

HABITATS DIRECTIVE ASSESSMENT - SCREENING REPORT -

IN ACCORDANCE WITH THE REQUIREMENTS OF
ARTICLE 6(3) OF THE EU HABITATS DIRECTIVE

OF THE

NORTH TIPPERARY COUNTY DEVELOPMENT PLAN 2010-2016

for: North Tipperary County Council

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Section 1 Preamble

1.1 The Habitats Directive

This is the Report on the Habitats Directive Assessment (HDA)¹ Screening of the North Tipperary County Development Plan - in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC).

Article 6(3) of the Habitats Directive states:

Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Furthermore, Article 6(4) states:

If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

In Ireland, Natura 2000 comprises sites that are designated as Special Areas of Conservation (SACs) and/or Special Protection Areas (SPAs)².

1.2 HDA Stages

According to the European Commission's guidance document: *"Assessment of plans and projects significantly affecting Natura 2000 sites (Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC)"*³ HDA comprises four stages:

Stage One: Screening

The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.

Stage Two: Appropriate Assessment

The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts.

¹ also referred to as Appropriate Assessment (AA)

² including Ramsar sites

³ European Commission 2002

Stage Three: Assessment of Alternative Solutions

The process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain

An assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

This report documents the first of these stages. It's conclusion that significant impacts on Natura 2000 sites are unlikely means that further HDA stages are not required.

1.3 Report Format

The headings in this and the following sections are derived from the European Commission's guidance document: *"Assessment of plans and projects significantly affecting Natura 2000 sites (Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC)"*⁴

⁴ European Commission 2002

Section 2 The Plan

2.1 Brief Description of the Plan

2.1.1 Background

Under Section 9 of the Planning and Development Act 2000, every planning authority must make a development plan, setting the framework for all future development in the planning authority's area for the stated period, for the whole functional area of the authority every six years. Development Plans are required to set out an overall strategy for the proper planning and sustainable development of the area in question. It is in this context in which North Tipperary County Council - the planning authority for North Tipperary - has prepared the County Development Plan.

The Plan replaces the current 2004-2010 Plan and it is intended to provide for the proper planning and sustainable development of North Tipperary for a duration of six years from the date on which it is adopted, unless amended.

2.1.2 Structure and Content

The Plan is presented in 4 Volumes.

Volume 1 contains the vision statement for the Plan, the settlement strategy and policies objectives. A designation map sets out the council's heritage, amenity and rural designations in the County and identifies the settlement centres throughout the County.

Volume 2 contains the settlement plans for small towns and villages.

Volume 3 contains the Record of Protected Structures for the County.

Volume 4 contains the Environmental Report on the SEA of the Plan.

2.1.3 Vision Statement from the Plan

The Plan puts forward the following vision for the sustainable and balanced development of the County:

Sustainability

To realise the economic, social and cultural potential of the County in a manner that will not undermine such aims for future generations.

Competitiveness

To promote Nenagh and Thurles as regional growth centres, maximise our strategic location as a county on the N7, N8 and rail corridors, and seek improvement in the economy across the County.

Quality of Life

To seek balanced communities in order to promote social, environmental and economic well being.

Quality of Environment

To promote responsible guardianship of the natural and cultural environment so that current and future generations can enjoy a healthy environment.

Social Inclusion

To seek to redress social inequalities and social polarisation, and engage the public at all possible times to seek consensus on planning for the future.

2.2 Is the Plan Necessary to Management of Natura 2000 Sites?

The Plan is not directly connected with or necessary to the management of the Natura 2000 sites in the Plan area. However, it does include, inter alia, measures to protect, conserve and manage the area's natural heritage in a prudent and sustainable manner, including Natura 2000 sites, and to seek its enhancement where appropriate and feasible.

2.3 Mitigating Measures in the Plan

2.3.1 Introduction

The Development Plan contains numerous measures which will contribute to the conservation of Natura 2000 sites in accordance with the requirements of the Habitats Directive.

Chapter 4: The Environment contains the following specific policies and objectives which will contribute to the conservation of Natura 2000 sites:

Policy ENV 1: General Policy: It is the policy of the Council that where relevant, projects and Masterplans arising from this plan will be screened by the Council, in cooperation with the applicant for the need to undertake a Habitats Directive Assessment under Article 6 of the Habitats Directive.

Policy ENV 5: Water Framework Directive: It is Council policy to implement the provisions of the River Management Plans, and any other water quality management plans prepared at a national, regional or local level.

Policy ENV 6: Source Protection Zones: It is the Council's policy to only consider application for one-off housing within Source Protection Zones in the following circumstances:

For established residents, or members of their immediate family, for a permanent dwelling for their own use where it can be demonstrated that:

- (a) There is no reasonable alternative within the remainder of the family landholding which lies outside the Source Protection Zones; and
- (b) The applicant does not already own a dwelling in the rural area; and
- (c) The applicant complies with the terms of policies HSG8, HSG9, HSG10, HSG12 and HSG13.

Policy ENV 7: Groundwater Protection: It is the Council's policy to protect groundwater resources and drinking water catchments having regard to European Communities (Good Agricultural Practice for Protection of Waters) Regulations, SI376 of 2006, and the 'Groundwater Protection Plan and any amendment/review thereof and Environmental Protection Agency guidelines applicable at the time.

Specific Objective EV1: It is an objective of the Council to protect and preserve the quality of surface water, ground water and drinking water in the County through the relevant legislative provisions. The Council will seek to prepare a dedicated Ground water Protection Scheme during the lifetime of the Plan, subject to resources and staffing.

Specific Objective EV2: It is an objective of the Council to work with the EPA, and the relevant River Basin Management Authorities in relation to the implementation of the River Basin Management Plans for the two River Basin District Authorities which relate to North Tipperary. The Council will also seek to work with appropriate bodies in the promotion of greater awareness of the Water Framework Directive, the Nitrates Directive and the Water Pollution Acts 1977-2007 (as amended).

Specific Objective EV3: It is an objective of the Council to continue its programme of monitoring water quality of the Council's rivers, streams and lakes, to ensure that the objectives under the Water Framework Directive 2000 are met.

Policy ENV 8: Single dwelling WWT Systems: It is the policy of the Council to strictly control the siting, construction and on-site layout of proposed Septic (primary standard) Systems and Advanced

(min.secondary standard) Wastewater Treatment Systems associated with one-off housing development. Where the public sewer network is upgraded in future years, it is the policy of the Council that these properties should connect into the public infrastructure, where feasible.

Policy ENV8a: Wastewater Treatment Systems on Un-Sewered Properties.

All site assessments for all on-site treatment systems or septic tanks shall be carried out in accordance with relevant Environmental Protection Agency guidance (EPA), and any subsequent Codes of Practice super-ceding or updating these, and endorsed by the Department of Environment for this purpose.

Policy ENV 9: Single dwelling WWT Discharges. It is the policy of the Council that treated effluent from on-site systems discharge to ground. Discharge to surface waters will only be considered in exceptional environmental circumstances.

Policy ENV 10: On-site Wastewater Treatment systems close to Water Bodies. It is the Council's policy to only consider application for one-off housing within 200m of sensitive lakes or within sensitive rivers catchments in the following circumstances:

For established residents, or members of their immediate family, for a permanent dwelling for their own use where it can be demonstrated that:

- (a) There is no reasonable alternative within the remainder of the family landholding which lies outside the 200m from the rivers and lakes; and
- (b) The applicant does not already own a dwelling in the rural area; and
- (c) The applicant complies with the terms of policies HSG8, HSG8a, HSG9, HSG10 and HSG11.

In certain circumstances the assessment of developments within these areas will require the applicant to submit a Hydrogeological Impact Study based on risk analysis and borehole data.

Policy ENV 11: Surface Water: The Council will seek the implementation of rainwater harvesting, re-use of grey water, SUDS and best practice guidance for the collection, reuse or disposal and treatment of surface water. Such systems will be required to conserve water, protect water quality and regulate the rate of surface water runoff so as not to cause or exacerbate flooding on the relevant site or elsewhere.

Specific Objective EV6: It is an objective of the Council to achieve the water quality targets set out under the water framework directive as documented in the South East and Shannon River Basin Management Plans where feasible and where resources permit.

Specific Objective EV7: It is an objective of the Council to carry out farm inspections to minimise the agricultural contribution to surface and ground water pollution

Specific Objective EV8: It is an objective of the Council to monitor existing licensed discharges to waters and enforce license conditions.

Specific Objective EV9: It is an objective of the Council to work towards ensuring that all on-site waste water treatment systems for single dwellings are appropriate installed and maintained in accordance with Best Practice.

Specific Objective EV10: It is an objective of the Council to accurately delineate source protection zones (inner, outer/zone of contribution) for existing public drinking water supplies

Policy ENV 13: Invasive Species: The Council will, where appropriate and where resources permit, work with other agencies to address the issue of invasive species within water courses in the County.

Policy ENV 14: Water Corridors: It is a policy of the Council to preserve an undisturbed edge or buffer adjacent to watercourses and to maintain the natural functions of existing ecosystems. In respect of Lough Derg, developments such as private harbours or jetties will be resisted within areas identified as being Special Areas of Conservation (or candidate), Special Protection Areas (or candidate) or Natural Heritage Areas (or proposed).

Policy ENV 15: Water Corridor Amenity: It is a policy of the Council to conserve and enhance the amenity of the shoreline and County river corridors, while avoiding adverse impacts on the integrity of designated sites, including the landscape, water environment and wildlife habitats and, where consistent with this, to encourage increased public access and water-related recreation opportunities.

Policy ENV 16: Riparian Zones: It is Council policy to provide riparian corridors and/or buffer zones by reserving land of minimum width of 30m along banks of rivers and streams for the purposes of, inter alia, providing habitat, river maintenance, access for anglers, walkers, recreational area and pollution buffer zone and to maintain such corridors free from inappropriate development. Regard will also be had to Policies ENV18 and ENV19 and to the Planning System and Flood Risk Management Guidelines

Policy ENV 17: Water Protection: Landuses shall not give rise to the pollution of ground or surface waters during the construction or operation of developments. This shall be achieved through the adherence to best practice in the design, installation and management of systems for the interception, collection and appropriate disposal or treatment of all surface waters and effluents.

Specific Objective EV 20: To encourage the development of environmentally sustainable agricultural practices, to ensure that development does not impinge on the visual amenity of the countryside and that watercourses, wildlife habitats and areas of ecological importance are protected from the threat of pollution.

Specific Objective EV 21: To ensure that all agricultural activities adhere to any legislation on water quality, such as the Water Pollution Acts, Phosphorous Regulations, Water Framework Directive and Nitrate Directive.

Specific Objective EV 22: To require buildings and structures in visually sensitive areas:

- to be sited as unobtrusively as possible;
- to be clustered to form a distinct and unified feature in the landscape;
- to utilise suitable materials and colours; and
- to utilise native species in screen planting in order to integrate development into the landscape.

Specific Objective EV 23: To support agricultural activities which encourage bio-diversity and the National Biodiversity Plan.

Policy ENV 23: Agricultural Waste: It is the policy of the Council to seek improvement in the management of livestock slurries. The Council will seek improvement in existing storage facilities where possible, and require high quality facilities for storage as part of new development. Applicants shall demonstrate the crop nutrient management requirement for the slurry. Applicants shall be required to comply with European Communities (Good Agricultural Practice for the Protection of Waters) Regulations 2006-2009 and Agricultural Bye-laws as they apply to North Tipperary.

Policy ENV 24: Recovery of Agricultural Waste: It is the policy of the Council to require adequate handling, storage, recovery of all effluent produced in and by agricultural rural based developments. The Council will have regard to the Sludge Management Plan for North Tipperary, Measures Report under the Phosphorous Regulations (SI No. 258 of 1998), European Communities (Good Agricultural Practice for the Protection of Waters) Regulations (SI No. 101 of 2009) as well as any national guidance in deciding upon such developments.

Policy ENV 25: Nutrient Management: It is the policy of the Council to utilise the legislation governing nutrient management planning and where necessary to require the preparation and submission of nutrient management plans for the approval of the Authority.

Policy ENV 26: Forestry: It is the policy of the Council to monitor forestry against impacts on the following:

- scenic areas and elevated landscapes in primary amenity areas;
- areas of best agricultural land;
- environmentally designated sites;

- marginal land with high biodiversity;
- areas identified in the County Landscape Character Assessment;
- existing rights of way; and
- the recreational and tourism value of the land.

Specific Objective EV24: The Council will seek to improve river, lake and ground water quality in the County in association with the farm organisations and key interest groups.

Specific Objective EV25: It is an objective of the Council to encourage the sustainable use of natural resources for the planting of forestry.

Policy ENV 27: Fishing: It is the policy of the Council to continue to take measures to protect streams and rivers from pollution and will encourage appropriate angling-related tourism, fish farming and mariculture in the County's waters. Protection of water quality will be a primary consideration to assessing development proposals.

Policy ENV 30: Polluter Pays: It is Council policy to ensure the provision of quality cost effective waste infrastructure and services, which reflect and meet the needs of the community and to ensure that the 'polluter pays principle' is adhered to in all waste management activities.

Policy ENV 32: Waste Disposal: It is Council policy to ensure that all waste disposal shall be undertaken in compliance with the requirements of the Environmental Protection Agency and relevant Waste Management Legislation.

Specific Objective: EV 34: It is an objective of the Council to implement the Waste Management (Certification of Historic Waste Disposal and Recovery Activity) Regulations (2008), or any subsequent appropriate legislative provisions in relation to historic landfill sites in the county and to undertake risk assessments where required and any subsequent remedial measures where necessary subject to resources.

Chapter 7: Infrastructure and Services lists a number of policies and objectives relating to wastewater, surface water and water quality as follows:

Policy SERV 3: General Policy: It is the policy of the Council to ensure that the provision of water and wastewater facilities is undertaken in accordance with EU policies and directives, national legislation and national/regional policies.

Policy SERV 6(a): Water Abstraction: It is the policy of the Council to work with Statutory Water Authorities, where abstraction is proposed from surface or ground water supplies within North Tipperary, subject to compliance with environmental and ecological legislative requirements.

Policy SERV 10: Wastewater treatment plants: It is the policy of the Council to consider the provision of improved and additional wastewater services in appropriate locations based on its current Assessment of Needs 2007-2014, and the DoEHLG current Water Services Investment Programme, and having regard to the need to control the impact of wastewater on receiving waters.

Chapter 8: Built and Natural Heritage includes the following policies:

Policy HERT 27: Tree Preservation: It is the policy of the Council to seek the protection of mature trees and hedgerows that contribute to amenities of the area (See Appendix 4). Development that requires the felling of such trees or removal of hedgerows will be discouraged. Where felling or removal is permitted, the Planning Authority will require suitable and substantial replanting during the next planting season.

Policy HERT 29: Designated Environmental Sites: It is the policy of the Council to maintain the quality and conservation value of designed environmental sites, including SACs, cSACs, SPAs, cSPAs, NHAs and

pNHAs, and when assessing proposals to provide for the protection, conservation and enhancement of wildlife habitats and designated sites.

Policy HERT 29a: Protection of Designated Environmental Sites: It is the policy of the Council to restrict any development which would be harmful to or that would result in a significant deterioration of habitats and/or disturbance of species in a SAC, cSAC, SPA, cSPAs, NHA or pNHA.

Policy HERT 30: Protection of Areas of Nature Conservation: It is the policy of the Council in Areas of Nature Conservation that proposals for development will only be permitted where it can be clearly demonstrated there is no direct or indirect adverse affect on:

- areas designated as sites or candidate or potential sites of national or international importance for wildlife; and
- protected species and their habitats; and
- features of major importance to wild flora and fauna; and
- important features of geological or geomorphological importance; and
- local biodiversity or recognised wildlife corridors.

Policy HERT 31: Lakes and Inland Waterways: It is the policy of the Council to seek to protect lakes, rivers, streams and other watercourses, wherever possible and ecologically appropriate, to maintain and protect the riparian zones in an open state capable of providing suitable habitat for flora and fauna.

BNH19: It is an objective of the Council to preserve the conservation value of all European Sites (SACs, cSACs, SPAs, pSPAs), and to ensure that appropriate assessments are carried out where development projects are likely to have significant effects on these sites; to preserve the conservation value of all designated or proposed Natural Heritage Areas (NHAs), to encourage biodiversity protection, including the management of features of the landscape which are of major importance for wild fauna and flora; to protect species of plants listed in the Flora Protection Order (S.I. No. 94 of 1999) and their habitats; to protect species and the habitats of species that require strict protection under the Habitats Regulations and the Wildlife Acts.

2.4 Cumulative Effects

The National Spatial Strategy 2002-2020 and the National Development Plan 2007-2013 set the planning framework within which the North Tipperary County Development Plan has been prepared with the objective of achieving an optimal balance of social, economic and physical development in the County. The effects of the higher level Strategy and Plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable Regulations and Directives.

Section 3 Natura 2000 Sites

3.1 Natura 2000 Sites in and within 15 km of the Plan Area

Following guidance from the Department of the Environment, Heritage and Local Government, all Natura 2000 sites within both the Plan area and an area extending 15km around it are considered. They are all mapped on Figure 1.

3.1.1 Special Protection Areas

Special Protection Areas (SPAs) have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) - referred to as the Birds Directive - by the DEHLG due to their conservation value for birds of importance in the European Union. The characteristics⁶ of each SPA within 15km of the Plan area are summarised below and each site's main conservation objectives⁷ are included.

Lough Derg (Shannon) SPA (Site Code 0004058): Lough Derg is the largest of the Shannon Lakes, being some 40 km long. Lough Derg SPA is of high ornithological importance as it supports nationally important breeding populations of Common Tern, Cormorant, Great Crested Grebe, and probably Tufted Duck and Black-headed Gull. In winter, it has nationally important populations of Tufted Duck and Goldeneye, as well as a range of other species including Whooper Swan. The site is still used on occasions by Greenland White-fronted Goose. The presence of Common Tern, Whooper Swan and Greenland White-fronted Goose is of particular note as these are listed on Annex I of the E.U. Birds Directive.

Main conservation objective:

To maintain the special conservation interests for this SPA at favourable conservation status: Cormorant, Tufted Duck, Common Tern, Goldeneye, Wetland & Waterbirds.

River Little Brosna Callows SPA (Site Code 0004086): The River Little Brosna Callows SPA follows the River Brosna from its confluence with the River Shannon for approximately 9 km south-eastwards to just beyond New Bridge on the R438 road. The River Little Brosna Callows SPA is one of the top sites in the country for wintering waterfowl. It is of international importance on account of the total numbers of birds that use it, as well as for its Greenland White-fronted Goose and Black-tailed Godwit populations. In addition, there are a further seven species with nationally important populations, several of which are the largest in the country. Also of note is that three of the species which occur regularly, i.e. Whooper Swan, Greenland Whitefronted Goose and Golden Plover, are listed on Annex I of the E.U. Birds Directive.

Main conservation objective:

To maintain the special conservation interests for this SPA at favourable conservation status: Whooper Swan, Greenland White-fronted goose, Wigeon, Teal, Pintail, Shoveler, Golden Plover, Lapwing, Black-tailed Godwit, 20,000 wintering waterbirds, Black-headed Gull; Wetland & Waterbirds.

Middle Shannon Callows SPA (Site Code 0004096): The Middle Shannon Callows SPA is a long and diverse site which extends for approximately 50 km from the town of Athlone (at southern point of Lough Ree) to the town of Portumna (northern point of Lough Derg). In winter the site is internationally important for the total numbers of birds (regularly exceed 20,000) and for Whooper Swan in particular. It also holds nationally important populations of a further five species. Some of the wintering species are listed on Annex I of the EU Birds Directive, including Whooper Swan, Greenland White-fronted Goose and Golden Plover. In summer the site supports important populations of breeding waders. Perhaps the most

⁶ A site's characteristics are outlined in its site synopsis as provided by the National Parks and Wildlife Service

⁷ Source: National Parks and Wildlife Service 2009

important species which occurs in the site is Corncrake (the site holds 40% of the national total), as this is listed on Annex I of the EU Birds Directive and is Ireland's only globally endangered species.

Main conservation objective:

To maintain the special conservation interests for this SPA at favourable conservation status: Whooper Swan, Corncrake, Golden Plover, Lapwing, Black-tailed Godwit, Redshank, 20, 000 wintering waterbirds, Wigeon, Black-headed Gull, Wetland & Waterbirds.

Slievefelim to Silvermines Mountains SPA (Site Code 0004165): The Slievefelim to Silvermines Mountains SPA is an extensive upland site located in Counties Tipperary and Limerick. Much of the site is over 200 m in altitude and rises to 694 m at Keeper Hill. The site is a traditional breeding site for a pair of Peregrine. Merlin has been recorded within the site but further survey is required to determine its status. Both of these species are also listed on Annex I of the E.U. Birds Directive. Red Grouse is found on some of the unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Red-listed. The main threat to the long-term survival of Hen Harriers within the site is further afforestation, which would reduce and fragment the area of foraging habitat, resulting in possible reductions in breeding density and productivity. Overall, the site provides excellent nesting and foraging habitat for breeding Hen Harrier and is among the top five sites in the country for the species.

Main conservation objective:

To maintain the special conservation interest for this SPA at favourable conservation status: Hen Harrier.

Slieve Bloom Mountains SPA (Site Code 004160): The Slieve Bloom Mountains SPA is situated on the border between Counties Offaly and Laois, and runs along a north-east/south-west aligned ridge for approximately 25 km. Much of the site is over 200 m in altitude, rising to a maximum height of 527 m at Arderin. The mountains are of Old Red Sandstone, flanked by Silurian rocks. Several important rivers rise within the site, including the Barrow, Delour and Silver. The site has a near continuous ridge of mountain blanket bog, with wet and dry heaths also well represented. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Hen Harrier. This SPA is one of the strongholds for Hen Harrier in the country and, indeed, is the most easterly regular population. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the E.U. Birds Directive. The site is also a traditional site for a breeding pair of Peregrine. Several pairs of Merlin are known to breed within the site but further survey is required to determine the exact status of this small falcon. Both of these species are also listed on Annex I of the E.U. Birds Directive. Red Grouse is found on many of the unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Red-listed. Overall, the site provides excellent nesting and foraging habitat for breeding Hen Harrier and is among the top five sites in the country for the species. It is also likely to be of national importance for breeding Merlin.

Main conservation objective:

To maintain the special conservation interest for this SPA at favourable conservation status: Hen Harrier.

River Suck Callows SPA (Site Code 004097): The River Suck Callows comprise a long, sinuous area of semi-natural lowland wet grassland, which floods extensively each winter along the River Suck between Castlecoote in the north and Shannonbridge in the south, and passing through Ballinasloe. The River Suck is the largest tributary of the River Shannon. The Suck River Callows is an important site for wintering waterfowl. Of particular note is the internationally important Greenland White-fronted Goose flock that is based along the Suck. The birds congregate mainly in the middle reaches of the river. A separate sub-flock is centred at Glenamaddy turlough. Three species had populations of national importance, i.e. Whooper Swan (124), Wigeon (1,203) and Lapwing (3,640). Golden Plover, a species that is listed on Annex I of the E.U. Birds Directive, occurs at times. The good quality riverine and grassland habitats are also home to populations of Otter and Irish Hare, and Brown Trout occur in the river. This site is of considerable ornithological importance on account of the Greenland White-fronted Goose population which is of international significance and which is one of the largest in the country

outside of the Wexford Slobs. Of note is that two of the species which occur regularly, Greenland White-fronted Goose and Whooper Swan, are listed on Annex I of the E.U. Birds Directive.

Main conservation objective:

To maintain the special conservation interests for this SPA at favourable conservation status: Whooper Swan, Greenland White-fronted Goose, Wigeon, Lapwing, Wetland & Waterbirds.

Dovegrove Callows SPA (Site Code 004137): Dovegrove Callows is an area of callowland beside the Little Brosna River 2 km downstream from Birr, Co. Offaly and 5 km upstream from the start of the main area of River Little Brosna callows. The main habitat is wet grassland which floods. The grassland is regularly used by a flock of Greenland White-fronted Geese, and a variety of other waterfowl in winter. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Greenland White-fronted Goose. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. The site is an important feeding area for the internationally important Little Brosna Greenland White-fronted Goose flock and is used on an occasional basis when other feeding sites along the middle Shannon and Little Brosna callows are flooded. It is of particular importance as it can support the entire Little Brosna flock. For this reason the site is a key part of this flock's winter range and important for its protection.

Main conservation objective:

To maintain the special conservation interests for this SPA at favourable conservation status: Greenland White-fronted Goose.

Slieve Aughty Mountains SPA (Site Code 004168): The Slieve Aughty Mountains SPA is a very large site that extends southwards from just south of Lough Rea, County Galway to Scariff in County Clare. The peaks are not notably high or indeed pronounced; the site rises to a maximum of 378 m near Cappaghbaun Mountain. It site includes many small- and medium-sized lakes, notably Lough Graney and Lough Atorick; several important rivers rise in the site, including the Owendalulleegh and Graney. Lough Derg occurs immediately to the south-east. The Slieve Aughty hills are predominantly comprised of Old Red Sandstone, but outliers of Lower Palaeozoic rocks provide occasional outcrops capping the hills. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Hen Harrier and Merlin. The site also supports a breeding population of Merlin, a species that is also listed on Annex I of the E.U. Birds Directive. The population size is not well known but is likely to exceed five pairs. Red Grouse is found on many of the unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Red-listed. Overall, the site provides excellent nesting and foraging habitat for breeding Hen Harrier and is one of the top two sites in the country for the species.

River Shannon and River Fergus Estuaries SPA (Site Code 004077): The estuaries of the River Shannon and River Fergus form the largest estuarine complex in Ireland. The site comprises all of the estuarine habitat west from Limerick City and south from Ennis, extending west as far as Killadysert and Foynes on the north and south shores respectively of the River Shannon (a distance of some 25 km from east to west). Also included are several areas in the outer Shannon estuary, notably Clonderalaw Bay and Poulnasherry Bay, as well as the intertidal areas on the south shore of the Shannon between Tarbert and Beal Point. Apart from the wintering birds, large numbers of some species also pass through the site whilst on migration in spring and/or autumn. Regular species include Blacktailed Godwit, Whimbrel and Greenshank. This site is of great ornithological interest, being of international importance on account of the numbers of wintering birds it supports. It also supports internationally important numbers of three species, i.e. Dunlin, Black-tailed Godwit and Redshank. In addition, there are 16 species that have populations of national importance. For several of the bird species, it is the top site in the country. Also of note is that three of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Golden Plover and Bar-tailed Godwit. The site is most effectively censused from the air and this is carried out in most winters.

All Saints Bog SPA (Site Code 004103): All Saints Bog is a lowland raised bog lying about 5 km north-west of Birr and separated from the River Little Brosna callows by a fragmented esker ridge. The site is unique in that it contains the largest stand of birch (*Betula* sp.) woodland in the country growing on an

active raised bog. All Saints Bog was formerly an important refuge for part of the internationally important population of Greenland White-fronted Geese based on the River Little Brosna. While All Saints Bog SPA appears to have been abandoned by wintering Greenland White-fronted Geese, it is still of some ornithological importance as it probably supports a nesting pair of Merlin, a species of high conservation importance and one that is listed on Annex I of the E.U. Birds Directive.

Main Conservation Objective:

To maintain the special conservation interests for this SPA at favourable conservation status: Greenland White-fronted Goose.

3.1.2 Special Areas of Conservation

Candidate Special Areas of Conservation (cSACs) have been selected for protection under the European Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC), referred to as the Habitats Directive, by the Department of the Environment, Heritage and Local Government due to their conservation value for habitats and species of importance in the European Union. The sites are *candidate* sites because they are currently under consideration by the Commission of the European Union. The characteristics⁶ of each SPA within 15km of the Plan area are summarised below and each sites main conservation objectives⁷ are included.

cSACs within the Plan area and within 15km of the Plan area are:

River Shannon Callows cSAC (Site Code 000216): The River Shannon Callows is a long and diverse site which consists of seasonally flooded, semi-natural, lowland wet grassland, along and beside the river between the towns of Athlone and Portumna. It is approximately 50 km long. Excellent examples of two habitats listed on Annex I of the EU Habitats Directive occur within the site – *Molinia* meadows and lowland hay meadows with good examples of a further two Annex habitats (both with priority status). In winter the site is internationally important for numbers and species of waterfowl. In spring it feeds large numbers of birds on migration. And in summer it holds very large numbers of breeding waders, rare breeding birds and the endangered Corncrake, as well as a very wide variety of more common grassland and wetland birds. The presence of Otter, an Annex II species, adds further importance to the site.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*); Limestone pavements; Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*).
2. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: *Lutra lutra*
3. To maintain the extent, species richness and biodiversity of the entire site
4. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Clonfinane/Ballyduff Bog cSAC (Site Code 000641): Clonfinane and Ballyduff bogs lie some 6 km to the southwest of Birr, the two bogs are linked and have been combined to form the present site. Both bogs were surveyed in 1994 and found to be of international importance for nature conservation. Clonfinane is a large flat lowland raised bog largely bordered by drains and, except in the immediate vicinity of the drains, remains wet and quaking. Active raised bogs once characteristic of central Ireland, are now rare and vulnerable. They are recognised by the European Union as a habitat of international importance and Ireland has a special responsibility to conserve the best of its remaining bogs.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Active raised bogs; Degraded raised bogs still capable of natural regeneration; depressions on peat substrates of the *Rhynchosporion*; Bog woodland.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Kilcarren-Firville Bog cSAC (Site Code 000647): Kilcarren - Firville Bog is situated approximately 2 km east of the village of Arrigahorig in North Tipperary. It is a lowland raised bog complex which extends about 4.5 km from east to west and is bisected by a road. The site is of importance for the presence of the rare and legally protected Flora Protection Order (1987) Killarney Fern (*Trichomanes speciosum*), a species that is listed on Annex II of the EU Habitats Directive. The woodland, although planted with many exotic trees, is mature and conforms to a type listed on Annex II of the EU Habitats Directive. The site is scenic and popular as an amenity area.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Clare Glen cSAC (Site Code 000930): Clare Glen lies on the Limerick - Tipperary border, in the western foothills of the Slievefelim Mountains, about 10 km northwest of Cappamore. The woodland is of mixed composition, but most of the broadleaved species are native. The site is of importance for the presence of the rare and legally protected (Flora Protection Order (1987)) Killarney Fern (*Trichomanes speciosum*), a species that is listed on Annex II of the EU Habitats Directive. The woodland, although planted with many exotic trees, is mature conforms to a type listed on Annex II of the EU Habitats Directive. The site is scenic and popular as an amenity area.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Old sessile oak woods with Ilex and Blechnum in British Isles.
2. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: *Trichomanes speciosum*.
3. To maintain the extent, species richness and biodiversity of the entire site.
4. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Barroughter Bog cSAC (Site Code 000231): Barroughter Bog is a relatively small raised bog, situated on the shores of Lough Derg, a few kilometres east of Woodford, and bounded in the north by the Cappagh River. The bog has a good dome, which is slightly hollowed towards the eastern side. The north-eastern corner (cut off by an old drain and track), and a narrow area in the southeast, are fairly dry due to drainage and burning. Barroughter Bog is a raised bog of considerable conservation value. Given its relatively small size, the area of outstanding quaking habitat is remarkably large. Its proximity to the shores of Lough Derg, with its succession from open water through extensive reed beds and marginal scrub, to raised bog, adds to its importance. It is also the only raised bog on the shores of Lough Derg.

Kilduff, Devisbit Mountain cSAC (Site Code 000934): This upland site is situated approximately 6 km north-west of Templemore. It comprises the summit of Devilsbit Mountain and much of the eastern side of the ridge which extends northwards to Kilduff Mountain. Most of the site lies above 250 m and the highest point is 480 m. Peregrine, a species listed on Annex I of the EU Birds Directive, breeds within the site. The site is heavily grazed by cattle and sheep.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: European dry heaths; Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe).
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Keeper Hill cSAC (Site Code 001197): Keeper Hill, or Slievekimalta, is situated between the Silvermines and Slieve Felim Mountains, 13 km south of Nenagh. Reaching an altitude of 695 m, this rounded, rather

steep peak of Old Red Sandstone is notably higher than any of the surrounding upland areas. The site includes the summit and slopes above 250 m which have not yet been afforested. Landuse within the site consists of some peat cutting to the north-west of the summit and some track development. Grazing is minimal and confined to the lower grassy slopes to the north of the site. The site is almost entirely surrounded by coniferous forest plantations.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Northern Atlantic wet heaths with *Erica tetralix*; Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe); Blanket bog.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Silvermine Mountains cSAC (Site Code 000939): This small site is situated on the northern slopes of the Silvermine Mountains, 1 km southeast of Silvermines village. It slopes steeply uphill from 240 m in the north-west corner to 400 m at the southern boundary. The occurrence of the Small White Orchid (*Pseudorchis albida*) at this site is of particular note as it is a Red Data Book species which is legally protected under the Flora (Protection) Order 1999. Landuse within the site is confined to low density grazing by cattle, sheep and perhaps horses.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Northern Atlantic wet heaths with *Erica tetralix*; Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe).
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Bolingbrook Hill cSAC (Site Code 002124): Situated approximately 6 km south-east of Silvermines Village, this upland site comprises Bolingbrook Hill and the nearby eastern slopes of Silvermine Mountains in Curryquin and Mucklin townlands. Bolingbrook Hill is a comparatively small site which contains a range of habitats, including three listed on the EU Habitats Directive, and species. It is of particular importance for the good quality examples of species-rich, unimproved upland grassland found. This habitat is becoming increasingly rare in Ireland and Europe and is listed as a priority habitat on Annex I of the EU Habitats Directive. The presence of good quality wet and dry heath, which are also listed on this Annex, contributes to the overall importance of the site.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Northern Atlantic wet heaths with *Erica tetralix*; European dry heaths; Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe).
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Liskeenan Fen cSAC (Site Code 001683): Liskeenan Fen is a small turlough-like fen situated about 10 km north-west of Borrisokane and just 1 km from the village of Aglish, in north Co. Tipperary. The site floods in winter via a swallow hole in the far north-west corner. The eastern part of the site is a small dry, inactive raised bog on which mixed woodland is developing, as well as an extensive and unusual area of flooded cut-away. The site is a candidate SAC selected for *Cladium* fen, a habitat listed on Annex I of the E.U. Habitats Directive. Liskeenan Fen is the only such fen in the area, most of the rest having been drained in the past. The area of *Cladium* fen in the centre is of special interest in a European context.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*.
2. To maintain the extent, species richness and biodiversity of the entire site.

3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Anglesey Road cSAC (Site Code 002125): Anglesey Road is a steep-sided valley which extends approximately 1.8 km along the Multeen River to the north of Hollyford village. Most of the site lies between 210 and 270 m above sea level. Anglesey Road is a comparatively small site which contains a range of habitat types and species. It is of particular importance for the good quality examples of species rich, unimproved upland grassland found. This habitat is becoming increasingly rare in Ireland and Europe and is listed on Annex I of the EU Habitats Directive.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe).
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Lower River Suir cSAC (Site Code 002137): This site consists of the freshwater stretches of the River Suir immediately south of Thurles, the tidal stretches as far as the confluence with the Barrow/Nore immediately east of Cheekpoint in Co. Waterford and many tributaries including the Clodiagh in Co. Waterford, the Lingaun, Anner, Nier, Tar, Aherlow, Multeen and Clodiagh in Co. Tipperary. The Aherlow River is a designated Salmonid Water under the EU Freshwater Fish Directive. Other recreational activities such as boating, golfing and walking are also popular. Several industrial developments, which discharge into the river, border the site including three dairy related operations and a tannery. The Lower River Suir contains excellent examples of a number of Annex I habitats, including the priority habitat Alluvial Forest. The site also supports populations of several Annex II animal species and a number of Red Data Book animal species. The presence of two legally protected plants (Flora (Protection) Order, 1999) and the ornithological importance of the river adds further to the ecological interest of this site.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*); Old sessile oak woods with *Ilex* and *Blechnum* in British Isles; *Taxus baccata* woods of the British Isles; Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*); Mediterranean salt meadows (*Juncetalia maritimi*); Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation; Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels.
2. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: *Petromyzon marinus*, *Lampetra planeri*, *Lampetra fluviatilis*, *Alosa fallax*, *Salmo salar*, *Lutra lutra*, *Austropotamobius pallipes*, *Margaritifera margaritifera* To maintain the extent, species richness and biodiversity of the entire site
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Lower River Shannon cSAC (Site Code 002165): This very large site stretches along the Shannon valley from Killaloe to Loop Head/ Kerry Head, a distance of some 120 km. This site is of great ecological interest as it contains a high number of habitats and species listed on Annexes I and II of the E.U. Habitats Directive, including the priority habitat lagoon, the only known resident population of Bottlenosed Dolphin in Ireland and all three Irish lamprey species. A good number of Red Data Book species are also present, perhaps most notably the thriving populations of Triangular Club-rush. A number of species listed on Annex I of the E.U. Birds Directive are also present, either wintering or breeding. Indeed, the Shannon and Fergus Estuaries form the largest estuarine complex in Ireland and support more wintering wildfowl and waders than any other site in the country. Most of the estuarine part of the site has been designated a Special Protection Area (SPA), under the E.U. Birds Directive, primarily to protect the large numbers of migratory birds present in winter.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Large shallow inlets and bays; Estuaries; Salicornia and other annuals colonising mud and sand; Vegetated sea cliffs of the Atlantic and Baltic coasts; Mediterranean salt meadows (*Juncetalia maritimi*); Coastal lagoons; Mudflats and sandflats not covered by seawater at low tide; Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*); Sandbanks which are slightly covered by sea water all the time; Reefs; Perennial vegetation of stony banks; Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation; *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)
2. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: *Lampetra fluviatilis*, *Lampetra planeri*, *Petromyzon marinus*, *Salmo salar*, *Margaritifera margaritifera*, *Tursiops truncatus*, *Lutra lutra*
3. To maintain the extent, species richness and biodiversity of the entire site
4. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Lough Derg, North-East Shore cSAC (Site Code 002241): Lough Derg, the lowest order lake on the River Shannon, is one of the largest bodies of freshwater in Ireland. The site, however, only includes the northern shore of the lake from the mouth of the Cappagh River in the north-west to just below Black Lough at the north-eastern shore. The endangered fish species Pollan (*Coregonus autumnalis pollan*) is recorded from Lough Derg, one of only three sites in Ireland and in western Europe. Lough Derg is also a well known fishing lake with a good Trout (*Salmo trutta*) fishery. Atlantic Salmon (*Salmo salar*) also use the lake as a spawning ground. Although this species is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is listed on Annex II of the EU Habitats Directive. The Otter and Badger have been recorded within the site. Both of these species are listed in the Irish Red Data Book and are legally protected by the Wildlife Act 1976.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: *Taxus baccata* woods of the British Isles; Alkaline fens; Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*; *Juniperus communis* formations on heaths or calcareous grasslands; Limestone pavements; Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*).
2. To maintain the extent, species richness and biodiversity of the entire site
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Silvermines Mountains West cSAC (Site Code 002258): Silvermines Mountains West is situated to the north of Keeper Hill, about 10 km south of Nenagh, Co. Tipperary. The vegetation at this site is in good condition, with low grazing pressure throughout and no signs of overgrazing. One fifth of the site was burned in 2003 and there is evidence of former burning in another fifth. Former peat-cutting has occurred on the summit plateau and parts of the northern slopes. Afforestation, which is widespread to the east of the site, remains the greatest threat. The site is of conservation importance for its heath and grassland vegetation, and as a foraging area for Hen Harrier, and is one of the only extensive unplanted uplands remaining in north Tipperary.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Northern Atlantic wet heaths with *Erica tetralix*; European dry heaths.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Redwood Bog cSAC (Site Code 002353): Redwood Bog is located 7 km south west of Banagher mainly in the townland of Redwood, Co. Tipperary. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is bounded by the Middle Shannon Callows Special Protection Area (SPA) to the north and the River Little Brosna SPA to the north-east. The site is a candidate Special Area of Conservation selected for active raised bog, degraded raised bog and *Rhynchosporion*, habitats that are listed on Annex I of the E.U. Habitats Directive. Part of the site is already a state-owned nature reserve and supports Greenland White-fronted Geese, a bird listed on Annex I of the E.U. Birds Directive.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Sharvogue Bog cSAC (Site Code 000585): Sharvogue Bog is located about 8 km south of Birr, Co. Offaly, in the Little Brosna Valley. It is situated between the River Little Brosna and a ridge of high ground of Carboniferous limestone. The eastern edge is bounded by a disused railway embankment, the western by the river. The site is underlain by low permeability limestone and limestone till. Ground water upwells at the base of the ridge on the eastern side of the site. On the western side the site grades from high bog, through fringing woodland to alluvial wet grassland by the Little Brosna River. Sharvogue Bog is one of the few remaining raised bogs situated on a flood plain and is a very important example of a habitat that is becoming increasingly rare in Ireland and Europe.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Philipston Marsh cSAC (Site Code 001847): Philipston Marsh is a small marsh near Philipston House, south of Cappagh White in Co. Tipperary. It represents one of only two examples of calcareous fen and mire vegetation in the Mulkear River catchment and is thus a rare habitat in this locality. Philipston Marsh is a candidate SAC selected for transition mire, a habitat listed on Annex I of the E.U. Habitats Directive. This undisturbed fen and mire system supports an unusual and diverse assemblage of plant communities and is particularly important for its transition mire, a habitat listed on Annex I of the E.U. Habitats Directive.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Transition mires and quaking bogs.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

River Barrow and River Nore cSAC (Site Code 002162): This site consists of the freshwater stretches of the Barrow/Nore River catchments as far upstream as the Slieve Bloom Mountains and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The site is a candidate SAC selected for alluvial wet woodlands and petrifying springs, priority habitats on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for old oak woodlands, floating river vegetation, estuary, tidal mudflats, *Salicornia* mudflats, Atlantic salt meadows, Mediterranean salt meadows, dry heath and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Nore Freshwater Pearl Mussel, Crayfish, Twaite Shad, Atlantic Salmon, Otter, Desmoulin's Whorl Snail *Vertigo moulinsiana* and the Killarney Fern. The site is very important for the presence of a number of EU Habitats Directive Annex II animal species including Freshwater Pearl Mussel (*Margaritifera margaritifera* and *M. m. durrovensis*), Freshwater Crayfish (*Austropotamobius pallipes*), Salmon (*Salmo salar*), Twaite Shad (*Alosa fallax fallax*), three Lamprey species - Sea (*Petromyzon marinus*), Brook (*Lampetra planeri*) and River (*Lampetra fluviatilis*), the marsh snail *Vertigo moulinsiana* and Otter (*Lutra lutra*). This is the only site in the world for the hard water form of the Pearl Mussel *M. m. durrovensis* and one of only a handful of spawning grounds in the country for Twaite Shad. The freshwater stretches of the River Nore main channel is a designated salmonid river. The site is of ornithological importance for a number of E.U. Birds Directive Annex I species including Greenland White-fronted Goose, Whooper Swan, Bewick's Swan, Bar-tailed Godwit,

Peregrine and Kingfisher. Nationally important numbers of Golden Plover and Bar-tailed Godwit are found during the winter. Wintering flocks of migratory birds are seen in Shanahoe Marsh and the Curragh and Goul Marsh, both in Co. Laois and also along the Barrow Estuary in Waterford Harbour. There is also an extensive autumnal roosting site in the reedbeds of the Barrow Estuary used by Swallows before they leave the country.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Estuaries; Mudflats and sandflats not covered by seawater at low tide; *Salicornia* and other annuals colonising mud and sand; Atlantic salt meadows (*Glauco-Puccinellietalia maritima*); Mediterranean salt meadows (*Juncetalia maritimi*); Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation; European dry heaths; Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; Petrifying springs with tufa formation (*Cratoneurion*); Old sessile oak woods with *Ilex* and *Blechnum* in British Isles; Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)
2. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: *Vertigo moulinsiana*; *Margaritifera margaritifera*; *Austropotamobius pallipes*; *Petromyzon marinus*; *Lampetra planeri*; *Lampetra fluviatilis*; *Alosa fallax*; *Salmo salar*; *Lutra lutra*; *Trichomanes speciosum*; *Margaritifera durrovensis*
3. To maintain the extent, species richness and biodiversity of the entire site
4. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

The Loughans cSAC (Site Code 000407): The Loughans is a turlough situated in flat land about 3km east of Urlingford, below the Slieve Ardagh Hills, in County Kilkenny. The basin is slightly undulating, with banks and hummocks of glacial drift around which the water rises. It has a level floor for the most part, but swallowholes and subsidence hollows are present. The turlough floods regularly, despite some drainage. In summer, it retains a permanent central pond and there are several subsidiary wet hollows at the eastern end. The Loughans is the only large turlough in the south-east of the country, and the highest anywhere in Ireland. It has limited physical variation but, for its size, a fairly diverse vegetation, including open water, ditches, extensive damp areas and a good transition to the high quality lime rich grassland areas.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Turloughs.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Spahill and Clomantagh Hill cSAC (Site Code 000849): All in all, the site contains a variety of natural grassland communities that are rare in Ireland because of agricultural intensification. Taken with Cullahill Mountain to the north-east it forms a unit of high ecological interest. The presence of a population of Green-winged Orchid in grassland referable to a type listed, with priority status, on Annex I of the EU Habitats Directive is notable. Spahill and the adjacent hills form part of an escarpment which links the Slieve Ardagh Hills with the Castlecomer Plateau. The hills are of limestone overlain by shales and/or sandstones so the surface geology is variable, with each rock type maintaining a very different type of vegetation. This particular site is mostly limestone, exposed as small ledges or as flat sheets when it is weathered into the pavement pattern so well known from the Burren.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*).
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Cullahill Mountain cSAC (Site Code 000831): This site lies on a western outlier of the Castlecomer plateau, 6 km north-east of Johnstown, where the underlying limestone has been exposed relatively recently by erosion of the higher shales. The rock is in the form of an escarpment with a steep side facing the central plain (and the Cork-Dublin road) and more gradual slopes to the south-east where the shale soon appears. Green-winged Orchid is a rare species that is legally protected under the Flora Protection Order (1987) and the site is particularly notable for the abundance of this species (some 350 individuals were recently recorded from the site). The importance of the site lies in the presence of the large population of Green-winged Orchid in grassland referable to a type listed, with priority status, on Annex I of the EU Habitats Directive.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*).
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Galmoy Fen cSAC (Site Code 001858): Galmoy Fen is situated 7 km north of Johnstown in Co. Kilkenny, close to the boundary with Co. Laois. It comprises a cutover raised bog that has become flooded with base-rich groundwater and that now supports alkaline fen vegetation. It lies in a depression and is underlain by Carboniferous limestone. This site is a candidate SAC selected for alkaline fen, a habitat listed on Annex I of the E.U. Habitats Directive. Galmoy Fen is of considerable conservation significance as it comprises a good quality example of alkaline fen, a habitat that is listed on Annex I of the E.U. Habitats Directive.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Alkaline fens.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Coolrain Bog cSAC (Site Code 002332): Coolrain Bog is situated in Co. Laois approximately 4 km north-east of Borris-in-Ossory, mainly within the townlands of Derries, Rosznaclonagh Outside, Coolrain and Caher. The site comprises a raised bog that includes both areas of high bog and cutover bog. The northern margin of the site is bounded by the Tonet River, and the eastern boundary by forestry on old cutover.

The site is a candidate Special Area of Conservation selected for active raised bog, degraded raised bog and Rhynchosporion, habitats that are listed on Annex I of the E.U. Habitats Directive.

Coolrain Bog is a site of considerable conservation significance comprising as it does a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. This site supports a good diversity of raised bog microhabitats, including hummock/hollow complexes and flushes. Unlike most other raised bogs, Coolrain Bog developed over Old Red Sandstone rather than limestone, a factor that will have affected the water chemistry of the site and the early development of the bog. Its geographical location is important as, along with the nearby Knockacoller Bog, it is at the most southerly edge of the range of the true Midland Raised Bog type. Active raised bog is listed as a priority habitat on Annex I of the E.U. Habitats Directive. Priority status is given to habitats and species that are threatened throughout the E.U. Ireland has a high proportion of the total E.U. resource of this habitat type (over 60%) and so has a special responsibility for its conservation at an international level.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Slieve Bloom Mountains cSAC (Site Code 000412): see **Slieve Bloom Mountains SPA** (Site Code 004160) above. The Slieve Bloom Mountains lie on the Offaly-Laois border, starting about 8km north-east of Roscrea and running about 24km north-east, towards Clonaslee. The mountains are of Old Red Sandstone, flanked by Silurian rocks. From approx. 180m O.D., the site extends to 529m O.D. This site is remarkable for its mountain blanket bog habitat. The uplands at this site provide excellent habitat for Peregrine Falcon, a species listed on Annex I of the E.U. Birds Directive. Breeding pairs occur here. Blanket bogs are an increasingly rare habitat in Europe, and in Ireland are continually under threat. The Slieve Bloom Mountains are an important link in the east-to-west gradient of bogs in Ireland, and are floristically linked to the midland raised bogs north of the site. The intactness of the blanket bog here is remarkable and is echoed in few other areas in the Republic of Ireland, making this site of unique conservation value.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Blanket bog (7130), Northern Atlantic wet heaths with *Erica tetralix* (4010), Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion albae*) (91E0).
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Ridge Road, SW of Rapemills cSAC (Site Code 000919): This steep-sided twin esker ridge, formed from glacial gravels, is situated under 2 km south-west of the village of Rapemills in County Offaly. The more northerly ridge supports a road running towards the Little Brosna River. Hollows are present with deeper soils which are more nutrient-enriched, while the banks are slightly leached. The vegetation is primarily unimproved grassland in the western section and a mixture of dry unimproved esker grassland and wet grassland in the more easterly section. An important feature of this site is the presence of orchid-rich calcareous grassland, a priority Annex I habitat under the EU Habitats Directive. Although small, this site is of ecological value as a good example of species-rich calcareous grassland, rich in orchids. This habitat type is increasingly rare as a result of agricultural intensification, and is given priority status on Annex I of the EU Habitats Directive. The vegetation at Ridge Road is diverse and features a variety of unusual plant communities, as well as a large population of Green-winged Orchid.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*).
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Ardgraique Bog cSAC (Site Code 002356): Ardgraique Bog is situated approximately 3 km north-east of Killimor, in the townlands of Ardgraique, Kilquain, Woodfield, and Lissaniska North and South, Co. Galway. The site comprises a raised bog that includes both areas of high bog and cutover bog. It is surrounded by agricultural fields and is located within a cluster of raised bogs. The bog is just north of the Killimor-Eyrecourt Road with a number of local access roads leading to the bog and one leading onto the high bog. The site is a candidate Special Area of Conservation selected for active raised bog, degraded raised bog and Rhynchosporion, habitats that are listed on Annex I of the E.U. Habitats Directive. The site consists of a small raised bog that developed in a basin. It is actively cut on all margins. Ardgraique Bog is a site of considerable conservation significance comprising as it does a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. The site has a high diversity of raised bog plant species and supports a good diversity of raised bog microhabitats, including hummock/hollow complexes, pools, and flushes, as well as a number of scarce plant species. Active raised bog is listed as a priority habitat on Annex I of the E.U. Habitats Directive. Priority status is given to habitats and species that are threatened throughout the E.U. Ireland has a high proportion of the total E.U. resource of this habitat type (over 60%) and so has a special responsibility for its conservation at an international level.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Cloonmoylan Bog cSAC (Site Code 000248): Cloonmoylan Bog is a very large expanse of level raised bog, situated close to the western shore of Lough Derg, near Woodford in County Galway. It lies at an altitude of approx. 50m above sea-level. This site contains a large area (90ha) of good quality, intact raised bog habitat. A further 100ha also qualifies as raised bog habitat, *sensu* Annex I of the European Habitats Directive. The surface of the bog displays a typical, undulating pattern of pools, wet channels and low hummocks. Cloonmoylan Bog is of high conservation value, due to the large area of good quality raised bog habitat present. Raised bogs have largely disappeared from Europe, and in Ireland, are threatened by peat extraction. Habitat diversity on this raised bog is good and the presence of scarce plant species adds to the sites importance

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion; Bog woodland.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Pollagoona Bog cSAC (Site Code 002126): Pollagoona Bog is located 300 m east-south-east of Lough Atorick, close to the Clare-Galway county boundary, and some 10 km west-south-west of Woodford. The bog is situated on a shallow saddle, on flat to gently sloping land surrounded by conifers at an altitude of 150 m above sea level. The site is a small blanket bog that shows some features of a raised bog. Intact blanket bogs are becoming increasingly rare in Ireland through turbary, afforestation and drainage. The scarcity of this habitat in Europe has also been recognised and active blanket bog is listed as a priority habitat on Annex I of the EU Habitats Directive. Pollagoona Bog is a small, but important example of an intact, active saddle blanket bog.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Blanket bog.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Loughatorick South Bog cSAC (Site Code 000308): The bog supports a population of Red Grouse. Snipe are regular in winter and may breed. Intact, active blanket bogs, which were once characteristic of uplands in Ireland, are now rare and vulnerable, and are recognised as a habitat of international importance. Ireland has a special responsibility to conserve the best of its remaining bogs. Loughatorick South Bog is a good example of the habitat. The scarcity of suitable terrain for the development of this type of intermediate bog in Ireland means that Loughatorick South is a rare habitat. Most of the rest of the Slieve Aughty range is heavily afforested but this bog is remarkably intact. About 8 km north-west of Mountshannon, straddling the Clare/Galway border, Loughatorick South Bog, named after one of the main townlands in the site, occupies the summit of Scalp Mountain, and extends down the gentle slopes to the south and to the east. Scalp is one of the southernmost, and lower of the Slieve Aughty Mountains, reaching a height of 325 m. It is predominantly of Old Red Sandstone with some Silurian beds to the east. At this elevation, the bog is an intermediate between lowland and mountain blanket bog, and can be described as a highland blanket bog.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Blanket bog.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Slieve Bernagh Bog cSAC (Site Code 002312): Slieve Bernagh Bog is situated to the west of Lough Derg, in the south-east of Co. Clare. The site comprises the Slieve Bernagh mountain range, with the highest peaks at Moylussa (532 m) and Cragnamurragh (526 m), and the surrounding peatlands that flank its northern slopes. Slieve Bernagh Bog is a candidate SAC selected for blanket bog, wet heath and dry heath, all habitats listed on Annex I of the E.U. Habitats Directive. Slieve Bernagh Bog is a site of considerable conservation importance as it contains a range of peatland types, including active blanket bog, a habitat listed with priority status under the E.U. Habitats Directive. It is one of the last remaining areas of intact open moorland habitat in this part of the country. Several species of birds, typical of open moorland, have been recorded from this site. These include Skylark, Meadow Pipet, Red Grouse, Wheatear and Raven. At least two pairs of Hen Harriers are known to occur within the Slieve Bernagh to Keeper Hill region and birds would use the cSAC for foraging habitat. This species is listed on Annex I of the E.U. Birds Directive.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Northern Atlantic wet heaths with *Erica tetralix*; European dry heaths; Blanket bog.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Glenomra Wood cSAC (Site Code 001013): Glenomra Wood is a good example of a deciduous semi-natural woodland and is of considerable conservation significance as it is of a type listed on Annex I of the EU Habitats Directive. This deciduous wood is located in south-east Clare, about 10 km north of Limerick City. The dominant tree is Downy Birch (*Betula pubescens*), which attains a height of about 20 m in places, mixed with Sessile Oak (*Quercus petraea*), Ash (*Fraxinus excelsior*) and Beech (*Fagus sylvatica*) throughout. Holly (*Ilex aquifolium*) is abundant and is the main understorey species. Hazel (*Corylus avellana*), regenerating Birch, Gorse (*Ulex europaeus*) and Brambles (*Rubus fruticosus* agg.) are other understorey species. Willow (*Salix* spp.) occurs in the wetter areas.

Draft Conservation Objectives:

1. To maintain the Annex I habitat for which the cSAC has been selected at favourable conservation status: Old sessile oak woods with *Ilex* and *Blechnum* in British Isles.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Glenstal Wood cSAC (Site Code 001432): This site, which is associated with Glenstal Abbey, lies in the western foothills of the Slievefelim Mountains, about 8 km north-west of Cappamore, Co. Limerick. The site is centered on a glen which has been cut into Old Red Sandstone, and which runs in a north-easterly direction for about 2 km, eventually becoming a steep-sided rocky ravine. Here, Oak (*Quercus* sp.) woodland remnants which support rich fern, bryophyte and lichen floras occur. The rare lichen, *Enterographa elabora*, a species known from only three other counties in Ireland has been recorded at the site. Some Oak woodland remnants are also found about Glenstal Abbey. Killarney Fern (*Trichomanes speciosum*), a rare species that is listed on Annex II of the EU Habitats Directive and that is also protected under the Flora (Protection) Order, 1999 occurs at the site.

Draft Conservation Objectives:

1. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: *Trichomanes speciosum*.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

All Saints Bog and Esker cSAC (Site Code 000566) see **All Saints Bog SPA** (Site Code 004103) site synopsis above.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Semi-natural dry grasslands and scrubland facies on calcareous substrates

- (Festuco Brometalia); Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion; Bog woodland.
2. To maintain the extent, species richness and biodiversity of the entire site.
 3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Danes Hole, Poulnalecka cSAC (Site Code 000030): This site consists of a small fossil cave in the banks of the Ahaclare River situated within a wood approximately 4 km west of Broadford, Co. Clare. It is a winter hibernation site and also a mating site of the Lesser Horseshoe Bat (*Rhinolophus hipposideros*), a species listed on Annex II of the EU Habitats Directive. A nearby summer roost for the bat and the commuting routes between the two are also included. The cave is located within Poulnalecka Wood, which is a broad-leaved wood consisting of Oak (*Quercus* sp.), Birch (*Betula* sp.) and Holly (*Ilex aquifolium*). This woodland provides important foraging habitat and shelter for the bats. Some recent felling in Poulnalecka wood is a cause of concern. Replanting with broadleaf trees would help mitigate this problem. In November 1998 250 Lesser Horseshoe bats were counted at the cave, making the site one of international importance. In the National context this site is considered important because it is one of the most eastern points in the distribution of this bat in Ireland.

Knockacoller Bog cSAC (Site 002333): Knockacoller Bog is situated approximately 2 km south west of Castletown in Co. Laois, and lies mainly within the townlands of Butterisland, Rush Hall and Knockacoller. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is a candidate Special Area of Conservation selected for active raised bog, degraded raised bog and Rhynchosporion, habitats that are listed on Annex I of the E.U. Habitats Directive. Hares are commonly observed on Knockacoller Bog, while Peregrine Falcons are often seen over the site.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Island Fen cSAC (002236): This site is located in a small valley in the foothills of the Slieve Bloom Mountains, south west of Clareen village in Co. Offaly. The geology of the area is Lower Carboniferous Limestone and the principle soil is grey brown podzolic with brown earths, gleys, basin peat and limestone gravels and sands. The site overlies an old lake bed lined with shelly marl. Generally, soil cover is thin with some rocks protruding locally. This is a relatively small but species diverse wetland site. The interest of the site lies primarily in the presence of alkaline fen and juniper scrub, both of which are listed as Annex 1 habitats under the EU Habitats Directive. The Frog also occurs in abundance within the site. This is a Red Data Book species listed as Internationally important and is legally protected under the 1976 Wildlife Act. It is listed in Annex V of the EU Habitats Directive. In summary, the site is important for the occurrence of excellent examples of upright Juniper scrub formations, on a species rich calcareous grassland/heath, and alkaline fen, both habitats listed on Annex 1 of the EU Habitats Directive.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: *Juniperus communis* formations on heaths or calcareous grasslands; Alkaline fens.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Lisduff Fen cSAC (Site Code 002147): Lisduff Fen is situated about 4 km south-east of Birr in County Offaly. Its exact location is at the north-east quarter of Kilcolman crossroads. The site comprises a wet calcareous fen, with typical fen and marsh species. This habitat corresponds to alkaline fen, a habitat that

is listed on Annex I of the EU Habitats Directive. Of major conservation and scientific significance is the presence on the site of a population of the rare snail *Vertigo geyeri*. *Vertigo geyeri* is listed on Annex II of the E.U. Habitats Directive. Overall, this is an important site owing to the presence of alkaline fen and petrifying spring, habitats listed on Annex I of the E.U. Habitats Directive. It is also of high conservation importance for the occurrence of *Vertigo geyeri*, a rare mollusc listed on Annex II of this directive.

Draft Conservation Objectives:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Petrifying springs with tufa formation (Cratoneurion); Alkaline fens.
2. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: *Vertigo geyeri*.
3. To maintain the extent, species richness and biodiversity of the entire site.
4. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Derrycrag Wood Nature Reserve cSAC (Site Code 000261): Derrycrag Wood is an old Oak (*Quercus* sp.) woodland, a habitat listed on Annex I of the EU Habitats Directive. It is situated 1.5 km south-east of Woodford, Co. Galway, and is traversed by the Woodford River. The underlying rock is Old Red Sandstone, which is overlain in places by drift. The soils vary from thin, acidic podzols to deeper, gleyed brown earths. Most of the site is also designated as a Nature Reserve, but an adjacent area of thinned out Scot's Pine with a very diverse ground flora and an area of wet grassland are also included. Derrycrag Wood is of considerable conservation significance as an old Oak woodland, a habitat listed on Annex I of the EU Habitats Directive. Furthermore it supports a diverse flora and fauna including the Red Data Book species Alder Buckthorn, Pine Marten and Badger.

Pollnacknockaun Wood Nature Reserve cSAC (Site Code 00319): Pollnacknockaun Wood is situated approximately 2 km north-east of Woodford, Co. Galway. It is a large area of former oakwood with significant remnants of the original stands of Sessile Oak (*Quercus petraea*) and even larger areas of intact ground flora. The area is underlain by Old Red Sandstone, which is covered in places by drift. The soils vary from thin acidic podzols to deeper gleyed brown earths. The site boundary has been taken to include all of the Nature Reserve plus an adjacent, similar sized area owned by Coillte. Here Scot's Pine planting in the past has allowed the ground flora to survive. Old Oak Woodlands are listed on Annex I of the E.U. Habitats Directive. Oakwoods are rare in Ireland and oakwoods on rich soils which are not the result of planting are even rarer.

Rosturra Wood cSAC (Site Code 001313): The site comprises part of what was formerly a large stand of Sessile Oak (*Quercus petraea*) woodland. It is situated about 3 km east of Woodford, Co. Galway and consists of two separate areas. In the 1930s and 1940s much of the wood was cleared and planted with coniferous species. However, the wood retains significant remnants of the original stands of Oak and its associated ground flora. The wood is situated on rich loamy soils and consequently the size and quality of the hardwood and the diversity of the ground flora is greater than in most Irish Oak woods. Oakwoods are rare in Ireland and those found on rich soils which are not the result of planting are even rarer. The remnants of original Oak wood at Rosturra Wood (and at the neighbouring Derrycrag Wood and Pollnacknockaun Wood) are part of what was, until 1940, the largest area of natural Oak wood in the country. Oak and Yew woodland such as that found at Rosturra Wood are rare habitats of considerable conservation significance and are listed on Annex I of the EU Habitats Directive.

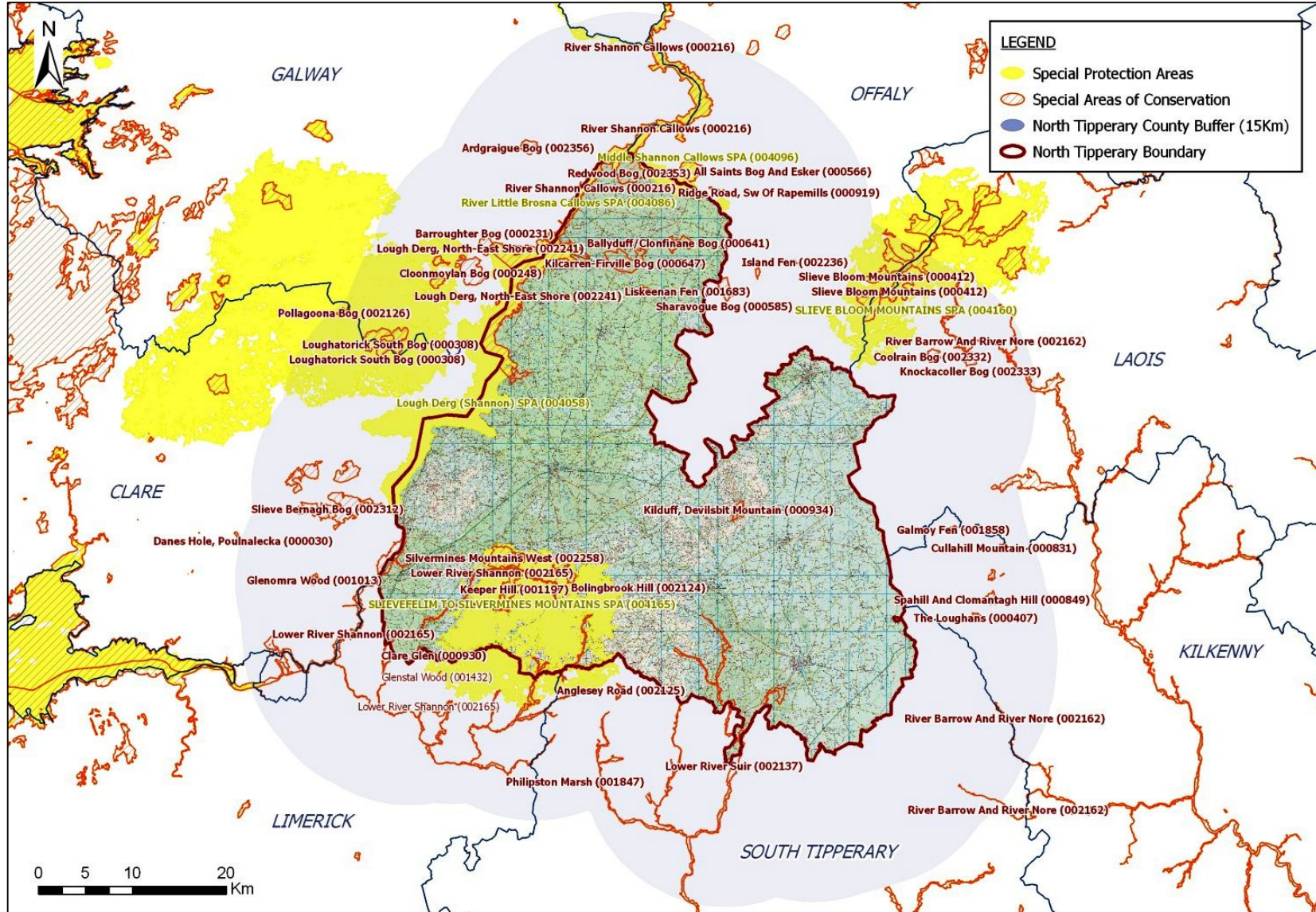


Figure 1 Natura 2000 Sites within the Plan area and within 15km of the Plan Boundary

Section 4 Assessment Criteria

4.1 Elements of the Plan with potential to give rise to significant effects

A list of the individual policies and objectives of the Plan (either alone or in combination with other plans or projects) with potential to give rise to impacts on the Natura 2000 sites is included in the left hand column of the assessment tables contained in the accompanying Appendix.

These have been taken from Section 8 - *Evaluation of Plan Provisions* - of the Environmental Report which has been prepared as part of the Strategic Environmental Assessment process. In that evaluation, each of the Plan's policies and objectives were evaluated against the Strategic Environmental Objectives (SEOs) listed below:

SEO B1: To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites.

SEO B2: To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites.

SEO B3: To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity.

Thus the policies and objectives which have been identified by the SEA process as having probable or potential conflict with the above SEOs are further examined in this Habitats Directive Assessment. Any policies or objectives relevant to the Habitats Directive Assessment with an uncertain interaction with the SEOs were brought forward to be screened in the Appendix to this document

Where a number of Specific Objectives were evaluated together in a group in Section 8 of the Environmental Report, only policies or objectives with relevance to Habitats Directive Assessment were brought forward to be screened in the Appendix to this document.

4.2 Elements of Plan likely to cause impacts

The tables in the Appendix identify whether these policies and objectives are likely to cause any direct, indirect or secondary impacts (either alone or in combination with other plans or projects) on the sites by assessing them against the sites' conservation objectives, as given in sections 3.1.1 and 3.1.2 above.

Where potential impacts are identified, then avoidance/mitigation measures contained as policies or objectives within the Plan as well as other laws/standards/procedures are cited and it is determined whether there will be any residual impacts or not.

Section 5 Conclusions

5.1 Criteria for Assessment

On the basis of the above analysis it can be concluded that no projects that will cause significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 sites shall be permitted on the basis of this Plan⁵ (either individually or in combination with other plans or projects), considering the following factors⁸:

- size and scale
- land-take
- distance from the Natura 2000 site or key features of the site
- resource requirements (water abstraction etc.)
- emissions (disposal to land, water or air)
- excavation requirements
- transportation requirements
- duration of construction, operation, decommissioning, etc.
- habitat area
- disturbance to key species
- habitat or species fragmentation
- species density
- changes in key indicators of conservation value (water quality etc.)
- climate change
- key relationships that define the structure of the sites
- key relationships that define the function of the site

Furthermore, such developments as will be permitted on foot of the provisions of this Plan shall be required to conform with the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects.

5.2 Conclusion

The trigger for a Stage Two⁹ HDA would be if the Plan were likely to have significant effects on a Natura 2000 site. This screening report evaluates the Plan to see if it needs to be the subject of a Stage Two HDA. It finds that the Plan has been formulated to ensure that uses, developments and effects arising from permissions based upon the Plan (either individually or in combination with other plans or projects) shall not give rise to significant effects on the integrity of any Natura 2000 sites⁵. Therefore, in accordance with the *Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, it is concluded that the Plan does not require any further assessment to demonstrate compliance with the Directive.

⁸ These factors have been taken from *Assessment of plans and projects significantly affecting Natura 2000 sites (Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC)*

⁹ ref. Section 1.2