

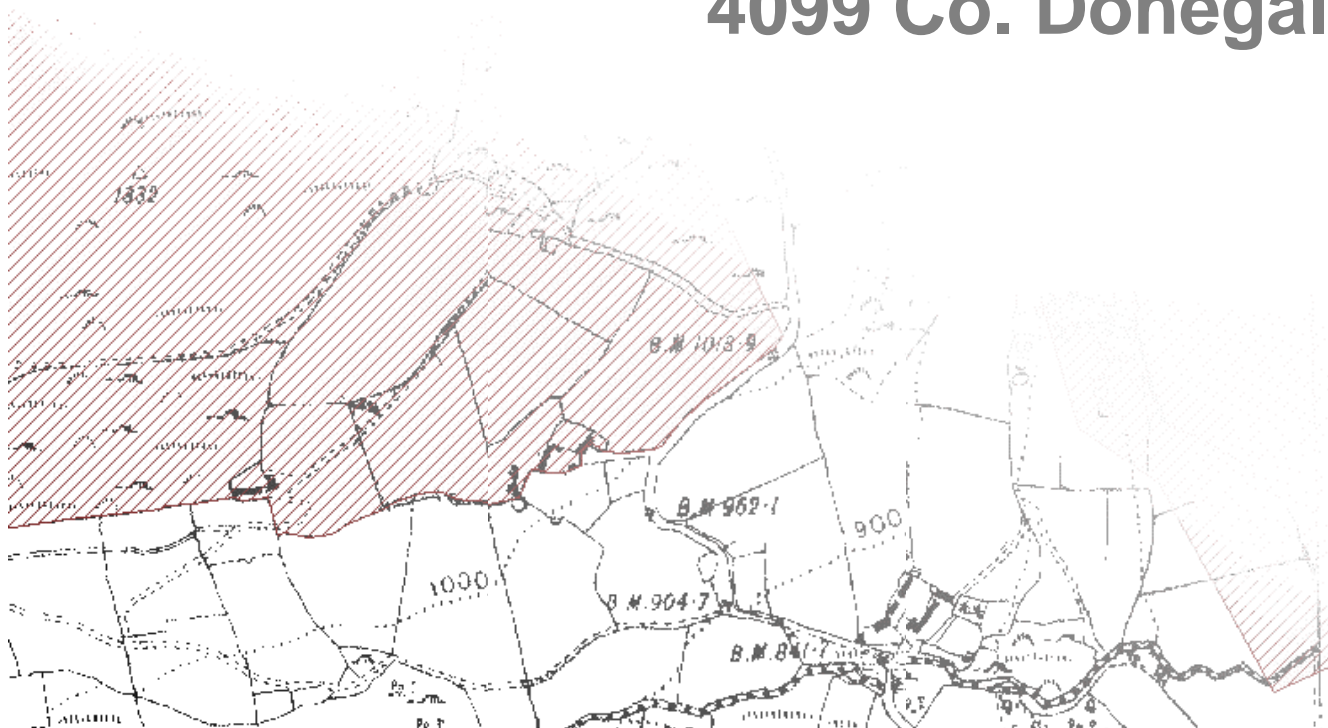


National Parks and Wildlife Conservation Plan for 2005-2010



Dunragh Loughs & Pettigo Plateau cSAC, SPA & NR

Site Code 1125 &
4099 Co. Donegal



SUMMARY

Site Description

The Dunragh Loughs and Pettigo Plateau candidate Special Area of Conservation (cSAC) is listed because of the presence of extensive areas of good quality active blanket bog (a priority habitat on Annex I of the EU Habitats Directive), a large area of good quality Northern Atlantic wet heath with *Erica tetralix* (also an Annex I EU Habitats Directive habitat), and the presence of habitat for several Annex I EU Birds Directive species.

The site is extensive (i.e. 2079 ha) and is situated in south-east Donegal, to the west of Lough Derg. It is one of the few remaining extensive intact bogs in Donegal, and is listed as the second largest in the region. The geology of the site consists of gneisses and schists. The terrain is undulating in character, with an altitude range of 180m to 325m.

The core of the site comprises a statutory Nature Reserve (NR), which has also been designated as the Pettigo Bog Special Protection Area (SPA). Ireland has further designated the NR/SPA as a wetland of International Importance under the Ramsar Convention, and it is part of the Council of Europe network of Biogenetic Reserves.

The site comprises a mosaic of active blanket bog and Northern Atlantic wet heath habitats and is largely undisturbed. The site features hills, rock outcrops, lakes, streams and broad basins. The range of flora present on the site reflects the diversity of habitats occurring. The flora includes the rather rare Cowberry and Cranberry. There is a rich variety of Bog Mosses present within the site, including *Sphagnum fuscum* and *S. imbricatum*. Many sedges occur on the site, including the very local White Sedge. The active blanket bog comprises many intact hummock-hollow systems, interconnecting pools, wet vegetation, raised bog type domes as well as several small flushes and lakes. Deer-grass, Hare's-tail Cotton Sedge, Purple Moor-grass and Bog Mosses dominate the bog. The lakes support stands of Common Reed, Reedmace, Bottle Sedge, Broad-leaved Pondweed and Rushes.

Several Annex I EU Birds Directive species use the site, including the Golden Plover, Merlin, Peregrine Falcon and Hen Harrier. The Greenland White-fronted Goose has used the site in the past, but it is uncertain whether the species is currently using the site.

The Irish Hare, Badger, Otter and Common Frog are found within the site and are all listed as Internationally Important in the Irish Red Data Book. The Common Lizard is present within the site. All the above species are protected under the Irish Wildlife Act (1976). Red Deer, Sika Deer and their hybrids are also known to occur on the site.

Land Use

Sheep grazing is practised across the majority of the site and burning has been previously carried out. Machine peat cutting has damaged the bog west of Lough Boyle. As a result, lands in this area have been excluded from the site. Some machine cutting continues within the western boundary. There are also turf banks at Mullanasole Barr where machine and hand cutting takes place. There

are two large areas of commercial cutting outside the site, at Flughra Hill and Ballinakillew Mountain.

Several bog roads and tracks serve the western edge of the site. An area of forestry, located west of Lough Golagh and within the overall boundary, is excluded from the site. However, this forestry has been earmarked for LIFE funding to restore the bog surface. Commercial conifer plantations surround the majority of the site.

Several planning applications for windfarms have been submitted for areas in close proximity to the site, with one windfarm currently under construction.

Main conservation issues

- Grazing
- Peat extraction
- Rhododendron infestation
- Draining of the bog

Main management objectives

- To maintain and, if possible, enhance the extent and ecological value of the active blanket bog and wet heath habitats within the site
- To maintain and, if possible, enhance the populations of important bird species occurring within the site, including the Greenland White-fronted Goose (if it still occurs), Golden Plover, Merlin, Peregrine Falcon and Hen Harrier
- To maintain and, if possible, enhance the extent and ecological value of the other habitats within the site, including the lakes and wet grassland

Main strategies to achieve objectives

- Ensure sustainable grazing levels
- Cease mechanical peat extraction within the site and control ongoing turf-cutting activities
- Prevent extraction of peat from virgin blanket bog areas
- Block existing drains
- Eradicate Rhododendron from the site and adjoining lands

ACKNOWLEDGEMENTS

Thanks to Susan Moles, the original plan facilitator for this site. Thanks also to the regional NPW staff for their assistance in the preparation of this plan.

TABLE OF CONTENTS

Summary	1
Acknowledgements.....	3
Table of Contents	4
Reader's Guide	6
Introduction	7
Legal Background for Conservation Plans	7
General Conservation Objectives.....	10
Implications for landowners and other site users	10
Site Description	11
Location including site boundaries	11
Legal Status.....	11
Management Infrastructure	14
Physical Features	14
Biological Features.....	15
Cultural Features	20
Ecological Assessment.....	22
Objectives, Strategies and Zoning.....	23
Conservation Objectives	23
Management Issues	23
General Strategies.....	26
Specific Strategies.....	27
Zoning.....	31
Summary of Specific Strategies	34

APPENDICES

Appendix I:	Glossary	36
Appendix II:	References	42
Appendix III:	Physical Processes Affecting the Site	44
Appendix IV:	Detailed Information on Flora and Fauna	46
Appendix V:	Notifiable Actions	50
Appendix VI:	Compensation and Appeals Procedures	65
Appendix VII:	Summary of Farming Conditions under REPS	67
Appendix VIII:	National Parks and Wildlife Management Staff	70

MAPS

Map 1 Site Location and Boundary (Version 1.0)
Map 2 Boundary of Statutory Nature Reserve and Special Protection Area for Birds
Map 3 Underlying Geology
Map 4 Hydrology
Map 5 Soil Survey Map
Map 6 Locations of Plant Communities described in Text
Map 7 Bird Usage Areas
Map 8 Indicative Habitat Map
Map 9 Management Zones
Map 10 Site Ownership

READER'S GUIDE

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

The **Site description** contains **general information** on the site's boundaries, ownership and organisations involved. It also contains sections on the **physical aspects** of the site such as 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 **Ecological Assessment** assesses the main ecological attributes of the site.

The **Objectives, Strategies and Zoning 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 will be used to achieve the objectives as outlined. In cases where more information is required, general strategies are usually applied. Where sufficient data and knowledge is available, specific management prescriptions are outlined for the timescale of the plan. 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, a list of **notifiable actions** relevant to each habitat within the site, and additional information on the site.

INTRODUCTION

Legal Background for 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.

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 Site Designation

The reason for the proposal to designate this site as a SAC is the presence of:

HABITATS LISTED IN ANNEX I OF THE E.U. HABITATS DIRECTIVE	
<ul style="list-style-type: none"> • Priority Habitat No. 7130 - *Active Blanket Bog 	Examples of *active blanket bog are rare in Ireland and the cSAC supports extensive areas of good quality *active blanket bog.
<ul style="list-style-type: none"> • Habitat No. 4010 – Northern Atlantic Wet Heaths with <i>Erica tetralix</i> 	The site supports large areas of good quality wet heath.

The reason for the designation of the SPA is:

SPECIES LISTED IN ANNEX I OF THE E.U. BIRDS DIRECTIVE	
<ul style="list-style-type: none"> • Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) 	The site was known to support a nationally important flock of Greenland White-fronted Goose. However, it is not known whether the species is using the site at present.
<ul style="list-style-type: none"> • Golden Plover (<i>Pluvialis apricaria</i>) 	The site provides suitable habitat for the Golden Plover, which breeds within the site.
<ul style="list-style-type: none"> • Merlin (<i>Falco columbarius</i>) 	The site provides very suitable habitat for the Merlin and is known to support breeding pairs.
<ul style="list-style-type: none"> • Peregrine (<i>Falco peregrinus</i>) 	The site provides habitat for the Peregrine Falcon.
<ul style="list-style-type: none"> • Red-throated Diver (<i>Gavia stellata</i>) 	The site supports good habitat resources for this species.

As part of his responsibility in relation to biodiversity and wildlife under the Wildlife Acts, the Minister's objective is to protect important habitats and species even though they may not appear in the Annexes of the Habitats Directive. This may mean that they are included in SAC/SPA plans.

General Conservation Objectives

Under Article 6 of the EU Habitats Directive, DEHLG is required to ensure the favourable conservation status of all Annex I habitats and Annex II species within cSACs. By preparing, implementing and reviewing this plan on a five year basis, DEHLG aims to achieve the objectives of the Habitats Directive in relation to this site. The general objectives DEHLG will apply to achieve this are:

- to maintain the Annex I habitats for which the cSAC is selected
- to liaise with the landowners, relevant authorities and interested parties
- to increase the scientific knowledge of the site through further scientific research and development of monitoring programmes

Specific conservation objectives and strategies are outlined in the section, **Objectives, Strategies and Zoning**.

Implications for landowners and other site users

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

In cases where users 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.

If an owner, occupier or user of a site wishes to carry out certain activities within the designated area (that are not covered by licence or consent from another statutory body), 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 V). Local Authorities are obliged to ensure appropriate assessment of the implications of any development permission sought that may have an impact on a designated area.

The designation of the site or any conservation actions can be appealed by landowners or right-owners on a scientific basis. Details of the appeals procedure are also given in Appendix VI.

SITE DESCRIPTION

Location including site boundaries

The site is located in the south-east of County Donegal, close to the western shores of Lough Derg.

Grid Ref.: H 03 75

Latitude: N 54° 37' 46"

Longitude: W 07° 56' 55"

Area: 2097 ha

Altitude Range: 180 m to 325 m

(Map references are provided in Appendix II).

Site Boundaries

The site is bounded by commercial forestry plantations to the south-east and east. Portions of forestry also occur along the western and northern boundaries. The western shore of Lough Derg lies just beyond the eastern site boundary. The majority of the remaining boundaries, partly comprising degraded blanket bog, provide grazing land for sheep.

The boundaries were drawn up during the Natural Heritage Area (NHA) survey in July 1993, with some recent modifications made by the author in July 1997.

Site Infrastructure

The public road to Kellys Bridge runs along the north-western boundary of the site. Other access to the site is provided by bog roads, tracks and forest roads.

Legal Status

Ownership

Approximately 35% (734 ha) of the site consists of the Pettigo Plateau NR (see Map 2), which is state-owned (see Map 10) and managed by the National Parks and Wildlife (NPW). A further 66 ha of the site is controlled by NPW. The area was transferred to the Wildlife Service of the Office of Public Works when Coillte Teo was formed in the late 1980s.

The remainder of the site is in multiple private ownership, with a portion of the site held in commonage (see Map 10).

Designations of the Site

candidate Special Area of Conservation	Site Code: IE0001125
Special Protection Area	The area comprising Pettigo Plateau NR (see below) was designated an SPA (Site Code IE000099) under S.I. 298 of 1996 (see Map 2).
proposed Natural Heritage Area	Site Code: 1125
Nature Reserve	The Pettigo Plateau NR comprises part of the site and was established on 31 st December 1984, under Statutory Instrument No. 334 of 1984.
CORINE Biotope	The site is a Corine Biotope Site (Site Codes: 80000129 and 80000635).
Wetland of International Importance	Ireland has designated the Pettigo Plateau NR/ Pettigoe Plateau SPA as a wetland of International Importance under the Ramsar Convention (31, July 1986).
Biogenetic Reserve	The NR/SPA site forms part of the Council of Europe network of Biogenetic Reserves.



Pettigo Plateau Nature Reserve (O. J. Merne)

Past Status and Designation of the Site

The site was listed as an Area of Scientific Interest (ASI).

Rights Pertaining To The Site

Commonage	Approximately 10-15% of the cSAC is commonage.
Turbary	Existing turf banks that occur south of Lough Hearn (in the south-west of the site) in Mullanasole Bar continue to be cut in accordance with turbary rights. Turf-cutting also occurs along the western edges of the site.
Fishing	The Pettigo and District Anglers Association hold the fishing rights to Dunragh Loughs. Permits to fish the lakes are available from the Association.

Shooting

The site falls between the preserves of the Donegal Town and Pettigo gun clubs, but shooting activity within the site appears to be low.

Management Infrastructure

Individuals and Organisations Involved

Landowners

The site is partly in multiple private ownership, with DEHLG owning 35% of the site. In addition, a portion of the site is held under commonage.

National Parks & Wildlife (NPW) of the Department of Environment, Heritage and Local Government (DEHLG)

NPW is responsible for maintaining the nature conservation value of the site. The site is patrolled by the local Conservation Ranger, with input from other staff as necessary (see Appendix VIII for further details of NPW regional staff).

Fisheries

The Northern Regional Fisheries Board (NRFB) are responsible for Dunragh Loughs.

Planning Authorities

Donegal County Council is the relevant planning authority for the site.

Other

The Loughs Agency of the Foyle, Carlingford and the Irish Lights Commission are responsible for the Derg catchment.

Local Authority Policy in relation to the Site

The County Donegal Development Plan (2000) indicates that the Council recognises the value of Natural Heritage Areas, including SACs and are committed to fulfilling obligations with regard to planning applications and SACs as set out in the 'European Communities (Natural Habitats) Regulations 1997'. Furthermore, *"The Council will work with relevant authorities, voluntary and community groups, to optimise the contribution of these and other heritage resources to the sustainable development of the country"*.

Physical Features

Climate

The closest synoptic weather station to the site is at Malin Head, and 30-Year Average information for this weather station was obtained from the Met Eireann website (see Appendix III for full details). In summary, the mean daily air temperature at the station is 9.3°C, ranging from an average low of 5.2°C in February to an average high of 14.0°C in July. The average annual rainfall is 1060.6 mm, and the average daily duration of sunshine is 3.4 hours per day. Winds are predominantly from the south and the west, with an average wind speed of 16.3 knots. There is an annual average of 25.8 days with snow or sleet recorded, and only 3.3 days where snow is still lying on the ground by 9am.

Rainfall data that is more specific to the site was recorded from Meteorological station No:4026140 at Meenshifin (located beyond to the southern site boundary), with data represented from 1997.

Rainfall data from Meenshifin 1997

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total for
-----	-----	-----	-----	-----	-----	-----	-----	------	-----	-----	-----	-----------

(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	year
24.6	184.2	110.5	63.6	98.3	77.2	151.2	81	130.2	111.8	140	196.9	1369.5

The region experiences an extreme Atlantic climate, which is characterised by dominant westerly winds and the depression activity on the boundary of subtropical and polar air currents. The result is a constantly high air humidity and high precipitation. The interaction of the sea winds and the relatively warm waters of the Gulf Stream cause the characteristically mild temperatures. There is a relatively small difference between mean summer and winter temperatures.

Geology & Geomorphology

The rocks of Carrickmore/Ardmore Hill in the northern portion of the site comprise Dalradian schists. Rocks of the Sliswood Division paragneiss underlie most of the site, where they can be seen at the surface. They also lie beneath the Dalradian schists. For further details regarding the geology and geomorphology of the site see Appendix III.

Hydrology & Water Quality

The site supports a relatively high number of lakes and streams, including Dunragh Lough, Lough Boyle and Lough Golagh. The general hydrological details of the site, including the direction of the flow of water in the rivers and streams within the site are provided in Map 4.

Soil & Soil Processes

The soils on the site are mainly ombrotrophic acid peats, with small areas of peaty podzols and lithosols (see Map 5).

Blanket bogs develop under conditions of impeded drainage, so by definition the natural drainage of the cSAC is poor. Artificial drains have been cut within the site and within the area of the NR. These drains are not particularly large and therefore do not pose a significant threat to the site as a whole.

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, while all other habitats are as listed according to the NPW NHA classification system.

The following table lists the habitats within the site. The Annex I habitats of the Habitats Directive for which the site was selected are listed, with the relevant NHA category also shown. The Annex I priority habitat is marked with an asterisk (*). The Gross Habitat map for the site is presented in Map 8. The percentage presented for each habitat type is based on the approximate geographic area of each habitat, as shown in Map 8.

Habitats Found within Dunragh Loughs & Pettigo Plateau cSAC, SPA & NR

ANNEX I HABITAT TYPE	CORRESPONDING NHA CATEGORY	% AREA
*Active Blanket Bog	Blanket Bog	54%
Northern Atlantic Wet Heaths with <i>Erica tetralix</i>	Heath	35%

-	Loughs	10%
-	Lowland Wet Grassland	1%
-	Flushes	(included in 54% *Active Blanket Bog)

Annex I Habitats:

*Active Blanket Bog (54% of total site area or 1123ha)

Dunragh Loughs and Pettigo Plateau cSAC represent an excellent example of a good quality, lowland/highland blanket bog supporting species typical of the habitat. The habitat also has a reasonable diversity of microtopographical features, species and vegetation communities.

The valleys feature domed areas comprising interconnecting pools and abundant hummocks. The *Sphagnum* cover is generally good, with *Sphagnum magellanicum* well represented and hummocks of *Sphagnum imbricatum* and *S. capillifolium* present.

*Active Blanket Bog (contd)

Cross-leaved Heather (*Erica tetralix*), White-beak Sedge (*Rhynchospora alba*), Bog Sedge (*Carex limosa*), Great Sundew (*Drosera anglica*) and Bog Asphodel (*Narthecium ossifragum*) dominate the flats. On steeper slopes Purple Moor-grass (*Molinia caerulea*), Deer-grass (*Trichophorum caespitosum*), Cross-leaved Heather, Heather (*Calluna vulgaris*), Hare's-tail Cotton Sedge (*Eriophorum vaginatum*) and Tormentil (*Potentilla erecta*) are common components. There are numerous flushes within the habitat, which support distinct communities of vegetation, dominated by Sedges and Rushes, with *Sphagnum* spp. forming the ground cover.

Descriptions of plant communities from Douglas *et al* (1990) have been mapped (see Map 6) and are described in Appendix IV.

Northern Atlantic Wet Heaths with *Erica tetralix* (35% of total site area or 728ha)

The steep rocky slope leading to Lough Golagh is vegetated with shrubby Heather, Bilberry (*Vaccinium myrtillus*), Rhododendron (*Rhododendron ponticum*) and Bracken (*Pteridium aquilinum*). In the lake, Shoreweed (*Littorella uniflora*), Water Horsetail (*Equisetum fluviatile*), Deer-grass and Bulbous Rush (*Juncus bulbosus*) are recorded (Area 26, Map 6).

Area 27 (Map 6) is a small area of dry heathy bog with abundant Purple Moor-grass, Heather, Cross-leaved Heather and occasional Crowberry (*Empetrum nigrum*), Bilberry and Wavy Hair-grass (*Deschampsia flexuosa*).

Other Habitats

Loughs

Loughs occupy approximately 10% of the site. Plant community descriptions of the lough habitats are provided in Appendix IV, with locations of communities provided in Map 6.

Lowland Wet Grassland

Lowland wet grassland (Area 28) occurs on a sloping area located adjacent to a stream. Species occurring include Sweet Vernal Grass (*Anthoxanthum odoratum*), Purple Moor-grass, Mat-Grass (*Nardus stricta*), Ribwort Plantain (*Plantago lanceolata*), Marsh Hawk's-beard (*Crepis paludosa*), Meadow Thistle (*Cirsium dissectum*), Bottle Sedge (*Carex rostrata*), Marsh-bedstraw (*Galium palustre*), Autumn Hawkbit (*Leontodon autumnalis*), Marsh Violet (*Viola palustre*), *Sphagnum capillifolium*, *S. recurvum* and *S. palustre* (see Map 6).

Flushes

Flushes occur within the blanket bog habitat. Area 29 (Map 6) comprises a small, narrow flush, located between rocky ledges and dominated by Sedges. Grasses, Rushes and *Sphagnum* spp. form the ground layer. Species recorded include Tawny Sedge (*Carex hostiana*), Carnation Sedge (*C. panicea*), Dioecious Sedge (*C. dioica*), Common Yellow Sedge (*C. demissa*), Water Horsetail (*Equisetum fluviatile*), Sharp-flowered Rush (*Juncus acutiflorus*), Soft Rush (*J. effusus*), Bulbous Rush (*J. bulbosus*), and Many-stalked Spike-rush (*Eleocharis multicaulis*). Grasses occurring include Creeping Bent (*Agrostis stolonifera*), Heath-grass (*Danthonia decumbens*) and Sweet Vernal Grass. *Sphagnum auriculatum* and *S. cuspidatum* dominate the bryophyte understorey.

Notable Flora:

Lower Plants

Information regarding lower plants recorded on the site is taken from Douglas *et al* (1990), with one moss (*Sphagnum imbricatum*) and five lichens (*Cladonia chlorophaea*, *C. ciliata* var. *tenue*, *C. portentosa*, *C. pyxidata* and *C. strepsilis*) recorded for the first time in south-east Donegal during 1990.

Higher Plants

Information regarding higher plants recorded on the site is also taken from Douglas *et al* (1990). Higher plants of conservation significance recorded on the site include:

- Cowberry (*Vaccinium vitis-idaea*) was recorded from two survey sites. This species is uncommon in Donegal and was previously recorded from only seven stations (post 1930 records)
- White Sedge (*Carex curta*) is a very local species and was recorded from only one survey site in the region
- Dioecious Sedge was recorded from the site and is noted as being rather local in Donegal
- Great Fen-sedge (*Cladium mariscus*) is uncommon in Donegal. It was recorded from one survey site in the region
- the Marsh Violet (*Viola palustris* subsp. *juressi*) record is a new record for the region

Fauna:

Amphibians and Reptiles

The Common Frog (*Rana temporaria*) is known to occur on the site and is an Internationally Important Irish Red Data Book species. The Common Lizard (*Lacerta vivipara*) is also present within the site.

Birds

Species listed under Annex I of the EU Birds Directive that occur, or have occurred in the past, on the site include Greenland White-fronted Goose, Merlin, Golden Plover, Peregrine Falcon and Hen Harrier. The NR has been designated as an SPA due to the presence of these Annex I species. The areas frequented by these species are indicated on Map 7.

A nationally important flock of Greenland White-fronted Goose was known to feed on the Pettigo Bogs, in particular those around Lough Golagh (i.e. within the cSAC and partly within the SPA).

The Greenland White-fronted Goose population has wintered on the Plateau Bogs and the adjacent coastal farmland in the past. Previous counts estimated that between 90-150 birds were using the site (Fox *et al*, 1994), with numbers over 200 recorded ten years previously. These numbers are thought to reflect a real decline in the number of birds that frequent the site. This is in part due to the general trend of increased use of improved lowland green fields by the geese. The fluctuating numbers and sporadic use of the site by the geese has meant that the bird usage map (Map 7) potentially over-estimates the bird usage of the site, with the usage varying greatly from year to year. Currently, it is thought that the flock has reduced to 65-100 birds and that the birds frequent coastal farmland and the Pettigo Bogs in the Ballintra area. It is thought that this species may no longer visit the site. This species is also an Internationally Important Irish Red Data Book species.



Greenland White-fronted Goose (A. Walsh)

Merlin, a rare Irish Red Data Book species, is thought to use the site for hunting. There is forestry present to the north, south-east, east and west of the site, which is likely to provide nesting resources for the Merlin. A population count for this species, at the present time, is not known. The main prey species of the Merlin is the Meadow Pipit (*Anthus pratensis*), a ground nesting bird, which occurs in plentiful numbers within the site and provides an excellent dietary resource for the Merlin.

Golden Plover flocks visit the site in winter and small numbers of this species breed within the site. This species is a vulnerable Irish Red Data Book species. Two breeding pairs were recorded on the site during July 1997. There is no comprehensive information about the habitat requirements of the Golden Plover but it is known that they breed in a variety of upland situations.

The Peregrine, an Internationally Important Irish Red Data Book species, occurs within the site (*pers. comm.* J. Gatins), and the Hen Harrier (an endangered Irish Red Data Book species) is thought to use the site for hunting.



Peregrine Falcon

The site supports good habitat resources for the Red-throated Diver (*Gavia stellata*), which is a rare Irish Red Data Book species that is listed on Annex I of the EU Birds Directive, although it is thought that this species does not occur on the site at present. The site provides habitat for Snipe (*Gallinago gallinago*), which is known to breed on the site and is a regularly occurring migratory bird, which is not listed on Annex I of the EU Birds Directive.

Greylag Goose (*Anser anser*) breed regularly on the islands within Lough Derg, and it is thought that the species is also breeding on the lake islands within the site. The impact of the Greylag Goose population on the Greenland White-fronted Goose population is not known. It is hypothesised that there may be competition between these birds for feeding and roosting sites.

Mammals

The Otter (*Lutra lutra*) is found within the site. The Otter is listed under Annex II and IV of the EU Habitats Directive and is also rated in the Red Data Book as an Internationally Important mammal. The Badger (*Meles meles*) and Irish Hare (*Lepus timidus hibernicus*), both Internationally Important Red Data Book species, are also found within the site.

Red Deer (*Cervus elaphus*) have moved onto the site during the last 15 years but the numbers are low (approximately 10-20). Sika Deer (*C. nippon*) are recorded occasionally on the fringes of the site, near forestry. Hybrids of the two species are also thought to occur on the site.

Cultural Features

Land use and impacts on the site

Grazing	<p>Sheep have grazing access to the majority of the site. Fences are poorly maintained in places and allow trespass to occur. Cattle are present in only one portion of the site. Overgrazing has damaged areas in the northern and southern portions of the site.</p> <p>The impacts of grazing on the commonage areas of this site have been assessed by the Commonage Framework Planning Project (CFPP). The relevant framework plan for the site is DG-19. The findings of this plan are reflected in the relevant management strategies and zoning sections of this conservation plan.</p>
Peat Cutting	<p>Peat cutting is confined to the western fringes of the site where turbary rights apply to the existing turf banks. Mechanical peat cutting is not permitted within the cSAC, but manual peat cutting is allowed on existing peat banks. However, some mechanical peat cutting continues within the western boundary. Machine and hand cutting of peat takes place on turf banks at Mullanasole Barr.</p>
Drainage	<p>Several drains are located within the site, in the vicinity of an abandoned farmstead.</p>
Roads/Pathways	<p>There are several tracks and bog roads in the western portion of the site. Another track that is in very poor condition leads to the NR (and to abandoned farmsteads).</p>
Recreation	<p>The Pettigo and District Anglers Association hold the fishing rights to Dunragh Lough and fishing permits are available in Pettigo. Ramblers and hill-walkers also use the site.</p>
Burning	<p>Burning of vegetation occurs only occasionally.</p>
Research	<p>A study was carried out to investigate the water quality and the composition of benthic invertebrates of the streams within the site (J. O'Halloran, Zoology Dept University College Cork).</p>

Land use adjacent to the site

Afforestation	<p>Commercial conifer plantations surround the majority of the site. Forestry adjacent to the site at Croaghnameal (north-east) and at Dunragh Hill (south-east) was recently excluded from the site. There is an area of forestry located west of Lough Golagh that is excluded from the site but is entirely surrounded by it (see Map 1).</p>
Grazing	<p>A large proportion of the land adjacent to the site is used for sheep grazing.</p>
Peat Extraction	<p>Peat extraction is carried out west of the site. An area of degraded bog located along the western boundary at Raneany Barr was recently excluded from the site.</p> <p>There are two large commercial turf-cutting areas located at Flughra Hill and Ballynakillew Mountain.</p>
Human Settlement	<p>The area around the cSAC is sparsely settled. There are a small number of private dwellings outside the western and north-western boundaries of the site.</p>

Windfarms	Several windfarm planning applications have been submitted for areas in close proximity to the site, with one farm currently under construction at Meenadreen (March 2003).
Pilgrimage	Lough Derg, the popular pilgrimage retreat, is located to the east of the site.

Past human use

Two abandoned farmsteads occur within the NR, where several of the buildings still stand and the enclosed field systems are visible.

Recorded Monuments and Other Features

There is no evidence of recorded national monuments within the site.

ECOLOGICAL ASSESSMENT

Note: The following is an assessment of the ecological features of the site. It is largely based on information given in the explanatory notes which accompany the Natura 2000 form (compiled in 1995). Additional information, obtained since these notes were written may also have been used to make the assessment.

The Dunragh Loughs and Pettigo Plateau cSAC is of ecological and conservation value because of:

- the presence of a large area (i.e. 1123ha) of good quality, almost undisturbed lowland/highland *active blanket bog
- the presence of large areas of good quality Northern Atlantic wet heath with *Erica tetralix*
- the presence of habitat for several Annex I EU Birds Directive species, including Merlin, Golden Plover, Peregrine Falcon, Hen Harrier and the site contains suitable habitat for the Greenland White-fronted Goose

The *active blanket bog on the site is considered to be of good quality, with the majority of the habitat in excellent condition. The site supports one of the few *active blanket bogs in this condition in Co. Donegal. It is noted that the areas of blanket bog located outside the NR boundary are vulnerable to turbary and overgrazing, although these activities can be controlled through monitoring and the implementation of appropriate grazing regimes.

The majority of the Northern Atlantic wet heath habitat on the site is in good condition, particularly the area within the NR boundary. Some areas located outside the NR suffer from overgrazing and erosion.

OBJECTIVES, STRATEGIES AND ZONING

Conservation Objectives

The nature conservation objectives for this site are:

- | | |
|---------------------|--|
| Objective 1: | To maintain and, where possible, enhance the extent and ecological value of the *active blanket bog (54% of the site). |
| Objective 2: | To maintain and, where possible, enhance the populations of bird species that are listed in Annex I of the Birds Directive and other important birds that occur on the site. |
| Objective 3: | To maintain and, where possible, enhance the extent and ecological value of the other habitats present on the site, including the Northern Atlantic wet heath, loughs, flushes and wet grassland (46 % of the site). |
| Objective 4: | To maintain the populations of important plants and animal species. |
| Objective 5: | To eradicate and prevent the spread of Rhododendron on the site. |
| Objective 6: | To maintain effective liaison between relevant stakeholders. |

Management Issues

Note: The main issues that may impact on the conservation of the site are outlined below. The constraints that these may pose and the management potential for the site are discussed.

- **Grazing**
- **Protected Birds**
- **Rhododendron Infestation**
- **Forestry**
- **Peat Cutting**
- **Drainage**
- **Boundary Fencing**
- **Burning**

Grazing

Localised areas of *active blanket bog and Northern Atlantic wet heath within the site have been damaged by overgrazing, particularly on the high ground at the north of the site and around the townland of Ballynakillew Mountain in the south of the site.

The majority of the *active blanket bog within the site is in good condition. In order to maintain the condition and ecological value of the blanket bog, grazing intensity must be kept at a sustainable level so that there is no significant damage to the vegetation.

Grazing assessments on commonage lands have been conducted in accordance with the CFPP and grazing reductions have been recommended, where appropriate. It is further proposed that similar grazing assessments will need to be conducted on privately owned lands as part of REPS or a DEHLG farm plan. Grazing assessments will also be conducted on the NPW-owned lands within the site.

Protected Birds

The numbers of Greenland White-fronted Goose frequenting the site have declined considerably and it is not known if this species is currently using the site. The reason for the decline is in part due to a general trend of the increased use by this species of improved fields as feeding areas. There is a need to maintain the quality and extent of the suitable habitat within the site to encourage the continued presence of this species on the site. Forestry bordering the site should not be replanted after the first rotation has been felled (see Forestry section below).

Golden Plover was observed on the degraded areas of bog within the site. It is not known whether the restoration of the degraded bog will have a detrimental impact on the Golden Plover population. DEHLG have proposed that a survey of the Golden Plover population status in Ireland should be carried out in the near future. This may help to establish the requirements needed to maintain the populations of Golden Plover.

Feral Greylag Goose has recently been recorded breeding within the site. It is not known whether the Greylag Goose will compete with the Greenland White-fronted Goose for habitat resources.

Rhododendron Infestation

Rhododendron is well established in the southern and south-western portions of the site at Ballynakillew Mountain (and between the Mountain and Dunragh Lough, and Lough Golagh). It is also established around the base of Oughtdarnid. It also occurs as scattered pockets within the site but is still confined to the southern portion of the site. There are minor pockets on the road to Kellys Bridge. The species is progressing up streams and along roadsides into the site. It is necessary to control this species and to remove it from the site as soon as possible, otherwise it will become increasingly difficult to eradicate.

Forestry

A large proportion of the site is surrounded by commercial forestry plantations, which have the ability to fragment habitat and restrict the movement of less mobile species. In addition, the plantations provide suitable habitats for predator species such as Fox (*Vulpes vulpes*) and Hooded Crow (*Corvus corone*). The presence of large numbers of these predators adjacent to the cSAC may have a significant negative impact on the survival and breeding success of ground-nesting birds, such as Red Grouse (*Lagopus lagopus*), Meadow Pipit and waders (e.g. Golden Plover) within the site. It is noted that the Meadow Pipit is the main prey species of the Merlin, which hunts over the site, and the loss of the Meadow Pipit from the site may negatively impact on the Merlin population that utilises the site.

It is known that the use of feeding sites by the Greenland White-fronted Goose is reduced within 300m of cover, such as forestry plantations. The presence of forestry adjacent to the site may restrict usage of several of the feeding sites marked on map 7.

Both Red and Sika Deer breed within forestry areas and graze the land adjoining forestry. In some areas grazing by deer has caused damage to the vegetation of the bog.

Harvesting of timber in the forestry areas adjacent to the site may cause damage to the bog habitats through run-off arising during, and after, harvesting operations.

Peat Cutting

Some mechanical peat cutting occurs within the site and manual cutting of existing banks still occurs in the western fringes of the site. Commercial peat-cutting is carried out on the boundaries of the site, which could in some areas encroach on the site. Efforts are currently under way to halt machine cutting of turf on the site.

Drainage

Drainage lines present within the NR drain a small area to the east of abandoned farmsteads.

Boundary Fencing

Some of the NR boundary fences are in a state of disrepair and in their current condition allow livestock to trespass onto the NR.

Burning

Burning occurs only occasionally within the site. Burning within the site is a notifiable action under the cSAC regulations.

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 DEHLG 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 (see Appendix VII)
- enforcement of Regulations under the Habitats/Birds Directives and the Wildlife Act
- enforcement of other relevant legislation such as the Water Pollution Act

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 authorities. NPW staff will liaise with Donegal County Council, and will collate and review this information on a regular basis. NPW will also liaise with relevant bodies (n.b. the EPA and local authority) in relation to compliance with the EU Water Framework. In particular:

- To establish reference conditions necessary for monitoring the status of the qualifying habitat
- To ensure that the sampling regime is adequate to detect changes in the conservation status of the designated area

NPW will liaise with the local authority and other relevant agencies in ensuring that the full ecological importance and sensitivity of the site is taken into account during the production of the River Basin District Management plan. In addition, NPW will liaise with the Local Authority in ensuring that sewerage disposal systems for all new (and existing) dwellings within the catchment area are of appropriate standards.

Scientific monitoring

Monitoring of the favourable conservation status of the qualifying interests will be done by, or on behalf of, the staff of the Monitoring Section of the NPW or staff working to NPW in accordance with the procedures laid down by that section. The work, if any, to be done on this site in that respect will be prescribed by that section.

Site surveillance

Patrolling of the site by the Conservation Ranger, with special attention to the protected habitats and species 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 are listed in Appendix V of this plan. Permission from the Minister is required before these actions may be carried out within the designated area. For example, the grazing of livestock above a sustainable density or the creation of new tracks or paths are notifiable actions for the *active blanket bog habitat on the site.

Specific Strategies

Objective 1.

To maintain and, where possible, enhance the extent and ecological value of the *active blanket bog (54% of the site).

Strategies:

- 1.1. Manage Grazing on Commonages**

The impacts of grazing on commonage areas of the site have been assessed by the Commonage Framework Planning Project (Commonage Plans (CPs) DG-19). These plans recommend de-stocking rates in areas that have been damaged by over-grazing. These rates will be incorporated into REPS plans and /or farm plans produced by DEHLG for each farm and must be achieved within an agreed timescale from the beginning of the REPS/farm planning period.

No farmer's stock will be reduced to less than 25 ewes. If the CP specifies a de-stocking level of less than 10%, then no de-stocking is required. The polluter pays principle does not apply to any commonage where the de-stocking percentage is less than 20%. The relevant CP (i.e. DG-19) recommends a de-stocking levels of 0.5% (i.e. undamaged). The individual CP should be consulted for further details.

The zoning map (Map 9) reflects the findings of the CP assessments, and these are specified in the prescriptions for each individual zone.

On commonages in six western counties, a stock reduction of 30% was implemented in December 1998 for farmers not already in REPS. This is taken into account when applying Commonage Framework Plans.
- 1.2. Maintain Sustainable Grazing Levels**

For non-commonage land (privately-owned lands including NPW-owned land), NPW will seek to ensure that sustainable grazing levels are established via REPS and DEHLG farm plans, using a similar methodology applied to commonage areas.
- 1.3. Block Drains**

NPW will block the drains located in the townland of Oughtcarn. These drain a small area of blanket bog located to the east of the abandoned buildings.

The drains that run north-south and drain into a small stream that flows east to Lough Derg will be blocked. The Conservation Ranger will assess whether the drains can be blocked by hand, or will require machinery.
- 1.4. Control Damaging Activities**

NPW will strive to control potentially damaging activities, such as burning, through enforcement of notifiable actions (see General strategies).
- 1.5. Maintain fenceline**

The NR boundary fence will be inspected on a regular basis by the Conservation Ranger to ensure it remains stock proof.

- 1.6. 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 particularly sensitive areas of bog, a complete halt to cutting may be required. In such cases compensation will be determined on a case by case basis, but would be in the region of €784.40 per ha (€317.43 per acre).

Objective 2.

To maintain and, where possible, enhance the populations of bird species that are listed in Annex I of the Birds Directive and other important birds that occur on the site.

Species listed under Annex I of the EU Birds Directive that occur, or have occurred, on the site include the Greenland White-fronted Goose, Merlin, Golden Plover, Peregrine Falcon and the Hen Harrier. Due to the presence of these species the NR has been designated as an SPA. The areas frequented by these species are indicated on Map 7. Suitable habitat for the Annex I species, Red Grouse, also occurs within the site.

Strategies:

- 2.1. Maintain populations of Merlin, Hen Harrier, Peregrine Falcon and Red Grouse**
- The maintenance of the quality and extent of the mosaic of *active blanket bog and Northern Atlantic wet heath is essential to the continued presence of Merlin on the site. The implementation of strategies 1.1-1.5 will ensure that the habitats on the site, and therefore the current status of the Merlin, will be maintained. In particular, the control of burning and grazing within the site should assist in maintaining the continued presence of this species, as the heather edge is a key feature of Merlin hunting habitat.
- Hen Harrier are thought to use the site as part of their hunting range. Maintaining the extent and quality of the habitats within the site (see strategies 1.1-1.6 and 3.2) should ensure the continued presence of this species at this site.
- Peregrine Falcon is known to use the site. The maintenance of habitat and control of damaging activities within the site through the implementation of strategies 1.1-1.6 should ensure that the current status of the Peregrine Falcon on the site is maintained.
- Red Grouse will benefit from the implementation of strategies 1.1-1.5. In particular, the control of burning and grazing within the site should help to maintain this species presence at this site.
- 2.2. Maintain habitat for Greenland White-fronted Goose and survey decline in bird usage**
- In order to encourage the return of this species to the site, it is necessary to maintain the quality and extent of *active blanket bog and to prevent disturbance. These requirements should be provided for under strategies 1.1-1.5 and 6.4.
- The flock of Greenland White-fronted Goose, which has until recently frequented the site, are the subject of an ongoing monitoring programme by NPW. The continued monitoring will assist in establishing the reasons for the decline in the flock size and may highlight the reasons for changes in the behaviour of this species (i.e. the abandonment of traditional feeding grounds).

- | | |
|--|--|
| 2.3. Establish requirements for maintaining Golden Plover population. | The breeding habits of the Golden Plover are not fully understood. NPW have proposed that a countrywide survey of this species be carried out in the near future. This will provide information regarding the species requirements and data regarding the effect of the restoration of degraded bogs on the species. |
| 2.4. Research impact of increasing numbers of Greylag Goose breeding within the site. | NPW will conduct research regarding the impact of Greylag Geese on Greenland White-fronted Goose in accordance with the general monitoring strategies. |

Objective 3.

To maintain and, where possible, enhance the extent and ecological value of the other habitats on the site, including Northern Atlantic wet heath, loughs, flushes and wet grassland (46 % of the site).

Strategies:

- | | |
|---|--|
| 3.1. Maintain ecological value of the heath, flushes and wet grassland | Strategies 1.1-1.6 for the *active blanket bog habitat are applicable to these areas. There is no boundary between the *active blanket bog and the other habitats. Therefore, these habitats will be treated as one unit for management purposes. |
| 3.2. Maintain ecological value of the loughs and streams | A practice of non-intervention will be applied for the management the loughs and small streams within the site. A current study is being carried out to investigate the water quality and the composition of benthic invertebrates of the streams within the site. |

Objective 4.

To maintain the populations of important plant and animal species.

Strategies:

- | | |
|--|--|
| 4.1. Maintain notable plant populations | There are a number of notable higher and lower plants listed for this site. The measures taken to maintain the habitats within the site (namely control of burning and grazing practices) should safeguard the future existence of the rare plants recorded at this site (see strategies 1.1-1.6 and 3.2). |
| 4.2. Maintain notable fauna populations | The population status of Otter, Irish Hare, Badger, Common Frog and the Common Lizard on the site are not known. By maintaining the quality and extent of the habitats within the site, these species will be adequately protected (see strategies 1.1-1.6 and 3.2). |

Objective 5.

To eradicate and prevent the spread of *Rhododendron* on the site.

Strategies:

- 5.1. Control spread of *Rhododendron*** There are several areas within the site where *Rhododendron* has become established (see Map 8). NPW will conduct liaison with landowners to facilitate the co-ordinated eradication of this invasive species and will seek to ensure that *Rhododendron* control is included in REPS and other farm plans. The spread of *Rhododendron* will be monitored as part of normal site surveillance (see general strategies).

Objective 6.

Maintain effective liaison with relevant stakeholders.

Strategies:

- 6.1. Liaise with interested parties** NPW will strive to maintain effective liaison with landowners (particularly through the Liaison Committee), relevant authorities and interested parties on achieving the objectives for conservation of the site.
- 6.2. Monitor development applications** NPW will continue to monitor applications, including current applications, for planning permission and licences for lands within and adjacent to the site. Appropriate bodies will be notified if developments are thought to conflict with conservation objectives.
- 6.3. Liaise with REPS planners** REPS planners are required to consult with NPW staff when they are developing plans for land within the site.
- 6.4. Liaise with Coillte and private forestry companies** NPW will liaise with Coillte and other forestry interests to ensure that at the end of the first rotation a 'way leave' between the site and forestland is established for the benefit of the Greenland White-fronted Goose. Coillte are already committed to environmental improvements under Forestry Certifications.

Zoning

Note: Zoning is the division of a nature conservation site and neighbouring lands into a number of sub-units. There are four types of zones identified (not necessarily all occurring within a site): A, B and C within the site and D outside the site but impacting on it. The relevant strategies are listed for each site.

Zone A: A Natural Zone

Areas of high conservation value, which require no or little intervention (see Map 9).

1A: NON-INTERVENTION AREAS

1A1: Loughs and Streams

Non intervention. Strategy 3.2 applies.

2A: MAINTENANCE AREAS WITH LIMITED INTERVENTION

***2A1: *Active blanket bog, wet heath, flushes and wet grassland.**

These areas have been identified in the CFP as being undamaged, see strategy 1.1. See CFP for full details. Strategy 1.4 and the general strategies also 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 (see Map 9).

***B1: *ACTIVE BLANKET BOG, WET GRASSLAND, WET HEATH & FLUSHES AND LOUGHS AND STREAMS**

Grazing assessments are required for the lands owned by NPW. Strategies 1.2, 1.4 and 1.5 apply.

***B2: *ACTIVE BLANKET BOG, WET GRASSLAND, WET HEATH & FLUSHES AND LOUGHS AND STREAMS**

Grazing assessments required for these privately owned areas. Strategies 1.2 and 1.4 apply.

***B3: *ACTIVE BLANKET BOG, WET GRASSLAND, WET HEATH & FLUSHES AND LOUGHS AND STREAMS**

Privately owned lands invaded with Rhododendron. Strategy 5.1 applies. Grazing assessments will also be conducted in open areas according to strategy 1.2. Strategy 1.4 also applies.

***B4: *ACTIVE BLANKET BOG, WET GRASSLAND, WET HEATH & FLUSHES AND LOUGHS AND STREAMS**

Privately owned land previously identified as damaged by overgrazing and requiring destocking. Grazing assessments to be conducted for these areas (strategies 1.2 and 1.4 apply).

***B5: *ACTIVE BLANKET BOG, WET GRASSLAND, WET HEATH & FLUSHES AND LOUGHS AND STREAMS**

NPW-owned land with existing drains. Block drains and conduct grazing assessment. Strategies 1.2, 1.3 and 1.4 apply.

Zone C: Intensive use Zone

Areas of low conservation value, managed for objectives other than nature conservation, but which are an important part of a nature conservation site (e.g. infrastructure). See Map 9.

***C1: *BLANKET BOG**

Area of ongoing peat extraction. Peat extraction to be phased out or area excluded from the site. Strategies 1.4 and 1.6 apply.

Zone D: Impact Zone

Areas outside the site, which may have an impact on the site (see Map 9).

D1: COMMERCIAL PEAT EXTRACTION

Several areas of commercial peat cutting are carried out in close proximity to the boundary of the site. It is envisaged that in some areas this may encroach onto the site. This will require monitoring of the extent of cutting in these areas (see general strategies).

D2: RHODODENDRON

Rhododendron is well established in some areas around the boundary of the site. The margins of the site will be closely monitored to ensure that Rhododendron does not advance onto the site (strategy 5.1 applies).

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
1.1.	Manage Grazing on Commonages	No grazing reduction required. Continue monitoring according to general monitoring strategy.	NPW/ Landowners			
1.2.	Maintain Sustainable Grazing Levels	Low levels of summer grazing can be permitted and maintain the current level of supplementary feeding. Conduct grazing assessments.	NPW/ Landowners			
1.3.	Block Drains	Block drains in Oughtcar townland and drains adjacent to the small stream east of Lough Derg.	NPW			
1.4.	Control Damaging Activities	Control damaging activities, such as peat cutting, turbary and burning.	NPW			
1.5.	Maintain fenceline	Inspect NR fenceline on a regular basis to ensure it is stock proof.	NPW			
1.6.	Minimise impacts of peat cutting	Prevent cutting in sensitive areas and purchase turbary rights. Peat cutting by use of machine (not sausage machine) may be permitted in consultation with NPW.	NPW			
2.1.	Maintain populations of Merlin, Hen Harrier, Peregrine Falcon and Red Grouse	See Strategies 1.1-1.6.	-			
2.2.	Maintain habitat for Greenland White-fronted Goose and survey decline in bird usage	See Strategies 1.1-1.5, 6.4 and general monitoring strategy.	-			
2.3.	Establish requirements for maintaining Golden Plover population.	Conduct survey of Golden Plover breeding requirements.	NPW			
2.4.	Research impact of increasing numbers of Greylag Goose breeding within the site.	Conduct survey of impact of Greylag Goose on Greenland White-fronted Goose use of the site (see general monitoring strategies).	NPW			
3.1.	Maintain ecological value of the heath, flushes and wet grassland	See Strategies 1.1-1.6.	-			
3.2.	Maintain ecological value of the loughs and streams	No intervention required.	-			
4.1.	Maintain notable plant populations	See Strategies 1.1-1.6 and 3.2.	-			
4.2.	Maintain notable fauna populations	See Strategies 1.1-1.6 and 3.2.	-			
5.1.	Control spread of Rhododendron	Liaise with landowners to facilitate co-ordinated effort to eradicate Rhododendron from the site and areas adjacent to it.	NPW/ Landowners			

TABLE Summary of Specific Strategies CONTINUED...

	Strategy	Action required	Who to implement	When/Duration/Frequency	Estimated Total Cost	Additional Resources needed
6.1.	Liaise with interested parties	Initiate and maintain effective liaison with relevant parties.	NPW			
6.2.	Monitor development applications	Monitor development applications for lands within and adjacent to the site. Inform appropriate bodies if developments may be in conflict with conservation objectives.	NPW			
6.3.	Liaise with REPS planners	REPS planners are required to consult with NPW staff if developing plans for land within the site.	REPS planners			
6.4.	Liaise with Coillte and private forestry companies	Liaise with Coillte and private forestry companies to ensure that a 'way leave' between the site and forested land is established for the benefit of the Greenland White-fronted Goose.	NPW/ Coillte/ Forestry Companies			

APPENDIX I:

GLOSSARY

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.

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.

ANNEX IV - of the EU Habitats Directive lists animal and plant species of Community interest in need of strict protection.

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

BASIN - A depressed area of the Earth's surface, in which sediments accumulate.

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.

BIOTOPE - An environmental region, defined by certain conditions characteristic organisms that typically inhabit it

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 - An NPW habitat classification which refers to bogs which carpet the landscape, following the underlying topography. They can cover extensive areas along the west coast and on uplands throughout the country.

CANOPY LAYER - The tallest tree layer in a wood.

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.

COMMERCIAL FOREST - An NPW habitat classification which applies to plantations of coniferous trees, primarily Sitka Spruce, Lodgepole Pine, Douglas Fir, Japanese Larch and Norway Spruce. More than 90% of the canopy is formed by coniferous trees, although there may be broad-leaved trees, especially Birch present along the plantation edges.

COMMONAGE – An area of land which is undivided but is owned by more than one person / or the rights to use the land are owned by more than one person.

COMMUNITY - a well-defined assemblage of plants and/or animals, clearly distinguishable from other such assemblages.

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.

CORINE - An information and mapping system, developed within the context of the Commission of the European Communities biotope project, which is used as a tool for the description of sites of importance for nature conservation in Europe. It catalogues recognisable communities of flora and fauna. The primary objective of this catalogue is to identify all major communities whose presence contributes to the conservation significance of a site. Included in this list of communities are interesting but rare natural or near-natural communities as well as the more widespread semi-natural ones.

CUTOVER BOG – An NPW habitat classification that describes 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.

DEHLG - Department of Environment, Heritage and Local Government

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.

DRAINAGE DITCHES - An NPW habitat classification which refers to water channel systems with moving or stagnant water bodies, artificial in origin. Most ditches are cleared cyclically, although this category also includes ditches that are overgrown with wetland plants.

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

ENCROACHMENT - The invasion of a species (usually plants) into areas previously uncolonised. 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 (such as wind, water or gravity) which include weathering, solution, corrosion and transportation.

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

FACILITATOR - A person who, in consultation with others, assists NPW staff in the production of a conservation or management plan.

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.

FENS AND FLUSHES - An NPW habitat classification. Fens are peatlands fed by calcium rich water, either from groundwater or from inflowing surface water. Flushes are wet areas maintained by the seepage of water down slopes of various gradient, and are usually local features. Both are characterised by an abundance of small Sedge forming species-rich mosaics with other species. Orchid species are particularly noticeable in fens and Butterworts are more typical of flushes.

FLORA - plant life.

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

GNEISS – A coarse-grained banded or foliated metamorphic rock, in which the minerals are arranged in lighter and darker layers.

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 sleane or spade.

HEATH – An NPW habitat classification comprises of vegetation on relatively dry acidic mineral or peat soil usually dominated by Ericaceous shrubs, which include *Calluna vulgaris* (Heather), all Heathers (*Erica* spp.), *Vaccinium myrtillus* (Bilberry), *Empetrum nigrum* (Crowberry), *Arctostaphylos uva-ursea* (Bearberry), *Daboecia cantabrica* (St Dabioic’s Heath), or dwarf, cushion forming *Ulex* spp. These shrubs must form a minimum cover of 25% to fall into the heath category. This habitat is frequently found in mosaic with other upland habitats.

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.

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.

INVERTEBRATES - Animals without backbones.

LAKES AND PONDS - An NPW habitat classification describing enclosed bodies of fresh water, or semi-enclosed bays of larger bodies of fresh water. Only the open water body itself is included, so areas of standing with tall emergent vegetation are not included here but should be assigned to reedbeds and other swamps.

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

LEVELLING - A process carried out to establish the gradient of sloping ground.

LIAISON - Communication and contact between groups.

LIAISON COMMITTEE - This is a special group set up to discuss the contents of a conservation management plan and the implementation of the plan. The committee will include representation of landowners, right-holders and other interest groups. It shall be the function of the committee to advise NPW managers on the interaction between site conservation management and local interests. The Liaison Committee will nominate a member to the official Appeals Board which will consider appeals against site designation and other issues. The Liaison Committee will be independent from the NPW.

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

LOCAL - A term used in ecology which is 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 10km National Grid squares. Local applies to 26-75, 10 km squares in this context.

LOWLAND WET GRASSLAND - An NPW habitat classification which refers to grasslands which normally below the 100m contour, with a vegetation characteristic of waterlogged soil. This category also includes rushy fields.

MANAGEMENT - a) Controlling processes within a site (this can be actively carrying out work or can be doing nothing), preferably in accordance with a conservation plan. - b) The practical implementation of the management plan. - c) Undertaking any task or project identified in the management plan, including the identification of new opportunities.

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).

MICROTOPOGRAPHY - Very small-scale variations in the height and roughness of the ground surface.

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.

MULTIPLE PRIVATE OWNERSHIP - Lands that are divided into areas which are privately owned. There must be more than one private landowner under this heading. (lands in commonage are not described under this heading).

NATIONAL PARKS AND WILDLIFE (NPW) - the section of the Environment Infrastructure and Services division of the Department of Environment, Heritage and Local Government with responsibility for nature conservation and implementation of Government conservation policy as enunciated by the Minister for the Environment, Heritage and Local Government.

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.

NATURE RESERVES (NRs) - 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 NPW and are managed for the purposes of conservation.

NHAs - Proposed Natural Heritage Areas. These are 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.

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 cSAC 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.

NPW - National Parks and Wildlife (see above).

OMBROTROPHIC - A system (often used when describing raised bogs) which relies solely on precipitation for inputs to the system.

ORGANISM - Any living thing.

OS – Ordnance Survey

PATROL MONITORING - Regular monitoring of a site usually carried out by the Conservation Ranger to check for damaging activities and to carry out other activities such as to assess the vegetation, to assess the effectiveness of the management regime on the condition of the site, etc.

PEAT CUTTING BY HAND. - See hand cutting of peat.

PEAT CUTTING BY MACHINE - See mechanical peat extraction.

PLATEAU - A wide, mainly level area of elevated land.

POACHING - Damage caused to the vegetation by excessive numbers 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.

RAMSAR CONVENTION - The convention on Wetlands of International Importance especially as Waterfowl Habitat. Ireland ratified in 1984.

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

RED DATA BOOK 2 (mammals, birds, amphibians and fish) - identifies those species threatened in Ireland or those species whose populations are considered to be of international importance, though not necessarily threatened in Ireland. It details the current state of Irish vertebrates and provides a concise summary of the various legislation for each species.

REPS - Rural Environmental 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.

RIVERS AND STREAMS - An NPW habitat classification describing linear channels of moving water. These are natural features that distinguish them from ditches and drainage channels.

SACs - Special Areas of Conservation 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). SAC's have also been known as cSAC's which stands for "candidate Special Areas of Conservation", and pcSAC's which stands for "proposed candidate Special Areas of Conservation."

SCHIST – Any of various medium- to coarse-grained metamorphic rocks composed of parallel layers.

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

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.

SPAs - Special Protection Areas for Birds are areas which have been designated to ensure the conservation of certain categories of birds. Ireland is required to conserve the habitats of two categories of wild birds under the European Birds Directive (Council Directive 79/ 409/ 2nd April 1979). The NPW is responsible for ensuring that such areas are protected from significant damage.

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.

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 feeds 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).

SWARD - Refers to the vegetation cover of low growing plants communities, such as grasslands.

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

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.

UNDERSTOREY - The plant layer below the tree canopy in a woodland.

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: REFERENCES

Map References:

- O.S. 1/2 inch (1:126,720) map: 3
O.S. Discovery (1:50,000) map: 11
O.S. 6 inch (1: 10,560) map: DL 094, DL 095, DL 100, DL 101.

Data Bases :

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

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

Photographic Coverage:

Department of Environment, Heritage and Local Government, HQ Ely Place, Aerial photo No. 3082, Flight Line 13. Date: 6/1995.

Relevant Legislation:

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

Local Government (Planning and Development) Regulations, 2000.

Bibliography:

Donegal County Council. (1989). *County Development Plan 1989*.

Donegal County Council. (2000). *County Donegal Development Plan 2000*.

Douglas, C., Dunnells, D., Scally, L. & Wyse-Jackson, M. L. (1990). *A Survey to locate Lowland Blanket Bogs of Scientific Interest in Co. Donegal and Upland Blanket Bogs in Counties Cavan, Leitrim and Roscommon*. Unpublished Report to Dúchas-The Heritage Service, Dublin.

Curtis, T.G.F. & McGough, H.N. (1988). *The Irish Red Data Book. 1 Vascular Plants*. The Stationary Office, Dublin.

Department of Agriculture, Food and Forestry. (1996). *Rural Environment Protection Scheme. Agri-Environmental Specifications Revised 15 May 1996*. European Commission.

Fox, A. D., Norriss, D.W., Strand, D.A. & Wilson, H.J. (1994). *Greenland White-fronted Geese in Ireland and Britain - The Monitoring Report* By GWGS and Dúchas-The Heritage Service, 55pp. ISSN0952-763X.

Hammond, R.F. (1981). *The Peatlands Of Ireland*. An Foras Taluntais, 19 Sandymount Avenue, Dublin 4.

Praeger, R.L. (1934). *A Botanist in Ireland*. Hodges Figgis, Co. Dublin.

Rohan, P.K. (1986). *The Climate of Ireland*. Meteorological Office, Dublin.

- Royal Irish Academy. (1979). *Atlas of Ireland*. Newman, Dublin.
- Scannell & Synnott. (1987). *Census Catalogue of the Flora of Ireland*. The Stationary Office, Dublin.
- Sutherland, W.J. & Hill, D.A. (1995). *Managing Habitats for Conservation*. Cambridge University Press.

APPENDIX III: PHYSICAL PROCESSES AFFECTING THE SITE

Climate

MALIN HEAD													
monthly and annual mean and extreme values													
1961-1990													
TEMPERATURE (degrees Celsius)	<i>jan</i>	<i>feb</i>	<i>mar</i>	<i>apr</i>	<i>may</i>	<i>jun</i>	<i>jul</i>	<i>aug</i>	<i>sep</i>	<i>oct</i>	<i>nov</i>	<i>dec</i>	<i>year</i>
<i>mean daily max.</i>	7.6	7.5	8.7	10.3	12.7	15	16.2	16.6	15.3	13	9.8	8.4	11.8
<i>mean daily min.</i>	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
<i>Mean</i>	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
<i>absolute max.</i>	13.9	13.8	19	19.5	24.7	25	27	25.3	23.2	19.6	16	15.1	27
<i>absolute min.</i>	-6.2	-6.2	-4.4	-1.8	-0.5	2.6	5.6	5.2	2	1	-2.5	-5.5	-6.2
<i>mean no. of days with air frost</i>	3.4	3.3	1.6	0.4	0	0	0	0	0	0	0.4	1.8	11
<i>mean no. of days with ground frost</i>	9.6	9.8	7.4	4.3	1	0	0	0	0.1	0.3	3.7	6.7	42.9
RELATIVE HUMIDITY (%)													
<i>mean at 0900UTC</i>	83	82	81	79	79	81	84	84	83	83	82	83	82
<i>mean at 1500UTC</i>	80	77	76	76	76	78	80	79	78	78	79	81	78
SUNSHINE (hours)													
<i>mean daily duration</i>	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
<i>greatest daily duration</i>	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
<i>mean no. of days with no sun</i>	11	7	6	3	2	2	3	3	4	6	8	12	67
RAINFALL (mm)													
<i>mean monthly total</i>	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
<i>greatest daily total</i>	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
<i>mean no. of days with $\geq 0.2\text{mm}$</i>	22	17	21	17	17	18	19	20	21	22	22	23	237
<i>mean no. of days with $\geq 1.0\text{mm}$</i>	19	13	16	12	12	13	13	15	16	18	18	18	182
<i>mean no. of days with $\geq 5.0\text{mm}$</i>	9	6	7	4	4	4	5	6	7	8	8	7	76
WIND (knots)													
<i>mean monthly speed</i>	19	18.4	17.9	15.1	14.2	13.2	13.2	13.2	15.7	17.5	18.3	19	16.3
<i>max. gust</i>	91	86	90	69	71	74	74	67	98	76	76	88	98
<i>max. mean 10-minute speed</i>	64	57	67	47	49	52	55	45	66	57	56	59	67
<i>mean no. of days with gales</i>	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...)													
<i>snow or sleet</i>	6.6	6	4.6	2.4	0.2	0	0	0	0	0.1	1.9	3.9	25.8
<i>snow lying at 0900UTC</i>	0.9	1	0.5	0.1	0	0	0	0	0	0	0	0.8	3.3
<i>Hail</i>	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
<i>Thunder</i>	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
<i>Fog</i>	0.4	0.5	0.7	1.9	1	2	2.2	1.3	0.6	0.4	0.2	0.4	11.8

Geology and Geomorphology

The rocks of Carrickmore/Ardmore Hill at the north of the site are composed of Dalradian schists. These are widespread in Co. Donegal, where they form part of a thick rock sequence occupying a larger area in Ireland and Scotland. They began as mainly marine sediments deposited between approximately 850 and 510 million years ago during late Precambrian and Cambrian times as the Iapetus Ocean (*i.e.* the predecessor of the Atlantic Ocean) was being formed. This ocean widened steadily for 90 million years, becoming as wide as the present day Atlantic Ocean. Gradual closure of the ocean then occurred, spanning the Ordovician and Silurian periods, with final closure and lateral adjustments during the early Devonian, approximately 490 million years ago, when much granite was emplaced in Co. Donegal.

The early stage of closure forced the sediments down to mid-crustal depths, in some areas greater than 25km below the surface, where they were recrystallised, repeatedly folded and disrupted by early faults. Schist, quartzite and marble were formed in the process. Tectonic uplift, with gravitational collapse and eventual erosion, had returned the schists to the surface by approximately 390 million years ago.

Carrickmore/Ardmore Hill lies over the Lough Derg Slide and represents a substantially lower part of the Dalradian sequence than is found further north above the Finmore Slide.

Rocks of the Slishwood Division paragneiss underlie most of the site where they can be seen at the surface and they also lie beneath the Dalradian schists. Originally deposited as sandy, shallow water sediments, their history of recrystallisation and deformation has been far more extreme than experienced by the Dalradian schists. So they have become gneisses (instead of schists) with a history of having been to a depth in the crust possibly as great as 70km below the surface. They are the oldest rocks in south Donegal.

APPENDIX IV: DETAILED INFORMATION ON FLORA AND FAUNA

Flora

Descriptions of some *active blanket bog plant communities from Douglas *et al.* (1990) have been mapped and are divided into Areas 1-14 described below (see Map 6), with lough plant communities described in Areas 15-25 (see Map 6).

Details of Blanket Bog Communities Area 1 – Area 14

Area 1 - Regenerating area of blanket bog dominated by Deer-grass (*Trichophorum caespitosum*) with Hare's-tail Cotton Sedge (*Eriophorum vagintum*), Purple Moor-grass (*Molinia caerulea*), Cross-leaved Heather (*Erica tetralix*) and Heather (*Calluna vulgaris*). Poorly developed hummock/hollow system with hollows containing *Sphagnum cuspidatum*, Carnation Sedge (*Carex panicea*) and Hare's-tail Cotton Sedge. The terrain is firm but poached and appears to have been burnt as the *Sphagnum* cover is rather sparse. Black Bog-rush (*Schoenus nigricans*) is absent from this community.

Area 2 - Dried-out interconnecting pool system with local regeneration of hummocks. Similar in character to Area 1 but with Bog Myrtle (*Myrica gale*), White Beak Sedge (*Rhynchospora alba*), Great Sundew (*Drosera anglica*), *Sphagnum compactum* and *Campylopus atrovirens* also present. The herb layer is dominated by Deer-grass, Hare's-tail Cotton Sedge and Purple Moor-grass. *Sphagnum molle*, a relatively rare moss in Ireland, was recorded here.

Area 3 - Excellent interconnecting pool system with very good *Sphagnum* cover which includes *S. magellanicum* and abundant hummocks of *Sphagnum imbricatum* and *S. capillifolium*. These are topped with *Racomitrium*, *Cladonia portentosa* and *C. ciliata* var. *tenuis*. The flats are dominated by Cross-leaved Heather, White Beak Sedge, Bog Sedge (*Carex limosa*), Great Sundew, Bog Asphodel (*Narthecium ossifragum*) and the moss *Campylopus atrovirens*. The pools contain *Sphagnum cuspidatum*, *S. auriculatum* and Bog Bean (*Menyanthes trifoliata*). There are extensive areas of quaking *Sphagnum* lawns amongst the interconnecting pools. Nearby is a small Sedge-flush with Bog Sedge and Common Sedge (*Carex nigra*).

Area 4 - Sloping Atlantic blanket bog pools dominated by Purple Moor-grass, with Deer-grass, Cross-leaved Heather and Heather. Narrow interconnecting hollows contain Great Sundew, *Sphagnum auriculatum* and litter. A few eroded hummocks occur near the top of the slope.

Area 5 - Small area of wet bog sloping eastwards towards the lake of Area 16, comprising hummocks of *Sphagnum capillifolium* and locally occurring *S. imbricatum*. Hollows and pools contain *S. cuspidatum*, *S. auriculatum*, *S. magellanicum*, Common Cotton-grass (*Eriophorum angustifolium*) and Great Sundew. Bog Asphodel occurs on the flats and on pool margins. Cross-

leaved Heather is abundant on the hummocks, with the lichens *Cladonia ciliata* var. *tenue* and *C. uncialis* subsp. *biuncialis* frequent in this area.

Area 6 - Hummock hollow system with intact hummocks of *Sphagnum capillifolium* crowned with *Racomitrium*, *Cladonia portentosa* and *C. ciliata* var. *tenue*. Hollows contain *S. auriculatum*, *S. cuspidatum*, Bog Bean, Common Cotton-grass and Great Sundew. White Beak Sedge is frequent on low hummocks and on pool margins. The terrain is on a gentle slope and the presence of Bog Myrtle indicates surface water movement. The vegetation cover is intact and unburnt.

Area 7 - Hummock hollow system with *Sphagnum imbricatum* and Common Cow-wheat (*Melampyrum pratense*).

Area 8 - This extensive, intact area of sloping bog is characterised by hummocks of *Sphagnum capillifolium* and occasional *S. imbricatum*. The flats are colonised by Hare's-tail Cotton Sedge, Bog Bean, *S. auriculatum* and *S. cuspidatum*. There are also large hummocks of *S. fuscum*, which was new to this vice-county (H34).

Area 9 - Highland Atlantic blanket bog is dominated by Purple Moor-grass and Deer-grass, with Common Cotton-grass occurring in the wetter areas. Hummocks consist of *Sphagnum capillifolium* topped with Heather and Purple Moor-grass, with occasional *Racomitrium* and *Cladonia portentosa*. Pools are interconnecting and contain *S. cuspidatum*, *S. auriculatum*, Great Sundew, Common Cotton-grass, and occasionally Lesser Bladderwort (*Utricularia minor*) and Bog Sedge. The flats are dominated by *Campylopus atrovirens* (a moss).

Area 10 - Similar to Area 9, but with lower hummocks and fewer, more elongated pools. The canopy is dominated by Purple Moor-grass and Deer-grass, with odd patches of Heather, Cross-leaved Heather, and Heath Wood-rush (*Luzula multiflora*). The hummocks are intact and include *Sphagnum imbricatum*. Towards the east there are erosion gullies and to the west of the Nature Reserve fence the surface has been damaged by sheep grazing.

Area 11 - This area is characterised by rock-outcrops and a shallow blanket of peat. Purple Moor-grass and Heather are dominant, with Cross-leaved Heather, Deer-grass, Common Cotton-grass and Hare's-tail Cotton Sedge also occurring. Hummocks are low and colonised by *Racomitrium*, Heather, *Cladonia portentosa* and *C. ciliata* var. *tenue*. Sheep grazing has caused damage in this area.

Area 12 - A small flush can be found adjacent to Area 23. Here, Cranberry (*Vaccinium oxycoccus*) occurs in association with Bog Pondweed (*Potamogeton polygonifolius*), Intermediate Bladderwort (*Potamogeton polygonifolius*), Marsh-marigold (*Caltha palustris*), Marsh Cinquefoil (*Potentilla palustris*), Bog Sedge, Slender Sedge (*Carex lasiocarpa*) and *Sphagnum palustre*.

Area 13 - Atlantic blanket bog pools are dominated by Purple Moor-grass, Cross-leaved Heather and Heather. There is good *Sphagnum* cover comprising *S. capillifolium*, *S. magellanicum*, *S. papillosum* in hummocks, and in lawns with Bog Asphodel and *Campylopus atrovirens*. Some dried-out interconnecting pools occur with *S. auriculatum*, *S. cuspidatum*, *S. papillosum* and Great Sundew. The stream to the west of this location contains Branched Bur-reed (*Sparganium erectum*), Lesser Bur-reed (*S. minimum*), Alternate Water-milfoil (*Myriophyllum alterniflorum*), Mares-tail (*Hippuris vulgaris*) and Water-starwort (*Callitriche* spp.).

Area 14 - This area is dominated by Wavy Hair-Grass (*Deschampsia flexuosa*) and Purple Moor-grass, with large hummocks colonised by *Pleurozium schreberi*, and with Cranberry scattered throughout.

Details of Lough Communities Area 15 – Area 25

Area 15 – A small lake with Yellow Water-lily (*Nuphar lutea*) and White Water-lily (*Nymphaea alba*), Bottle Sedge (*Carex rostrata*), Bog Bean, *Sphagnum auriculatum* and *S. cuspidatum*. On the north-west margin are lawns of *S. papillosum*, *S. magellanicum* and *S. recurvum*, and hummocks of *S. palustre* and *Aulacomnium palustre*. Cranberry grows abundantly here. The herb layer consists of an open sward of Bottle Sedge, Bog Sedge and Common Cotton-grass.

Area 16 – A shallow lake with Bottle Sedge, Common Reed (*Phragmites australis*) and White Water-lily.

Area 17 – A deep, circular lake with adjacent slope characterised by hummock hollow microtopography. The pools are linear and aligned across the slope (tear pools) and there are some large hummocks of *Sphagnum imbricatum*.

Area 18 - This lake supports Alternate Water-milfoil.

Area 19 – A small lake with Broad-leaved Pondweed (*Potamogeton natans*), Bog Bean, Common Reed, Yellow and White Water-lily and Slender Sedge.

Area 20 - Lake with an emergent zone, characterised by large stands of Great Fen-sedge (*Cladium mariscus*), swards of Bottle Sedge and Slender Sedge, with occasional Common Reed. Marginal lawns of *Sphagnum recurvum* and *S. palustre* also occur. The herb component contains White-beak Sedge, Bog Sedge, Bog Myrtle, Bog Bean, Purple Moor-grass, Bottle Sedge, Round-leaved Sundew (*Drosera rotundifolia*) and one tussock of White Sedge (*Carex curta*). Cranberry also grows locally here.

Area 21 - Lough Naseehoge has a stony shore and is surrounded by leggy Heather, Bell Heather (*Erica cinerea*) and Rhododendron (*Rhododendron ponticum*). On the north-west side is a small seepage area with Blinks (*Montia fontana*), Marsh Willowherb (*Epilobium palustre*), Bog Pondweed and Creeping Forget-me-not (*Myosotis secunda*).

Area 22 – Water Lobelia (*Lobelia dortmanna*), Shoreweed (*Littorella uniflora*), Broad-leaved Pondweed and Bulbous Rush (*Juncus bulbosus*) occur in this rocky lake.

Area 23 – Lough Barderg is infilling with Common Reed, Bottle Sedge, Sharp-flowered Rush (*Juncus acutiflorus*), Common Club-rush (*Scirpus lacustris*), Broad-leaved Pondweed and Floating Bur-reed (*Sparganium angustifolium*). The inlet stream contains Yellow and White Water-lily, whilst on the margin there is Cranberry, *Sphagnum recurvum*, *S. auriculatum* and *S. cuspidatum*.

Area 24 - Lough Sallagh is colonised by Common Club-rush, Bottle Sedge, Yellow Iris (*Iris pseudacorus*), Water Horsetail (*Equisetum fluviatile*), Broad-leaved Pondweed, Yellow Water-lily and Sharp-flowered Rush. The lake is nutrient enriched, probably as a result of fertiliser run-off from the adjacent conifer plantation.

Area 25 - Lough Creeve is a small lake in which the presence of Floating Bur-reed was noted.

Fauna

Bird species recorded from Dunragh Loughs and Pettigo Plateau cSAC include:

- Red Grouse (*Lagopus lagopus*), a notable species, that breeds within the site
- Kestrel (*Falco tinnunculus*) are relatively common within the site with several recorded during the July 1997 survey
- Snipe (*Gallinago gallinago*)
- Curlew (*Numenius arquata*)
- Cormorant (*Phalacrocorax carbo*)
- Mallard (*Anas platyrhynchos*)
- Teal (*Anas crecca*)
- Meadow Pipit (*Anthus pratensis*)
- Skylark (*Alauda arvensis*)
- Woodcock (*Scolopax rusticola*)

- Hooded Crow (*Corvus corone cornix*)
- Raven (*Corvus corax*)
- Common Sandpiper (*Actitis hypoleucos*)
- Greylag Goose (*Anser anser*) was recorded breeding within the site during 1997 and 1998

Other species observed recently from the site include the Reed Bunting (*Emberiza schoeniclus*), Stonechat (*Saxicola torquata*), Wheatear (*Oenanthe oenanthe*), Wren (*Troglodytes troglodytes*), Sand Martin (*Riparia riparia*), Goldeneye (*Bucephala clangula*), Grey Heron (*Ardea cinerea*), Blackbird (*Turdus merula*), Mallard (*Anas platyrhynchos*), Crossbill (*Loxia curvirostra*), Robin (*Erithacus rubecula*), Long-tailed Tit (*Aegithalos caudatus*) and Whooper Swan (*Cygnus cygnus*).

APPENDIX V: NOTIFIABLE ACTIONS

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

- Notifiable Action 2.1 – Upland Grassland, Scree, and Inland Cliff
- Notifiable Action 3.1 – Blanket Bog
- Notifiable Action 3.2 – Heath
- Notifiable Action 4.1 – Raised Bog, Cutaway Bog and Bog Woodland
- Notifiable Action 6.1 – Rivers and Streams
- Notifiable Action 6.2 – Lakes, Ponds, Canals
- Notifiable Action 7.1 – Artificial Habitats

HABITAT TYPE 2.1

UPLAND GRASSLAND, SCREE, AND INLAND CLIFF

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

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.

SECTION B

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 2.1

UPLAND GRASSLAND, SCREE, AND INLAND CLIFF

<u>Section A</u>	<u>Section B</u>
<p>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</p> <p>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</p> <p>changing of traditional use from hay meadow (to either grazing or silage making), or from grazing to silage cutting/adding lime</p> <p>adding fertiliser of any sort to areas not previously fertilised applying fertiliser which would increase the level of nitrogen in the soil/ applying fertiliser which would increase the level of phosphorous in the soil applying phosphorous to soils which already have in excess of the REPS index 2 levels</p> <p>using fertiliser on slopes over 25 degrees</p> <p>creation of new tracks or paths</p> <p>burning of vegetation</p> <p>reclamation, infilling, ploughing or land drainage</p> <p>reseeding, planting of trees or any other species</p> <p>rock removal/use of any pesticide or herbicide</p> <p>dumping, burning or storing any materials</p> <p>alteration of the banks, bed or flow of watercourses</p> <p>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</p> <p>any other activity of which notice may be given by the Minister from time to time</p>	<p>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</p> <p>developing leisure facilities including golf courses, sports pitches, caravan or camping facilities.</p> <p>removal of soil, mud, gravel, sand or minerals</p> <p>developing roads or car parks</p> <p>construction of fences, buildings or embankments</p> <p>afforestation</p> <p>commercial turf cutting</p> <p>erecting or operating a windfarm</p>

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 3.1

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

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.

SECTION B

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

<u>Section A</u>	<u>Section B</u>
<p>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</p> <p>grazing of livestock above a sustainable density or type of stock (as defined in approved farm plans)</p> <p>grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung</p> <p>supplementary feeding of stock, except as defined in REPS guidelines/ introduction of stock to formerly ungrazed areas</p> <p>adding lime/adding fertiliser of any sort</p> <p>creation of new tracks or paths/burning of vegetation/ reclamation, infilling, ploughing or land drainage</p> <p>reseeding, planting of trees or any other species</p> <p>rock removal/cutting turf except from existing banks; no cutting from intact (uncut) areas</p> <p>commercial peat moss or turf extraction</p> <p>use of any pesticide or herbicide, including sheep dip/ dumping, burning or storing any materials</p> <p>alteration of the banks, bed or flow of watercourses</p> <p>operation of commercial recreation facilities (e.g. pony trekking)</p> <p>introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area</p> <p>any other activity of which notice may be given by the Minister from time to time</p>	<p>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</p> <p>developing leisure facilities including golf courses, sports pitches, caravan or camping facilities.</p> <p>removal of soil, mud, gravel, sand or minerals</p> <p>developing roads or car parks</p> <p>construction of fences, buildings or embankments</p> <p>afforestation</p> <p>erecting or operating a windfarm</p>

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

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.

SECTION B

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)

<u>Section A</u>	<u>Section B</u>
<p>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</p> <p>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</p> <p>supplementary feeding of stock, except as defined in REPS guidelines</p> <p>introduction of stock to formerly ungrazed areas</p> <p>adding lime/ adding fertiliser of any sort</p> <p>Creation of new tracks or paths</p> <p>burning areas of vegetation over 5 ha, or burning any area more often than once every 15 years</p> <p>reclamation, infilling, ploughing or land drainage</p> <p>reseeding, planting of trees or any other species</p> <p>rock removal/cutting turf except from existing banks; no cutting from intact (uncut) areas</p> <p>commercial peat moss or turf extraction</p> <p>use of any pesticide or herbicide, including sheep dip</p> <p>dumping, burning or storing any materials</p> <p>alteration of the banks, bed or flow of watercourses</p> <p>operation of commercial recreation facilities (e.g. pony trekking)</p> <p>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</p>	<p>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</p> <p>developing leisure facilities including golf courses, sports pitches, caravan or camping facilities.</p> <p>removal of soil, mud, gravel, sand or minerals</p> <p>developing roads or car parks</p> <p>construction of fences, buildings or embankments</p> <p>afforestation</p> <p>erecting or operating a windfarm</p>

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

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.

SECTION B

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

<u>Section A</u>	<u>Section B</u>
<p>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</p> <p>grazing of livestock/grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung</p> <p>adding lime/adding fertiliser of any sort</p> <p>creation of new tracks or paths</p> <p>burning areas of vegetation reclamation, infilling, or ploughing /reseeding, planting of trees or any other species/cutting trees or removing timber</p> <p>drainage works on the bog or within the local water catchment area</p> <p>cutting turf or peat moss extraction</p> <p>use of any pesticide or herbicide, including sheep dip</p> <p>dumping, burning or storing any materials</p> <p>alteration of the banks, bed or flow of watercourses</p> <p>operation of commercial recreation facilities (e.g. botanical tours)</p> <p>introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area</p> <p>any other activity of which notice may be given by the Minister from time to time</p>	<p>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</p> <p>developing leisure facilities including golf courses, sports pitches, caravan or camping facilities.</p> <p>removal of soil, mud, gravel, sand or minerals</p> <p>developing roads or car parks</p> <p>construction of fences, buildings or embankments</p> <p>afforestation</p> <p>erecting or operating a windfarm</p>

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.

<u>SECTION A</u>	<u>SECTION B</u>
<p>Please note that the activities listed in <i>Section A overleaf</i> are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.</p>	<p>Please note that the activities listed in <i>Section B overleaf</i> 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).</p> <p>If so, these notifiable actions do not apply.</p> <p>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.</p>

HABITAT TYPE 6.1

RIVERS OR STREAMS

<u>Section A</u>	<u>Section B</u>
<p>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</p> <p>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</p> <p>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</p> <p>extracting water for irrigation or other purposes</p> <p>operation of boat angling or shore angling business/restocking with fish</p> <p>reclamation, infilling, ploughing or land drainage within 30m of the river or stream/ reseeded, 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</p> <p>dumping rubbish or other materials or disposing of any chemicals or wastes in streams/ivers or into water-courses running into them</p> <p>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</p> <p>harvesting or burning of reed or willow.</p> <p>causing siltation/ operation of commercial recreation facilities (e.g. bird watching tours)</p> <p>introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area</p> <p>any other activity of which notice may be given by the Minister from time to time</p>	<p>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</p> <p>developing leisure facilities including golf courses, sports pitches, caravan or camping facilities.</p> <p>any activity which might cause pollution of the river or stream</p> <p>removal of soil, mud, gravel, sand or minerals</p> <p>developing roads or car parks</p> <p>construction of fences, buildings or embankments</p> <p>construction or operation of an aquaculture facility.</p> <p>fishing for eels or salmon</p> <p>bank maintenance and grading</p> <p>creation of weirs and dams</p>

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.

<u>SECTION A</u>	<u>SECTION B</u>
<p>Please note that the activities listed in <i>Section A overleaf</i> are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.</p>	<p>Please note that the activities listed in <i>Section B overleaf</i> 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).</p> <p>If so, these notifiable actions do not apply.</p> <p>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.</p>

HABITAT TYPE 6.2

LAKES, PONDS AND CANALS

<u>Section A</u>	<u>Section B</u>
<p>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</p> <p>grazing of livestock above a sustainable density as defined in approved farm plans) within 50m of the lake, pond or canal</p> <p>grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung</p> <p>supplementary feeding of stock within 50m of the lake, pond or canal</p> <p>adding lime within 50m of the lake, pond or canal /adding fertiliser of any sort within 50m of the lake, pond or canal</p> <p>extracting water for irrigation or other purposes</p> <p>operation of boat angling or shore angling business/restocking with fish.</p> <p>within 50m of the lake, pond or canal: reclamation, infilling, ploughing or land drainage</p> <p>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</p> <p>dumping rubbish or other materials or disposing of any chemicals or wastes in streams/rivers or into water-courses running into them.</p> <p>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).</p> <p>alteration of the banks, channel, bed or flow of the lake, pond or canal or of watercourses running into or out of it</p> <p>harvesting or burning of reed or willow.</p> <p>causing siltation</p> <p>operation of commercial recreation facilities (e.g. bird watching tours)</p> <p>introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area</p> <p>any other activity of which notice may be given by the Minister from time to time</p>	<p>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</p> <p>developing leisure facilities including golf courses, sports pitches, caravan or camping facilities.</p> <p>any activity which might cause pollution of the lake, pond or canal</p> <p>removal of soil, mud, gravel, sand or minerals</p> <p>developing roads or car parks</p> <p>construction of fences, buildings or embankments</p> <p>construction or operation of an aquaculture Facility.</p> <p>fishing for eels or salmon</p> <p>bank maintenance and grading</p> <p>creation of weirs and dams</p>

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.

<u>SECTION A</u>	<u>SECTION B</u>
<p>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.</p>	<p>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).</p> <p>If so, these notifiable actions do not apply.</p> <p>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.</p>

HABITAT TYPE 7.1

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

<u>Section A</u>	<u>Section B</u>
<p>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</p> <p>disturbance of bats</p> <p>operation of commercial recreation facilities (e.g. bird watching tours)</p> <p>introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area</p> <p>any other activity of which notice may be given by the Minister from time to time</p>	<p>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</p> <p>developing leisure facilities including sports pitches, caravan or camping facilities.</p> <p>developing roads or car parks</p> <p>construction of fences, buildings and embankments</p> <p>afforestation</p>

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 VI:

Compensation and Appeals Procedures Compensation

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.

Appeals Procedure

Objection or appeal can be made against the inclusion of a piece of land in a cSAC or SPA. A person can only make objections if they have a legal interest in the site (i.e. an owner or legal user). They must be made on scientific grounds, e.g. a landowner would show that the relevant habitats/species/geological features were not present in such a condition as to warrant designation. Appeals can also be made for the inclusion of lands. Appeals should be accompanied by a map of the area of concern and be as informative as possible. There are two stages to the appeals process:

Internal Appeals are initially dealt with by regional staff. If necessary, they may refer the case to other NPWS staff. If there is no agreement following the internal appeal, the case becomes an external appeal.

The option of an **External Appeal** is available only where an internal appeal is unsuccessful. If so, the appellant may have the case referred to an Appeals Advisory Board, which is independent of NPWS. A grant to defray the cost of an expert scientific report is available to the appellant. The Board is comprised of equal representation of landowners/users and conservationists, with an independent chairperson. The Board makes a recommendation on each appeal to the Minister who then decides on the outcome of the appeal.

APPENDIX VII: SUMMARY OF 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 VIII: NATIONAL PARKS AND WILDLIFE MANAGEMENT STAFF

Conservation Ranger

Ms. Miriam Crowley,
Old Mill,
Dromahair,
Co. Leitrim.
Phone (071) 9134950.
dmcdonagh@duchas.ie

District Conservation Officer

Mr. Tim Roderick,
Old Mill,
Dromahair,
Co. Leitrim.
Phone (071) 9134950.
troderick@duchas.ie

Regional Manager

Mr. Joe Gatins,
Main Street,
Laghy,
Co. Donegal.
Phone (074) 9721837.
Fax (074) 9721674.
jgatins@duchas.ie

Deputy Regional Manager

Mr. Dave Duggan,
Glenveagh National Park,
Church Hill,
Letterkenny,
Co. Donegal.
Phone (074) 9137090/91/ Fax (074) 9137072.
dduggan@duchas.ie

Divisional Manager

Mr. Pat Warner,
National Parks & Wildlife Service
Ballinafad
Co. Sligo
Phone/Fax (071) 9666178
pat_warner@environ.ie

Divisional Ecologist

Dr. Cathryn Hannon
Galeybaley
Knockroghery
Co. Roscommon
Phone (090) 6661370
channon@duchas.ie

National Parks and Wildlife

Dept. of Environment, Heritage and Local Government,

7 Ely Place,

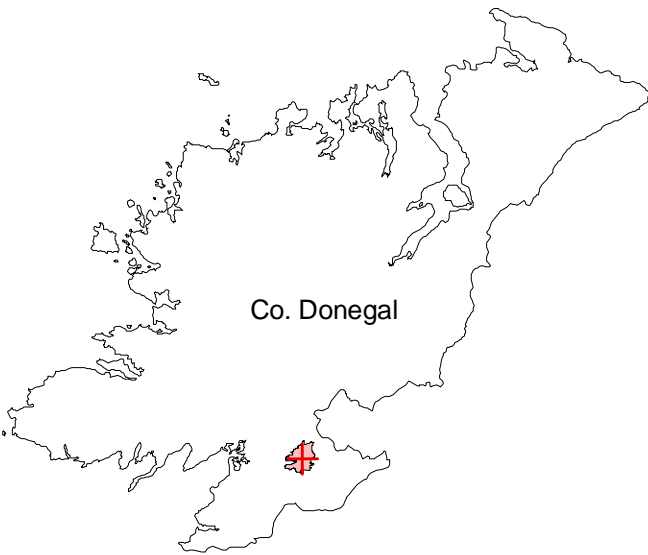
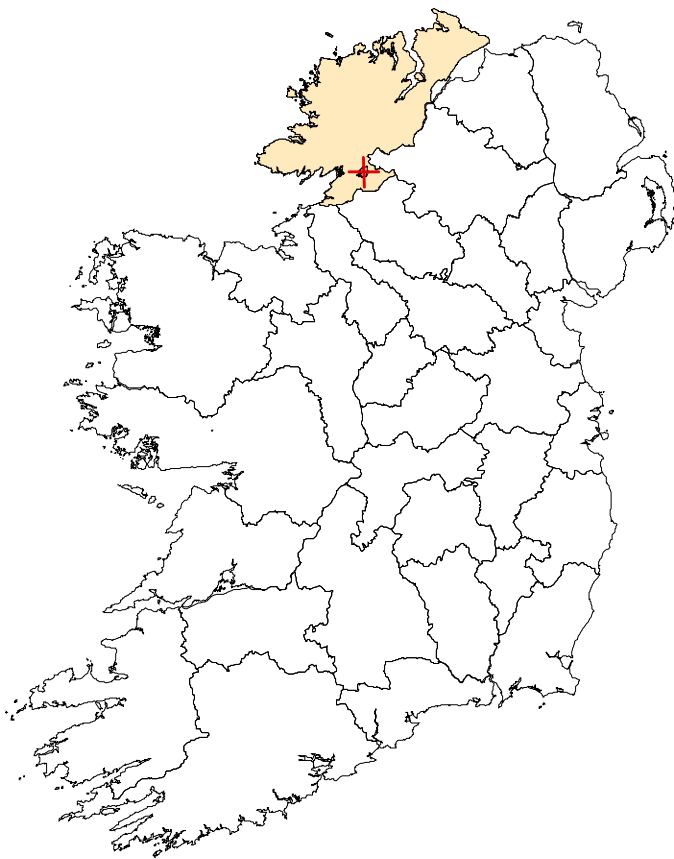
Dublin 2.

Phone Lo Call 1890 202021, (01) 8882000

Fax (01) 8883272

www.npws.ie

Féadtar athruithe a chur ar an gceantair / Sites subject to revision
(Ní thaispeántar suímh gur de spéis géolaíoch amháin iad) / (Sites solely of geological interest not shown)
Reproduced from Ordnance Survey material by permission of the Government (Permit Number 5953)
Macasamhail d'ábhar na Suirbhéireachta Ordonáis le cead ón Rialtas (Ceadúnas Uimh 5953)



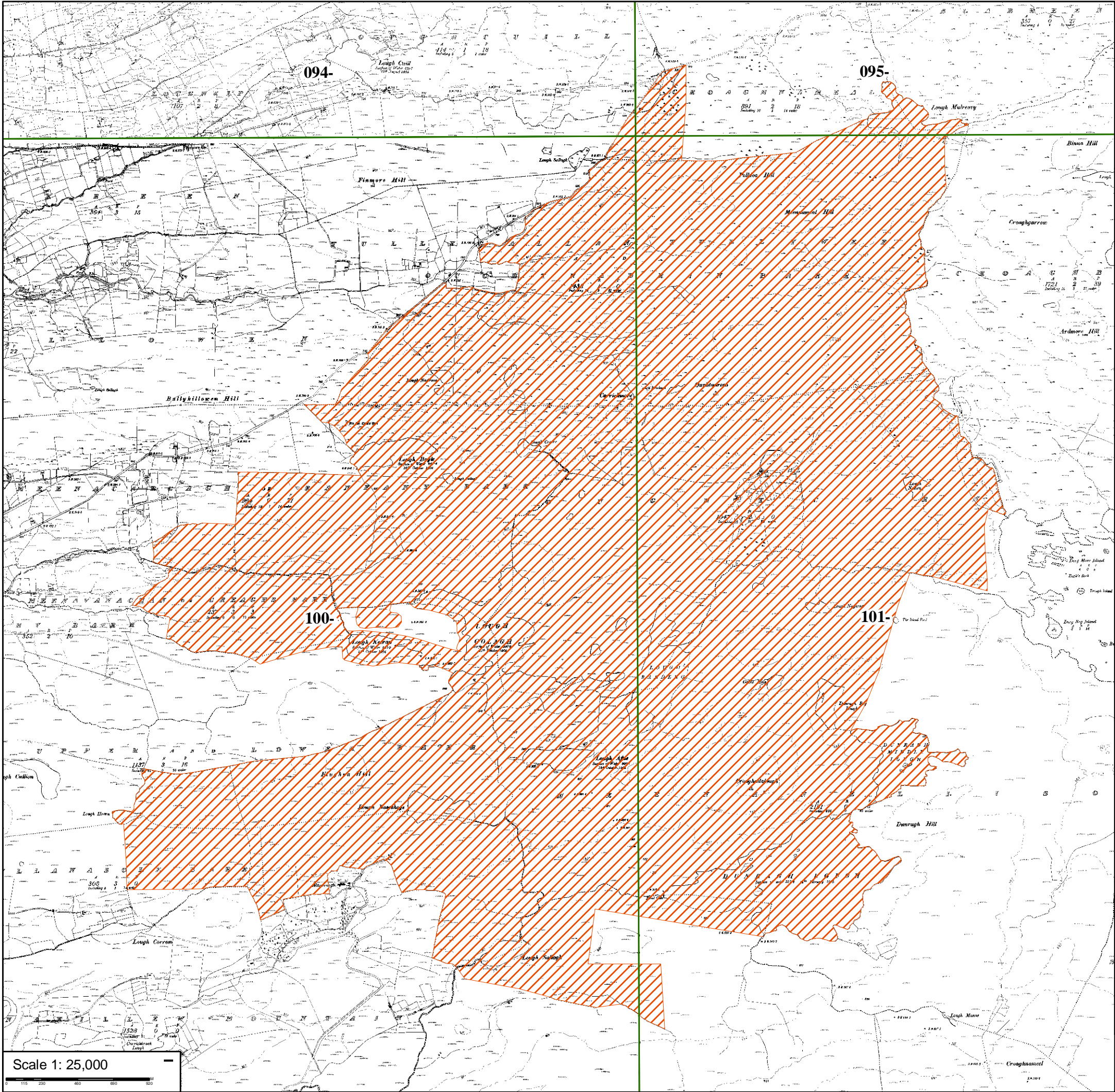
Map 1

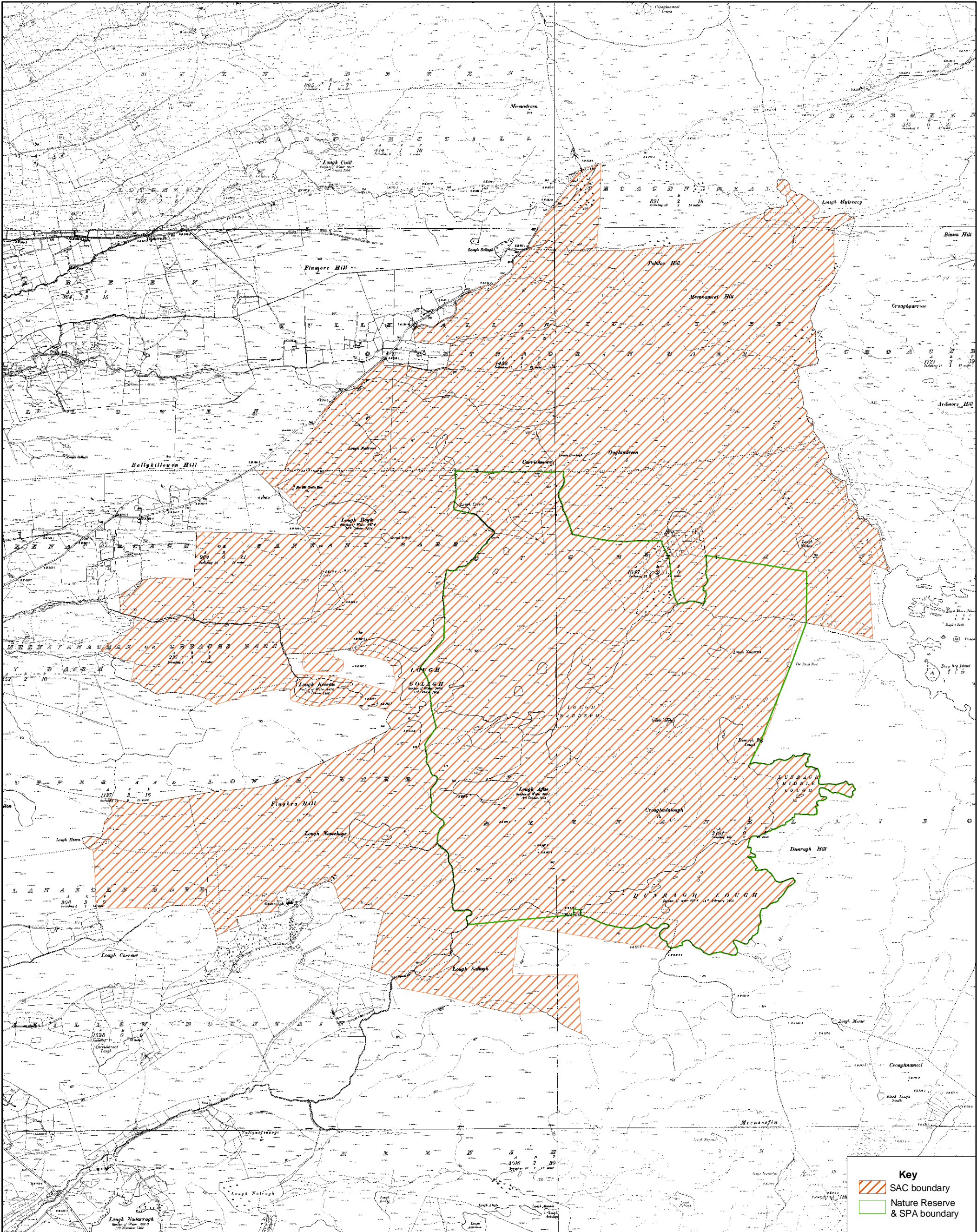
LOCATION MAP: DUNRAGH LOUGH/ PETTIGO PLATEAU cSAC 001125





Department of Environment, Heritage and Local Government
An Roinn Comhshaoil, Oidhreacht agus Rialtais Áitiúil

Co-financed through 'Life' EU funding
Chomh-mhaoinithe trí chiste 'LIFE' an AE





Key

-  SAC boundary
-  Nature Reserve & SPA boundary

- Carboniferous
- D.R.S. Old Red Sandstone
- Lough Foyle (Lach Awe) Succession
- Metagreywacke lithologies of Upper Dalradian
- Guldriff (Lach Tay) Limestone and its non-limestone equivalent

Kilmacrenan (Islay) Succession: NW facies

- 7 Crana Quartzite
- 6 Terman Pelites
- 5 Cranford Limestone
- 4 Slieve Toomy Quartzite
- 3 Glencolumbkille Limestone and Port Askaig Tillfold
- 1 Glencolumbkille Pelite

Creeslough (Ballachulish) Succession

- 8 Falcarragh Pelites, Falcarragh Limestone and Loughros Formation
- 7 Sessiagh-Donmass Group
- 4 Ards Quartzite
- 3 Ards Pelite
- 2 Altan Limestone
- 1 Creeslough Formation
- Moine Series
- Undifferentiated granite
- Younging direction
- Faults
- Slide showing dip

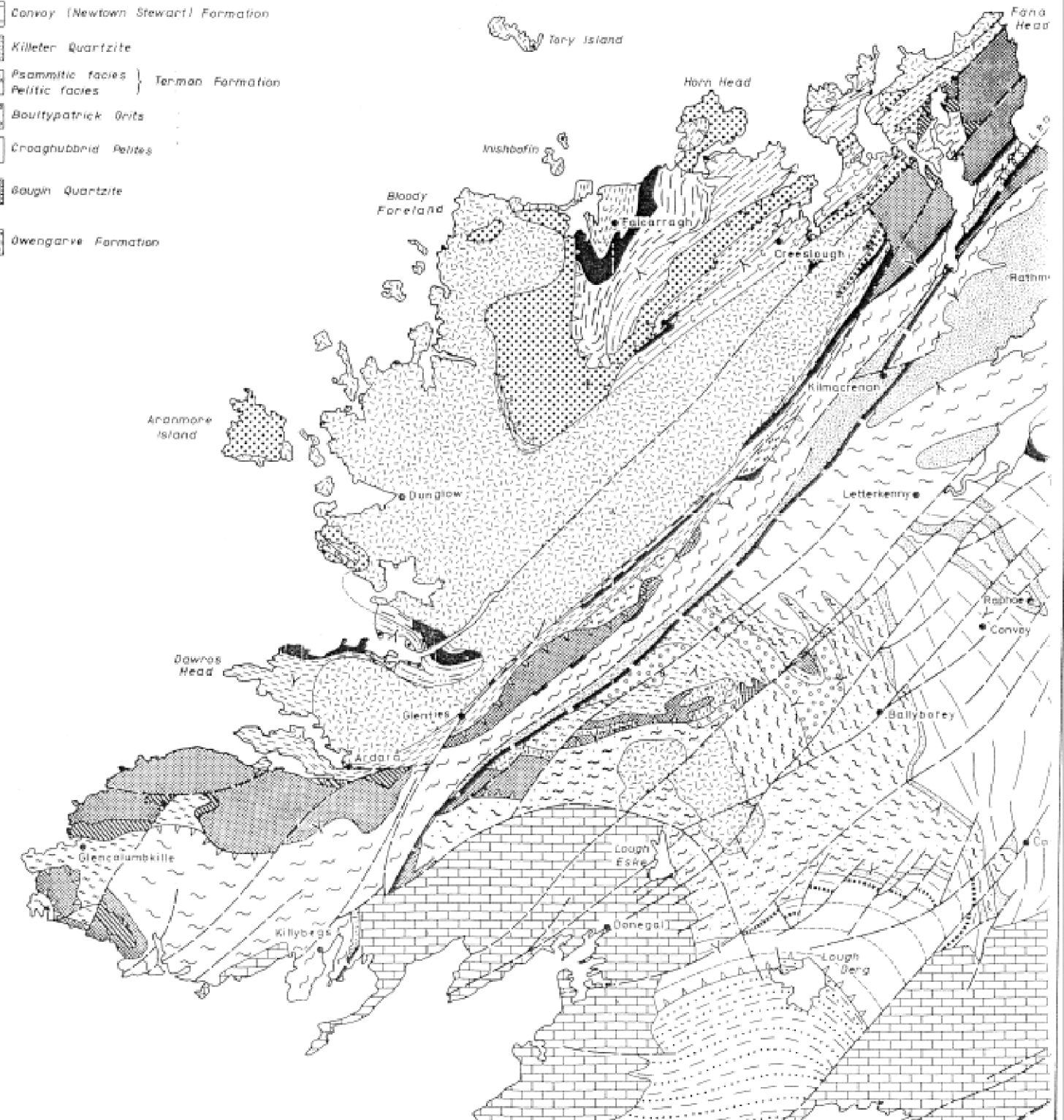
South East facies

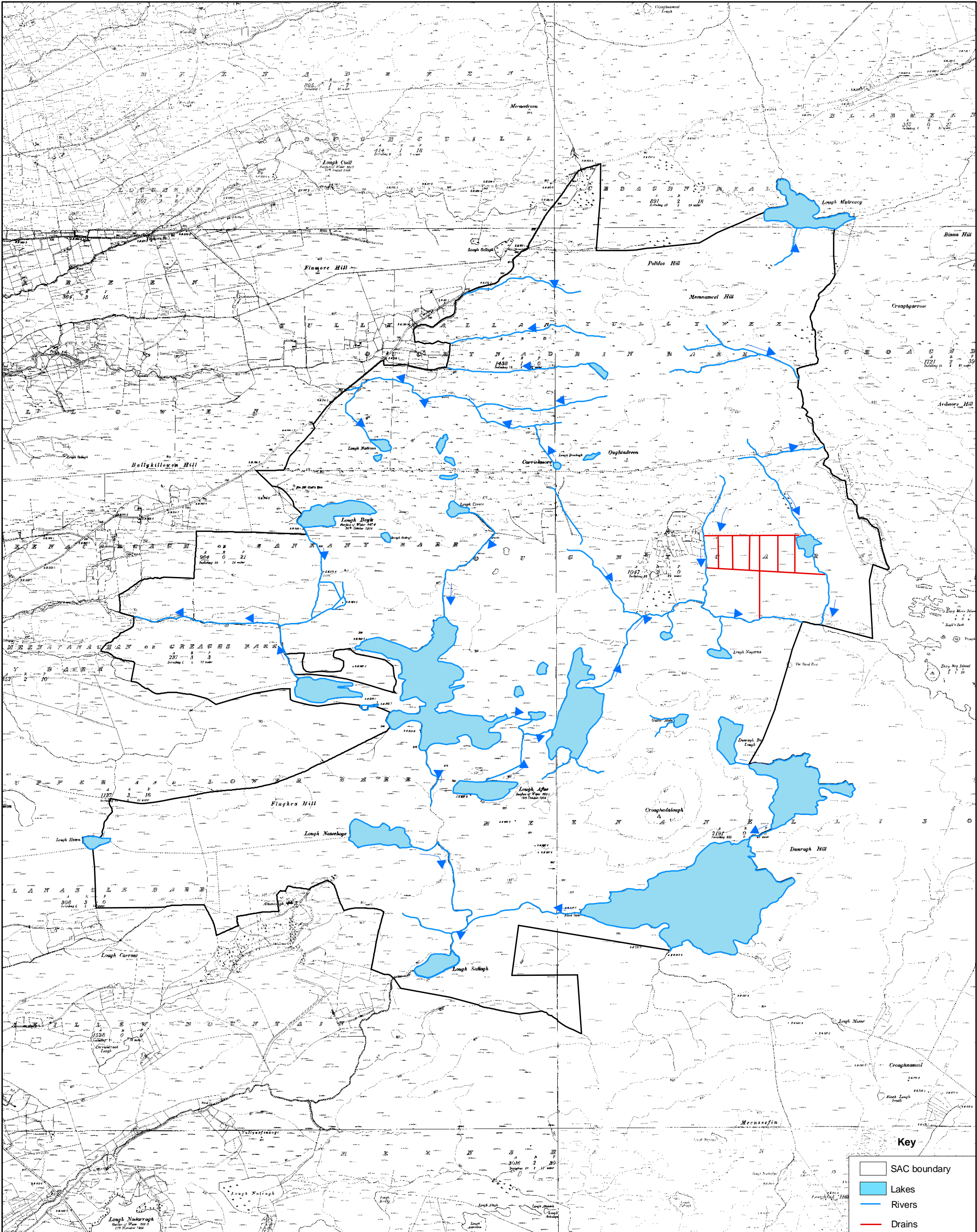
- Conway (Newtown Stewart) Formation
- Killeter Quartzite
- Psammitic facies } Terman Formation
- Pelitic facies
- Boultypatrick Grits
- Croaghbrid Pelites
- Baugh Quartzite
- Owengarve Formation

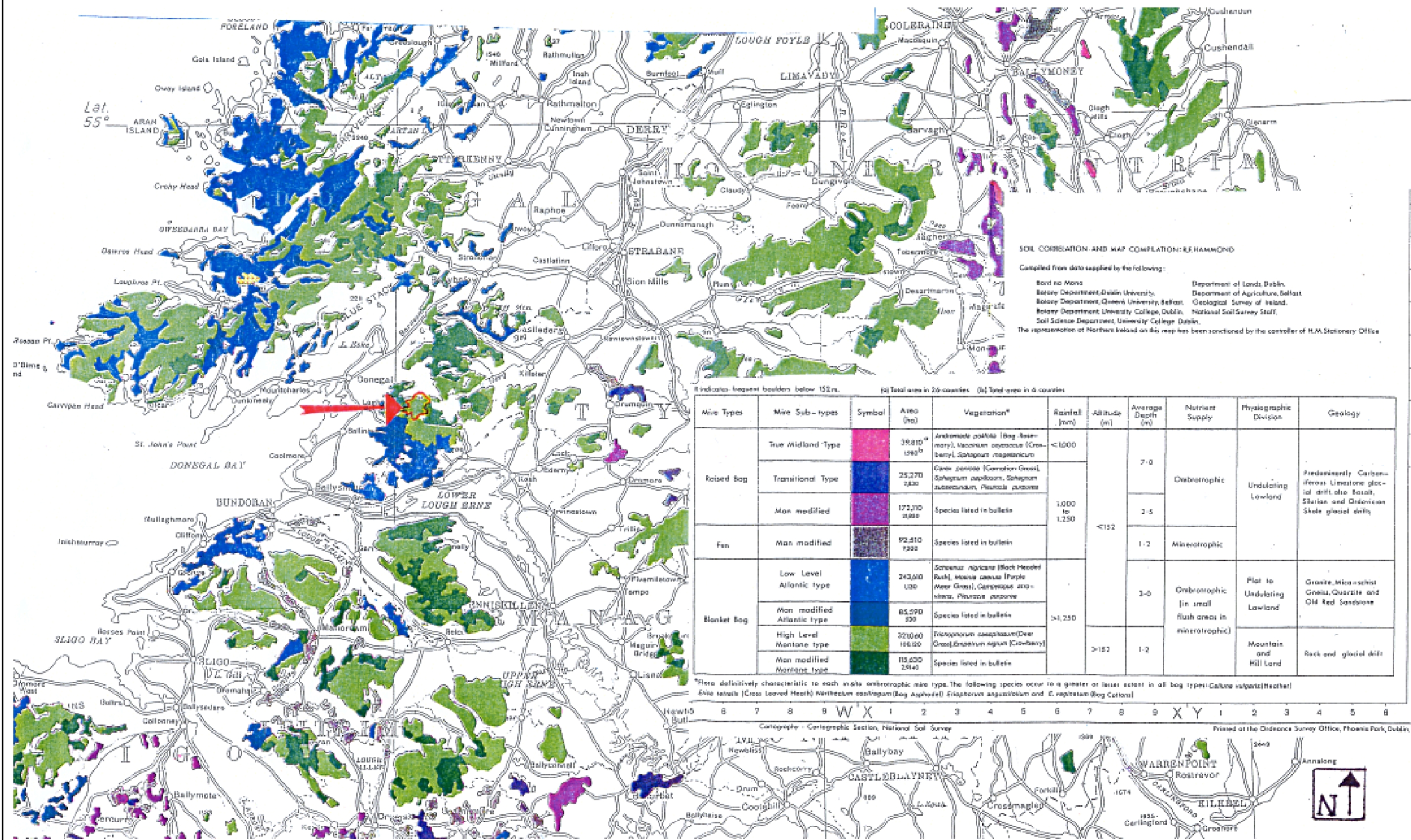
Map 3: Underlying Geology

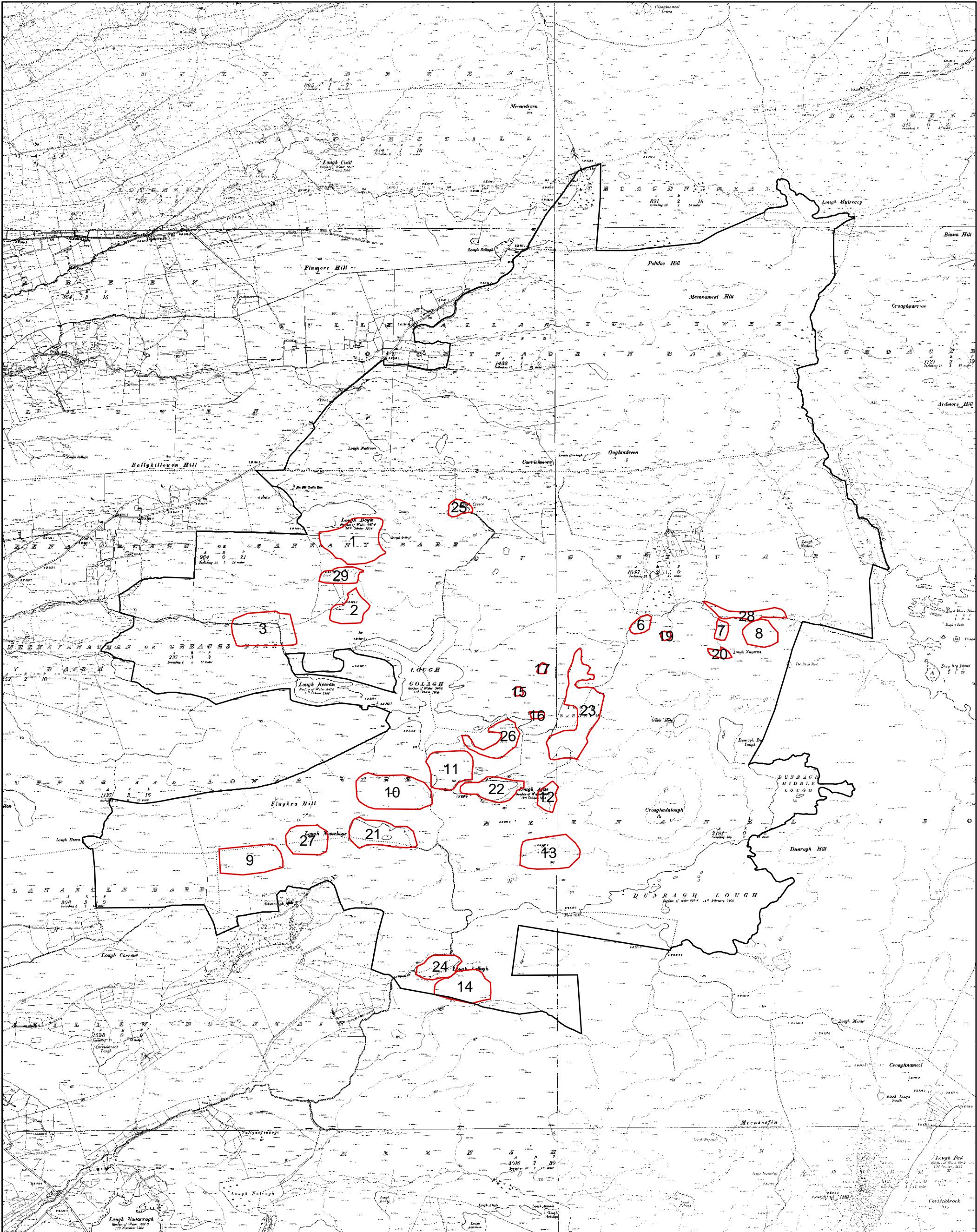
Site name: Pettigo Plateau and Dunragh Loughs
Site code: 1125
Date: July 97

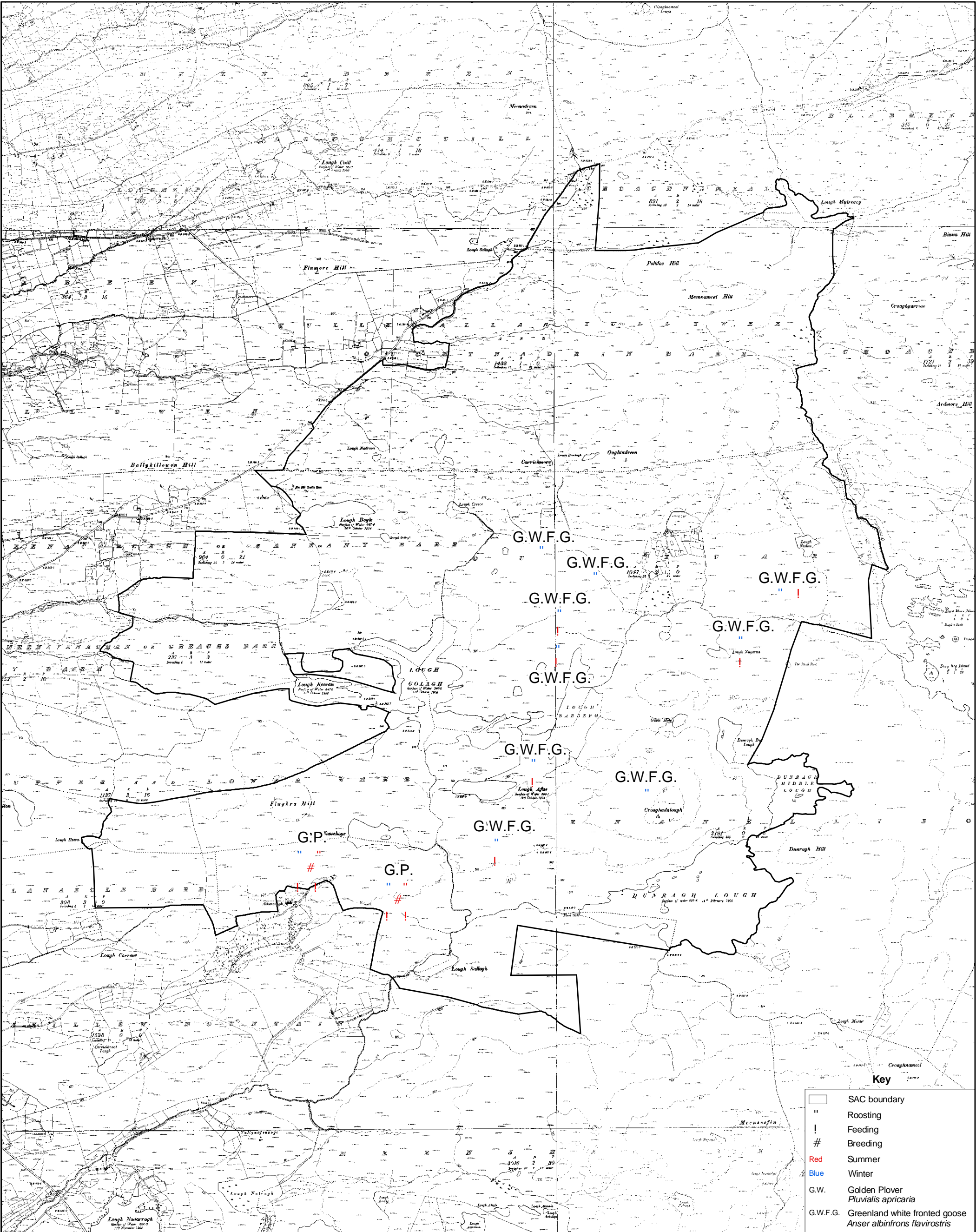
Source: The Geology of Donegal
Scale: 2.5": 15 miles











Key

"

!

#

Red

Blue

G.W.

G.W.F.G.

SAC boundary
Roosting
Feeding
Breeding
Summer
Winter
Golden Plover
Pluvialis apricaria
Greenland white fronted goose
Anser albinfrons flavirostris

