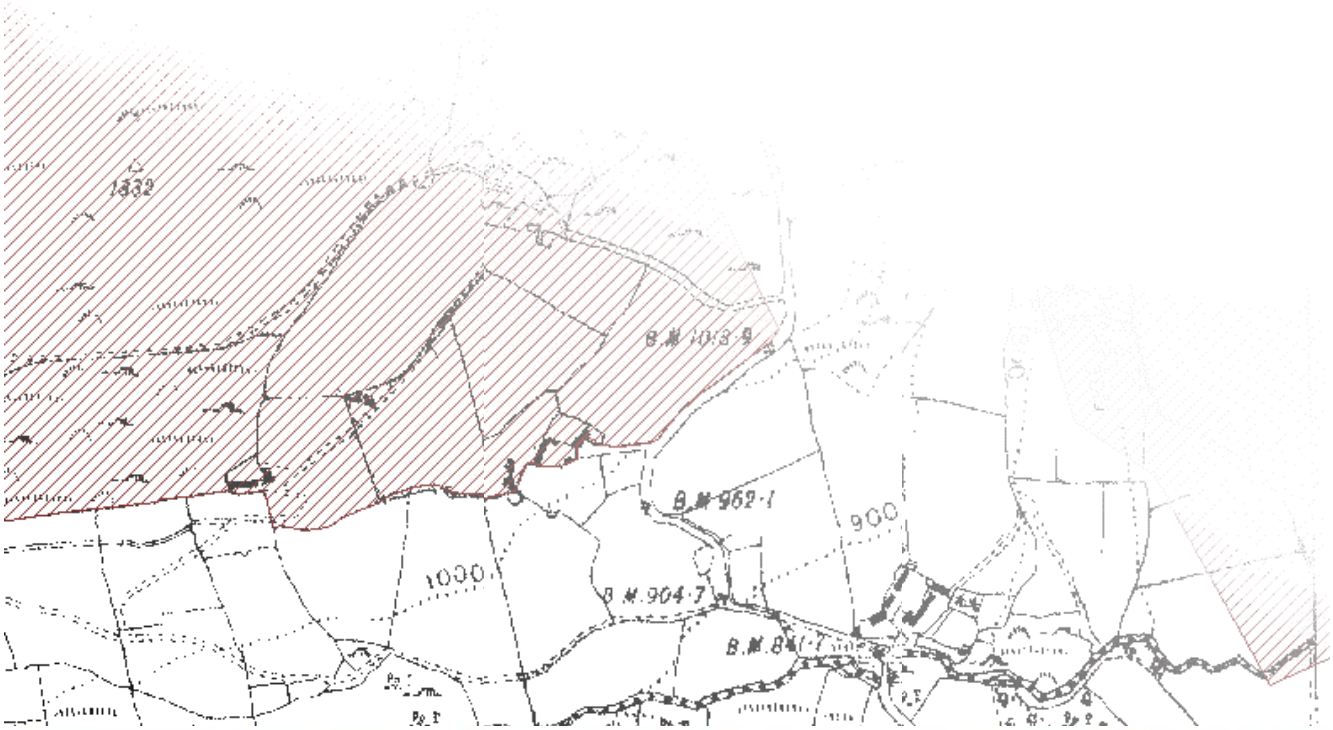
AN ROINN COMHSHAOIL, OIDHREACHTA AGUS RIALTAIS ÁITIÚIL
DEPARTMENT OF THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT

National Parks and Wildlife Service Conservation Plan for 2006-2011

Croaghonagh Bog cSAC

Site Code 129

Co. Donegal



SUMMARY

Introduction

Croaghanagh Bog cSAC has been designated as a candidate Special Area of Conservation under the EU Habitats Directive because it is an excellent example of blanket bog, being one of only a handful of relatively intact bogs remaining in east Donegal. In addition it supports a range of bird species, particularly Greenland White-fronted Goose, which feed here in winter, and Golden Plover and Red Grouse which breed on site. Merlin, Hen Harrier and Peregrine Falcon feed over the site. Otter and Irish Hare also frequent the site.

Description of Croaghanagh Bog cSAC

Croaghonagh bog predominantly comprises upland blanket bog, with a variety of other habitats including wet heath and cutover bog. A small lake, Lough Carn, and associated watercourses are included in the site and it is bounded on the northern side by Lough Mourne. The blanket bog at its northern end is dome–shaped. It is spongy and quaking in places with hummock/hollow formation and large pools. It supports typical plant communities including Ling, Cottongrasses, Purple Moor-grass, and an extensive cover of bog mosses.

The site is primarily devoted to conservation, and part is actively managed in this regard by Coillte Teo. as part of an EU LIFE-funded project. It has been partly damaged in the past by drainage, and by turf cutting which has taken place practically right around the internal margins. Water abstraction from Lough Mourne may have an impact on the hydrology of the site.

Main conservation objectives

- To maintain the Annex I habitat for which the cSAC has been selected, at favourable conservation status; Blanket Bog (68 % of the site).
- To maintain the extent, species-richness and biodiversity of the entire site.
- To maintain facilities for the visiting public and promote and enhance the potential educational use and value of the site.
- To establish effective liaison and co-operation with land owners, legal users and relevant authorities.

Main management issues

- Water Abstraction
- Drainage
- Dumping
- Forestry
- Grazing
- Burning
- Turf Cutting

Main strategies to achieve objectives

- Monitor
- Maintain blocked drains
- Minimise impacts of peat cutting
- Eliminate and prevent dumping
- Maintain board walk
- Maintain display signs
- Carry out promotion and publicity
- Liaise with interested parties

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READER'S GUIDE

The National Parks and Wildlife Service (NPWS) of the Department of the Environment, Heritage and Local Government (DEHLG) has produced this plan to provide ecological information about the site and to outline the main objectives for the conservation of the special features of the site. The purpose of this draft is to provide stakeholders the opportunity to input into the development of the plan.

The **Introduction** section outlines the **policy background** to the site's designation and the relevant legislation.

The **Site Description** section contains **general information** on the site's boundaries and ownership and on the statutory bodies with responsibility for its conservation. It also contains sections on the **physical aspects** of the site such as the geology and hydrology as well as the **biological features**, in particular, the habitats and species found there. **Land use** and cultural features are also described.

The **Conservation Value** section assesses the main ecological attributes of the site.

The **Management Framework** section outlines the management necessary for the conservation of the site. It starts with a set of specific **conservation objectives.** These are followed by the main **management issues** that may impact on the conservation of the site and the **strategies** that are proposed to achieve the conservation objectives. In the final section, the site is divided into management **zones** to indicate where each strategy applies.

The appendices include a **glossary** where scientific and technical terms are explained, **reference material** consulted in the preparation of the plan and a list of **notifiable actions** relevant to each habitat within the site.

By preparing, implementing and reviewing this plan on a five-year basis, DEHLG aims to achieve the objectives of the EU Habitats Directive in relation to this site.

INTRODUCTION

Legal Background of Conservation Plans

The legal basis for selection and designation of **Special Areas of Conservation** (SACs) is the **EU Habitats Directive**, which was adopted in 1992. Focusing on the conservation of natural and semi-natural habitats and species of flora and fauna, the Habitats Directive seeks to establish "Natura 2000", a network of protected areas throughout the European Community. The Habitats Directive includes a list of habitats that require SAC designation and specific conservation measures. This list is known as Annex I and the habitats are referred to as Annex I habitats. On this list, habitats that require special attention because they are in danger of disappearance, are termed 'priority habitats'. A second list, Annex II in the Habitats Directive comprises species that must be afforded special protection.

In Ireland, the habitats and species that must be afforded protection under the Habitats Directive include:

- 16 Annex I priority habitats that require particular attention – including raised bogs, active blanket bogs, turloughs and machair,
- 45 other Annex I habitats – such as certain types of heaths, lakes and woodlands,
- 25 Annex II species – including Otter, Freshwater Pearl Mussel and Killarney Fern.

It is the responsibility of each member state to designate SACs to protect the Annex I habitats and Annex II species. These sites, together with the **Special Protection Areas** (SPAs) designated under the **EU Birds Directive** (1979), form the European "Natura 2000" network.

The Birds Directive contains annexes, which are lists of birds that require particular conservation measures (Annex I), and also species that may be hunted, and species that may be sold. There are 28 Annex I species regularly occurring in Ireland including Whooper Swan, Greenland White-fronted Goose, Peregrine Falcon, Corncrake and Terns. Member states are also required to protect sites that are important for migratory species such as ducks, geese and waders.

The Habitats Directive was transposed into Irish law through the **European Communities (Natural Habitats) Regulations 1997.** The **Wildlife Act 1976** is the main statute governing the protection of wildlife in Ireland and was amended in 2000 to take account of European law, particularly the Habitats and Birds Directives. The **Wildlife (Amendment) Act 2000** also makes legal provision for the designation and protection of a national network of **Natural Heritage Areas** (NHAs). Over 1,100 proposed NHAs were published in 1995 and almost 400 of these are also selected as candidate SACs.

The European Communities (Natural Habitats) Regulations 1997 include the following points:

The Minister for the Environment, Heritage and Local Government must transmit a candidate list of sites to the European Commission for consideration.

Following adoption of this list by the Commission, the Minister will formally designate the sites as SACs.

Sites are legally protected once they are publicly advertised.

Landowners and other users with a legal entitlement should be notified of designation, and the Minister must make all reasonable efforts to do so. Notification also includes a list of activities that may alter, damage, destroy or interfere with the integrity of the site. A person who illegally damages a site may be prosecuted or required to repair damage.

Landowners and other users with a legal entitlement may appeal the designation of lands on scientific grounds, within three months of the designation notification.

Landowners and other users with a legal entitlement will be compensated for actual loss of income arising from restrictions imposed as a result of designation.

DEHLG is the government department with responsibility for the designation and protection of wildlife habitats, species and areas of conservation interest. As part of their responsibility in relation to biodiversity and wildlife under the Wildlife Acts (1976 and 2000), the Minister's brief extends far beyond the habitats and species listed in the annexes of the Habitats and Birds Directives. For this reason, cSAC conservation plans may deal with species that are not mentioned in these annexes.

Reasons for Designation of Croaghonagh Bog cSAC

HABITATS LISTED IN ANNEX I OF THE EU HABITATS DIRECTIVE	CONSERVATION VALUE
• **Blanket Bog** (EU Habitat Code 7130)	This is one of the few relatively intact blanket bogs in east County Donegal and has an excellent system of bog pools. It is actively forming.

Implications of Site Designation for Landowners and other Site Users

In most areas designated as cSACs, current practices will not have to change significantly.

In cases where users with a legal entitlement are required to change practices or restrict activities to protect the wildlife interest of the site, compensation will be payable based on actual loss of income. See Appendix VII for further details.

If a user with a legal entitlement wishes to carry out certain activities, not covered by licence or consent from another statutory body, within the designated area, they must consult with, and get consent from, the Minister for the Environment, Heritage and Local Government. These activities are listed as "Notifiable Actions" for each habitat (see Appendix VI).

SITE DESCRIPTION

Location Including Site Boundaries

This site is located approximately 9 km south-west of the town of Ballybofey, on the eastern side of the national primary road (N15) in county Donegal. It is immediately south of Lough Mourne and north of Barnesmore Gap. (Map 1)

Grid Ref.:	H 05 88
Latitude:	N 54° 44’
Longitude:	W 07° 55’
Area:	249 ha
Altitude Range:	170m to 195m
Townlands:	Croaghonagh, Croaghnagawna. Cashelnavean.

Site Boundaries

The boundaries of this site are determined, and defined on the ground, by clearly identifiable physical features (Map 1). On the western/north-western side this takes the from of a combination of a gravelled road and, at the northern end, a track which was part of the former Donegal Railway line. The boundary is continued around the north-eastern margin by a combination of streams and the shore of Lough Mourne. The eastern and southern sides are bounded by forestry plantations.

Site Infrastructure

A third class road running in a general east-west direction serves the site and divides it into two parts. The western side of the southern part is served by a gravelled road which forms its boundary at that location. Two further short sections of gravelled road provide access to two sites where stone quarrying took place in the past. An ESB cable on timber pylons traverses the southern portion of the site in a general east-west direction. A small car park at the roadside at the northern end serves the property and a board-walk extends from it onto the bog.

Legal Status

Ownership

The major part of this site is in private ownership (one owner). Three plots are owned by Coillte Teoranta, The Irish Forestry Board, one at the northern end of the site, another south of Mary Breen's Burn and the third on the western side of the site. A narrow strip, 10 meters in width, running eastwards from Lough Carn is owned by Donegal County Council. (See Map 2).

Designations of the Site

candidate Special Area of Conservation	Sitecode IE000129	Published on 1st May 2000
proposed Natural Heritage Area	Sitecode 129	Published 1995

Rights Pertaining to the Site

Turbary	There are turbary rights along the bog road at the western side of the site.
Rights of way	The ESB has a wayleave along the route of its cable through the site. (see Map 2)

Government Departments and Agencies

Department of the Environment, Heritage and Local Government (DEHLG)	DEHLG is the government department with responsibility for the protection and conservation of Ireland's natural heritage.
National Parks & Wildlife Service (NPWS)	NPWS is the section of the DEHLG responsible for maintaining the nature conservation value of the site. Periodic inspection of the site is carried out by the local Conservation Ranger. Regional staff may also participate in research and survey projects by collecting data on the site, provide advice to planning authorities on the impacts of development applications and provide an education and advisory service to the public (see Appendix IX for further details of NPWS regional staff).
Donegal County Council	Donegal County Council is the planning authority for the site. As such it is obliged to ensure appropriate assessment of the implications of developments requiring planning permission that may have an impact, either individually or in combination with other developments on the designated area. Donegal County Council is responsible for, analyses and monitors water quality on Lough Mourne and the Mourne Beg river in association with the EPA. It also has responsibility for the supply of water to the towns of Ballybofey, Stranorlar, Castlefin and Lifford, the source of which is Lough Mourne (to the north-east of the site).

Environmental Protection Agency (EPA)	The EPA is an independent state sponsored body with a wide range of statutory duties including monitoring environmental quality and overseeing the performance by local authorities of their statutory environmental protection functions. Water quality monitoring is one of its functions.
Department of Agriculture and Food	DAF is the government department responsible for the development and regulation of agriculture, forestry and the food industry, including the administration of schemes such as the Rural Environment Protection Scheme (REPS).
Coillte Teoranta	Coillte Teoranta is the State-owned commercial forestry company, which owns public forests.
The Loughs Agency/ Gniomhaireacht na Lochanna/Factrie Fur Loughs	The Loughs Agency is the fisheries body under the All Ireland, Foyle, Carlingford and Irish Lights Commission. It has responsibility for several river catchments in Donegal (i.e the Finn, The Foyle) and the catchment of the Mourne Beg River.

Local Authority Policy in relation to the Site

It is the stated objective (2.6.3) of Donegal County Council in its County Development Plan 2000 *'to have regard to proposed Natural Heritage Areas (as published to date) in relation to the Council's own activities and in assessment of planning applications'*. It recognises that within the NHA category there are two other categories, namely SPAs and SACs.

Under Policy No. 6 - Natural Heritage Areas, Special Protection Areas and Special Areas of Conservation (Section 2.6.4) *'The Council will inform Dúchas of any planning applications or proposed service works likely to impact on sites'*. It continues that *'until an amendment to the wildlife Act 1976 is passed, the Council cannot make more general policy guidelines in relation to developments within NHAs'*.

It recognises that in respect of SPAs and SACs *'the obligations of the Council in regard to Planning applications are set out in the European Communities (Natural Habitats) Regulations 1997'*.

'The proposed NHAs reflect the rich and diverse heritage resource which survives in the County. The Council views them in a positive rather than negative light. Like other heritage resources they can contribute, in themselves, to the wealth of experience and opportunity which the County offers to residents and visitors.

The Council will work with relevant authorities, voluntary and community groups, to optimise the contribution of these or other heritage resources to the sustainable development of the County'.

Under Section 2.6.4 of the County Donegal Development Plan 2000 proposed NHAs (incorporating SPAs and SACs) are identified by reference to a Landscape Conservation Map where they are distinguished. Croaghonagh Bog is identified and categorized on this map only as a NHA.

County Donegal Development Plan (Section 2.6.4) designates the hinterland of Croaghonagh Bog as a combination of Landscape Categories 2 and 3 (three categories exist). Category 2 landscapes are described as highly scenic areas whose natural character has been modified by mans activities. Those in Category 3 are described as areas of highest quality landscape with characteristics of wilderness, and few if any manmade features. Policies regarding landscape conservation are set out in Appendix V.

Notwithstanding the above, Donegal County Council propose to further develop Lough Mourne as a water supply source. Under Environmental Services and Protection, Section 2.4.4, Policy No 1 of the plan, the Council's five year programme for major water supply schemes is set out. The Lough Mourne/Letterkenny Water Supply Scheme is listed in the associated Table 3.2.2 as a "*scheme approved to enter planning*" with an estimated budget of €30m.

Under Policy No 3 "*all water sources and uses within the jurisdiction of the Council form the basis of an Integrated Water Quality Management Programme being developed by the Council. …. The Council is developing monitoring, control and improvement programmes to provide a structured approach to actions under this policy area*".

A "County Donegal Draft Development Plan 2005" now exists. While it has yet to be adopted cognisance is taken of it and the policies outlined therein in the consideration of relevant proposals and developments. With regard to this site the draft plan recognises and identifies it as a Special Area of Conservation. It confirms the status of the location and hinterland of the SAC as an area of Especially High Scenic Amenity (EHSA). With regard to Water Quality Management Plans it states that the EU Water Framework Directive "*will provide the framework for establishing the existing water quality status of the river basin districts and put in place Water Quality Management Plans to improve and protect the aquatic environment*".

Physical Features

Climate

This site, by virtue of its location at the north-western end of the country and at the western extremity of Europe, enjoys a temperate oceanic climate influenced by its proximity to the Atlantic Ocean. It generally experiences mild humid conditions without great fluctuations in temperature. Precipitation is relatively high with a total mean monthly rainfall of 1060.6 mm, a mean temperature of 9.3 degrees celsius and a mean monthly wind speed of 16.3 knots. According to Schouten (1984) intermediate bogs occur where rainfall is between 1000 and 1300 mm per annum. These statistics are based on meteorological data for the nearest Synoptic Station based at Malin Head which is located approximately 70 km north-east of Croaghonagh Bog (full details are listed in Appendix III).

Geology & Geomorphology

Solid Geology

The underlying bedrock is composed of metamorphic rocks of the Ballybofey Succession within the Argyll Group of the Dalradian era. Two formations have been identified:

Lough Mourne Formation: quartz and feldspar pebbles in a green matrix.

Lough Eske Psammite Formation: feldspathic psammite (metamorphosed sandstone) with quartzite and marble units.

The strata dip towards the east and are folded within the Ballybofey Nappe, an antiformal structure. They are crossed by SW-NE trending faults including the Barnesmore Fault, which runs approximately along the route of the N15 road.

Drift Geology

Glacial soils are present where the N15 passes close to Lough Mourne and in the lower lying areas. The glacial soils arise from the Pleistocene era when ice flows moved towards the south-east channelled by the bedrock topography and forming the well developed U-shaped valley of Barnesmore Gap. The eroded rock material incorporated into the ice was deposited either directly by ice as till (boulder clay) or by meltwater as sorted gravel, silt or clay. The maximum depth to the base of the glacial soils encountered in exploratory holes was 5.2m at the south end of Lough Mourne (O'Dwyer & McIlveen 2003).

Soils & Soil Processes

The predominant soil type is peat formed as blanket bog where poor drainage enables the build up of oxygen-starved partially decomposed biomass. Development of the bog began about 4,000 years ago, with the bog cover often interspersed by rock outcrops. The maximum depth to the base of the peat, encountered in exploratory holes, is approximately 4m (O'Dwyer & McIlveen 2003).

Hydrology & Water Quality

Groundwater levels are likely to be closely related to water levels in the adjacent watercourses including Mary Breen's Burn, Loughs Mourne and Carn and the outflows from them, which ultimately form the Mourne Beg River. The limited thickness and discontinuous nature of the drift cover means that any groundwater is moderately vulnerable to contamination (O'Dwyer & McIlveen 2003).

Coillte is currently monitoring water levels in peat as part of the EU LIFE project.

Biological Features

Habitats and Vegetation

Note: Throughout the conservation plan, habitats are named and described under two different systems: the Annex I habitat(s) are as listed in the EU Habitats Interpretation Manual Version 25(2003), while all other habitats are as listed according to the classification system of 'A Guide to Habitats in Ireland' (Fossitt, 2000).

The following table lists the habitats within the site. The Annex I habitat of the Habitats Directive for which the site was selected is listed, with the relevant Guide to Habitats category also shown. Annex I priority habitats are marked with an asterisk (*). The Indicative Habitat map for the site is presented in Map 3. The percentage area presented for each habitat type is based on the approximate geographic area of each habitat, as shown in Map 3.

Habitats Found within Croaghonagh Bog cSAC

ANNEX I HABITAT TYPE	HABITAT CATEGORY	% AREA
*Blanket Bog (7130)	Upland blanket bog (PB2)	68
	Wet heath (HH3)	1
	Cutover bog (PB4)	27
	Acid oligotrophic lakes (FL2)	1
	Eroding/upland rivers (FW1)	1
	Scrub (WS1)	<1
	Buildings and artificial surfaces (BL3)	1

The following descriptions arise mainly from survey notes made in 1990.

Annex I Habitat:

Blanket Bog (7130) (68% of total site area)

The predominant habitat type on this site is blanket bog. It varies in character throughout, with some features of raised bog, in the form of domed areas, also occurring. The best, currently intact areas are located around Lough Carn from north of the lake round to the south-east. The bog to the north of the lake comprises a well defined dome with a very intact, spongy, wet surface and a good bog moss and lichen cover. There is a good surface topography with small, deep, pools scattered amongst an extensive hummock/hollow microtopography which is dominated by *Sphagnum capillifolium*, S. *magellanicum* and moss (*Racomitrium lanuginosum*) hummocks with occasional *Sphagnum imbricatum*. Many of the pools north of Lough Carn have low water levels or are drained completely. The inter-pool areas and hollows consist of quaking lawns of bog mosses including *Sphagnum compactum* and *S. papillosum*. There is also a good *Sphagnum* cover on the pool margins. The surrounding area consists of purple moor-grass (*Molinia caerulea*), common cotton-grass (*Eriophorum angustifolium*), harestail cottongrass (*Eriophorum vaginatum*) with some cross-leaved heath (*Erica tetralix*), some white beak-sedge (*Rhyncospora alba*) and scattered bog myrtle (*Myrica gale*).

The bog to the east of Lough Carn is characterised by numerous distinctive, long, concentrically aligned tear-pools and localised spongy flats. These occur within an area dominated by a dense, deep, undisturbed cover of purple moor-grass and ling heather (*Calluna vulgaris*), with hummocks of moss (*Racomitrium lanuginosum*) and abundant *Cladonia* species including *C. ciliata*, C. *portentosa*, *C. arbuscula* and *C. uncialis* also present. Some steep-sided pools are colonised by bog sedge (*Carex limosa*), bogbean (*Menyanthes trifoliata*), common cotton-grass and bulbous rush (*Juncus bulbosus*), with lawns of *Sphagnum cuspidatum*, S. *auriculatum* var. *auriculatum*, *S. magellanicum*, S. *fuscum* and S. *capillifolium* on the margins.

This northern portion of the site is divided by a north-west to south-east line, possibly an underlying tear marking a point where the bog shifted eastwards in the past. It is now occupied by a stream draining the lakes.

The bog is terminated along the western shore of Lough Mourne by a steep bank of peat. A mosaic of habitats, comprise the band of vegetation along the shoreline where three distinct plant communities occur, although too small to be depicted separately on the habitat map. The first consists of bottle sedge (*Carex rostrata*) swards with stands of common spike-rush (*Eleocharis palustris*) and floating mats of yellow water-lily (*Nuphar lutea*) in the water. The stony mudflats contain bulbous rush, creeping bent (*Agrostis stolonifera*), lesser spearwort (*Ranunculus flammula*), *Sphagnum auriculatum* and occasional water lobelia (*Lobelia dortmanna*), marsh pennywort (*Hydrocotyle vulgaris*) and shoreweed (*Littorella uniflora*). Thirdly, drier raised banks of purple moor-grass, sharp-flowered rush (*Juncus acutiflorus*), bog myrtle and tufted hair-grass (*Deschampsia cespitosa*) with some swards of star sedge (*Carex echinata*), Common Sedge (*Carex nigra*), bottle sedge (*Carex rostrata*) and carnation sedge (*Carex panicea*) with occasional bog pimpernel (*Anagallis tenella*), yarrow (*Achillea millefolium*), autumn hawkbit (*Leontodon autumnalis*), devilsbit scabius (*Succcisa pratensis*) and marsh violet (*Viola palustris*).

Blanket Bog (contd.)

An area to the west of Lough Carn was formerly drained in preparation for afforestation which did not ultimately proceed. Some of the drains have now been blocked and a conservation project is underway to restore this section of bog (see below).

The blanket bog in the southern section of this site is quite extensive, but is damaged and eaten away around its margins on three sides by former turf extraction (see cutover below). This is causing parts of the bog, extending well into the site, adjacent to those areas to dry out. It is divided by Mary Breen's Burn which flows in a general north-easterly direction through the site. This section is more "rugged" than the northern portion reflecting, particularly at the south-eastern end, the landscape contours and gentle slope towards the burn where it levels off. Peat is thinner here and some rock outcrop occurs. Vegetation throughout is broadly similar to that in the area described above, although phasing to heath along the Burn. Ling is predominant, and quite tall in the south east, with purple moor-grass, cottongrass, bog moss, moss hummocks, lichens, bilberry (*Vaccinium myrtillus*) and bog myrtle representing the main species. On the northern side of the Burn it is quite wet in places with hummock hollow formation. Small sphagnum pools are a feature with pondweed (*Potamogeton* sp.) and bogbean in some. Bog Asphodel (*Narthecium ossifragum*), great sundew (*Drosera anglica*) and milkwort (*Polygala* sp.) are also in evidence.

The north-western boundary along the railway track is characterized by clumps of scrub and woody species including willow (*Salix caprea*), rowan (*Sorbus aucuparia*), gorse (*Ulex europaeus*) and bramble (*Rubus fruticosus*). Bilberry occurs along some of the dryer banks through the site, but particularly around the margins where young naturally regenerating rowans also occur. Occasional Scots pine (*Pinus sylvestris*) and downy birch (*Betula pubescens*) also occur.

Intact blanket bog showing inter-connecting pools (photo: Martin Brennan)

Other Habitats:

Cutover bog (PB4)

Turf cutting in the past results in areas of cutover occurring at various locations throughout the site, particularly around the margins and along the roadsides. Turf cutting has occurred in the triangular corner at the eastern extremity of the site. Both mechanical and manual extraction took place, with old turf banks reflecting the latter. On some of the former areas vegetation cover is not complete indicating fairly recent exploitation, and re-colonization still occurring. Flora in such areas is dominated by heather, cotton grasses and bog mosses with some tormentil. Cutover extends west of the road from here and southwards towards Mary Breen's Burn and beyond it to the eastern boundary of the site. Cutover also occurs along both north and south sides of the road dividing the site, and along the eastern side of the track which forms its western boundary in the southern portion. Vegetation cover in those areas is superior to that in the previously described area, reflecting both greater use of manual cutting and cessation of extraction for a longer period. Diversity is greater also with purple moor-grass, sedges, bog asphodel and sundews also present.

At the northern extremity of the site a further small area of cutover is present.

Wet heath (HH3)

Two areas of heath occur within the site although small pockets also occur in mosaic with the blanket bog. The first is on the banks of the Burn on its southern side and the second on the banks of the Mourne Beg River at the outflow from Lough Mourn. They are characterized by a greater predominance of Purple Moor-grass and sedges in addition to Ling and Bell Heather (*Erica cinerea*).

Acid oligotrophic lakes (FL2)

Lough Carn, located towards the north-western end of the site is a base-poor, oligotrophic lake. It has a typically sparse lake flora, which includes white water-lily (*Nymphaea alba*) and water lobelia, with bottle sedge, bulbous rush and many-stalked spike-rush (*Eleocharis multicaulis*) at the margins. Limited areas of reedbed (*Phragmites australis*) occur at the south-western end. It is fairly steep-sided, particularly at the north-western end. A small island colonized by scrub is also present.

Eroding/upland rivers (FW1)

A combination of rivers and streams add diversity to the site. Mary Breen's Burn represents the main stream within the body of the site. It winds in a generally north-easterly direction through the southern part of the site and joins the Mourne Beg River at its easterly extremity. A short section of that river, being the outflow from Lough Mourne, is incorporated into the site also and forms its north-eastern boundary. A second stream being the discharge from Lough Carn feeds into the afore-mentioned river. The final on-site stream forms part of its northern boundary and flows into Lough Mourne.

Eroding/upland rivers (FW1) (cont)

Mary Breen's Burn throughout much of its length is a narrow, steep-sided channel cut into the peat. Aquatic vegetation is sparse. Liverworts occur along its banks in places. Heath-type vegetation extends to its banks, almost enclosing it. Emergent or swamp vegetation in the form of common reed occurs in places. In addition soft rush, hair-grass (*Deschampsia* sp.), common sorrel (*Rumex acetosa*) and meadow buttercup (*Ranunculus acris*) occur along the banks. The discharge stream from Lough Carn is similar in nature.

The stream flowing into Lough Mourne and the Mourne Beg River itself are both similar in nature. They are more open than the previously described streams, and throughout most of their length, have a stone or gravel bed with pools and riffles. They support little aquatic vegetation.

Scrub (WS1)

Scrub has naturally colonized two small areas of disturbed bog at the south western end of the site where turf cutting and quarrying occurred. It predominantly comprises goat willow, with downy birch, Scots pine, sitka spruce (*Picea sitchensis*), gorse and bramble also present. Herb vegetation in addition to the bog-loving species includes wood anemone (*Anemone nemorosa*), coltsfoot (*Tussilago farfara*), white clover (*Trifolium repens*) and foxglove (*Digitalis purpurea*). Associated with this habitat is a small pond in a stone quarry.

Buildings and artificial surfaces (BL3)

The principal artificial structures/surfaces on the site are the roads and tracks. These include a third class road running in a general east-west direction dividing the site in two, and the two tracks which demarcate the boundaries on the eastern and western sides. Two further short sections of gravelled road provide access to two sites where stone quarrying took place in the past. An ESB cable on timber pylons traverses the southern portion of the site in a general east-west direction. A small concrete hut and dam on the Mourne Beg River is used for the purpose of monitoring water flows by Donegal County Council. A small area on the eastern side of the track at the south-western end of the site has been in-filled and surfaced with gravel. A small car park and board-walk are also present.

Flora:

A more comprehensive list of plants recorded on site is provided in Appendix IV.

Fauna:

Fish

Atlantic Salmon (*Salmo salar*), listed in Annex II of the EU Habitats Directive, and also in the Irish Red Data Book where it is categorised as internationally important, and Brown Trout (*Salmo trutta*) are present in, and travel up through the Mourne Beg River into Lough Mourne (pers. comm. Wallace Kennedy, Loughs' Agency – May 2004).

Amphibians and Reptiles

Common Frog (*Rana temporaria*) listed in the Irish Red Data Book, where it is classified as internationally important, is present on site.

Birds

A flock of up to 30 Greenland White-fronted Geese (*Anser albifrons*), a species listed in Annex I of the EU Bird Directive, use this site as a feeding area in winter. It is listed also as an amber species in "Birds of Conservation Concern in Ireland" (Newton *et al*. 1999) and in the Irish Red Data Book, where it is classified as internationally important, They migrate between a number of sites in the area.

One or two pairs of Golden Plover (*Pluvialis apricaria*), listed in Annex I of the Bird Directive, breed annually on the site. It is listed also as an amber species in the afore-mentioned "Birds of Conservation Concern in Ireland" and in the Irish Red Data Book, where it is classified as vulnerable.

Merlin (*Falco columbarius*), listed in Annex I of the Bird Directive, forage over and feed on the site. It breeds in the adjacent plantation on the western side of the N15. It is listed as an amber species in "Birds of Conservation Concern in Ireland" and also in the Irish Red Data Book, where it is classified as rare.

Hen Harrier (*Circus cyaneus*), listed in Annex I of the Bird Directive, forage over the site. A pair breed on property outside the site approximately one mile away. It is listed as a red species in "Birds of Conservation Concern in Ireland" and in the Irish Red Data Book, where it is classified as endangered.

A pair of Peregrine Falcon (*Falco peregrinus*), listed in Annex I of the Bird Directive forage over the site. They breed further south in Barnesmore Gap. Peregrine is listed as an amber species in "Birds of Conservation Concern in Ireland". It is listed also in the Irish Red Data Book, where it is classified as internationally important,

One or two pairs of Red Grouse (*Lagopus lagopus scoticus*) breed annually on the site. Red Grouse is listed as a red species in "Birds of Conservation Concern in Ireland".

A list of the bird species recorded during the course of field surveys for this plan, previous records from earlier surveys and records by NPWS staff is presented in Appendix IV

Mammals

Otter (*Lutra lutra*), listed in Annex II of the EU Habitats Directive and in the Irish Red Data Book, where it is classified as internationally important, is present on the site. Its population and status is unknown.

Irish Hare (*Lepus timidus hibernicus*), listed in the Irish Red Data Book, where it is classified as internationally important, is present on the site.

Land Use

Land use on the site

Nature Conservation

While the major part of the site is not actively managed for nature conservation the effect of the cessation of former human activities/intervention, such as turf cutting, grazing and burning, now results in its conservation.

The part of the bog to the west of Lough Carn that was drained in the recent past in preparation for afforestation, which did not subsequently occur. Coillte Teoranta, its owner, in recognition of the value of this blanket bog, has initiated measures to rehabilitate and restore it under the EU LIFE – Nature Programme. The principal method adopted is the blocking of the numerous drains with interlocking plastic piling dams. These have been installed and will reduce water loss and lead to the elevation of water levels between the dams and on the site generally. It is expected that this will encourage re-colonization by species such as Common Cotton-grass and Sphagnum and assist the restoration process. Changes in water levels within the peat are being assessed using a number of Water Level Range Gauges (WalRaGs). Vegetation changes are monitored by means of permanent plots which will be surveyed at regular intervals.

Drains that have been blocked by Coillte under the EU LIFE Programme (Photo: Martin Brennan)

Education Coillte Teoranta has chosen the part of the site in its ownership to form one of a series of 14 sites in its blanket bog restoration project. It is a demonstration plot for conservation education as part of this project. Site visits, for the general public and for school pupils, are encouraged and facilitated as part of the associated educational schedule. A car park and boardwalk of untreated larch to both facilitate educational visits and protect the bog has been installed and explanatory display signs have been erected.

Turf Cutting Manual extraction occurs on one or two banks along the western boundary, south of the dividing road. The area south-west of Lough Carn has been damaged by a combination of peat extraction and drainage to facilitate it

Land use adjacent to the site

Nature Conservation Although not immediately contiguous to the site two further areas of blanket bog, one to the north-east at Lough Hill and the other to the north-west at Cashelnavean are proposed Natural Heritage Areas. They do, however form part of the much larger area of bog, of which this site forms part, covering much of the landscape at this location.

Turf Cutting A considerable amount of manual turf cutting occurs at various locations on land adjoining the site. The closest such activity occurs at locations immediately adjacent to the site at the north-eastern, western and south-western boundaries

Forestry Forestry plantations occur along the eastern and southern margins of the site. The former is young, recently planted sitka spruce, with the latter more mature. They form part of an extensive area of forestry extending south-eastwards from the site. A further area of coniferous forest extends along the roadside immediately to the west of the site, with other blocks scattered throughout the landscape to the north.

Water Abstraction Lough Mourne is a public water supply source for the towns Ballybofey, Stranorlar, Castlefin and Lifford in county Donegal. The outflow from the lake is within the site, forming its north-eastern boundary, and influencing its hydrology. There is a proposal by Donegal County Council to substantially increase the rate and volume of abstraction as part of an improved and expanded public water scheme. This would be achieved by construction of dam(s) downstream of the lake to impound a greater volume of water and increase the capacity of the lake. This has potential to negatively impact on the blanket bog. The significance and extent of the impact depends on the chosen location of the dam(s) and the volumes of water to be impounded. A dam being considered at a location downstream of the junction of the outflows from the both Lough Carn and Lough Mourne, on the Mourne Beg River, is likely to result in the inundation of parts of the site.

Quarrying A small active stone quarry occurs immediately adjacent to the site at the south-western end.

Past human use

Turf Cutting

Turf cutting is the principal activity which formerly occurred on the site. This was conducted both manually and by machine extraction. It was concentrated primarily towards the centre of the site close to the existing roadway and practically right around the margins of the site. It has resulted in some drying out of the bog. Turf extraction has now virtually ceased.

Drainage

Drainage channels were cut in the bog at the northern end of the site in preparation for afforestation which did not subsequently proceed. This resulted in damage to the integrity of the bog and Coillte LIFE project has now completed drain blocking as a means to restoring it.

Quarrying

Quarrying for stone and gravel took place in the recent past at two locations within the site. The first took place at the south-western end and the second towards the centre of the site at the eastern side. In both instances a short section of gravelled track was constructed and rock faces/pits remain, with a small pond now occupying the former.

Industrial

The western boundary of the site is demarcated by the disused narrow-gauge Donegal Railway.

Recorded Monuments and Other Features

There are no monuments recorded as occurring on the site.

CONSERVATION VALUE OF CROAGHONAGH BOG cSAC

This site contains blanket bog, a priority habitat listed in Annex I of the EU Habitats Directive. It is one of few relatively intact blanket bogs surviving in east Donegal and contains fine examples of tear pools. It is an excellent example of this habitat type and is of high quality.

The site is of further interest due to the presence of two bird species which are listed in Annex I of the EU Bird Directive. The first is a flock of up to 30 Greenland White-fronted Geese which feed here in winter and the second Golden Plover, one or two pairs of which breed here annually. Three other Annex I species, Merlin, Hen Harrier and Pergrine Falcon hunt over the site. Red Grouse breed here. The site is also used by Otter, a species listed in Annex II of the Habitats Directive.

MANAGEMENT FRAMEWORK

Conservation Objectives

European and national legislation places a collective obligation on Ireland and its citizens to maintain at favourable conservation status areas designated as candidate Special Areas of Conservation. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

According to the EU Habitats Directive, favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, is stable or increasing, and
- the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable as defined below.

The favourable conservation status of a species is achieved when:

- population data on the species concerned indicate that it is maintaining itself, and
- the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective 1:	To maintain the Annex I habitat for which the cSAC has been selected, at favourable conservation status; Blanket Bog (68 % of the site).
Objective 2:	To maintain the extent, species-richness and biodiversity of the entire site.
Objective 3:	To maintain facilities for the visiting public and promote and enhance the potential educational use and value of the site
Objective 4:	To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

Management Issues

The following are the principal management issues for Croaghonagh Bog cSAC.

- **Water Abstraction**
- **Drainage**
- **Dumping**
- **Forestry**
- **Grazing**
- **Burning**
- **Turf Cutting**

Water Abstraction

Donegal County Council proposes to further develop Lough Mourne as a water supply. NPWS believes that the current proposal will not impact significantly on the cSAC or on the priority habitat, active blanket bog.

The following issues are currently of minor significance:

Drainage

Drainage in the past has caused damage to the integrity of the blanket bog. The EU-LIFE project aimed at restoring this site and repairing the damage is part of a wider research project being conducted on a range of such sites by Coillte Teoranta. It takes the form of blocking the drains. The results will be closely monitored, but the project is likely to have a positive long-term impact on the site and speed its recovery. The impact of drainage at other locations, both within the site and beyond its boundaries, is not fully known due to lack of adequate information, but it is considered to be causing damage and drying it out in places. It requires ongoing monitoring.

Dumping

A limited amount of dumping has occurred on the site, but it is not currently regarded as a problem.

Forestry

Commercial forestry plantations occur at various locations adjacent to the site and in the wider landscape in the catchment of this system. The impact of these operations on the site is unknown, and requires monitoring to determine any potential negative impacts over time.

Grazing

Grazing by sheep occurs at low stocking densities and is not regarded as a problem.

Burning

The site does not appear to have a history of burning and it is desirable that this is maintained.

Turf Cutting

Turf cutting is not a significant threat at this time. The impact of former turf extraction and associated drainage, particularly around the internal margins, on the hydrology of the site, resulting in parts drying out, cannot be addressed during the life of this plan, except for the area where the restoration programme is in place.

Immediately adjacent to the site, at various locations externally, turf cutting is ongoing. This has an impact on the integrity and quality of the bog as a whole, of which this site only forms part. It is likely also to have some impact on the overall hydrology of the bog.

General Strategies

Specific strategies that relate to the above objectives are outlined below. However, there are a number of strategies that relate to the site as a whole. These are as follows:

Implement plan

DEHLG will seek to ensure that the aims of this conservation plan are achieved through:

- liaison with the landowners, relevant authorities and interested parties.
- implementation of REPS or NPWS farm plans, which will use this document as a guideline for prescribing management on a farm by farm basis, and also will ensure that the agreed prescriptions for the relevant habitats are adhered to
- enforcement of Regulations under the Habitats/Birds Directives and the Wildlife Acts.
- enforcement of other relevant legislation.

Establish a monitoring regime

The monitoring regime for the site will comprise:

Water quality monitoring

Water quality is monitored at regular intervals by the local authority.

Under the Water Framework Directive local authorities are obliged to establish River Basin District plans covering all inland and coastal waters that will lead to the identification and implementation of effective measures for improved water management.

NPWS is liaising with the EPA, the local authorities and other relevant statutory agencies and research organisations to:

- determine the quality and quantity of waters associated with water dependent habitats
- establish reference conditions necessary for monitoring the status of the habitats and species and to
- ensure that the sampling regime is adequate to detect changes in their conservation status

Scientific monitoring

Monitoring of the conservation status of the blanket bog will be done by, or on behalf of, the staff of the Monitoring Section of the NPWS or staff working to NPWS in accordance with the procedures laid down by that section.

NPWS will discuss with Coillte how best to continue the monitoring commenced under the EU LIFE project.

Protocols for monitoring Croaghonagh Bog cSAC will be developed, in consultation with other agencies where appropriate, to determine if the site is being maintained at favourable conservation status.

This site will be included in national surveys of species such as Hen Harrier and Peregrine Falcon.

Site surveillance

Regular inspection of the site by the NPWS staff, with special attention to the turf cutting and grazing will identify any major changes, damaging operations, or threats should they arise.

Enforce notifiable actions

Certain activities may be restricted in SACs. Notifiable Actions for particular habitats and species are listed in Appendix VI of this plan. Consent from the Minister may be required before these actions may be carried out within the designated area. For example drainage, reclamation, burning, alteration of banks, bed or flow of watercourses and creation of new tracks or paths.

Specific Strategies

Objective 1.

To maintain the Annex I habitat for which the cSAC has been selected, at favourable conservation status; Blanket Bog (68 % of the site).

Strategies:

1.1	**Maintain blocked drains**	Coillte Teoranta will maintain and monitor the drains blocked as part of the LIFE project on its property in the area west of Lough Carn. It will monitor vegetation changes by means of regular surveys of selected permanent plots
1.2	**Minimise impacts of peat cutting**	Most areas of active turf cutting are not included in the cSAC. Where areas of active cutting lie within the less sensitive areas of the site cutting may continue. Machine cutting other than the use of 'sausage machines' will normally be permitted on banks currently in use.
1.3	**Eliminate and prevent dumping**	NPWS will liaise as necessary with Donegal County Council/landowners to ensure dumped household material is removed from the site.

Objective 2.

To maintain the extent, species-richness and biodiversity of the entire site.

Strategies:

2.1	**Maintain habitats**	The strategies listed under objective one are also relevant to other habitats in the site.
2.2	**Non-intervention**	No active management is required for the lake and rivers.

Objective 3.

To maintain facilities for the visiting public and promote and enhance the potential educational use and value of the site.

Strategies:

3.1	**Maintain board walk**	Coillte Teoranta will maintain its board walk of untreated larch on the demonstration bog site to facilitate access for visiting public
3.2	**Maintain display signs**	Coillte Teoranta will maintain the LIFE project display boards erected on site.
3.3	**Carry out promotion and publicity**	As part of the EU LIFE – Nature Programme, and as part of its wider public relations and educational programme Coillte will promote this site through various media.

Objective 4.

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

Strategies:

4.1	**Liaise with interested parties**	NPWS will strive to initiate and maintain effective liaison with landowners, legal users, relevant authorities and interested parties on achieving the objectives for conservation of the site.
4.2	**Liaise with REPS planners**	REPS planners should consult with local NPWS staff when they are developing plans for land within the site.

Zoning

Note: Zoning is the division of a nature conservation site and neighbouring areas into a number of sub-units. Four types of zones are identified (not necessarily all occurring within a site): A, B and C are zone types within the site. D is a zone type outside the site where activities may have an impact on the site. The relevant strategies are listed for each site.

Zone A: A Natural Zone

Areas of high conservation value, that require no or little management intervention.

1A: NON-INTERVENTION AREAS

1A1: Blanket bog, heath, cutover bog, oligotrophic lake, eroding/upland rivers & scrub

Strategies 1.2, 1.3, 2.1, 2.2, 4.1, 4.2 and the general strategies apply.

1A2: Area that will be flooded if dam scheme proceeds

That portion of the site, projected by consultants, to be flooded if the Lough Mourne/Letterkenny water supply scheme proceeds is included in this category. Strategies 2.2, 4.1 and the general strategies will apply.

Zone B: Active Management

Areas of high conservation value where high management input is needed to maintain, rehabilitate, restore to a more desirable state.

B1: Blanket bog being restored by Coillte

Strategies 1.1, 1.3, 2.1, 3.1 - 3.3, 4.1 and the general strategies apply.

Zone C: Intensive use Zone

Intensively used areas/infrastructure, which form an integral part of a nature conservation site.

C1: Roads and other infrastructure

Strategies 3.1, 3.2, 4.1 and the general strategies apply.

Zone D: Impact Zone

Areas outside the site where activities may have an impact on the site.

D: Surrounding bog and watercourses/bodies

As this site forms part of a much larger area of blanket bog, activities occurring on the adjacent land may impact negatively on it or its hydrology. Turf cutting, forestry, activities upstream of the site and water abstraction from Clogher Lough may impact on the site. Strategy 4.1 and general strategies apply.

Summary of Specific Strategies

Note: It is implicit with all the strategies presented that their implementation is dependent on availability of adequate resources in terms of staff, expertise and financial resources. Also, that cooperation with landowners and other key stakeholders is key to achieving the stated objectives.

	Strategy	Action required	Who to implement	When/Duration/ Frequency	Estimated Total Cost	Additional Resources needed
	Establish Monitoring Regime	Carry out water quality monitoring, scientific monitoring, site surveillance	County Council/EPA/ NPWS/Coillte			
1.1	Maintain blocked drains	Maintain and monitor blocked drains	Coillte			
1.2	Minimise impacts of peat cutting	Permit only on banks currently in use. No sausage machines	NPWS			
1.3	Eliminate and prevent dumping	Liaise with landowner and county council to remove	landowner/ NPWS/ County Council			
2.1	Maintain other habitats	As per 1.1 to 1.3				
2.2	Non-intervention	No active intervention for lake and rivers				
3.1	Maintain board walk	Maintain as necessary	Coillte			
3.2	Maintain display signs	Maintain as necessary	Coillte			
3.3	Carry out promotion and publicity	Promote as part of the EU LIFE project	Coillte			
4.1	Liaise with interested parties	Initiate and maintain liaison with landowners, legal users, relevant authorities and interested parties	NPWS			
4.2	Liaise with REPS planners	REPS Planners to consult with NPWS	REPS planners			

APPENDIX I: GLOSSARY

ABSTRACTION - The process of taking water form a river, stream, spring pond or lake or from ground water. This process is “abstracting” water or making an “abstraction”.

ACIDIC - When applied to soils, refers to soils which are of a low pH i.e. below 7. The term is often used in relation to the plant communities that an acid soil may support e.g. acidic grassland.

ACIDIFICATION - The detrimental effect of acid rain on soils and freshwater.

AFFORESTATION - The planting of trees (usually conifers) over an area of previously unplanted ground.

ALTITUDE - Vertical height above sea level.

AMPHIBIANS – A vertebrate group whose members spend part of their life cycle in water and part on land e.g. Frog.

ANNEX I - of the EU Birds Directive, lists birds that are strictly protected so that they cannot be killed, captured, disturbed or traded.

ANNEX I - of the EU Habitats Directive, lists habitats including priority habitats for which SACs have to be designated.

ANNEX II - of the EU Habitats Directive is a list of species for which SACs have to be designated.

ANTHROPOGENIC - Produced or caused by humans.

AQUATIC ENVIRONMENT – Rivers, streams, lakes, ponds, springs and features that depend on natural waters e.g. marsh, bogs and wetlands.

ASIs - Areas of Scientific Interest. Areas that were identified in the 1970s as being of conservation interest. The NHA designation developed from ASIs.

ASSEMBLAGE - A collection of organisms.

BIODIVERSITY – A general term used to describe all aspects of biological diversity, including: the number of species present in a given environment; the genetic diversity present within a species; the number of different ecosystems present within a given environment.

BIRDS DIRECTIVE (Council Directive 79/ 409/ 2nd April 1979) - Under this Directive Ireland is required to conserve the habitats of two categories of wild birds: 1) Listed rare and vulnerable species and 2) Regularly occurring migratory species. The Directive also obliges Ireland to conserve wetlands, especially those of international importance and regulates the hunting and trading of wildbirds. It was transposed into Irish legislation by the EU (Natural Habitats) Regulations, 1997.

BLANKET BOG - Bogs which carpet the landscape, following the underlying topography. They can cover extensive areas along the west coast and on uplands throughout the country.

BoCCI – Birds of Conservation Concern in Ireland. A list of bird species prioritised for conservation in Ireland. The list is divided into Red (high conservation concern), Amber (medium conservation concern) and Green (not threatened).

CATCHMENT - An area of land draining to a defined point. The term river catchment refers to the area of land that drains into a particular river system.

CENSUS - An official periodic count of a population.

COLONISATION - The entry and spread of a species into an area, habitat or population from which it was formerly absent.

CONSERVATION STATUS - The sum of the influences acting on a habitat and its typical species that may affect its long term distribution, structure and functions. Also refers to the long-term survival of its typical species within the European territory of the Member States.

CUTOVER BOG – Areas of bog which have been previously cut, although not down to the marl layer or bedrock. Cut-over areas are normally a mosaic of cut areas, face banks, pools, drainage ditches, uncut areas of peat, scrub, grassland etc.

DAF – The Department of Agriculture and Food.

DEHLG - Department of Environment, Heritage and Local Government

DESICCATION - Drying out.

DEVELOPMENT PLANS - Local Authorities (Co. Councils & Corporations) are obliged under statute to produce a document which sets out the planned development of their areas for a given number of years. In the future Local Authorities will be asked to incorporate designated NHAs, SACs and SPAs classifications into their development plans.

DIVERSITY - see biodiversity.

DOMESTIC PURPOSES - Used in relation to the cutting of peat. Peat that is cut for domestic purposes is not for commercial sale and is cut at the rate of one year's supply for a household per year.

ECOLOGY - The study of the interactions between organisms, and their physical, chemical and biological environment.

ECOSYSTEM – A functional ecological unit in which the biological, physical and chemical components of the environment interact.

ELEVATION - The height of something above a given place, usually above sea level.

ENCROACHMENT - The invasion of a species (usually plants) into areas previously un-colonised. This term is often used when an undesirable species advances at the expense of a desirable species or habitat.

ENVIRONMENT – The biological and physical conditions in which an organism lives.

EPA – Environmental Protection Agency

EROSION - The processes whereby the materials of the Earth's crust are dissolved, or worn away and simultaneously moved from one place to another by natural agencies which include weathering, solution, corrosion and transportation.

EUROPEAN BIRDS DIRECTIVE (79/ 409/ 2nd April 1979) - See Birds Directive.

EVAPOTRANSPORATION - Water loss to the atmosphere from soil (evaporation) and vegetation (transpiration). The potential evapotranspiration may be calculated from physical features of the environment such as wind speed and temperature. The actual evapotranspiration will commonly fall below the potential depending on the availability of water from precipitation and soil storage.

EXOTIC SPECIES - Are those species which are considered to be non native.

FAUNA - Animal life.

FAVOURABLE CONSERVATION STATUS - The conservation status of a natural habitat will be taken as “favourable” when: its natural range and areas it covers within that range are stable or increasing, and the specific structure and functions which are necessary for its long term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable.

FLORA - Plant life.

FORMATION – A geological term for a body of rocks having easily recognised boundaries that can be traced in the field, and large enough to be represented on a geological map as a practical and convenient unit for mapping and description.

GEOMORPHOLOGY – The study of the form and structure of the landscape, which is shaped by the underlying geology.

HABITAT - Refers to the environment defined by specific abiotic and biotic factors, in which a species lives at any stage of its biological cycle. In general terms it is a species home. In the Habitats Directive this term is used more loosely to mean plant communities and areas to be given protection.

HABITATS DIRECTIVE - (Council Directive 92/43/EEC). The Directive on the conservation of Natural Habitats and of Wild Flora and Fauna. This Directive seeks to legally protect wildlife and its habitats. It was transposed into Irish legislation by the EU (Natural Habitats) Regulations, 1997.

HAND CUTTING OF PEAT - Refers to traditional cutting of peat using a slean or spade.

HERBACEOUS - Seed plants with non-woody green stems.

HERBICIDE - A chemical or biological preparation which kills plants.

HUMMOCK - A small hillock/mound. Often used to describe the surface of active bogs where the ground forms a pattern of mounds, hollows and pools. Such hummocks commonly comprise bog mosses.

HYDROCHEMICAL MONITORING - Observing the chemical composition of water over a period of time usually carried out for detailed studies of raised bogs.

HYDROLOGY - The movement of water through a catchment area including freshwater and seawater inputs, water level changes and drainage mechanisms which are all influenced by the underlying geology.

IMPEDED DRAINAGE - A limited through flow of water.

IMPERMEABLE - Does not allow the passage of water.

INSECTICIDE - A chemical preparation which kills insects.

INVERTEBRATES - Animals without backbones.

LATITUDE – The angular distance measured in degrees north or south of the equator.

LEACHING – The process by which water removes soluble components from soil.

LICHEN – An organism that consists of a fungus growing in close association (symbiosis) with an alga.

LIFE – An EU budget line that provides funding for nature conservation projects on Natura 2000 sites throughout Europe.

MARGINAL VEGETATION - At or near the margin or border, often used to describe the vegetation at the edge of a lake or river.

MECHANICAL PEAT EXTRACTION - Refers to the use of machinery to cut peat. This includes extrusion cutting such as by sausage machine (e.g. Difco) or any other type of mechanical cutter (e.g. Hopper).

MITIGATE - To make or become less severe or harsh / moderate.

MONITORING – A repeat or repeats of a survey using the same methodology. Designed to look for or measure specific changes and the rate or extent of change. Used to check the “health” quantity or quality of a habitat or species.

MOSAIC - Used to describe habitats that occur together and cannot easily be mapped separately.

NATIONAL PARKS AND WILDLIFE SERVICE – NPWS is part of the Department of the Environment, Heritage & Local Government (DEHLG) that manages the Irish State's nature conservation responsibilities under National and European law.

NATURA 2000 - A network of sites across the European Community, selected for the purpose of conserving natural habitats and species of plants and animals which are rare, endangered or vulnerable in the European Community. SACs and SPAs form the Natura 2000 network.

NATURAL HABITAT - Can be aquatic or terrestrial areas distinguished by geographic, abiotic and biotic features, whether entirely natural or semi-natural.

NATURAL HERITAGE AREA – Designated areas that are important for wildlife conservation. Some of these sites are small, such as roosting areas for rare bats; others can be large such as a blanket bog or a sand dune system.

NATURE RESERVE - Under National legislation, the Wildlife Act of 1976, a number of sites have been designated as Nature Reserves. These areas are mainly owned by the NPWS and are managed for the purposes of conservation.

NGO - Non-Governmental Organisation.

NHA - Natural Heritage Area.

NICHE – The functional position of an organism within its environment, i.e. where individuals of a species can survive grow and reproduce.

NOTABLE SPECIES - Plants or animals which are worthy of mentioning either because they are particularly typical of a habitat, or because they are rare/ scarce/ atypical.

NOTIFIABLE ACTIONS - Actions specified under the SAC regulations and are listed in the appendices of a conservation plan. These are actions which could cause damage to the site, and for which prior approval is required before they can be carried out.

NPWS - National Parks and Wildlife Service

OLIGO – Prefix denoting few or little

OLIGOTROPHIC - Applied to waters that are relatively low in nutrients, as in lakes which are low in dissolved minerals and which can only support limited plant growth.

ORGANISM - Any living thing.

OS – Ordnance Survey.

PEAT CUTTING BY HAND - See hand cutting of peat.

PEAT CUTTING BY MACHINE - See mechanical peat extraction.

PER-ANNUM - Each year.

PERMEABILITY - The capacity of a rock to transmit fluid.

pH - A quantitative expression for the acidity or alkalinity of a solution or soil. The scale ranges from 0-14: pH 7 is neutral, less than 7 is acidic and greater than 7 is alkaline.

PIEZOMETER – An instrument used for measuring the fluctuations of water levels in the acrotelm of a raised bog.

POACHING - Damage caused to vegetation and soil by trampling of large grazers.

PRECIPITATION - Water moving from the atmosphere to the ground in the form of rain, fog, mist, snow or hail.

PRIORITY HABITAT - A subset of the habitats listed in Annex I of the EU Habitats Directive. These are habitats which are in danger of disappearance and whose natural range mainly falls within the territory of the European Union. These habitats are of the highest conservation status and require measures to ensure that their favourable conservation status is maintained.

PRIVATE OWNERSHIP - Land which is owned by one private landowner.

QUALIFYING INTERESTS – The habitat(s) and/or species for which an SAC or SPA is designated.

Q-VALUE – A biological index of river water quality ranging from Q5 (good water quality) to Q1 (bad water quality).

RARE - An ecological term applied to distribution of species when assessed on a national grid reference system. The assessment is made on the basis of the number of occupied 10 km National Grid squares. A species is described as rare if has been recorded in to 3-10, 10 km squares.

RARITY - Refers to how common or scarce a site/habitat/species is.

RECHARGE - The downward movement of water from the soil to the water table.

RECLAIMED LAND - this is applied to lands which have been modified from their natural state by intervention such as: a) drainage, b) bulldozing, c) clearance of scrub, d) infilling of wetland, e) ploughing and reseeding.

RED DATA BOOK – A register of threatened species that includes definitions of degrees of threat.

RED DATA BOOK (lower plants) - This Red Data Book deals with Stoneworts which are recognised as a separate class, Characea, of the Green Algae Chlorophyta). Many of these species are threatened by loss of habitat or pollution.

REPS - Rural Environment Protection Scheme. This is an Agri-Environmental programme which seeks to draw up agreements with farmers, according to the type of farming, landscape and features on the land. The overall objectives of REPS are to achieve: the use of farming practices which reduce the polluting effects of agriculture by minimising nutrient loss- an environmentally favourable extensification of crop farming, and sheep farming and cattle farming; - ways of using agricultural land which are compatible with protection and improvement of the environment, the countryside, the landscape, natural resources the soil and genetic diversity; - long-term set-aside of agricultural land for reasons connected with the environment; - land management for public access;- education and training for farmers in types of farming compatible with the requirements of environmental protection and upkeep of the countryside.

REPTILES - Cold-blooded vertebrates, most of which are terrestrial, having dry horny skin with scales or plates. Most reptiles lay eggs that have a leathery skin, although some are ovoviviparous.

SAC – Special Area of Conservation

SCIENTIFIC MONITORING - this is carried out by the monitoring section of the NPWS, whose function here is to ensure that the favourable conservation status of the site is maintained and where possible improved.

SCRAGH - a floating mat of vegetation.

SEDIMENT - Solid particles that can originate by the weathering and erosion of pre-existing rock, by chemical precipitation from water, or by the breakdown of organisms.

SEDIMENTARY - Formed by the deposition of sediment, i.e. rock particles or chemical precipitate, or pertaining to the process of sedimentation.

SPA- Special Protection Area

SPECIAL AREA OF CONSERVATION – Areas designated for nature conservation at a European level. SACs have been selected from the prime examples of wildlife conservation areas in Ireland. Their legal basis from which selection is derived is The Habitats Directive (92/43/EEC of the 21st May 1992).

SPECIAL PROTECTION AREA - Areas which have been designated to ensure the conservation of certain categories of wild bird under the European Birds Directive (Council Directive 79/ 409/ 2nd April 1979).

SPECIES - the lowest unit of classification normally used for plants and animals.

STRATEGY - A course of action or a broad approach towards achieving an objective . It is the general thrust of management towards achieving an objective. It is a description of how the objective is to be achieved.

STRATIFICATION - Arrangement in layers: differentiation of horizontal layers in soils.

SUCCESSION – Directional change/sequential development of vegetation e.g. from open water to fen to woodland.

SUPPLEMENTARY FEEDING - The practice of providing livestock with additional food, usually carried out in winter. This term is most often used when hay, silage or other foods are brought into a site to supply cattle or sheep with food during times when growing conditions are poor.

SURVEY - a) Study/visit to produce an inventory of what is present / record a situation.- b) Establishing a baseline (study).

SUSTAINABLE - The highest rate at which a renewable resource can be used without reducing its supply (without causing damage to the resource).

TAXON – Any grouping within the classification of organisms (plural = taxa)

TERRAIN - A piece of ground which is usually described by its physical character, i.e. rocky terrain.

TERRESTRIAL - A term used to refer to living on land. The opposite of aquatic.

TILL - Unconsolidated, unsorted glacial deposits.

TOPOGRAPHY - the study or detailed description of the surface features of a region.

TRADITIONAL MANAGEMENT PRACTICES Land management practices which were carried out prior to the 1950s. These practices were often less intensified than today's management practices. In REPS prescriptions traditional means an activity which has been carried out for a specified number of years on a site (usually 10 years).

TURBARY – Refers to the right to harvest turf.

VASCULAR - Consisting of, or containing vessels adapted for the carriage or circulation of fluid, in plants refers to xylem and phloem.

VERTEBRATES - Animals with backbones.

WEATHERING - The process by which rocks are broken down and decomposed by the action of wind, rain temperature changes, plants and bacteria. See also chemical and mechanical weathering.

WETLAND - An area habitually saturated with water, and which may be partially or wholly covered permanently, occasionally, or periodically by fresh or salt water up to a depth of 6 m, and which includes bogs, fens, marsh, shallow ponds, river estuaries, and intertidal mud flats.

ZONING - The division of a nature conservation site (& neighbouring lands) into a number of sub-units. Within each zone the management prescriptions will be reasonably uniform and will differ in type or intensity from the other zones in the plan.

APPENDIX II: REFERENCE MATERIAL

Map References:

O.S. 1/2 inch (1:126,720) map: 3

O.S. Discovery (1:50,000) map: No.11

O.S. 6 inch (1: 10,560) map: Sheet 086

Databases :

NHA database, NPWS, The Department of Environment, Heritage and Local Government, 7 Ely Place, Dublin 2.

Natura 2000 database, NPWS, The Department of Environment, Heritage and Local Government, 7 Ely Place, Dublin 2.

Photographic Coverage:

Aerial photo No. H 357, Flight Line Z. Date: 1970s. NPWS, The Department of Environment,

Heritage and Local Government, 7 Ely Place, Dublin 2.

Photos 2000

Relevant Legislation:

S.I. No. 39 of 1976: Wildlife Act 1976

S.I. No. 38 of 2000: Wildlife (Amendment) Act 2000

S.I. No. 94/1997: European Communities (Natural Habitats) Regulations 1997

Local Government (Planning and Development) Acts 1963-2002

Bibliography:

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Newton, S., Donaghy, A., Allen, D. & Gibbons, D. (1999) *Birds of Conservation Concern in Ireland*. Irish Birds 6(3): 333-344.

O'Dwyer, N. & McIlveen, F. 2003. *Environmental Impact Statement, Proposed Impoundment of Lough Mourne*, Donegal County Council.

Schouten, M.G.C. 1984. *Some aspects of the ecogeographic gradient in the Irish ombrotrophic bogs.* Proceedings 7th International Peat Congress, Dublin.

Whilde, A., 1993. *Threatened Mammals, Birds, Amphibians and Fish in Ireland. Irish Red Data Book 2: Invertebrates.* HMSO, Belfast.

APPENDIX III: CLIMATE

MALIN HEAD **monthly and annual mean and extreme values** **1961-1990**													
TEMPERATURE *(degrees Celsius)*	***jan***	***feb***	***mar***	***apr***	***may***	***jun***	***jul***	***aug***	***sep***	***oct***	***nov***	***dec***	***year***
mean daily max.	7.6	7.5	8.7	10.3	12.7	15	16.2	16.6	15.3	13	9.8	8.4	**11.8**
mean daily min.	3.2	2.9	3.7	5	7.1	9.6	11.4	11.4	10.1	8.3	5.2	4.2	**6.8**
mean	5.4	5.2	6.2	7.6	9.9	12.3	13.8	14	12.7	10.7	7.5	6.3	**9.3**
absolute max.	13.9	13.8	19	19.5	24.7	25	27	25.3	23.2	19.6	16	15.1	**27**
absolute min.	-6.2	-6.2	-4.4	-1.8	-0.5	2.6	5.6	5.2	2	1	-2.5	-5.5	**-6.2**
mean no. of days with air frost	3.4	3.3	1.6	0.4	0	0	0	0	0	0	0.4	1.8	**11**
mean no. of days with ground frost	9.6	9.8	7.4	4.3	1	0	0	0	0.1	0.3	3.7	6.7	**42.9**
RELATIVE HUMIDITY *(%)*													
mean at 0900UTC	83	82	81	79	79	81	84	84	83	83	82	83	**82**
mean at 1500UTC	80	77	76	76	76	78	80	79	78	78	79	81	**78**
SUNSHINE *(hours)*													
mean daily duration	1.2	2.2	3.1	5.1	6.2	5.7	4.3	4.3	3.5	2.4	1.5	0.9	**3.4**
greatest daily duration	7.5	9.2	11.1	14.1	15.5	16.2	16.1	14.8	11.9	9.4	7.6	6.7	**16.2**
mean no. of days with no sun	11	7	6	3	2	2	3	3	4	6	8	12	**67**
RAINFALL *(mm)*													
mean monthly total	114.4	76.3	85.9	58.4	59.2	64.4	72.4	91.3	102.1	118	114.9	103.2	**1060.6**
greatest daily total	36.9	24.1	26.3	36.1	29.8	32.5	26.2	41.5	53.5	63.2	56.1	33.5	**63.2**
mean no. of days with >= 0.2mm	22	17	21	17	17	18	19	20	21	22	22	23	**237**
mean no. of days with >= 1.0mm	19	13	16	12	12	13	13	15	16	18	18	18	**182**
mean no. of days with >= 5.0mm	9	6	7	4	4	4	5	6	7	8	8	7	**76**
WIND *(knots)*													
mean monthly speed	19	18.4	17.9	15.1	14.2	13.2	13.2	13.2	15.7	17.5	18.3	19	**16.3**
max. gust	91	86	90	69	71	74	74	67	98	76	76	88	**98**
max. mean 10-minute speed	64	57	67	47	49	52	55	45	66	57	56	59	**67**
mean no. of days with gales	11.2	8.6	8	3.4	2.3	1.3	0.8	1.5	3.8	6.7	8.7	9.7	**66**
WEATHER *(mean no. of days with...)*													
snow or sleet	6.6	6	4.6	2.4	0.2	0	0	0	0	0.1	1.9	3.9	**25.8**
snow lying at 0900UTC	0.9	1	0.5	0.1	0	0	0	0	0	0	0	0.8	**3.3**
hail	8.6	5.8	7.9	4.7	1.9	0.4	0.1	0.1	0.6	3.1	7.9	7.3	**48.4**
thunder	0.6	0.4	0.4	0.3	0.4	0.8	0.6	0.4	0.4	0.6	0.6	0.6	**5.9**
fog	0.4	0.5	0.7	1.9	1	2	2.2	1.3	0.6	0.4	0.2	0.4	**11.8**

APPENDIX IV: DETAILED INFORMATION ON FLORA AND FAUNA

The species included in the following lists were gleaned from NPWS files and reports incorporated therein.

Plant species recorded on site

Herbs
Bilberry (*Vaccinium myrtillus*)
Bog Myrtle (*Myrica gale*)
Bog Asphodel (*Narthecium ossifragum*)
Great Sundew (*Drosera anglica*)
Common Sundew (*Drosera rotundifolia*)
Common Butterwort (*Pinguicula vulgaris*)
Marsh Pennywort (*Hydrocotyle vulgaris*)
Bog Pimpernel (*Anagallis tenella*)
Heath Milkwort (*Polygala serpyllifolia*)
Tormentil (*Potentilla erecta*)
Golden Rod (*Solidago virgaurea*)
Marsh Violet (*Viola palustris*)
Autumn Hawkbit (*Leontedon autumnalis*)
Coltsfoot (*Tussilago farfara*)
Devilsbit Scabius (*Succcisa pratensis*)
Yarrow (*Achillea millefolium*)
Meadow Buttercup (*Ranunculus acris*)
Lesser Spearwort (*Ranunculus flammula*)
Common Sorrel (*Rumex acetosa*)
White Clover (*Trifolium repens*)
Wood Anemone (*Anemone memorosa*)
Foxglove (*Digitalis purpurea*)
Bogbean (*Menyanthes trifoliata*)
Shoreweed (*Littorella uniflora*).
Water Lobelia (*Lobelia dortmanna*)
Lesser Bladderwort (*Utricularia minor*)
Greater Bladderwort (*Utricularia vulgaris*)
Bog Pondweed (*Potamogeton polygonifolius*)
Yellow Water-lily (*Nuphar lutea*)
White Water-lily (*Nymphaea alba*)

Grasses
Purple Moor-grass (*Molinia caerula*)
Creeping Bent (*Agrostis stolonifera*)
Tufted Hair-grass (*Deschampsia cespitosa*)
Wavy Hair-grass (*Deschampsia flexuosa*)
Common Reed (*Phragmites australis*)
Rushes
Bulbous Rush (*Juncus bulbosus*)
Common Spike-rush (*Eleocharis palustris*)
Sharp-flowered Rush (*Juncus acutiflorus*)
Many-stalked Spike-rush (*Eleocharis multicaulis*),
Soft Rush (*Juncus effusus*)
Heath Rush (*Juncus squarrosus*)
Compact Rush (*Juncus conglomeratus*)
Sedges
Bog Sedge (*Carex limosa*)
White Beak-sedge (*Rhyncospora alba*),
Bottle Sedge (*Carex rostrata*)
Star Sedge (*Carex echinata*)
Common Sedge (*Carex nigra*)
Carnation Sedge (*Carex panicea*)
Common Cotton-grass (*Eriophorum angustifolium*)
Harestail Cotton-grass (*Eriophorum vaginatum*)
Ferns
Hard Fern (*Blechnum spicant*)
Clubmoss
Fir Clubmoss (*Huperzia selago*)
Mosses
Racomitrium lanuginosum
Aulocomnium palustre
Calypogeia fissa
Campylopus atrovirens
Campylopus introflexus
Hylocomium splendens
Hypnum cupressiforme
Leucobryum glaucum
Odontoschisma sphagni
Pleurozia purpurea
Pleurozium schreberi
Racomitrium lanuginosum
Sphagnum cuspidatum,
Sphagnum auriculatum var. *auriculatum,*
Sphagnum magellanicum
Sphagnum capillifolium
Sphagnum papillosum
Sphagnum magellanicum
Sphagnum imbricatum
Sphagnum compactum
Sphagnum fuscum
Sphagnum tenellum
Sphagnum subnitens
Lichens
Cladonia ciliata
Cladonia arbuscula
Cladonia uncialis
Cladonia chlorophaea
Cladonia crispata var. *centrariiformis*
Cladonia pyxidata
Cladonia portentosa

Trees and shrubs
Ling Heather (*Caluna vulgaris*),
Cross-leaved Heath (*Erica tetralix*)
Bell Heather (*Erica cinerea*)
Downy Birch (*Betula pubescens*)
Goat Willow (*Salix caprea*)
Scots Pine (*Pinus sylvestris*)
Sitka Spruce (*Picea sitchensis*)

Birds recorded on site

Meadow Pipit (*Anthus pratensis*)
Skylark (*Alauda arvensis*)
Stonechat (*Saxicola torquata*)
Willow Warbler (*Phylloscopus trochilus*)
Cuckoo (*Cuculus canorus*)
Sand Martin (*Riparia riparia*)
Merlin (*Falco columbarius*)
Hen Harrier (*Circus cyaneus*)
Peregrine Falcon (*Falco peregrinus*)
Kestrel (*Falco tinnunculus*)
Sparrowhawk (*Accipiter nisus*)
Golden Plover (*Pluvialis apricaria*)
Snipe (*Gallinago gallinago*)
Curlew (*Numenius arquata*)
Red Grouse (*Lagopus lagopus scoticus*)
Mallard (*Anas platyrhynchos*)
Teal (*Anas crecca*)
Greenland White-fronted Goose (*Anser albifrons*)

APPENDIX V: PLANNING POLICIES

County Donegal Development Plan 2000

Policy relating to Landscape Conservation

Section 2.6.4 Policy No 1. Landscape Conservation

The core principles underlying the Council's policies for landscape conservation are to give the highest degree of protection to the areas of highest scenic quality and to adopt a positive attitude to development proposals in areas of relatively lower scenic landscape quality.

In Landscape Category 2 areas it is the Council's policy to conserve the scenic landscapes of these areas by more specific control of types of development and categories of users. Priority will be given to the indigenous rural population building permanent houses and holiday homes will in general not be permitted.

In Landscape Category 3 areas it is the Council's policy to preserve the amenities of the highest quality scenic landscapes in the county and only very limited further development will be considered in those areas.

Under Section 2.6.5 the County Plan states that new development within the Landscapes 1, 2 and 3 will be guided by the general principles and policies set out above and by the more specific policies as follows for Category 2 Areas:-

New housing development for both permanent and holiday homes will be permitted in accordance with the strategic development control policies set out in Section 2.5.5 Guiding Development:– Housing.

Agricultural development will be permitted subject to location, siting, and design and subject to mitigating environmental consideration in appropriate circumstances

The development of natural resources like wind and water power, fishery and aquaculture industries will be subject to integration and environmental considerations

The construction of electricity poles, masts and pylons will be subject to the application of the "least visual harmful route" principle and will have regard to any other relevant environmental consideration

The development of resource-related tourist projects other than stand alone accommodation will be permitted. (The "holiday home village" policy set out in Housing Policy No1 is excluded from this)

The development of agri-tourist projects, excluding the development of caravan parks, will be permitted

The development of caravan parks will be encouraged in those areas set out in Appendix No I SPG No. 5.

The developers of hotels and guest houses will be encouraged to locate within the existing towns and villages where the optimum us ecan be made of the infrastructure and where the service sector of these centres can benefit.

In Landscape Category 3, the following strategic development control policies will apply

Limited new housing development for the indigenous rural population (immediate family members only) and the renovation of rundown and derelict buildings will be permitted in accordance with the details set out in Section 2.5.5.

Public developments tied to a fixed resource which are imperative for reasons of overriding public interest

Limited farm forestry will be permitted in accordance with the details set out in Section 2.2.5 and new farm buildings both within and outside an existing farm complex will be considered on their merits

Appropriate extensions, changes of use and renovations of existing intact buildings will be considered provided they do not materially alter the character of the building and its associated curtilage.

Use of the amenity value itself will generally be permitted

It further states that new development will not be permitted between roads and the sea, lakes and rivers where it would:-

- Restrict the views or prospects from the road
- Intrude significantly on the view or prospect
- Materially alter the view or prospect

APPENDIX VI: NOTIFIABLE ACTIONS

The notifiable actions relating to the habitats that occur within the site are listed below:

- Notifiable Action 3.1 - Blanket Bog
- Notifiable Action 3.2 - Heath (Including Juniper Scrub)
- Notifiable Action 4.1 - Raised Bog, Cutaway Bog and Bog Woodland
- Notifiable Action 5.2 - Scrub
- Notifiable Action 6.1 - Rivers or Streams
- Notifiable Action 6.2 - Lakes, Ponds and Canals
- Notifiable Action 7.1 - Ditches, Hedges, Cereals and Intensive Grasslands, Walls, Buildings, Waste Ground, Bare Soil, Parkland Grassland, Bracken, Caves or Quarries.

HABITAT TYPE 3.1

BLANKET BOG

Under STATUTORY INSTRUMENT 94 of 1997, made under the EUROPEAN COMMUNITIES ACT 1972 and in accordance with the obligations inherent in the COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 (the Habitats Directive) on the conservation of the natural habitats and species of wild fauna and flora, all persons must obtain the written consent, (in circumstances prescribed at section A and B below) of the Minister for The Environment, Heritage and Local Government before performing any of the operations on, or affecting, the following habitats where they occur on lands / waters within the candidate Special Area of Conservation.

Please note that where a landowner has a current approved plan under the Rural Environmental Protection Scheme or any scheme which the Minister considers to be equivalent s/he need only notify the Minister of activities not covered in the plan.

SECTION A	**SECTION B**
Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	Please note that the activities listed in *Section B* overleaf may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food). If so, these notifiable actions do not apply. However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 3.1

BLANKET BOG

Section A	Section B
THE MINISTER FOR THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT grazing of livestock above a sustainable density or type of stock (as defined in approved farm plans) grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung supplementary feeding of stock, except as defined in REPS guidelines/ introduction of stock to formerly ungrazed areas adding lime/adding fertiliser of any sort creation of new tracks or paths/burning of vegetation/ reclamation, infilling, ploughing or land drainage reseeding, planting of trees or any other species rock removal/cutting turf except from existing banks; no cutting from intact (uncut) areas commercial peat moss or turf extraction use of any pesticide or herbicide, including sheep dip/ dumping, burning or storing any materials alteration of the banks, bed or flow of watercourses operation of commercial recreation facilities (e.g. pony trekking) introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area any other activity of which notice may be given by the Minister from time to time	(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY) developing leisure facilities including golf courses, sports pitches, caravan or camping facilities. removal of soil, mud, gravel, sand or minerals developing roads or car parks construction of fences, buildings or embankments afforestation erecting or operating a windfarm

In a very limited number of cases it may be necessary for the Minister for The Environment, Heritage and Local Government to restrict existing activities. In these cases compensation will be payable for actual losses arising out of any such restriction. In the event of restrictions being imposed by the Minister for The Environment, Heritage and Local Government, an appropriate appeals procedure will be put in place.

HABITAT TYPE 3.2

HEATH (INCLUDING JUNIPER SCRUB)

Under STATUTORY INSTRUMENT 94 of 1997, made under the EUROPEAN COMMUNITIES ACT 1972 and in accordance with the obligations inherent in the COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 (the Habitats Directive) on the conservation of the natural habitats and species of wild fauna and flora, all persons must obtain the written consent, (in circumstances prescribed at section A and B below) of the Minister for The Environment, Heritage and Local Government before performing any of the operations on, or affecting, the following habitats where they occur on lands / waters within the candidate Special Area of Conservation.

Please note that where a landowner has a current approved plan under the Rural Environmental Protection Scheme or any scheme which the Minister considers to be equivalent s/he need only notify the Minister of activities not covered in the plan.

SECTION A	**SECTION B**
Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	Please note that the activities listed in *Section B* overleaf may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food). If so, these notifiable actions do not apply. However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 3.2

HEATH (INCLUDING JUNIPER SCRUB)

Section A	Section B
THE MINISTER FOR THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT grazing of livestock above a sustainable density or type of stock (as defined in approved farm plans)/grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung supplementary feeding of stock, except as defined in REPS guidelines introduction of stock to formerly ungrazed areas adding lime/ adding fertiliser of any sort Creation of new tracks or paths burning areas of vegetation over 5 ha, or burning any area more often than once every 15 years reclamation, infilling, ploughing or land drainage reseeding, planting of trees or any other species rock removal/cutting turf except from existing banks; no cutting from intact (uncut) areas commercial peat moss or turf extraction use of any pesticide or herbicide, including sheep dip dumping, burning or storing any materials alteration of the banks, bed or flow of watercourses operation of commercial recreation facilities (e.g. pony trekking) introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area/any other activity of which notice may be given by the Minister from time to time	(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY) developing leisure facilities including golf courses, sports pitches, caravan or camping facilities. removal of soil, mud, gravel, sand or minerals developing roads or car parks construction of fences, buildings or embankments afforestation erecting or operating a windfarm

In a very limited number of cases it may be necessary for the Minister for The Environment, Heritage and Local Government to restrict existing activities. In these cases compensation will be payable for actual losses arising out of any such restriction. In the event of restrictions being imposed by the Minister for The Environment, Heritage and Local Government, an appropriate appeals procedure will be put in place.

HABITAT TYPE 4.1

RAISED BOG, CUTAWAY BOG AND BOG WOODLAND

Under STATUTORY INSTRUMENT 94 of 1997, made under the EUROPEAN COMMUNITIES ACT 1972 and in accordance with the obligations inherent in the COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 (the Habitats Directive) on the conservation of the natural habitats and species of wild fauna and flora, all persons must obtain the written consent, (in circumstances prescribed at section A and B below) of the Minister for The Environment, Heritage and Local Government before performing any of the operations on, or affecting, the following habitats where they occur on lands / waters within the candidate Special Area of Conservation.

Please note that where a landowner has a current approved plan under the Rural Environmental Protection Scheme or any scheme which the Minister considers to be equivalent s/he need only notify the Minister of activities not covered in the plan.

SECTION A	**SECTION B**
Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	Please note that the activities listed in *Section B* overleaf may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food). If so, these notifiable actions do not apply. However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 4.1

RAISED BOG, CUTAWAY BOG AND BOG WOODLAND

Section A	Section B
THE MINISTER FOR THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT grazing of livestock/grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung adding lime/adding fertiliser of any sort creation of new tracks or paths burning areas of vegetation reclamation, infilling, or ploughing /reseeding, planting of trees or any other species/cutting trees or removing timber drainage works on the bog or within the local water catchment area cutting turf or peat moss extraction use of any pesticide or herbicide, including sheep dip dumping, burning or storing any materials alteration of the banks, bed or flow of watercourses operation of commercial recreation facilities (e.g. botanical tours) introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area any other activity of which notice may be given by the Minister from time to time	(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY) developing leisure facilities including golf courses, sports pitches, caravan or camping facilities. removal of soil, mud, gravel, sand or minerals developing roads or car parks construction of fences, buildings or embankments afforestation erecting or operating a windfarm

In a very limited number of cases it may be necessary for the Minister for The Environment, Heritage and Local Government to restrict existing activities. In these cases compensation will be payable for actual losses arising out of any such restriction. In the event of restrictions being imposed by the Minister for The Environment, Heritage and Local Government, an appropriate appeals procedure will be put in place.

HABITAT TYPE 5.2

SCRUB

Under STATUTORY INSTRUMENT 94 of 1997, made under the EUROPEAN COMMUNITIES ACT 1972 and in accordance with the obligations inherent in the COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 (the Habitats Directive) on the conservation of the natural habitats and species of wild fauna and flora, all persons must obtain the written consent, (in circumstances prescribed at section A and B below) of the Minister for The Environment, Heritage and Local Government before performing any of the operations on, or affecting, the following habitats where they occur on lands / waters within the candidate Special Area of Conservation.

Please note that where a landowner has a current approved plan under the Rural Environmental Protection Scheme or any scheme which the Minister considers to be equivalent s/he need only notify the Minister of activities not covered in the plan.

SECTION A	**SECTION B**
Please note that the activities listed in Section A overleaf are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	Please note that the activities listed in *Section B* overleaf may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food). If so, these notifiable actions do not apply. However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 5.2

SCRUB

Section A	Section B
THE MINISTER FOR THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT grazing of livestock above a sustainable density (as defined in approved farm plans)/grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung supplementary feeding of stock (as defined in approved farm plans) adding lime /adding fertiliser of any sort reclaiming land covered by scrub; if scrub is cut it must be allowed to regrow reclamation, infilling, ploughing or land drainage reseeding, planting of trees or any other species felling of trees, removal of timber removal of foliage, moss or other materials killing ivy use of any pesticide or herbicide /dumping, burning or storing any Materials alteration of the banks, bed or flow of watercourses operation of commercial recreation facilities (e.g. walking tours) introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area any other activity of which notice may be given by the Minister from time to time	(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY) developing leisure facilities including golf courses, sports pitches, caravan or camping facilities. any activity which may cause pollution of the site removal of soil, mud, gravel, sand or minerals developing roads or car parks construction of fences, buildings or embankments felling trees or reafforestation

In a very limited number of cases it may be necessary for the Minister for The Environment, Heritage and Local Government to restrict existing activities. In these cases compensation will be payable for actual losses arising out of any such restriction. In the event of restrictions being imposed by the Minister for The Environment, Heritage and Local Government, an appropriate appeals procedure will be put in place.

HABITAT TYPE 6.1

RIVERS OR STREAMS

Under STATUTORY INSTRUMENT 94 of 1997, made under the EUROPEAN COMMUNITIES ACT 1972 and in accordance with the obligations inherent in the COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 (the Habitats Directive) on the conservation of the natural habitats and species of wild fauna and flora, all persons must obtain the written consent, (in circumstances prescribed at section A and B below) of the Minister for The Environment, Heritage and Local Government before performing any of the operations on, or affecting, the following habitats where they occur on lands / waters within the candidate Special Area of Conservation.

Please note that where a landowner has a current approved plan under the Rural Environmental Protection Scheme or any scheme which the Minister considers to be equivalent s/he need only notify the Minister of activities not covered in the plan.

SECTION A	**SECTION B**
Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	Please note that the activities listed in *Section B* overleaf may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food). If so, these notifiable actions do not apply. However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 6.1

RIVERS OR STREAMS

Section A	**Section B**
THE MINISTER FOR THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT grazing of livestock above a sustainable density (as defined in approved farm plans) within 30m of the river or stream/grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung within 30m of the river or stream supplementary feeding of stock within 30m of the river or stream/adding lime within 30m of the river or stream/adding fertiliser of any sort within 30m of the river or stream extracting water for irrigation or other purposes operation of boat angling or shore angling business/ restocking with fish reclamation, infilling, ploughing or land drainage within 30m of the river or stream/ reseeding, planting of trees or any other species within 30m of the river or stream/ removal of trees or any aquatic vegetation within 30m of the river/stream/ use of any pesticide or herbicide in the river or stream or within 30m of the river or stream dumping rubbish or other materials or disposing of any chemicals or wastes in streams/rivers or into water-courses running into them dumping, burning or storing any materials within 30m of the river/stream including the land spreading of used pesticides (e.g. sheep dip)./alteration of the banks, channel, bed or flow of the river or stream harvesting or burning of reed or willow. causing siltation/ operation of commercial recreation facilities (e.g. bird watching tours) introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area any other activity of which notice may be given by the Minister from time to time	(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY) developing leisure facilities including golf courses, sports pitches, caravan or camping facilities. any activity which might cause pollution of the river or stream removal of soil, mud, gravel, sand or minerals developing roads or car parks construction of fences, buildings or embankments construction or operation of an aquaculture facility. fishing for eels or salmon bank maintenance and grading creation of weirs and dams

In a very limited number of cases it may be necessary for the Minister for The Environment, Heritage and Local Government to restrict existing activities. In these cases compensation will be payable for actual losses arising out of any such restriction. In the event of restrictions being imposed by the Minister for The Environment, Heritage and Local Government, an appropriate appeals procedure will be put in place.

HABITAT TYPE 6.2

LAKES, PONDS AND CANALS

Under STATUTORY INSTRUMENT 94 of 1997, made under the EUROPEAN COMMUNITIES ACT 1972 and in accordance with the obligations inherent in the COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 (the Habitats Directive) on the conservation of the natural habitats and species of wild fauna and flora, all persons must obtain the written consent, (in circumstances prescribed at section A and B below) of the Minister for The Environment, Heritage and Local Government before performing any of the operations on, or affecting, the following habitats where they occur on lands / waters within the candidate Special Area of Conservation.

Please note that where a landowner has a current approved plan under the Rural Environmental Protection Scheme or any scheme which the Minister considers to be equivalent s/he need only notify the Minister of activities not covered in the plan.

SECTION A	**SECTION B**
Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	Please note that the activities listed in *Section B* overleaf may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food). If so, these notifiable actions do not apply. However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 6.2

LAKES, PONDS AND CANALS

Section A	Section B
THE MINISTER FOR THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT grazing of livestock above a sustainable density as defined in approved farm plans) within 50m of the lake, pond or canal grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung supplementary feeding of stock within 50m of the lake, pond or canal adding lime within 50m of the lake, pond or canal /adding fertiliser of any sort within 50m of the lake, pond or canal extracting water for irrigation or other purposes operation of boat angling or shore angling business/ restocking with fish. within 50m of the lake, pond or canal: reclamation, infilling, ploughing or land drainage reseeding, planting of trees or any other species /removal of trees or any aquatic vegetation/use of any pesticide or herbicide in the lake, pond or canal or within 50m of the lake, pond or canal dumping rubbish or other materials or disposing of any chemicals or wastes in streams/rivers or into water-courses running into them. dumping, burning or storing any materials within 50m of the lake pond or canal including the land spreading of used pesticides (e.g. sheep dip). alteration of the banks, channel, bed or flow of the lake, pond or canal or of watercourses running into or out of it harvesting or burning of reed or willow. causing siltation operation of commercial recreation facilities (e.g. bird watching tours) introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area any other activity of which notice may be given by the Minister from time to time	(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY) developing leisure facilities including golf courses, sports pitches, caravan or camping facilities. any activity which might cause pollution of the lake, pond or canal removal of soil, mud, gravel, sand or minerals developing roads or car parks construction of fences, buildings or embankments construction or operation of an aquaculture Facility. fishing for eels or salmon bank maintenance and grading creation of weirs and dams

In a very limited number of cases it may be necessary for the Minister for The Environment, Heritage and Local Government to restrict existing activities. In these cases compensation will be payable for actual losses arising out of any such restriction. In the event of restrictions being

imposed by the Minister for The Environment, Heritage and Local Government, an appropriate appeals procedure will be put in place.

HABITAT TYPE 7.1

DITCHES, HEDGES, CEREALS AND INTENSIVE GRASSLANDS, WALLS, BUILDINGS, WASTE GROUND, BARE SOIL, PARKLAND GRASSLAND, BRACKEN, CAVES, OR QUARRIES

Under STATUTORY INSTRUMENT 94 of 1997, made under the EUROPEAN COMMUNITIES ACT 1972 and in accordance with the obligations inherent in the COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 (the Habitats Directive) on the conservation of the natural habitats and species of wild fauna and flora, all persons must obtain the written consent, (in circumstances prescribed at section A and B below) of the Minister for The Environment, Heritage and Local Government before performing any of the operations on, or affecting, the following habitats where they occur on lands / waters within the candidate Special Area of Conservation.

Please note that where a landowner has a current approved plan under the Rural Environmental Protection Scheme or any scheme which the Minister considers to be equivalent s/he need only notify the Minister of activities not covered in the plan.

SECTION A	**SECTION B**
Please note that the activities listed in Section A overleaf are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	Please note that the activities listed in Section B overleaf may, and in most cases do, require a licence or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food). If so, these notifiable actions do not apply. However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 7.1

DITCHES, HEDGES, CEREALS AND INTENSIVE GRASSLANDS, WALLS, BUILDINGS, WASTE GROUND, BARE SOIL, PARKLAND GRASSLAND, BRACKEN, CAVES, OR QUARRIES

Section A	Section B
THE MINISTER FOR THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT disturbance of bats operation of commercial recreation facilities (e.g. bird watching tours) introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area any other activity of which notice may be given by the Minister from time to time	(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY) developing leisure facilities including sports pitches, caravan or camping facilities. developing roads or car parks construction of fences, buildings and embankments afforestation

In a very limited number of cases it may be necessary for the Minister for The Environment, Heritage and Local Government to restrict existing activities. In these cases compensation will be payable for actual losses arising out of any such restriction. In the event of restrictions being imposed by the Minister for The Environment, Heritage and Local Government, an appropriate appeals procedure will be put in place.

APPENDIX VII: COMPENSATION PROCEDURES

The Government is committed, as part of the social partnership process, to the payment of a fair and proper level of compensation to landowners who have lands proposed as part of an SAC or SPA and to other users who have a legal entitlement in the site.

A landowner or user with a legal entitlement may seek compensation for actual losses incurred due to restrictions imposed as a result of designation. Eligible persons should submit to NPWS details of the losses incurred as a result of the inclusion of lands in an SAC/SPA and outlining the basis for the calculations. Documentary evidence of past earnings and the activities that produced these should be included with the claim. Should the applicant be dissatisfied with a compensation offer, the case may be referred to an independent arbitrator who will review the matter and make a final decision.

Where a landowner or user with a legal entitlement is restricted in carrying out an activity on their land or licensed area, the compensation due will exclude any payments that have been attracted under grant schemes.

For farmers, there are two options available for receiving compensation for possible restrictions to their farming practices. Farmers may also receive payments for carrying out actions that enhance a nature conservation area.

Rural Environment Protection Scheme (REPS)

Lands within SACs, SPAs, NHAs or commonages are defined as 'Target Areas' under this scheme. A REPS plan usually covers an entire farm, but a farmer with land in a target area receives a higher payment for that area. Farmers with small areas of land in a designated area can get REPS payments for that part of their farm. In either case, the farmer is subject to certain conditions regarding farming and land use practices, set out in the REPS plan for the farm. REPS is administered by the Department of Agriculture, Food and Forestry.

NPWS Farm Plan Scheme

Where a farmer chooses not to participate in REPS, and NPWS seeks to change the farm operation in some way or to restrict a particular activity, NPWS will pay for preparation of a farm plan. This scheme also applies to land within SACs, SPAs, NHAs and commonages.

An NPWS farm plan will normally be confined just to the designated land and will address the conservation requirements, as well as any costs arising. Payment may also be made for work carried out that enhances the nature conservation value of the designated area. The farmer will have a substantial input into the plan.

A list of trained and approved farm planners is available for farmers to choose from. For further information, contact NPWS.

APPENDIX VIII: FARMING CONDITIONS UNDER REPS

Conditions for the conservation of blanket bogs, heaths and upland grasslands to be applied under REPS

General Provisions

The conditions for specific habitat types are supplementary to the agri-environmental plan requirements of the general REPS programmes. The conditions for the target areas under Supplementary Measure A apply. Planners may seek a derogation from the Regional Inspector to vary these conditions in individual cases. All REPS plans in respect of NHAs must be approved and signed by the Planning Agency's environmentalist/ecologist.

Detailed Conditions

The conditions applicable to Supplementary Measure A apply; the guidelines set out below are complementary to these conditions.

Stocking Density

In all cases an environmentally sustainable plan must be prepared and adhered to for the total area of the farm. Sustainable optimum stocking rates must be set down by the REPS planner following careful assessment of the environmental conservation needs of the lands.

Where the stocking levels set down by the planner require a reduction in stock, this must be achieved within one year of the commencement of the plan.

There can be no increase in stocking levels, no introduction of stock to new areas and no changes in stock type during the period of the REPS plan without the prior approval of DAF.

The maximum number of sheep that may be kept on the farm as a whole must be set down in the REPS plan. The conditions set out for Supplementary Measure A areas must be followed. The following parameters apply:

- Where there is no damage, the current stocking levels are acceptable.
- If the level of damage is moderate, a stocking reduction must be prescribed by the planner at a level related to the damage and sufficient for the vegetation to recover
- If the level of damage is severe, a stocking reduction of between 70 % and 100 % of ewe numbers on the damaged area must be prescribed for a specified period.
- At the review of the REPS plan, the conservation status of the areas will be reviewed. A change in the stocking levels (increase or decrease) may be appropriate depending on progress.

Stocking levels apply to Scottish Blackface sheep or similar medium sized sheep breeds. Stocking levels for cattle or other stock should be at livestock unit applicable rates taking account of DAF conversion rates for the various stock types. The stocking levels recommended in this document are maximum sustainable rates for year round grazing. If shorter periods of grazing are used, the number of animals may be increased, though not necessarily pro rata.

Supplementary Feeding

Supplementary feeding is permitted only on areas where it is currently practised. Locations of feeding points must be specified. To reduce heavy grazing, trampling, poaching and erosion problems, 'feeding points' should be moved every three weeks and sited on ground with least habitat and wildlife value, preferably on grassland well away from stands of heather. Feeding on steep slopes and on peaty soils should be avoided where possible. The total amount of feed used must not be increased.

Use of Fertilisers and Herbicides

Neither organic nor inorganic fertilisers or lime can be applied on bogs, heaths or upland grasslands where they have not been used before. Fertilisers must not be used as a means of regenerating eroded areas. In the case of upland grasslands, fertilisers can only be applied on the basis of the results of a soil test. Where fertilisers are being applied, the initial soil sampling should be relatively intensive, with at least one sample per 2-4 ha. Target soil phosphate levels must not exceed the Index 2 level set out in the REPS specification.

Spraying or broadcast application of herbicides must be avoided. Spot application and wipe-on treatments to eradicate docks, thistles, ragwort and similar noxious weeds may be used. Rhododendron may be removed by cutting and herbicide treatment. Bracken control may be by rolling, cutting and/or by controlled cattle trampling in early summer. In exceptional circumstances, control of bracken by herbicides may be permitted.

Water Pollution

The greatest care should be taken to observe the statutory requirements on water pollution. The hydrology of bogland areas is characterised by extremely nutrient poor surface waters which contain flora and fauna adapted to these conditions. These species would be adversely affected by nutrient enrichment. New sheep dip sites must be listed and located away from streams and flushes to reduce the possibility of water pollution and damage to flora and fauna.

Restricted and Prohibited Practices

- The following practices must not be carried out on blanket bogs, heaths or upland grasslands
- The areas must not be drained, ploughed, cultivated or reseeded.
- There must be no infilling or rock removal.
- Turf cutting on unexploited bogs is not permitted. Turf cutting for domestic use is permitted on existing banks.
- Planting of trees or other crops is not permitted.
- No new tracks or paths can be created.
- Burning is only allowed as a planned management practice.
- Gorse may be controlled by cutting, spot spraying or exceptionally by burning outside of the bird nesting season (March 1st to August 31st).

Complementary Action

(a) Measures to prevent damage by non REPS participants

DAF should take measures to ensure that the environmental benefits achieved in degraded areas under REPS are not negated or diminished by non-participants in the Scheme

(b) Evaluating and Monitoring

Monitoring and evaluating the effects of REPS on blanket bogs, heaths and upland and unimproved grassland is essential in determining the environmental impact of REPS on these habitats so that appropriate modifications can be identified and effected where necessary. The effect of the grazing regime on vegetation and wildlife should be monitored to assess recovery as well as any damage being caused by animals. To this end, DAF and NPWS of DEHLG, in consultation with Teagasc and private planners, will monitor the environmental impact of REPS on these habitats on an ongoing basis. Progress in this regard will be reported to the Consultative Committee on REPS.

(c) Farmer Education /Advice

A REPS promotional campaign will be undertaken as soon as is practicable to inform farmers of the conservation needs of these areas and of the provisions of REPS. This campaign will be undertaken by DAF. Farming and environmental organisations will also be invited to assist in this promotional campaign.

(d) Seminars for Planners

Seminars for REPS planners shall be held to advise on the interpretation of these conditions at ground level.

(e) Demonstration Farms

A number of REPS participant demonstration farms will be set up in selected areas. Research work could also be carried out at these farms to assess the ability/rate of recovery of an area under different stocking conditions.

(f) Quota Rights

Any REPS participant farmer is guaranteed that their quota rights are protected and in the event of a possibility of increasing numbers arising, such farmers would be allowed to do so, subject to the environmental condition of the participant farm.

(g) Scheme Extension

The application of REPS in the target areas will apply for periods of five years renewable for 15 years.

(h) Local Co-ordination

DAF will encourage co-ordination, at local level, of efforts to rejuvenate damaged areas.

APPENDIX IX: NATIONAL PARKS AND WILDLIFE SERVICE MANAGEMENT STAFF

Conservation Ranger

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