be achieved by sketching a simple habitat map marking in existing field boundaries, areas of scrub, trees or wet regions, all of which are diverse habitats. A development will integrate better with the landscape and be more ecologically sensitive if the design works with the natural features of the site.

- Retain existing habitats wherever possible
- Keep natural site features in context rather than as isolated fragments
- Pay attention to field boundaries and hedgerows, and retain wildlife corridors and habitat links if at all possible (including vegetation along watercourses)
- Use the natural contours of the site and surrounding landscape

Construction Considerations

The following should be considered before construction commences:

- Where will machinery be stored during construction/operation?
- Where will waste or spoil material be stored?
- Where will the site office be located?
- Where will fuel be stored?

The position of all these areas should be planned before construction begins to avoid damage to important ecological areas and wildlife corridors. The following measures should be adopted to minimise negative impacts on the surrounding environment:

- Fence off trees and hedges to avoid damage during construction and allow extra space when excavating to avoid root damage
- Only discharge water into watercourses after it has passed through a settlement or siltation pond
- Bund all fuel tanks to avoid pollution of rivers/groundwater
- Waste should be properly stored and removed from the site as soon as possible by a licensed waste collector

Compensate where damage is unavoidable

- Lay new hedges to replace any lost - use these to link pieces of fragmented habitat throughout the site, or to link the site to other areas
- Excavate new ponds and ditches to replace any lost
- Incorporate features such as wildflower meadows
- Plant native trees, indigenous to the area

Habitat Enhancement

Existing habitats can be enhanced during the development, for example:

- Old hedges can be re-laid
- Gaps in hedgerows can be thickened up
- Dead wood can be retained for invertebrates
- Blocks of native trees can be planted
- Climbing plants can be planted against walls or buildings
- Bat boxes can be installed
- Bird boxes can be installed; boxes for swallows, martins and swifts can be incorporated into buildings
- Old ponds can be cleared and restored



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 can 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'

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.



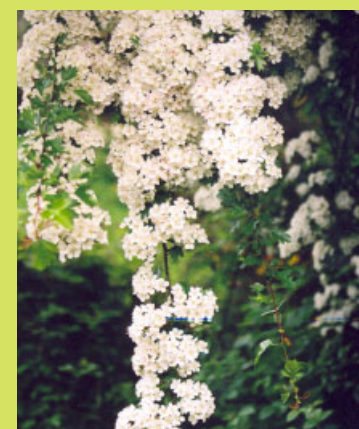
Native and non-native species

Consider using native species as part of your landscaping plan and source plants 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 adjacent table*. Horse chestnut, sycamore and beech, although broadleaved, are not native and so 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. Alternatively, seeds can be collected from the wild to grow your own trees.

Common Name	Latin Name	Site Suitability (see key below)
Alder	Alnus glutinosa	ADPS
Ash	Fraxinus excelsior	ADIPS
Aspen	Populus tremula	DPSV not close to buildings or services
Blackthorn	Prunus spinosa	AHPV
Bramble	Rubus fruticosus agg.	C/H invasive
Broom	Cytisus scoparius	Tolerates dry conditions
Common Gorse	Ulex europaeus	HV
Crab Apple	Malus sylvestris	AHIP
Dog Rose	Rosa canina	C/H
Downy Birch	Betula pubescens	ADIP
Elder	Sambucus nigra	V
Guelder Rose	Viburnum opulus	DH
Hawthorn (Whitethorn)	Crataegus monogyna	AHIPS
Hazel	Corylus avellana	AHS
Holly	Ilex aquifolium	AHPS
Juniper	Juniperus communis	S
Oak – Pedunculate	Quercus robur	AI only on large sites
Oak - Sessile	Quercus petraea	AI only on large sites
Rowan (Mountain Ash)	Sorbus aucuparia	ADHIP
Scots Pine	Pinus sylvestris	AI
Silver Birch	Betula pendula	ADIP
Spindle	Euonymus europaeus	H
Strawberry Tree	Arbutus unedo	Not frost hardy
Whitebeam	Sorbus aria	IPS
Wild Cherry	Prunus avium	AHI
Willow spp.	Salix spp.	V not close to buildings or services
Wych Elm	Ulmus glabra	PS
Yew	Taxus baccata	AIPS

*Adapted from The Heritage Council 'Conserving and Enhancing Wildlife in Towns and Villages'

A – Grows in a wide variety of soils C – Climber H – Suitable for Hedging
I – Suitable as an Individual Tree D – Tolerates or prefers Damp Conditions
P – Tolerates smoke or pollution S – Tolerates Shade V – Invasive