



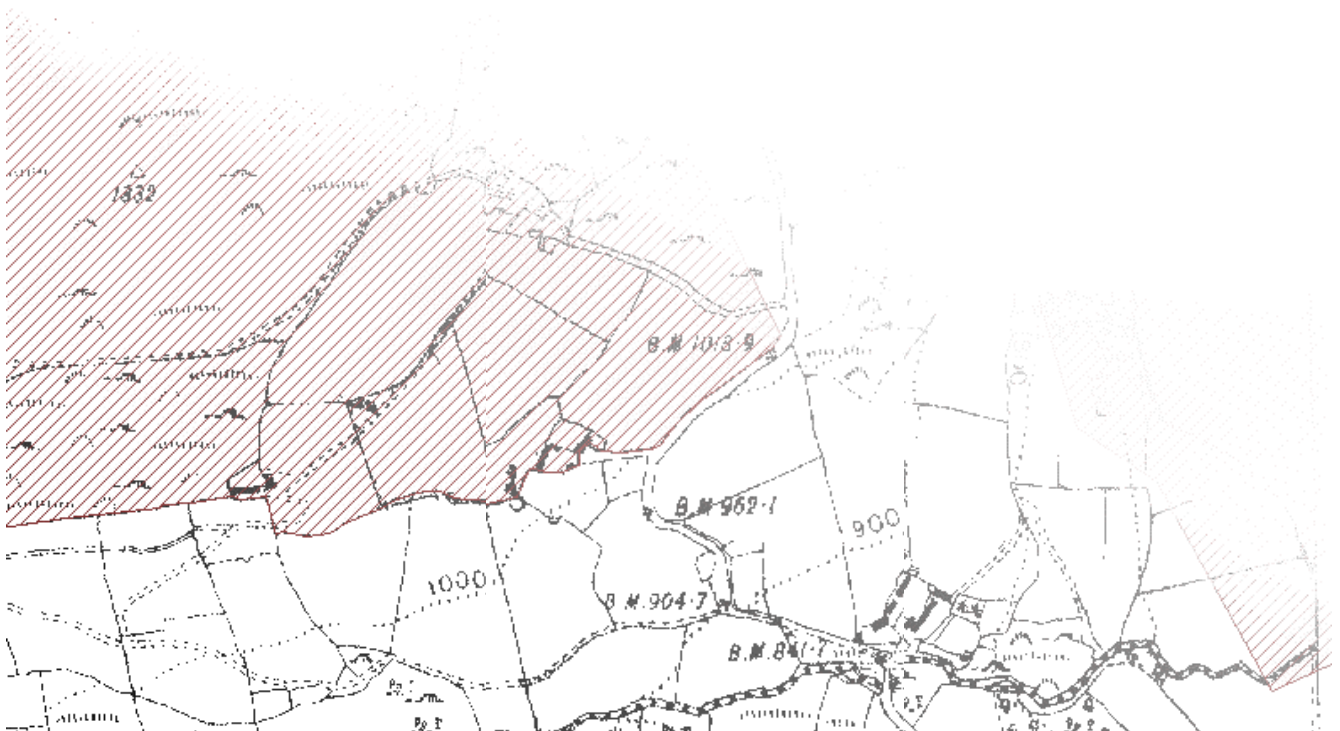
# National Parks and Wildlife Service Conservation Plan for 2006-2011



## Fin Lough cSAC

Site Code 576

Co. Offaly





# SUMMARY

## Introduction

Fin Lough cSAC has been designated as a candidate Special Area of Conservation under the EU Habitats Directive. The site has been listed due to the presence of the Annex I habitat, alkaline fen, and also because of the presence of *Vertigo geyeri*, a rare snail listed on Annex II of the EU Habitats Directive.

## Description of Fin Lough cSAC

Fin Lough cSAC is located approximately 13km south of Athlone and 2km east of Clonmacnoise, in Co. Offaly. Fin Lough is a shallow limestone lake surrounded by a complex of wetland habitats. The name Fionn Loch, meaning White Lake, probably derives from the white colour of the lake bottom caused by marl deposits. It is bounded to the north and east by the Clonfinlough Esker and to the south and west by Blackwater Bog, which is now largely cutover due to industrial exploitation.

The alkaline fen Annex I habitat is species-rich and characteristic species, such as Black Bog Rush and sedge species (Glaucous Sedge, Long-stalked Yellow Sedge and Carnation Sedge), are present. The total flora of Fin Lough is remarkably rich, with 210 vascular plant species and 29 bryophytes known to occur. Other habitats occurring within the cSAC include calcareous springs, limestone/marl lake, reed and large sedge swamps, fen-bog transition, bog woodland, raised bog, scrub and wet grassland. The transition from calcium-rich lake to reedbed, to fen, to bog is relatively intact in some areas, which is exceptional for this part of the country.

In addition to the presence of the rare Annex II *Vertigo geyeri* populations, the site supports an extensive invertebrate fauna. It is nationally important for two rare Hover-fly species (Order Diptera), *Chrysogaster macquarti* and *Platycheirus perpallidus*. As one of the few areas of standing water in the county, the lake is also an important roosting area for winter bird visitors, such as Mallard, Teal and Tufted Duck.

The majority of the site is in Bord na Móna and multiple private ownership, with a small portion under commonage. Cattle and sheep graze parts of the site. An active Bord na Móna peat railway forms part of the northern site boundary. The site is occasionally used for shooting of ducks during the winter season and for bird-watching. Drainage ditches installed for peat extraction activities are present adjacent to the south-western boundary.

## **Main conservation objectives**

- To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status; alkaline fen and alkaline fen/calcareous springs mosaic (20% and 1% area of the site respectively)
- To maintain the Annex II species for which the cSAC has been selected at favourable conservation status; *Vertigo geyeri* and other notable fauna species
- To maintain the extent, biodiversity and species richness of the site
- To establish effective liaison and co-operation with landowners, legal users and relevant authorities

## **Main management issues**

- Adjacent infrastructure
- Agricultural improvement and nutrient enrichment
- Natural succession
- Potential impacts of drainage on the hydrology of the site

## **Main strategies to achieve objectives**

- Conduct hydrological survey and determine hydrological regime of the site
- Maintain suitable grazing regime
- Monitor the notable habitats and species present within the site
- Maintain effective liaison between landowners and stakeholders

# TABLE OF CONTENTS

Summary .....	1
Table of Contents .....	3
Reader's Guide .....	5
Introduction .....	6
Legal Background for Conservation Plans.....	6
Implications of Site Designation for Landowners and other Site Users .....	7
Site Description .....	8
Location Including Site Boundaries.....	8
Legal Status .....	9
Government Departments and Agencies.....	9
Physical Features.....	10
Biological Features.....	11
Land Use .....	16
Conservation Value of Fin Lough cSAC.....	17
Management Framework.....	18
Conservation Objectives .....	18
Management Issues .....	18
General Strategies .....	20
Specific Strategies.....	22
Zoning.....	24
Summary of Specific Strategies .....	25

# APPENDICES

Appendix I:	Glossary .....	26
Appendix II:	Reference Material .....	31
Appendix III:	Climate .....	32
Appendix IV:	Notifiable Actions .....	33
Appendix V:	Compensation and Appeals Procedures .....	50
Appendix VI:	National Parks and Wildlife Service Management Staff .....	52

# MAPS

Map 1 Location and Boundary (Version 1.01).

Map 2 Ownership Map

Map 3 Indicative Habitat Map

Map 4 Management Zoning Map

# READER'S GUIDE

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

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

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

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

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

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

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

# INTRODUCTION

## Legal Background 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 Designation of Fin Lough cSAC

HABITATS LISTED IN ANNEX I OF THE EU HABITATS DIRECTIVE	CONSERVATION VALUE
<ul style="list-style-type: none"> <li><b>Alkaline fen</b> (EU Habitat Code 7230)</li> </ul>	The site supports a relatively extensive area of alkaline fen.

SPECIES LISTED IN ANNEX II OF THE EU HABITATS DIRECTIVE	CONSERVATION VALUE
<ul style="list-style-type: none"> <li><b><i>Vertigo geyeri</i></b></li> </ul>	The site is very important for this snail species as it appears to provide suitable habitat over a reasonably large area.

## Implications of Site Designation for Landowners and other Site Users

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

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

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

The designation of the site can be appealed by landowners and legal users on scientific grounds. Details of the appeals procedure are also given in Appendix V.

# SITE DESCRIPTION

## Location Including Site Boundaries

The site is located approximately 13km south of Athlone and 2km east of Clonmacnoise in Co. Offaly (Map 1).

**Grid Ref.:** N 03 29

**Latitude:** N 53°18'45"

**Longitude:** W 07°57'00"

**Area:** 78 ha

**Altitude Range:** 133 m to 150 m

**Townlands:** Clonfinlough and Tullaghbed



*Aerial photograph of Fin Lough cSAC (the top of the photo is facing west).*

## Site Boundaries

The site is bounded to the west and south by the largely cutover Blackwater Bog, with the Clonfinlough Esker located to the north and east. A railway used for peat transportation forms part of the northern boundary, with a drain forming part of the south-western site boundary. The Gowlan Rivers forms part of the south-eastern site boundary. Agricultural lands used for grazing also bound the site.

## Site Infrastructure

The site is located to the south of the R444 regional road from the N6 to Clonmacnoise and Shannonbridge. A track parallel to a peat transport railway provides access to the site from the regional road.

# Legal Status

## Ownership

The site is in multiple private ownership with a small portion under commonage (approximately 15%). Bord na Móna own a portion of land in the south-eastern corner of the site (Map 2), as well as having a share of the north-eastern portion of the site.

## Designations of the Site

<b>candidate Special Area of Conservation</b>	Sitecode IE0000576	Published on 1 <sup>st</sup> July 1999
<b>proposed Natural Heritage Area</b>	Sitecode 576	Unpublished
<b>CORINE Biotope Site</b>	Sitecode 800000443	

**Heritage Zone** The site is part of a proposed Heritage Zone for Offaly County Council.

## Rights Pertaining to the Site

**Shooting** The Clonfinlough Gun Club previously shot over the site in winter, although it is not certain whether this club is still active.

# Government Departments and Agencies

<b>Department of the Environment, Heritage and Local Government (DEHLG)</b>	DEHLG is the government department with responsibility for the protection and conservation of Ireland's natural heritage.
<b>National Parks &amp; Wildlife Service (NPWS)</b>	NPWS is the section of the DEHLG responsible for maintaining the nature conservation value of the site. Periodic inspection of the site is carried out by the local Conservation Ranger.  Regional staff also participate in research and survey projects by collecting data on the site, provide advice to planning authorities on the impacts of development applications and provide an education and advisory service to the public (see Appendix VI) for further details of NPWS regional staff.

**Offaly County Council**

Offaly County Council is the planning authority for the site. As such they are obliged to ensure appropriate assessment of the implications of developments requiring planning permission that may have an impact, either individually or in combination with other developments on the designated area.

**Environmental Protection Agency (EPA)**

The EPA is an independent state sponsored body with a wide range of statutory duties including monitoring environmental quality and overseeing the performance by local authorities of their statutory environmental protection functions.

## Local Authority Policy in relation to the Site

The Offaly County Development Plan 2003 states that *“It is an objective of the Council to protect, conserve and enhance the county’s biodiversity and natural heritage. It is a particular objective to protect plants and animal species and habitats, which have been identified by the Habitats Directive, Birds Directive, Wildlife Act and the Flora Protection Order”*. Furthermore, *“It is an objective to maintain the conservation value of those sites identified by Dúchas the Heritage Service as candidate Special Areas of Conservation ... . Offaly County Council will ensure that any development proposals in the vicinity of or affecting in any way a designated Special Area of Conservation provides sufficient information showing how its proposals will impact on the habitat of the SAC and appropriate amelioration”*.

# Physical Features

## Climate

The closest synoptic weather station is the Birr station and 30-Year Average information was obtained from the Met Eireann website for the years 1961-1990 (for full details see Appendix III). In summary, the mean daily air temperature at the station is 9.3°C, ranging from an average low of 1.8°C in January and February to an average high of 19.2°C in July. The average annual rainfall is 804.2 mm, and the average daily duration of sunshine is 3.33 hours. Winds are predominantly from the south and west, with an average wind speed of 7 knots. There is an annual average of 15.9 days with snow or sleet recorded for the Birr station, with 6.6 days where snow was still lying on the ground by 9am.

## Geology & Geomorphology

The eastern portion of the site is underlain by the Navan Group formation, which comprises limestone, sandstone and mudstone (GSI, 2003). The Ballysteen Formation underlies the western portion of the site, which comprises fossiliferous dark-grey muddy limestone (GSI, 2003). The presence of the Clonfinlough Esker to the north and east of the site indicates that the area also has a glacial origin.

## Soils & Soil Processes

The principal soil present at the site comprises grey, brown podzolics. Associated soils include brown earths, gleys and basin peat (An Foras Taluntais, 1980).

## Hydrology & Water Quality

There has been no research completed regarding the hydrology of Fin Lough, although judging by the water levels shown on the 6” map (1890) the lake is infilling.

There are several drains located within the site boundary, including a Bord na Móna drain located at the southern edge of the lake that traverses the southern portion of the site in a north-south direction (Map 3). Other smaller drains are located in the southern portion of the site, with a large drain (3m wide x 2m deep) located along part of the south-western boundary. The installation of a railway on the northern lakeshore boundary may also have affected the hydrological regime in the site. An inlet in the northern part of the site receives drainage from the railway, which actually increases the amount of water entering the lake (Tubridy, 1984). The Gowlan River is located adjacent to the south-eastern boundary.

Fin Lough is supplied with lime-rich water from the surrounding eskers, and drain to the south via the Blackwater River (Tubridy, 1984). There is a spring zone present along the lower slopes of the Clonfinlough esker (Tubridy, 1984).

## Biological Features

### Habitats and Vegetation

**Note:** Throughout the conservation plan, habitats are named and described under two different systems: the Annex I habitat(s) are as listed in the EU Habitats Interpretation Manual Version 15/2(1999), while all other habitats are as listed according to the classification system of ‘A Guide to Habitats in Ireland’ (Fossitt, 2000).

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

**Habitats Found within Fin Lough cSAC**

ANNEX I HABITAT TYPE	HABITAT CATEGORY	% AREA
Alkaline fen (EU Code 7230)	Alkaline fen (PF1) and Alkaline Fen/ Calcareous springs (FP1)	20% and 1% respectively
-	Reed and large sedge swamps (FS1)	40%
-	Fen/Bog (PB1) transition	19%
-	Limestone/marl lakes (FL3)	7%
-	Scrub (WS1)	4%
-	Wet grassland (GS4)	3%
-	Bog woodland (WN7)/Raised Bog (PB1) <sup>1</sup> – mapped with Bog woodland	2%
-	Buildings and artificial surfaces (BL3)	1%
-	Drainage ditches (FW4)	<1%

<sup>1</sup> The raised bog habitat present on the site is not of sufficient quality to qualify as the Annex I EU Habitats Directive habitat \*raised bog.

## Annex I Habitat:

**Alkaline fen (7230)**  
(20% of total site area  
or 16ha) and **Alkaline  
fen (7230)/Calcareous  
springs (FP1)** (1% of  
total site area or 1ha)

The alkaline fen is species-rich and is present mainly in the southern and south-eastern parts of the site. Black Bog Rush (*Schoenus nigricans*) dominates the fen, with Great Fen-sedge (*Cladium mariscus*) also commonly occurring. Other species occurring include Glaucous Sedge (*Carex flacca*), Long-stalked Yellow Sedge (*C. lepidocarpa*), Carnation Sedge (*C. panicea*), Tormantil (*Potentilla erecta*) and Bog Bean (*Menyanthes trifoliata*), with Purple Moor Grass (*Molinia caerulea*) co-dominant in one area. Mosses are abundant, with *Campylium stellatum* being the most common species occurring. Black-bog Rush forms a sward 40-60cm high over a large area. The fen community forms a transition between reed beds and raised bog communities. The surface is not flooded in winter and becomes quite dry in summer, when it is grazed by cattle.

The north-eastern corner of the site supports mineral flushes and springs. The habitat is characterised by Long-stalked Yellow Sedge, Glaucous Sedge and Few-flowered Spike-rush (*Eleocharis quinqueflora*), with Bog Pimpernel (*Anagallis tenella*), Marsh Pennywort (*Hydrocotyle vulgaris*), the moss *Drepanocladus revolvens* and other calcicolous mosses occurring.

## Other Habitats:

**Reed and large sedge  
swamps (FS1)**

Reedbeds and large sedge swamps comprise the majority of the northern portion of the site.

Species occurring in low fringing sub-communities include Bottle Sedge (*Carex rostrata*), Water Horsetail (*Equisetum fluviatile*), Slender Sedge (*C. lasiocarpa*) and Mare's-tail (*Hippuris vulgaris*).

Species occurring as largely monotypic stands in the taller reed sub-communities include Bulrush (*Schoenoplectus lacustris*), Reedmace (*Typha latifolia*) and Common Reed. In some areas, the Common Reed stands are more open and have an understorey of Water Horsetail, Water Mint (*Mentha aquatica*), Marsh Bedstraw (*Galium palustre*), Bog Bean, Lesser Water Parsnip (*Berula erecta*), Marsh Stitchwort (*Stellaria palustris*), Common Valerian (*Valeriana officinalis*) and Greater Spearwort (*Ranunculus lingua*). Duckweed species (*Lemna minor* and *L. trisiulca*) are also present.

In the taller sedge sub-communities, Brown Sedge (*Carex disticha*), Bottle Sedge, *C. diandra*, Flea Sedge (*C. pulicaris*) and Long-stalked Yellow Sedge are the main species occurring. Other species occurring include *C. elata*, Common Cotton-grass (*Eriophorum angustifolium*), Water Horsetail, Yorkshire Fog (*Holcus lanatus*), Water Mint, Wild Angelica (*Angelica sylvestris*) and Marsh Pennywort. Mosses are inconspicuous, with *Calliergon cuspidatum* the most common species.





Open water, reedbeds and Willow scrub in the north of the site. Photo M. Traynor.

**Fen/Raised Bog (PB1) transition** The vegetation is composed of a mixture of bog species, including Bog Myrtle (*Myrica gale*), Ling (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*) and *Sphagnum* spp. Wetland species recorded include Water Horsetail and Marsh Cinquefoil (*Potentilla palustris*). Devil's-bit Scabious (*Succisa pratensis*) is common.

**Limestone/ marl lakes (FL3)** The name Fionn Loch, meaning White Lake, probably derives from the white colour of the lake bottom caused by marl deposits.

There are several areas of open water within the Fin Lough site, which are being encroached by the spread of Common Reed (*Phragmites australis*). The depth of the lake is less than 1m deep, with marl and loosely packed peat comprising the base of the lake. Within the areas of open water, rafts of floating vegetation are present.

The main species occurring include *Chara* spp., Whorled Water-milfoil (*Myriophyllum verticillatus*) and Fennel Pondweed (*Potamogeton pectinatus*). The floating aquatics Broad-leaved Pondweed (*Potamogeton natans*) and Yellow Water Lily (*Nuphar lutea*) are also present. The rarely found aquatic, Horned Pondweed (*Zannichellia palustris*), grows near the northern margin.

Parts of the lake shoreline (along the northern and north-eastern edges) comprise large rocks and boulders, some of which have been cleared from adjacent fields, although some occur naturally. Species occurring include Cotoneaster (*Cotoneaster* sp.), Carlina Thistle (*Carlina vulgaris*) and marsh orchids (*Dactylorhiza* spp.).

<b>Scrub (WS1)</b>	Small stands of Willow ( <i>Salix</i> spp.) occur scattered across the site, mainly within the wetter 'tall sedge' zones, which comprises open stands of bushes or small trees up to 4m high. The Eared Willow ( <i>Salix aurita</i> ) is common, with the rare Grey Willow ( <i>Salix cinerea</i> ssp. <i>oleifolia</i> ) also present. The larger specimens present are hybrids of Eared Willow and Grey Willow. Downy Birch ( <i>Betula pubescens</i> ), Bay Willow ( <i>Salix pentandra</i> ) and Osier ( <i>S. viminalis</i> ) also occur. Stands of Gorse ( <i>Ulex europaeus</i> ) and Bramble are also present.
<b>Wet grassland (GS4)</b>	The north of the wetland is fringed by damp grassland, which is used for cattle grazing. Yorkshire Fog is the most common species occurring, with Dog's-tail ( <i>Cynosurus cristatus</i> ) and Sheep's Fescue ( <i>Festuca ovina</i> ) the other main grass species present. Other herb species occurring include Meadow Buttercup ( <i>Ranunculus acris</i> ), Mouse-eared Chickweed ( <i>Cerastium</i> sp.), Flea Sedge and Marsh Thistle ( <i>Cirsium palustre</i> ).
<b>Bog woodland (WN7)/ Raised Bog (PB1)</b>	A small Downy Birch and Willow ( <i>Salix</i> spp.) woodland occurs along the south-western boundary. The ground flora is poor and in part dominated by Bramble ( <i>Rubus fruticosus</i> ). It is surrounded by a typical raised bog community with Ling, Cross-leaved Heath, Purple Moor Grass, Common Cotton-grass and Bog Myrtle present.
<b>Buildings and artificial surfaces (BL3) Drainage ditches (FW4)</b>	<p>The Bord na Móna railway forms part of the northern boundary and species present are typical of disturbed ground.</p> <p>Drainage ditches are present along and adjacent to many of the site boundaries. The main drainage ditch is located along the south-western boundary, where it carries drained water from Blackwater Bog (to the south and west). Common Reed is the most common species encountered, with Reedmace and Fool's Water-cress (<i>Apium nodiflorum</i>) also occurring.</p>

## Notable Flora:

The site is rich in bryophytes, with 29 species recorded (Tubridy, 1984).

## Fauna:

Additional fauna species will be added to this Section as their occurrence within the site is confirmed. Where relevant, the 'Irish Red Data Book' by Whilde (1993) is referred to as the reference for providing information regarding the current conservation status of Irish vertebrates (including mammals, birds, fish, reptiles and amphibians).

## Invertebrates

The presence of *Vertigo geyeri* (a snail species listed in Annex II of the Habitats Directive) and areas of suitable habitat are of considerable conservation significance. Several populations of the snail are located in the flush/fen habitats present on the site (Moorkens, 1998). During a survey to identify the presence of *Vertigo geyeri*, 21 other mollusc species were recorded.

In addition to the rare snail species, there is an extensive invertebrate fauna present on the site, which is of national importance for two Hover-fly species (Order Diptera), *Chrysogaster macquarti* and *Platycheirus perpallidus*. Other notable invertebrate species recorded from the site are *Melanogaster aerea*, *Dolerus aeruceos* and *Oxycera pygmaea*.





*Vertigo geyeri* (a land snail less than 2mm long)

## Amphibians and Reptiles

Common Frog (*Rana temporaria*), which is listed in the Irish Red Data Book as an Internationally Important species (Whilde, 1993), occurs at the site.

## Birds

The site provides an important roosting site for winter visitors, including Mallard (*Anas platyrhynchos*), Teal (*Anas crecca*), Wigeon (*Anas penelope*) and Tufted Duck (*Aythya fuligula*). A pair of successfully breeding Mute Swans (*Cygnus olor*) was observed on the site in October 2003, with four young. Other species observed at the site include:

Common Name	Latin Name
Little Grebe	<i>Tachybaptus ruficollis</i>
Great-crested Grebe	<i>Podiceps cristatus</i>
Grey Heron	<i>Ardea cinerea</i>
Hen Harrier	<i>Circus cyaneus</i>
Merlin	<i>Falco columbarius</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Wigeon	<i>Anas penelope</i>
Water Rail	<i>Rallus aquaticus</i>
Moorhen	<i>Gallinula chloropus</i>
Coot	<i>Fulica atra</i>
Pheasant	<i>Phasianus colchicus</i>
Ringed Plover	<i>Charadrius hiaticula</i>

Common Name	Latin Name
Lapwing	<i>Vanellus vanellus</i>
Purple Sandpiper	<i>Calidris maritima</i>
Ruff	<i>Philomachus pugnax</i>
Jack Snipe	<i>Limnocyrtus minimus</i>
Snipe	<i>Gallinago gallinago</i>
Skylark	<i>Alauda arvensis</i>
Swallow	<i>Hirundo rustica</i>
Meadow Pipit	<i>Anthus pratensis</i>
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>
Stonechat	<i>Saxicola torquata</i>
Reed Bunting	<i>Emberiza schoeniclus</i>
House Martin	<i>Delichon urbica</i>

In the past, there were reports of up to 1,000 pairs of Black-headed Gull (*Larus ridibundus*) occurring on the site. However, there has been no sighting of this species in recent years, possibly due to the reduction in area of open water associated with the site.

## Mammals

Mink (*Mustela vison*) have been observed at the edge of the lake. Otter (*Lutra lutra*) used to occur at the site in the past but have not been observed recently.

## Land Use

### Land use on the site

<b>Agriculture</b>	Cattle and sheep graze some of the land within the site, including some land held under commonage.
<b>Shooting</b>	The site is used for the shooting of ducks during the winter season, which causes serious disturbance to wintering birds. Spent cartridges are found in large numbers at the site.
<b>Drainage</b>	Two drainage ditches are present within the site, which run in a north-south direction. A large Bord na Móna drain forms part of the south-western boundary. Smaller drains are also located in the southern tip of the site and adjacent to the installed Bord na Móna railway.
<b>Birdwatching</b>	The site is used on occasion for birdwatching.
<b>Railway</b>	The construction of a Bord na Móna railway and an associated drain have altered part of the northern shoreline.

### Land use adjacent to the site

<b>Agriculture</b>	Sheep and cattle grazing occur to the north and west of the site.
<b>Peat extraction and drainage</b>	Industrial milled peat extraction from the adjacent Blackwater Bog is still occurring, with associated drainage works located around the site boundary. Bord na Móna has improved its large drain along the south-western edge of the site and are clearing peat from it, which allows for faster water flows. A Bord na Móna railway for the transportation of peat was installed along part of the northern site boundary.

### Past human use

There is anecdotal evidence that when there was a larger area of open water at the site, fishing from boats was carried out.

### Recorded Monuments and Other Features

Two recorded monuments are known to occur within the site, a crannóg and a causeway (see below for details).

MONUMENT NO.	DESCRIPTION	NAT. GRID	TOWNLAND
OF006-05401	Crannóg	203010; 229500	Tullaghbeg
OF006-05402	Causeway	203010; 229500	Tullaghbeg

# CONSERVATION VALUE OF FIN LOUGH cSAC

The Fin Lough cSAC is listed due to the presence of the Annex I habitat alkaline fen and because of several *Vertigo geyeri* populations present at the site. In addition, the site is notable for its species-richness of bryophytes and vascular plants. The site provides a good example of the transition from lake, to reedbed, fen, fen-bog transition and to bog. Furthermore it is of significance to birds as it is one of the few areas of open water in Co. Offaly.

With regard to the alkaline fen community, it is considered to be in good condition and, despite drainage issues, is of good conservation value. The entire site is undergoing hydrological and vegetation changes due to drainage. Nevertheless, the fen areas are relatively extensive and form part of a mosaic of wetland habitats.

The site is of particular conservation value because of the presence of several populations of *Vertigo geyeri* in suitable habitat over a reasonably large area.

# MANAGEMENT FRAMEWORK

## Conservation Objectives

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

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

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

The favourable conservation status of a species is achieved when:

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

- |                     |  |
|---------------------|--|
| <b>Objective 1:</b> | To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status; alkaline fen and alkaline fen/calcareous springs mosaic (20% and 1% area of the site respectively). |
| <b>Objective 2:</b> | To maintain the Annex II species for which the cSAC has been selected at favourable conservation status; <i>Vertigo geyeri</i> and other notable fauna species.  |
| <b>Objective 3:</b> | To maintain the extent, biodiversity and species and richness of the site.   |
| <b>Objective 4:</b> | To establish effective liaison and co-operation with landowners, legal users and relevant authorities.   |

## Management Issues

While many activities in or adjacent to the site have the potential to cause deterioration/disturbance, it is important to determine the significance of such activities relative to

the conservation objectives at a particular site. To that end, all known potential environmental effects of the sites principal activities (in alphabetical order) have been listed and the biological and chemical impacts that may cause change to the biological communities present have been described.

- **Agricultural improvement and nutrient enrichment**
- **Grazing**
- **Hydrology and drainage**
- **Infrastructure**
- **Natural succession**
- **Protection of *Vertigo geyeri***
- **Shooting of wintering birds**

## **Agricultural improvement and nutrient enrichment**

Agricultural lands are present within and adjacent to the site. Agricultural practices involving the improvement of land by the use of fertilisers could disturb the natural balance of nutrients, by fertiliser run-off. In addition, the lake is vulnerable to pollution from slurry. Algae were observed in areas of open water, which may indicate nutrient enrichment of the lake waters is occurring.

## **Grazing**

The grazing levels present on the site do not pose a threat to its wildlife interest and can assist in maintaining habitats, including the alkaline fen. Supplementary feeding and grazing above sustainable levels are notifiable actions relevant to the site.

A Commonage Framework Plan (OF2a) has been prepared for the commonage areas of the site, which indicates that the site is undamaged by grazing. Some poaching on wet grassland areas has been noted in the past.

## **Hydrology and drainage**

There is very little information available regarding the hydrology of the site and uncertainty regarding the location and effects of drainage channels located within and immediately adjacent to the site. The River Gowlan is located adjacent to the south-eastern site boundary, which is also likely to have a function in the hydrology of the area. It will be necessary to determine the existing hydrological regime of the site and the effects of drainage prior to appropriate management of the site being prescribed.

A new peat-fired power station is being constructed at Shannonbridge, which has an expected life span of 15 years, which implies that there will be a continued need for peat through that period. There are still peat resources available from Blackwater Bog and drainage of the bog is likely to continue while resources are still available. Liaison between Bord na Móna and the NPWS regarding the effects of the drainage of Blackwater Bog on the cSAC is required.

## **Infrastructure**

Bord na Móna installed a railway and associated drain along part of the northern boundary, which led to the alteration of the original lake edge. It is important to ensure that impacts from the railway and drain are minimised, e.g control spread of invasive species from this location and ensure that the railway structure stability is maintained so that it does not further encroach on the existing, semi-natural habitats present within the site.

## Natural succession

A further issue for the Fin Lough cSAC is natural succession. It is difficult to determine how much of the vegetation and hydrological changes on the site are due to natural succession and how much is due to adjacent land use. The natural succession of fen results in the establishment of scrub, which initially forms in the drier areas. Once the hydrology and drainage of the site is determined, it may be possible to control these factors to ensure that the alkaline fen habitat present within the site can be maintained.

## Protection of *Vertigo geyeri*

A survey for *Vertigo geyeri* was completed for the site (Moorkens, 1998), with three populations located within the site.

## Shooting of wintering birds

The regular shooting of wintering ducks over the lake causes serious disturbance to wintering birds within the site. Discarded empty cartridges and lead shot, following shooting, can cause problems for swans and diving ducks.

# 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
- enforcement of Regulations under the Habitats/Birds Directives and the Wildlife Acts

## Establish a monitoring regime

The monitoring regime for the site will comprise:

<b>Scientific monitoring</b>	Monitoring of the conservation status of the alkaline fen and <i>Vertigo geyeri</i> populations will be done by, or on behalf of, the staff of the Monitoring Section of the NPWS or staff working to NPWS in accordance with the procedures laid down by that section.  Protocols for monitoring Fin Lough cSAC will be developed, in consultation with other agencies where appropriate, to determine if the site is being maintained at favourable conservation status.
<b>Site surveillance</b>	Regular inspection of the site by the NPWS staff, with special attention to the alkaline fen, damaging activities and <i>Vertigo geyeri</i> habitats will identify any major changes, damaging operations, or threats should they arise.

## **Enforce notifiable actions**

Certain activities may be restricted in SACs. Notifiable Actions for particular habitats and species are listed in Appendix IV of this plan. Consent from the Minister may be required before these actions may be carried out within the designated area. For example, the grazing of livestock above a sustainable density, the addition of lime or fertiliser within 50m of a fen or watercourse, the extraction of water and the harvesting of reed or willow are notifiable actions for both the alkaline fen and for *Vertigo geyeri*.

# Specific Strategies

## Objective 1.

To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status; alkaline fen and alkaline fen/calcareous springs mosaic (20% and 1% area of the site respectively).

### Strategies:

- |  |  |
|--|--|
| <b>1.1. Conduct hydrological survey</b>                | NPWS will endeavour to employ surveyors to conduct a hydrological study of the site, with particular reference to establishing the hydrological regime within the site and the drainage effecting the site.  |
| <b>1.2. Determine suitable hydrological management</b> | If a hydrological survey of the site is completed during the period of this management plan, NPWS will determine appropriate management techniques to ensure the maintenance of the alkaline fen habitat, in consultation with relevant landowners. Techniques may include the blocking of drains or re-direction of existing flows. |
| <b>1.3. Manage grazing on commonage</b>                | The impacts of grazing on commonage areas of the site have been assessed by the Commonage Framework Planning Project (Commonage Plan (CP) OF2a). The results of the CP determined that there was no damage as a result of grazing. Grazing at the site can continue at current levels.   |
| <b>1.4. Manage grazing on privately owned land</b>     | For non-commonage land, NPWS will seek to ensure that sustainable grazing levels are established via REPS and DEHLG farm plans.  |
| <b>1.5. Prevention of damaging activities</b>          | NPWS will strive to ensure that no agricultural improvements occur on alkaline fen habitat, such as addition of fertiliser, extraction of water and supplementary feeding of stock. These and other potentially damaging activities are notifiable actions (see Appendix IV).  |

## Objective 2.

To maintain the Annex II species for which the cSAC has been selected at favourable conservation status; *Vertigo geyeri* and other notable fauna species.

### Strategies:

- |   |   |
|---|---|
| <b>2.1. Maintain <i>V. geyeri</i> habitat</b>   | Implementation of the strategies to ensure maintenance of the alkaline fen and other habitats present within the site (Strategies 1.1-1.5 and 3.1-3.4) will ensure the maintenance of the <i>V. geyeri</i> habitats and populations. The population will be monitored in accordance with the general monitoring strategies. |
| <b>2.2. Control dumping of spent cartridges</b> | NPWS will liaise with the local gun club to ensure that spent cartridges are removed after shooting, where possible.  |

## Objective 3.

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



### Strategies:

- |  |   |
|--|---|
| <b>3.1. Maintain sustainable grazing</b>     | Strategies 1.3-1.5 also apply here.   |
| <b>3.2. Maintain other habitats</b>          | Following the completion of a hydrological survey, appropriate management for the other habitats present on the site will be determined (see Strategies 1.1 and 1.2).   |
| <b>3.3. Control agricultural improvement</b> | See Strategy 1.5 and the Notifiable Actions (Appendix IV).  |
| <b>3.4. Monitor Bord na Móna railway</b>     | NPWS will monitor the condition of the railway and liaise with Bord na Móna to ensure that impacts, with regard to spread of invasive species or small-scale erosion, from the existing railway and associated drain are minimised. |

### Objective 4.

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

### Strategies:

- |  |  |
|--|--|
| <b>4.1. Liaise with interested parties</b> | NPWS will strive to initiate and maintain effective liaison with landowners, legal users (particularly through the Liaison Committee), relevant authorities and interested parties on achieving the objectives for conservation of the site. |
| <b>4.2. Liaise with Bord na Móna</b>       | NPWS will liaise with Bord na Móna regarding drainage activities on Blackwater Bog.  |
| <b>4.3. Liaise with REPS planners</b>      | REPS planners should consult with local NPWS staff when they are developing plans for land within the site.  |

# Zoning

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

## Zone A: A Natural Zone

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

### 1A: NON-INTERVENTION AREAS

#### 1A1: Alkaline Fen and Alkaline Fen/Calcareous Springs Mosaic

Strategies 1.1, 1.2, 1.4, 1.5, 2.1, the general monitoring strategies and the notifiable actions apply.

#### 1A2: Bog Woodland, Scrub, Large Reed and Sedge Beds, Lake and Fen-bog transition

Strategies 1.1, 1.2, 1.5, 3.2, 3.3, 2.1, 2.3, the general monitoring strategies and the notifiable actions apply.

### 2A: MAINTENANCE AREAS WITH LIMITED MANAGEMENT INTERVENTION

#### 2A1: Alkaline Fen, Fen-bog Transition, Tall Reed and Sedge Beds and Bog Woodland (Commonage Unit OF2a)

This area has been identified in the Commonage Framework Plan as being undamaged (category U). See Commonage Framework Plan for details.

Strategies 1.1, 1.3, the general monitoring strategies and the notifiable actions apply.

#### 2A2: Wet Grassland

Strategies 1.4, 1.5, 3.3, the general monitoring strategies and the notifiable actions apply.

## Zone C: Intensive use Zone

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

### C1: Bord na Móna Railway

Strategy 3.4, the general monitoring strategies and the notifiable actions apply.

## Zone D: Impact Zone

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

### D1: Adjacent agricultural lands

There is potential for agricultural improvement of adjacent agricultural lands to result in nutrient enrichment within the site.

### D2: Blackwater Bog

The continued exploitation of Blackwater Bog has the potential to affect Fin Lough, particularly with regard to drainage.

## 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.	Conduct hydrological survey	Conduct hydrological survey as soon as possible.	NPWS/ Contractor			
1.2.	Determine suitable hydrological management	Determine suitable management of qualifying interests when results of survey are available.	NPWS			
1.3.	Manage grazing on commonage	Implement sustainable grazing regimes in accordance with Commonage Framework Plans.	Dept. of Ag./ NPWS/ Landowners			
1.4.	Manage grazing on privately owned land	Conduct grazing assessments.	NPWS/ Landowners			
1.5.	Prevention of damaging activities	Ensure that notifiable actions are implemented.	NPWS			
2.1.	Maintain <i>V. geyeri</i> habitat	See Strategies 1.1-1.5.	-			
2.2.	Control dumping of spent cartridges	Ensure that spent cartridges are removed from the site, where possible.	NPWS/ Local gun club			
3.1.	Maintain sustainable grazing	As Strategies 1.3-1.5.	-			
3.2.	Maintain other habitats	As Strategies 1.1 and 1.2.	-			
3.3.	Control agricultural improvement	Control activities that may result in nutrient enrichment.	NPWS/ Landowners			
3.4.	Monitor Bord na Móna railway	Monitor railway to ensure that impacts are minimised.	NPWS/ Bord na Móna			
4.1.	Liaise with interested parties	Maintain effective liaison between stakeholders.	NPWS			
4.2.	Liaise with Bord na Móna	Liaise regarding drainage activities on Blackwater Bog.	NPWS/Bord na Móna			
4.3.	Liaise with REPS planners	REPS planners must consult with NPWS when developing plans for land within the site.	NPWS/ REPS planners			

# APPENDIX I:

## GLOSSARY

**ALGAE** - Simple plants that are not differentiated into roots, stems and leaves and have no true vascular system. They can be microscopic, or very large and are capable of photosynthesis. They can be found in most habitats but the majority occurs in freshwater or marine environments.

**ALKALINE** - When applied to soils it refers to soils of a calcareous nature and of a high pH, i.e. above 7. The term is often used to describe plant communities associated with such soils e.g. Alkaline Fens.

**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 Habitats Directive, lists habitats including priority habitats for which SACs have to be designated.

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

**ASSEMBLAGE** - A collection of organisms.

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

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

**BRYOPHYTES** - A group of simple non-vascular spore-bearing green plants comprising the mosses, liverworts and hornworts.

**CALCAREOUS** - Made of or containing calcium carbonate (CaCO<sub>3</sub>) and therefore alkaline. limestone for example

**CALCICOLOUS** – A plant that tolerates or requires a large amount of calcium in the soil.

**CALLOWS** – Species rich grasslands in river floodplains that are flooded during the winter.

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

**COMMONAGE** – An area of land which are undivided but are 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** – 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.

**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 which include weathering, solution, corrosion and transportation.

**ESKER** - A ridge of sand/ gravel resulting from deposition by sub-glacial streams. Typically the soils of an esker are thin, calcareous and vary between sandy loams and gravels.

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

**EUTROPHICATION** - The nutrient enrichment of aquatic ecosystems usually by phosphates and nitrates. It may occur naturally but can also be the result of human activity (fertiliser run-off/ sewage discharge/ seepage from silage etc.).

**FAUNA** - Animal life.

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

**FLORA** - plant life.

**FLORA PROTECTION ORDER** - under the 1976 Wildlife Act, particular plants can be protected under a Flora Protection Order. Under such an order it becomes an offence to cut, uproot or

damage these plants unless under licence from the Minister. The same order prohibits damage to the habitats of these species.

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

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

**GLACIOFLUVIAL** - Deposits laid down by glacial meltwater.

**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.

**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.

**INVERTEBRATES** - Animals without backbones.

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

**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 10 km National Grid squares. Local applies to 26-75, 10 km squares in this context.

**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.

**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.

**MUDSTONE** - Fine-grained sedimentary rock, formed from mud.

**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 SERVICE (NPWS)** – 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.

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

**NATURALNESS** - Refers to how much or little a site/habitat/species has been modified by mankind.

**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.

**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.

**NPWS** - National Parks and Wildlife Service

**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.

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

**POACHING** - Damage caused to the vegetation by excessive numbers of large grazers.

**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.

**RAISED BOG** - A priority habitat listed in Annex I of the EU Habitats Directive. Raised bogs are characterised by an elevated dome of peat, the surface of which is isolated from the surrounding ground water table and receiving water solely from precipitation. The peat surface is wet, often with pools and hummock hollow systems and is usually dominated by Sphagnum mosses and bushy Heather, with Deer-grass, Bog Cottons and other associated species.

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

**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.

**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."

**SCARCE** - This is an ecological term, 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 10 km National Grid squares. Scarce applies to 11-25, 10 km squares in this context.

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

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

**SHALE** - Fine-grained sedimentary rock, like mudstone but with an irregular parting.

**SLATE** - metamorphic rock possessing a well-developed planar cleavage such that it splits into thin slabs or "slates".

**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 NPWS 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.

**SUCCESSION** - The non-seasonal, directional continuous pattern of colonisation and extinction on a site by populations.

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

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

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

**VERTEBRATES** - Animals with backbones.

**VERY RARE** - an ecological term 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 10 km National Grid squares. Very Rare applies to 1-2, 10 km squares in this context.

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

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



# APPENDIX II: REFERENCE MATERIAL

## Map References:

- O.S. 1/2 inch (1:126,720) map: 15
- O.S. Discovery (1:50,000) map: 47
- O.S. 6 inch (1: 10,560) map: OY006

## Databases :

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

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

## Photographic Coverage:

Aerial photo Nos. 7263 and 7264, Flight Line 38. Date: June 1995. NPWS, The Department of Environment, Heritage and Local Government, 7 Ely Place, Dublin 2.

## Relevant Legislation:

- S.I. No. 39 of 1976: Wildlife Act 1976
- S.I. No. 38 of 2000: Wildlife (Amendment) Act 2000
- S.I. No. 94/1997: European Communities (Natural Habitats) Regulations 1997.
- Local Government (Planning and Development) Acts 1963-2002.

## Bibliography:

- An Foras Taluntais. 1980. *Ireland General Soils Map*. National Soil Survey, An Foras Taluntais, Dublin.
- European Commission, 1999. *Interpretation Manual of European Habitats Eur 15/2*.
- Fossitt, J.A. 2000. *A Guide to Habitats in Ireland*. The Heritage Council, Kilkenny.
- GSI. 2003. *Geology of Galway-Offaly, Sheet 15*. Geological Survey of Ireland, Dublin.
- Moorkens, E. 1998. *An Inventory of Mollusca in Potential SAC sites, with special reference to Vertigo angustior, V. moulinsiana and V. geyeri*. A report for Dúchas, The Heritage Service, National Parks and Wildlife.
- Tubridy, M. 1984. *Creation and Mangement of a Heritage Zone at Clonmacnoise, County Offaly, Ireland*. Environmental Sciences Unit, Trinity College, Dublin.
- Whilde, A. *Threatened Mammals, Birds, Amphibians and Fish in Ireland. Irish Red Data Book 2: Vertebrates*. Belfast, HMSO.

# APPENDIX III: CLIMATE

<b>BIRR</b>													
<b>monthly and annual mean and extreme values</b>													
<b>1961-1990</b>													
<b>TEMPERATURE</b> ( <i>degrees Celsius</i> )	<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>
mean daily max.	7.5	7.9	9.8	12.2	14.9	17.7	19.2	18.8	16.6	13.6	9.7	8.2	13
mean daily min.	1.8	1.8	2.5	3.5	5.9	8.7	10.7	10.3	8.5	6.7	3.1	2.5	5.5
mean	4.6	4.8	6.1	7.9	10.4	13.2	14.9	14.6	12.6	10.1	6.4	5.4	9.3
absolute max.	13.8	15	19.7	23.7	25.7	31.2	30.8	29.3	24.5	22.3	17.5	15.3	31.2
absolute min.	-14.6	-10.5	-10.5	-4.6	-2.2	-0.3	3.1	1.2	-1	-3.4	-7.2	-9.4	-14.6
mean no. of days with air frost	9	7.7	7	4.2	1	0.1	0	0	0.3	1.5	7.1	7.8	45.7
mean no. of days with ground frost	17	15.1	13.6	11.8	6.1	1.2	0.1	0.2	2	4.9	13	15	99.9
<b>RELATIVE HUMIDITY</b> (%)													
mean at 0900UTC	90	89	87	82	77	78	80	84	86	89	90	90	85
mean at 1500UTC	83	76	71	65	64	66	67	68	71	76	80	84	73
<b>SUNSHINE</b> (hours)													
mean daily duration	1.6	2.31	3.18	4.64	5.32	4.8	4.24	4.16	3.58	2.67	2.03	1.41	3.33
greatest daily duration	7.2	9.2	11.7	13.6	15.2	15.6	15.2	13.8	11.3	9.7	8.1	6.7	15.6
mean no. of days with no sun	11	7	5	3	2	2	3	2	4	6	9	12	66
<b>RAINFALL</b> (mm)													
mean monthly total	75.9	54	61.3	52.5	61.7	55.2	59.1	77.6	70.6	83.5	74.1	78.6	804.2
greatest daily total	28.6	35.3	25.9	30.9	26.3	27.5	39.5	42.2	25.6	40.3	25.9	47.1	47.1
mean no. of days with $\geq 0.2\text{mm}$	19	15	18	15	17	16	15	17	17	18	18	19	204
mean no. of days with $\geq 1.0\text{mm}$	14	11	13	11	13	11	10	13	12	14	13	14	148
mean no. of days with $\geq 5.0\text{mm}$	6	4	4	4	5	3	4	5	5	6	5	6	57
<b>WIND</b> (knots)													
mean monthly speed	8	8.1	8.1	7	6.7	6.1	5.8	6	6.6	7.2	7.1	7.9	7
max. gust	85	77	62	58	55	49	49	58	81	65	60	69	85
max. mean 10-minute speed	51	40	36	34	31	28	27	35	39	40	34	43	51
mean no. of days with gales	0.4	0.4	0.1	0	0	0	0	0	0	0.1	0	0.2	1.2
<b>WEATHER</b> (mean no. of days with..)													
snow or sleet	4.9	3.8	2.7	1.1	0.1	0	0	0	0	0	0.6	2.6	15.9
snow lying at 0900UTC	3.1	1.9	0.8	0.2	0	0	0	0	0	0	0	0.6	6.6
hail	0.6	0.9	2.6	1.8	1.1	0.3	0	0.2	0.2	0.2	0.5	0.3	8.7
thunder	0.1	0.1	0.3	0.3	0.6	1.1	1	0.7	0.5	0.2	0.2	0.1	5.2
fog	3.2	1.8	1.7	2.4	1.2	1.4	1.9	3.2	3.3	3.6	2.8	3.4	29.9

Source: Met Eireann

# APPENDIX IV: NOTIFIABLE ACTIONS

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

- Notifiable Action 2.3 – Wet lowland grassland
- Notifiable Action 4.1 – Raised bog, cutaway bog and bog woodland
- Notifiable Action 4.2 – Fens, transition mires and petrifying springs
- Notifiable Action 5.2 – Scrub
- Notifiable Action 6.2 – Lakes, ponds and canals
- Notifiable Action 6.3 – Marshes and reedbeds
- Notifiable Action 7.1 – Ditches, hedges, cereals and intensive grasslands, walls, buildings, waste ground, bare soil, parkland grassland, bracken, caves or quarries
- Notifiable Action 8.5 – *Vertigo* species and Shining Sickle Moss

## HABITAT TYPE 2.3

### WET LOWLAND GRASSLANDS

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.

<p><b><u>SECTION A</u></b></p> <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><b><u>SECTION B</u></b></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 2.3

### WET LOWLAND GRASSLANDS

<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</p> <p>adding lime/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 mowing grass before the 30th June (<i>Note; if you have been notified that your lands hold breeding corncrakes, or certain rare meadows, special provisions will apply</i>)</p> <p>burning of vegetation</p> <p>reclamation, infilling, ploughing or land drainage/ reseedling, planting of trees or any other species use of any pesticide or herbicide</p> <p>dumping, burning or storing any materials</p> <p>alteration of the banks, bed or low 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>

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.

<b><u>SECTION A</u></b>	<b><u>SECTION B</u></b>
<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 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 4.2

### FENS, TRANSITION MIRES, PETRIFYING SPRINGS

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.

<b><u>SECTION A</u></b>	<b><u>SECTION B</u></b>
Please note that the activities listed in <i>Section A</i> below are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	<p>Please note that the activities listed in <i>Section B</i> 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).</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 4.2

### FENS, TRANSITION MIRES, PETRIFYING SPRINGS

<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)</p> <p>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</p> <p>adding lime within 50m of the fen or a water course running into it</p> <p>adding fertiliser of any sort within 50m or a water course running into it</p> <p>extracting water for irrigation or other purposes</p> <p>mowing grass before the 30th June (Note; if you have been notified that your lands hold breeding corncrakes, or certain rare meadows, special provisions will apply)</p> <p>supplementary feeding of stock</p> <p>operation of boat angling or shore angling business</p> <p>restocking with fish.</p> <p>reclamation, infilling, ploughing or land drainage within 50m of the fen</p> <p>reseeding, planting of trees or any other species within 50m of the fen</p> <p>use of any pesticide or herbicide within 50m of fen</p> <p>dumping, burning or storing any materials within 50m of the fen</p> <p>alteration of the banks, bed or flow of watercourses within the fen or running into or out of it</p> <p>harvesting reed or willow</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 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 fen</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>

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

## HABITAT TYPE 5.2

### SCRUB

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

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

<p><b><u>SECTION A</u></b></p> <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><b><u>SECTION B</u></b></p> <p>Please note that the activities listed in <i>Section B</i> 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).</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 5.2

### 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 (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 (as defined in approved farm plans)</p> <p>adding lime /adding fertiliser of any sort</p> <p>reclaiming land covered by scrub; if scrub is cut it must be allowed to regrow</p> <p>reclamation, infilling, ploughing or land drainage</p> <p>reseeding, planting of trees or any other species</p> <p>felling of trees, removal of timber</p> <p>removal of foliage, moss or other materials</p> <p>killing ivy</p> <p>use of any pesticide or herbicide /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. walking 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 may cause pollution of the site</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>felling trees or reafforestation</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.

<p><b><u>SECTION A</u></b></p> <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><b><u>SECTION B</u></b></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 6.3

### MARSHES AND REEDBEDS

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.

<p><b><u>SECTION A</u></b></p> <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><b><u>SECTION B</u></b></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 6.3

### MARSHES AND REEDBEDS

<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 marsh or reedbed</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 marsh or reedbed</p> <p>adding lime within 50m of the marsh or reedbed</p> <p>adding fertiliser of any sort within 50m of the marsh or reedbed</p> <p>extracting water for irrigation or other purposes</p> <p>operation of boat angling or shore angling Business</p> <p>restocking with fish.</p> <p>reclamation, infilling, ploughing or land drainage within 50m of the marsh or reedbed</p> <p>reseeding, planting of trees or any other species within 50m of the marsh or reedbed</p> <p>removal of trees or any aquatic vegetation within 50m of the marsh or reedbed</p> <p>use of any pesticide or herbicide in the marsh or reedbed or within 50m of the marsh or reedbed</p> <p>dumping rubbish or other materials or disposing of any chemicals or wastes in marsh or reedbed or into water-courses Running into them.</p> <p>dumping, burning or storing any materials within 50m of the marsh or reedbed including the land spreading of used pesticides (e.g. sheep dip).</p> <p>alteration of the banks, channel, bed or flow of the marsh or reedbed 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 marsh or reedbed</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</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.

<b><u>SECTION A</u></b>	<b><u>SECTION B</u></b>
Please note that the activities listed in Section A overleaf are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.	<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.

## HABITAT TYPE 8.5

### VERTIGO SPECIES, SHINING SICKLE MOSS

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.

<p><b><u>SECTION A</u></b></p> <p>Please note that the activities listed in Section A below are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.</p>	<p><b><u>SECTION B</u></b></p> <p>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).</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 8.5

### VERTIGO SPECIES, SHINING SICKLE MOSS

<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</p> <p>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</p> <p>restocking with fish.</p> <p>reclamation, infilling, ploughing or land drainage within 50m of the lake, pond or canal</p> <p>reseeding, planting of trees or any other species within 50m of the lake, pond or canal</p> <p>removal of trees or any aquatic vegetation within 50m of the river/stream.</p> <p>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 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>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.

# APPENDIX V: 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 VI: NATIONAL PARKS AND WILDLIFE SERVICE MANAGEMENT STAFF

## **Conservation Ranger**

Noel Bugler  
Keepers Lodge  
Banagher Road  
Birr  
Co. Offaly  
Ph (0509) 22512  
Email [nbugler@duchas.ie](mailto:nbugler@duchas.ie)

## **District Conservation Officer**

Ciara Flynn  
National Parks and Wildlife Service  
Station Road  
Kildare Town  
Co. Kildare  
Ph (045) 521713  
Email [cflynn@duchas.ie](mailto:cflynn@duchas.ie)

## **Deputy Regional Manager**

Val Swan  
National Parks and Wildlife Service  
Station Road  
Kildare Town  
Co. Kildare  
Ph (045) 520 644  
Fax (045) 520 622  
Email: [vswan@duchas.ie](mailto:vswan@duchas.ie)

## **Regional Manager**

Jim Moore  
National Parks and Wildlife Service  
Station Road  
Kildare Town  
Co. Kildare  
Ph/Fax (045) 520 622  
Email: [jmoore@duchas.ie](mailto:jmoore@duchas.ie)

**Divisional Manager**

Sean Casey  
Wicklow Mountains National Park  
Kilafin  
Laragh  
Co. Wicklow  
Tel (0404) 45801/Fax (0404) 45055  
Email [scasey@duchas.ie](mailto:scasey@duchas.ie)

**Divisional Ecologist**

Dr. Linda Patton  
National Parks and Wildlife Service  
7 Ely Place  
Dublin 2  
Tel (01) 8883241  
[lpatton@duchas.ie](mailto:lpatton@duchas.ie)

**National Parks and Wildlife Service**

The Department of the Environment, Heritage  
and Local Government  
7 Ely Place,  
Dublin 2  
Phone Lo Call 1890 321 421, (01) 8882340/42  
Fax (01) 8883276

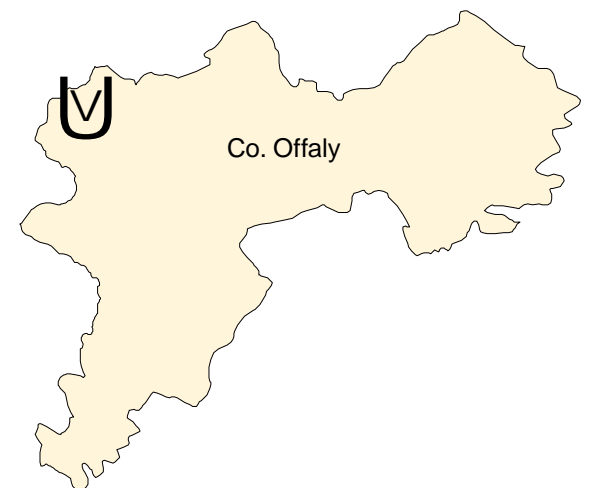
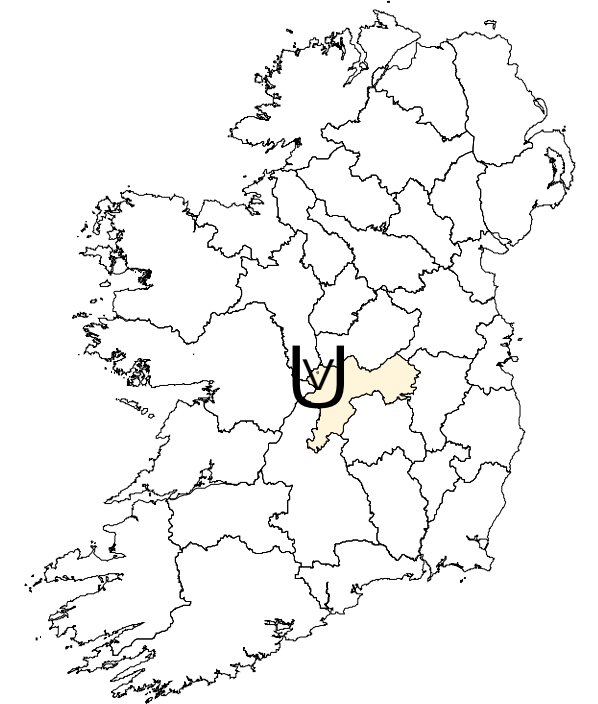
CEANTAR SPEISIALTA CAOMHNATHE  
CANDIDATE SPECIAL AREA OF CONSERVATION

FIN LOUGH 000576

Boundary Version 1.01  
6 inch sheet: of006

The mapped boundaries are of an indicative and general nature only.  
Boundaries of designated areas are subject to revision.  
Reproduced from Ordnance Survey material by permission of the Government (Permit number 5953).

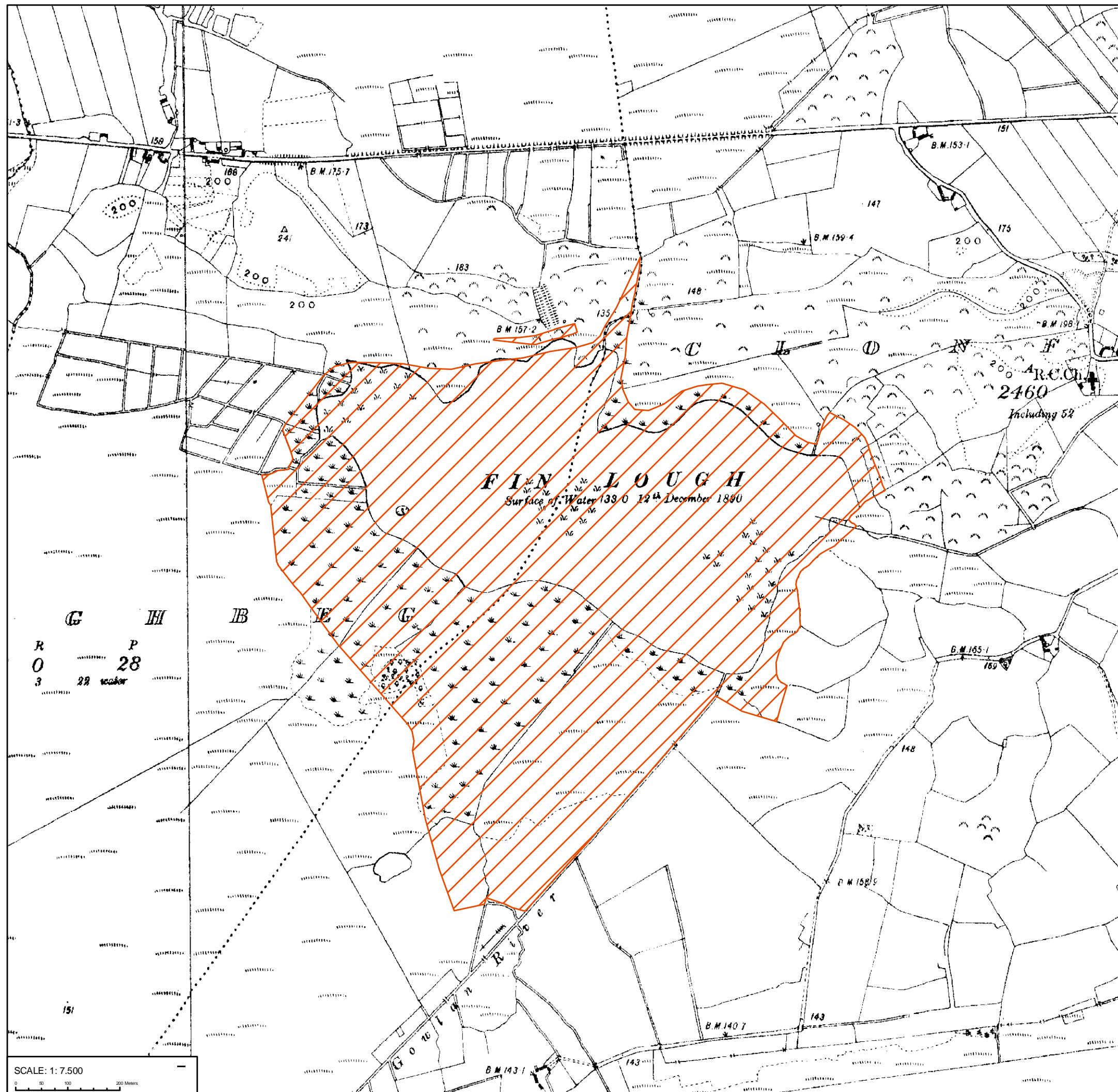
Níl sna teorainneacha ar na léarscáileanna ach nod garshuimhach ginearálta.  
Féadfar athbheithnithe a déanamh ar theorainneacha na gceantar comharthaithe.  
Macasamhail d'ábhar na Suirbhéarachta Ordonáis le chead ón Rialtas (Ceadúnas Uimh. 5953)



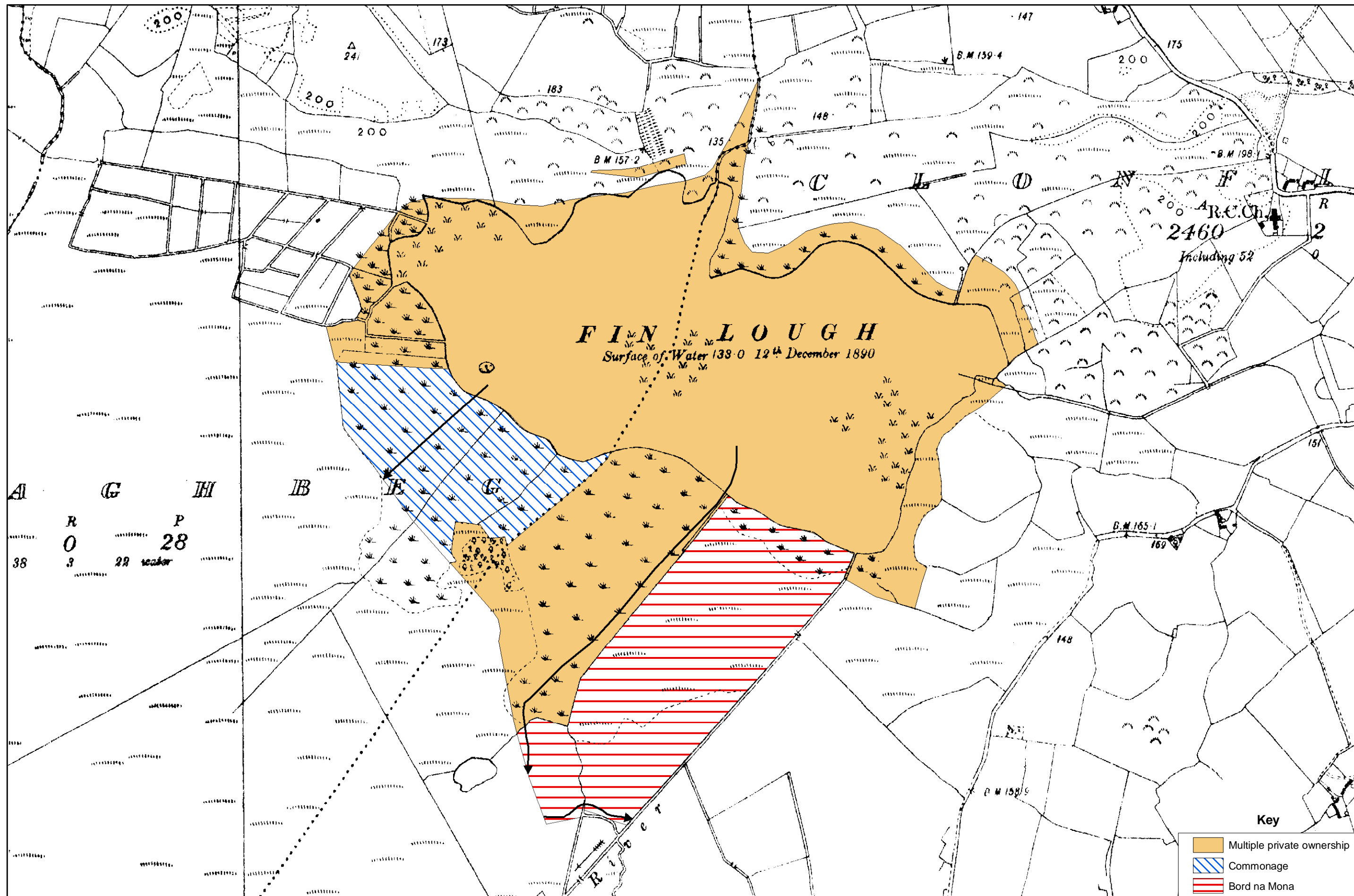
MAP 1  
SITE LOCATION AND BOUNDARY

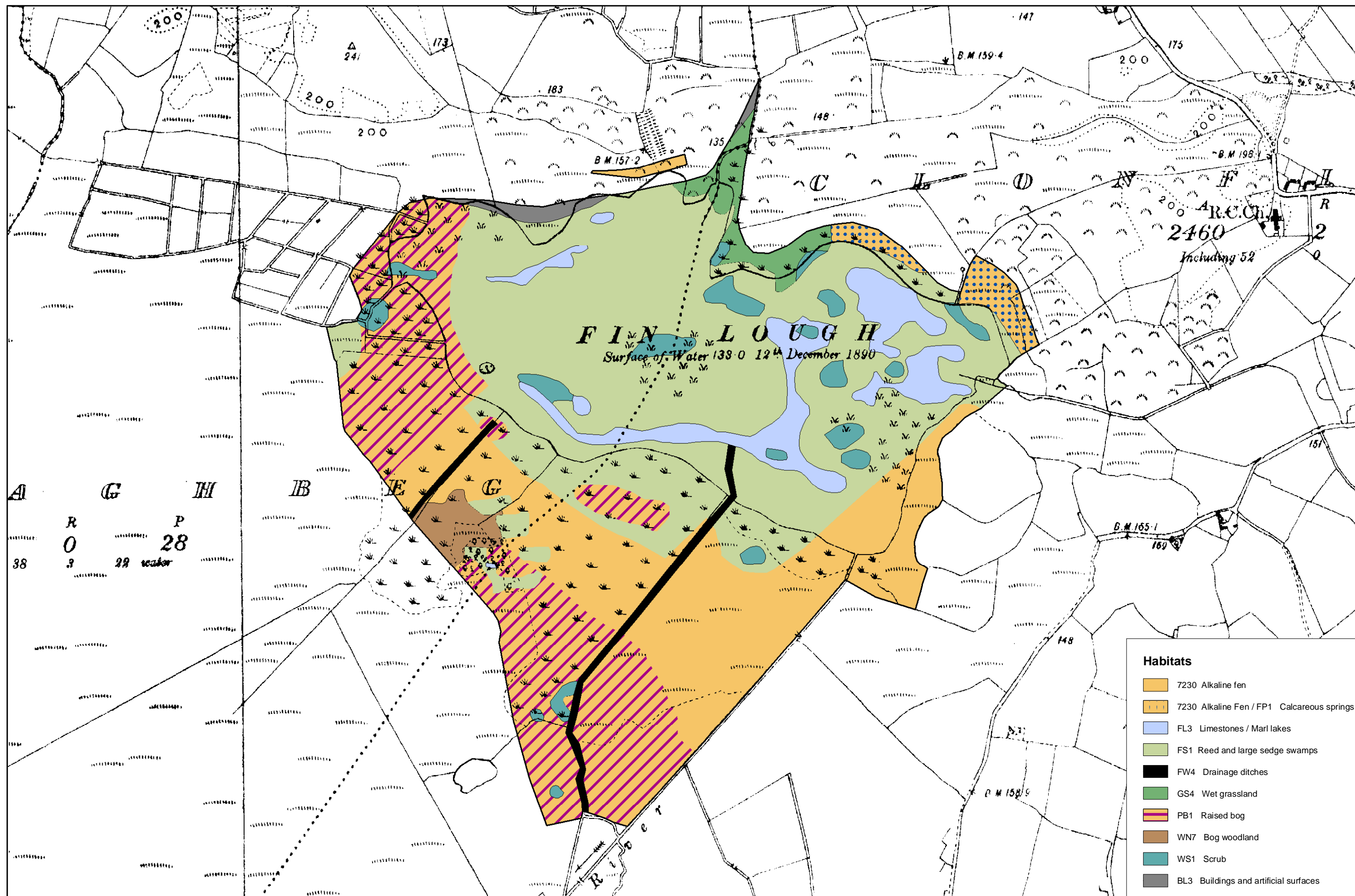
Department of Environment, Heritage and Local Government  
An Roinn Comhshaoil, Oidhreacht agus Rialtais Áitiúil

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



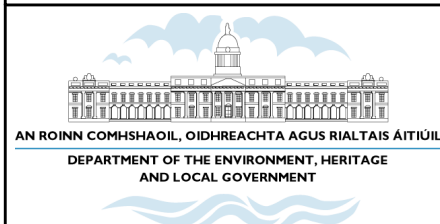






#### Habitats

- 7230 Alkaline fen
- 7230 Alkaline Fen / FP1 Calcareous springs
- FL3 Limestones / Marl lakes
- FS1 Reed and large sedge swamps
- FW4 Drainage ditches
- GS4 Wet grassland
- PB1 Raised bog
- WN7 Bog woodland
- WS1 Scrub
- BL3 Buildings and artificial surfaces



### CEANTAR SPEISIALTA CAOMHNAITHE CANDIDATE SPECIAL AREA OF CONSERVATION

The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision. Reproduced from Ordnance Survey material by permission of the Government (Permit number 5953).  
Níl sna teorainneacha ar na léarscáileanna ach nod garshuimhach ginearálta. Féadtar athbheithnithe a déanamh ar teorainneacha na gceantar comharthaithe. Macasamhail d'ábhar na Suirbhéarachta Ordonáis le chead ón Rialtas (Ceadúnas Uimh. 5953)

FIN LOUGH  
6" O.S. OFFALY SHEET. 006c  
0 75 150 300 M  
Scale 1: 6,000

### Map 3 INDICATIVE HABITAT MAP

Source: NHA Survey, Colour Aerial photography (2000), Site Visit Oct 2003.

Map to be read in conjunction with the conservation plan.

SITE CODE

000576

Version 1.01



