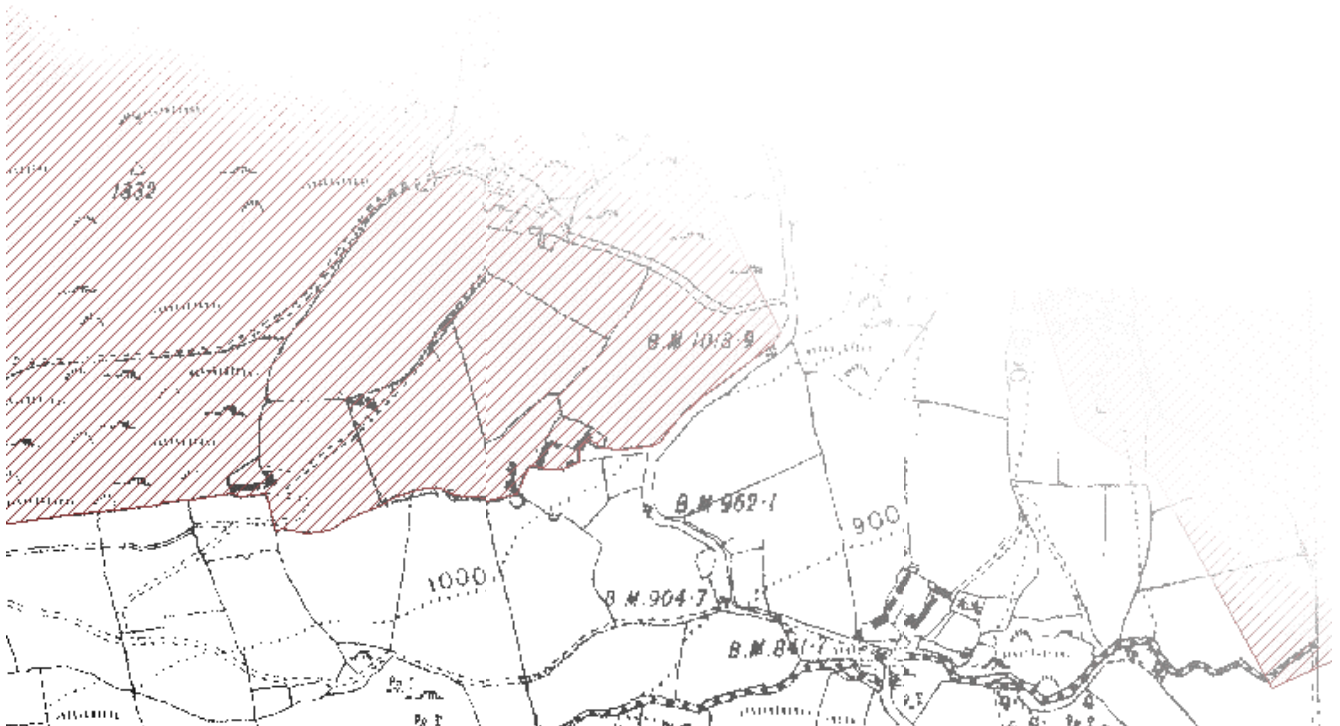




National Parks and Wildlife Conservation Plan for 2005-2010

Bolingbrook Hill cSAC

Site Code 2124
Co. Tipperary



SUMMARY

Site Description

The Bolingbrook Hill candidate Special Area of Conservation (cSAC) is an upland site that comprises Bolingbrook Hill and the nearby eastern slopes of the Silvermine Mountains in the townland of Curryquin. The majority of the land within the site lies above 270m, with the highest point being 383m. It is located approximately 6km south-east of Silvermines village, in north-west Tipperary.

Bolingbrook Hill is a cSAC due to the presence of *species-rich *Nardus* grassland, a priority habitat listed in Annex I of the EU Habitats Directive and two non-priority Annex I habitats, northern Atlantic wet heath with *Erica tetralix* and European dry heath. The *species-rich *Nardus* grassland habitat is found on the lower slopes of the site. Characteristic species include Heath Bedstraw, Sheep's Fescue, Tormentil, Lousewort and Mat-grass. On the lower slopes of Bolingbrook Hill, and much of the townland of Curryquin, the dominant grass species are Mat-grass, Bent-grasses and Crested Dog's-tail. The Moss and Bracken cover are also extensive. The herb component is diverse and many of the fields have Gorse scrub or scattered Hawthorn shrubs. The grassland grades into heath on the steeper slopes.

Wet heath is mainly confined to the townland of Curryquin. Dry heath dominates the centre of the site on the upper slopes of Bolingbrook Hill. Characteristic species of this habitat are present including Heather, Mat-grass, Bilberry, Heath Rush, Common Bent Grass and Tormentil. The northern slopes of Bolingbrook Hill are covered in Bracken and Gorse. Scrub has developed on some steep slopes. Small streams are also found within the site.

A small area of blanket bog occurs on the western slopes of Bolingbrook Hill. However, the bog margins are not intact due to former peat cutting activities. This habitat is dominated by Heather, with Deer-grass, Bog Cottons, Bell Heather, Bog Asphodel and Bog Mosses also occurring. Regeneration of the cutaway areas of bog is occurring.

The Hen Harrier hunts over the site. This species is listed under Annex I of the EU Birds Directive. Other notable species occurring on the site include Red Grouse, Kestrel, Snipe and Woodcock. The site is a known breeding ground for Red Grouse.

The Irish Hare, Badger, Common Lizard and Frog are legally protected species that are also present on the site.

Land Use

Land use at the site consists of grazing, mainly by cattle, sheep and horses, although donkeys and deer are noted as occasional grazers. Several fields have been reclaimed and fertilised and supplementary feeding occurs in some areas. A small area within the site supports a failed forestry plantation, which has associated drainage. The site is surrounded by forested areas and land used for grazing.

Main conservation issues

Grazing

Agricultural practices

Liaison and resources

Main management objectives

To maintain and, if possible, enhance the ecological value of the species-rich *Nardus* grassland

To maintain and, if possible, enhance the ecological value of the other habitats, including wet heath, dry heath, blanket bog, cut-over blanket bog and streams

To maintain and, if possible, enhance the populations of important plants and animals

To achieve consensus on the conservation management of the site with landowners, the local community and other interested parties

Main strategies to achieve objectives

Control grazing levels

Ensure damaging activities do not occur on the site

Ensure effective liaison occurs between the relevant parties

ACKNOWLEDGEMENTS

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READER'S GUIDE

The Department of Environment, Heritage and Local Government (DEHLG), has produced this plan to provide ecological information about the site and to outline the main objectives for the conservation of the special features of the site.

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

The **Site description** contains **general information** on the site's boundaries, ownership and organisations involved. It also contains sections on the **physical aspects** of the site such as geology and hydrology as well as the **biological features**, in particular, the habitats and species found there. **Land use** and cultural features are also described.

The **Ecological Assessment** assesses the main ecological attributes of the site.

The **Objectives, Strategies and Zoning section** outlines the management necessary for the conservation of the site. It starts with a set of specific **conservation objectives**. These are followed by the main **management issues** that may impact on the conservation of the site and the **strategies** that will be used to achieve the objectives as outlined. In cases where more information is required, general strategies are usually applied. Where sufficient data and knowledge is available, specific management prescriptions are outlined for the timescale of the plan. In the final section, the site is divided into management **zones** to indicate where each strategy applies.

The appendices include a **glossary** where scientific and technical terms are explained, a list of **notifiable actions** relevant to each habitat within the site, and additional information on the site.

INTRODUCTION

Legal Background for Conservation Plans

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

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

16 Annex I priority habitats that require particular attention – including raised bogs, active blanket bogs, turloughs and machair,

45 other Annex I habitats – such as certain types of heaths, lakes and woodlands,

25 Annex II species – including Otter, Freshwater Pearl Mussel and Killarney Fern.

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

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

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

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

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

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

Sites are legally protected once they are publicly advertised.

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

Landowners and other users with a legal entitlement may appeal the designation of lands on scientific grounds.

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

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

Reasons for Site Designation

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

HABITATS LISTED IN ANNEX I OF THE E.U. HABITATS DIRECTIVE	
Priority Habitat No. 6230 - *Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submontane areas in continental Europe)	The site is listed because of the species community on the site and because the habitat is in good condition mainly due to a lack of over-grazing. Although the area of the habitat on the site is quite small in extent there is a relatively diverse flora present.
Habitat No. 4010 – Northern Atlantic wet heaths with <i>Erica tetralix</i>	The site supports a relatively large area (approximately 39 ha) of the Annex I wet heath habitat, and species typical of this community occur.
Habitat No. 4030 – European dry heaths	The site supports approximately 22 ha of this Annex I habitat.

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

General Conservation Objectives

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

of the Habitats Directive in relation to this site. The general objectives DEHLG will apply to achieve this are:

to maintain the Annex I habitat(s) for which the cSAC is selected

to liaise with the landowners, relevant authorities and interested parties

to increase the scientific knowledge of the site through further scientific research and development of monitoring programmes

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

Implications for landowners and other site users

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

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

If an owner, occupier or user of a site wishes to carry out certain activities within the designated area (that are not covered by licence or consent from another statutory body), they must consult with, and get consent from, the Minister for the Environment, Heritage and Local Government. These activities are listed as “Notifiable Actions” for each habitat (see Appendix IV). Local Authorities are obliged to ensure appropriate assessment of the implications of any development permission sought that may have an impact on a designated area.

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

SITE DESCRIPTION

Location including site boundaries

The site is located in north-west Tipperary, approximately 6km south-east of the village of Silvermines. The site is divided into two blocks, Bolingbrook Hill and the western slopes of the Silvermines Mountains in the townland of Curryquin. The location and boundary is shown on Map 1.

Grid Ref.:	R 88 67
Latitude:	N 52° 45' 29"
Longitude:	W 08° 10' 10"
Area:	128 ha
Altitude Range:	222 m to 383 m
Townlands:	Bolingbrook, Curryquin and Mucklin

(Map references are provided in Appendix II).

Site Boundaries

The majority of the site is bounded by agricultural lands used for grazing, with Bolingbrook Hill bounded by forestry along its north-western edge.

Site Infrastructure

A local road forms part of the eastern boundary of the western portion of the site, with several tracks located within both portions of the site. A lookout, picnic and parking point are located to the east of the eastern portion of the site, which provides views of the site including the Silvermine Mountains.

Legal Status

Ownership

The site is held under multiple private ownership.

Designations of the Site

Candidate Special Area of Conservation	Site Code: IE0002124
Proposed Natural Heritage Area	Site Code: 2124

Management Infrastructure

Individuals and Organisations Involved

Landowners	The entire site is in the ownership of multiple private landowners.
National Parks & Wildlife (NPW) of the Department of Environment, Heritage and Local Government (DEHLG)	NPW is responsible for maintaining the nature conservation value of the site. The site is patrolled by local Conservation Rangers, with input from other staff as necessary (see Appendix VII for further details of NPW regional staff).
Planning Authorities	North Tipperary County Council is the relevant planning authority.

Local Authority Policy in relation to the Site

Tipperary (North Riding) County Council are the County Council who have responsibility for this area. The County Development Plan (1990) for Tipperary states that “*The planning Authority recognises the value to the county and to the nation of the many areas and structures of historic, artistic, and archaeological importance that exist in the county. There are, also, many areas and features of scientific, botanic and wildlife interest. Where such sites, structures and features are not National Monuments, the Planning Authority shall protect them as far as practicable*”.

Physical Features

Climate

The closest weather station to the site 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 9 am.

Geology & Geomorphology

The underlying geology of the area is dominated by sandstone. However, in places, the site appears to be underlain by schistose shale.

Soils & Soil Processes

Typically the range of soils occupied by the *species-rich *Nardus* grasslands is narrow. They are characteristically associated with podzols, peaty podzols, peaty podzolised gleys and brown podzols (O'Sullivan, 1992).

Biological Features

Habitats and Vegetation

Note: Throughout the conservation plan, habitats are named and described under two different systems: the Annex I habitat(s) are as listed in the EU Habitats Interpretation Manual, while all other habitats are as listed according to the NPW NHA classification system.

The following table lists the habitats within the site. The Annex I habitat(s) of the Habitats Directive for which the site was selected is listed, with the relevant NHA category also shown. Annex I priority habitats are marked with an asterisk (*). The Gross Habitat map for the site is presented in Map 2. The percentage presented for each habitat type is based on the approximate geographic area of each habitat, as shown in Map 2.

Habitats Found within Bolingbrook Hill cSAC

ANNEX I HABITAT TYPE	CORRESPONDING NHA CATEGORY	% AREA
*Species rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas	Upland grassland on mineral soil	28%
Northern Atlantic wet heaths with <i>Erica tetralix</i>	Heath	30%
European dry heaths	Heath	17%
-	Blanket Bog	11%
-	Cutover Blanket Bog	1%
-	Lowland Wet Grassland	3%
-	Scrub	5%
-	Rivers and Streams (incompletely mapped)	<1%
-	Drainage Ditches (not mapped)	<1%
-	Semi-improved Grassland	4%

Active blanket bog, listed as a priority habitat in Annex I of the Habitats Directive, is found within this cSAC. However, this example is not of the quality required and is therefore not part of the reason for selection of this site as a cSAC.



Bolingbrook Hill cSAC

Annex I Habitat:

***Species-rich
Nardus grassland**
(28% of total site area
or 35.8ha)

The *species-rich *Nardus* grassland is found on the lower slopes of the site. In places it dominates entire fields or alternatively it is found in a mosaic with other habitats, such as heath and lowland wet grassland. Characteristic species include Heath Bedstraw (*Galium saxatile*), Sheep's Fescue (*Festuca ovina*), Tormentil (*Potentilla erecta*), Lousewort (*Pedicularis sylvatica*) and Mat-grass (*Nardus stricta*). On the lower slopes of Bolingbrook Hill and much of the townland of Curryquin the dominant grasses are Mat-grass, Bents (*Agrostis* spp.) and Crested Dog's-tail (*Cynosurus cristatus*). Moss and Bracken (*Pteridium aquilinum*) cover is extensive. The herb component is diverse and many fields have Gorse (*Ulex europaeus*) scrub or scattered Hawthorn (*Crataegus monogyna*) shrubs. The grassland grades into heath on the steeper slopes, and in some places grades into blanket bog.

**Northern Atlantic
wet heath with *Erica*
*tetralix*** (30% of total
site area or 38.4ha)

Wet heath is mainly confined to the townland of Curryquin. Typical species include Green-ribbed Sedge (*Carex binervis*), Heath Rush, Purple Moor-grass (*Molinia caerulea*), Cross-leaved Heather (*Erica tetralix*), Deer-grass (*Trichophorum caespitosum*), Heather, Bilberry, Common Cotton-grass (*Eriophorum angustifolium*), Hare's-tail Cotton-grass (*Eriophorum vaginatum*) and Milkwort (*Polygala serpyllifolia*). These are interspersed with grassy patches of Mat-grass, Many-headed Wood-rush (*Luzula multiflora*), Common Bent, Wavy Hair-grass (*Deschampsia flexuosa*), Soft Rush (*Juncus effusus*) and Tormentil. Lichens (*Cladonia portentosa*), Bog Mosses (*Sphagnum papillosum*, *S. capillifolium*, *S. subnitens*) and the mosses *Dicranum scoparium* and *Rhytidiadelphus squarrosus* are common. Wetter patches have Bog Asphodel (*Narthecium ossifragum*) and Round-leaved Sundew (*Drosera rotundifolia*).

European dry heath
(17% of total site area
or 21.8ha)

Dry heath dominates the centre of the site on the upper slopes of Bolingbrook Hill. Characteristic species of this habitat are present including Heather (*Calluna vulgaris*), Mat-grass, Bilberry (*Vaccinium myrtillus*), Heath Rush (*Juncus squarrosus*), Common Bent (*Agrostis capillaris*), and Tormentil. Moss cover is extensive. In general, the dry heath grades into unimproved grassland, but also grades into blanket bog. Dry heath is also present in the west of the site, in the townland of Curryquin, where the vegetation is similar, but with the addition of Dwarf Gorse (*Ulex gallii*) and Bell Heather (*Erica cinerea*). Overall, the dry heath vegetation is variable depending on the substrate depth, altitude, aspect and position relative to other vegetation types. The dry heath is also found in a mosaic with scrub and Bracken.

Other Habitats

Active blanket bog

A small area of blanket bog occurs on the western slopes of Bolingbrook Hill. The margins of the bog are not intact due to former peat cutting activities. The blanket bog is dominated by Heather, with Deer-grass, Bog Cottons (*Eriophorum* spp.), Bell Heather, Cross-leaved Heath, Bilberry, Bog Asphodel, and *Sphagnum* mosses. This habitat also occurs on small pockets of deeper peat within the wet heath areas, in the townland of Curryquin.

Cutover blanket bog

There is a small amount of cut-over blanket bog on the fringes of the active blanket bog. Peat cutting is no longer active, but turf banks remain evident on the ground. Cutover areas have been recolonised with vegetation resembling that of the surrounding bog surface. The areas are dominated by Heather, with Deer-grass, Bog Cottons, Bell Heather, Bog Asphodel, and Bog Mosses. Hare's-tail Cotton Grass and Bog Mosses form a greater component on the cutover in comparison to the intact blanket bog. The regeneration of the cutaway areas of bog is occurring.

**Lowland wet
grassland**

Localised flushed areas occur throughout the site. They are characterised by abundant rushes (*Juncus effusus* and *J. acutiflorus*), Buttercup species (*Ranunculus* spp.) and occasionally some Willow (*Salix* spp.) scrub. Bog Mosses and *Polytrichum* are also abundant in these areas.

Scrub

Scrub has developed on some of the steep slopes within the site. The scrub is most extensive on the lower northern and north-eastern slopes of Bolingbrook Hill. The species present include Willow, Hawthorn, Rowan (*Sorbus aucuparia*), Ash (*Fraxinus excelsior*), Blackthorn (*Prunus spinosa*), Sycamore (*Acer pseudoplatanus*), the occasional Oak (*Quercus* spp.) and conifer. Herbs in the ground flora include Wild Strawberry (*Fragaria vesca*), Wood-sorrel (*Oxalis acetosella*), Foxglove (*Digitalis purpurea*) and Thistles (*Cirsium* spp.). Ferns are also common including Hard Fern (*Blechnum spicant*), Male Fern (*Dryopteris filix-mas*), *D. affinis*, and Polypody (*Polypodium* spp.).

The northern slopes of Bolingbrook Hill are covered in Bracken and Dwarf Gorse scrub.

Scrub is also found in a mosaic with grassland, Bracken and heath.

Rivers and streams

A steeply-sided stream valley supports some overhanging scrub with Hawthorn, Rowan and Holly (*Ilex aquifolium*). Trees and shrubs have an extensive cover of Mosses, Polypody and Ivy (*Hedera helix*). The banks of the stream support Great Wood-rush (*Luzula sylvatica*), Bilberry, Bents grasses, Foxglove, Wood-sorrel, Gorse and Bramble (*Rubus fruticosus*). The ground flora also supports mosses.

Drainage ditches	The banks of the drainage ditch are overgrown with Willow and Gorse. Grasses present include Bents and Sheep's Fescue. Hard Fern and Foxglove are common.
Semi-improved Grassland	Small areas of improved grassland are found within the site. Such areas have been fertilised.

Notable Flora:

No notable higher or lower plant species were recorded during survey work. However, further survey work during the summer period is required, as the site is likely to be rich in orchid species given the presence of the *orchid-rich *Nardus* grassland at Silvermine Mountains, which is only 4km from the site.

Fauna:

Amphibians and Reptiles

Common Frog (*Rana temporaria*), which is listed as Internationally Important in the Irish Red Data Book, breed in the site. Common Lizard (*Lacerta vivipara*) also occurs on the site.

Birds

Hen Harrier (*Circus cyaneus*), a species listed in Annex I of the Birds Directive, uses the site for hunting, as do Kestrel (*Falco tinnunculus*). Red Grouse (*Lagopus lagopus*) breeds within the site and Snipe (*Gallinago gallinago*) are common over the site. Woodcock (*Scolopax rusticola*) are also present.

Mammals

Irish Hare (*Lepus timidus hibernicus*) and Badger (*Meles meles*), both listed in the Irish Red Data Book as Internationally Important species, are found on the site. Fallow Deer (*Dama dama*) and Fox (*Vulpes vulpes*) have also been recorded on the site.

Cultural Features

Land use and impacts on the site

Grazing	Low numbers of sheep and cattle graze the majority of the site. In several areas, particularly where heath is present, there is localised damage to the vegetation caused by cattle. In addition, bare peat has been exposed as a result of grazing pressure. In other areas, undergrazing may be a problem as Bracken cover appears to be increasing. Horses, donkeys and deer are noted as occasional grazers on the site.
Winter feeding of cattle	There are a number of areas in the site where cattle are fed overwinter through the use of ringfeeders, which has led to localised poaching.
Forestry	A small plantation of Sitka Spruce (<i>Picea sitchensis</i>) (approx. 20 trees) is present within the site. The trees are sparse and are up to 3m tall. The area is fenced off from the rest of the site. The vegetation beneath the forestry is good quality wet heath. The trees would appear to represent a failed attempt at planting the area.

Land use adjacent to the site

Afforestation	Commercial forestry plantations bound the site in several areas. The forestry fences often mark the boundary of the site.
Grazing	Sheep and cattle grazing are practised on the lands adjoining the cSAC.
Past Human Settlement	The area around the cSAC is sparsely settled. There are a small number of private dwellings/ farms outside the boundary of the site.

Past human use

Peat extraction was once carried out on a small scale in parts of the site. In these areas the vegetation has generally regenerated well.

Recorded Monuments and Other Features

There are no recorded national monuments on the site.

ECOLOGICAL ASSESSMENT

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

The *species-rich *Nardus* grassland occurs in several areas within the upland grassland community present within the site. The habitat is distinguished from other areas of grassland by the community of species present and because the area is generally not overgrazed. Although the area of the habitat is quite small in extent there is a diverse flora present. No orchids have been listed but it is likely that they may be present within the site. Further survey work conducted during the suitable flowering season is required to determine their presence.

Overall, the habitat is in moderate condition, with the habitat occurring in various conditions including overgrazed, undergrazed (which may lead to scrub invasion) and undamaged. In addition, a portion of the site supports improved grassland. Field improvement has occurred along lower slopes, however, if these areas can be rehabilitated through a controlled grazing regime, the area of the habitat can be maintained.

OBJECTIVES, STRATEGIES AND ZONING

Conservation Objectives

The nature conservation objectives for this site are:

- | | |
|---------------------|--|
| Objective 1: | To maintain and, if possible, enhance the ecological value of the *species-rich <i>Nardus</i> grassland (28% of the site). |
| Objective 2: | To maintain and, where possible, enhance the ecological value of the other habitats, including wet heath (30%), dry heath (17%), blanket bog (11%), scrub (5%), lowland wet grassland (3%), cutover blanket bog (1%) and streams (1%). |
| Objective 3: | To improve the ecological value of the degraded *species-rich <i>Nardus</i> grassland (4% of the site). |
| Objective 4: | To maintain the populations of important plants and animals, particularly the Hen Harrier (an Annex I EU Birds Directive species), as well as other notable species, such as Red Grouse. |
| Objective 5: | To achieve consensus on the conservation management of the site with landowners, the local community and other interested parties. |

Management Issues

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

- **Grazing**
- **Agricultural practices**
- **Liaison and resources**

Grazing

Portions of the *species-rich *Nardus* grassland appear to be undergrazed, which is indicated by the encroachment of scrub. Overgrazing and associated trampling damages other portions of the site. Localised poaching by cattle occurs where ringfeeders have been placed for winter-feeding. In order to maintain the ecological value of the *species-rich *Nardus* grassland, grazing intensity should be kept below the level that causes excessive damage to the vegetation yet conversely high enough to prevent the encroachment of scrub (i.e. at a sustainable level).

Agricultural practices

Several parts of the site have been semi-improved through fertilisation. A small area in the townland of Curryquin has been reclaimed by the clearance of scrub. Both of these activities have led to a reduction in the species diversity of the ground flora in these areas. The reclaimed areas situated in the Curryquin townland can be ecologically improved by the implementation of a controlled grazing regime and by preventing the application of fertilisers. Degraded areas of *species-rich *Nardus* grassland are currently being improved as the majority of farmers have stopped using fertilisers on the land (*pers. comm.* D Ryan 1998).

Liaison and resources

The level of resources available (in terms of staff and finances) will influence the extent to which liaison with landowners and other interested parties occurs, as well as the amount of monitoring and research that will be carried out. Initiating effective liaison is important to the future management of the site.

General Strategies

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

Implement plan

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

liaison with the landowners, relevant authorities and interested parties

implementation of REPS or DEHLG farm plans, which will use this document as a guideline for prescribing management on a farm by farm basis, and also will ensure that the agreed prescriptions for the relevant habitats are adhered to (see Appendix VI)

enforcement of Regulations under the Habitats/Birds Directives and the Wildlife Act

Establish a monitoring regime

The monitoring regime for the site will comprise:

Water quality monitoring

Water quality is monitored at regular intervals by the local authorities. NPW staff liaise with these bodies, and will collate and review this information on a regular basis. NPW will also liaise with relevant bodies (n.b. the EPA and local authority) in relation to compliance with the EU Water Framework. In particular:

- To establish reference conditions necessary for monitoring the status of the qualifying habitat. These conditions will be defined using data from undisturbed hardwater lakes, or if appropriate, techniques such as modelling and palaeo-ecological studies
- To ensure that the sampling regime is adequate to detect changes in the conservation status of the designated area

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

Scientific monitoring Monitoring of the favourable conservation status of the *species-rich *Nardus* grassland will be done by, or on behalf of, the staff of the Monitoring Section of the NPW or staff working to NPW in accordance with the procedures laid down by that section. The work, if any, to be done on this site in that respect will be prescribed by that section.

Site surveillance Patrolling of the site by the Conservation Ranger, with special attention to the *species-rich *Nardus* grassland, wet heath and dry heath will identify any major changes, damaging operations, or threats should they arise.

Enforce notifiable actions

Certain activities may be restricted in SACs. Notifiable Actions for particular habitats are listed in Appendix IV of this plan. Permission from the Minister is required before these actions may be carried out within the designated area. For example, the grazing of livestock above a sustainable density and the adding of fertiliser to previously unfertilised areas are notifiable actions with regard to the *species-rich *Nardus* grassland.

Specific Strategies

Objective 1.

To maintain and, if possible, enhance the ecological value of the *species-rich *Nardus* grassland (28% of the site).

Strategies:

1.1. Maintain sustainable grazing regimes

Stock levels will be based on a grazing impact assessment survey that will be carried out for the site. This assessment uses the methodology of the Commonage Framework Planning Project. The stock levels should be set below the level which causes eutrophication, overgrazing, or erosion, but still high enough to control the encroachment of coarse vegetation and scrub. These will be incorporated into REPS plans and /or DEHLG farm plans produced for each farm. Where the stock level set by the REPS planner requires a reduction, this must be achieved within an agreed timescale from the beginning of the REPS/Farm planning period. Where the level is to increase, this can be spread over the period of the plan, as specified by the planner. The same level will apply to a REPS plan as for a DEHLG plan. The categories shown on the assessment will be the following:

- U – undamaged, no stock reduction will be proposed
- M/U – moderate to undamaged, 20-40% of stock reduction will be proposed (30% norm)
- MM – moderate damage, 40-60% of stock reduction will be proposed (50% norm)
- M/S – moderately to severely damaged, 60-70% of stock reduction will be proposed (65% norm)
- S – severe damage, 70-100% of stock reduction will be proposed
- S* - severe damage with over 10% eroded peat, 100% of stock reduction will be proposed

The above categories will be shown on a Grazing Impact Assessment map with relevant descriptive and prescriptive details.

The *species-rich *Nardus* grassland requires low levels of seasonal grazing to maintain the habitat. Ideally the grazing should be carried out by cattle and confined from April to November.

In addition, anti-parasitic chemicals that leave residues in dung affecting dung fauna should not be used. Where parasitic control has to be used, grazing livestock should be kept off the site for a period of a week after treatment. No bolus treatment should be used.

- | | |
|--|---|
| 1.2. Improve damaged areas of *species-rich <i>Nardus</i> grassland | <p>Improve the damaged areas of *species-rich <i>Nardus</i> grassland to a condition where damage to the vegetation is not evident, by the following:</p> <ul style="list-style-type: none"> • The use of ringfeeders should be limited to areas outside the site, wherever possible. It may be possible to use the adjacent forestry plantations for the feeding of cattle, which will require liaison with Coillte and local farmers • Where reclamation has occurred, a grazing regime (see strategy 1.1) should be introduced to improve the ecological value of the areas affected |
| 1.3. Restrict potentially damaging activities | <p>Activities that may have negative impacts on the site are listed in Appendix IV. Consultation with NPW is required before these actions may be carried out within the site. In particular:</p> <ul style="list-style-type: none"> • Land reclamation, the application of fertilisers and reseedling • Burning, drainage works and afforestation |

Objective 2.

To maintain and, where possible, enhance the ecological value of the other habitats, including wet heath (30%), dry heath (17%), blanket bog (11%), scrub (5%), lowland wet grassland (3%), cutover blanket bog (1%) and streams (<1%).

Strategies:

- | | |
|--|--|
| 2.1. Maintain and enhance ecological value of other habitats | <p>The strategies referred to for *species-rich <i>Nardus</i> grassland are applicable to these areas, as there is generally no boundary between the *species-rich <i>Nardus</i> grassland and these habitats. Therefore, for management purposes they will be treated as one unit. Strategies 1.1 and 1.3 apply, as do the general monitoring strategies.</p> |
| 2.2. Improve damaged areas of blanket bog and wet heath | <p>Improve the damaged areas of blanket bog and wet heath to a condition where the damage to the vegetation is no longer evident by limiting the use of ringfeeders to areas outside the site, wherever possible.</p> |
| 2.3. Maintain extent and ecological value of blanket bog habitats | <p>The blanket bog can tolerate low levels of summer grazing. Ideally the grazing should be confined to the period April to November. However, for the majority of the blanket bog the current grazing regime appears to be at a sustainable level. The strategies referred to for the *species-rich <i>Nardus</i> grassland are applicable to these areas. The only exception to these strategies is that the blanket bog does not require grazing to maintain its ecological value, so periods of no grazing are acceptable.</p> |
| 2.4. Maintain the extent and ecological value of streams | <p>A practice of non-intervention will be applied for the management of the small streams within the site.</p> |
| 2.5. Maintain the extent and ecological value of scrub | <p>A practice of non-intervention will be applied for the management the scrub.</p> |

Objective 3.

To improve the ecological value of the degraded areas of *species-rich *Nardus* grassland (4% of the site).

Strategies:

3.1. Management for ecological enhancement

There are small semi-improved fields within the site that have been fertilised. Formerly, they were *species-rich *Nardus* grassland. However, they are now species poor. It would appear that the application of fertiliser has been practised in the past, but is no longer carried out (*pers. comm.* D. Ryan).

Where reclamation has occurred, a controlled grazing regime should be introduced to improve the ecological value of the areas affected. The grazing regime should be subject to the advice of the local Conservation Ranger and should be in accordance with traditional management practices. Once established it will be closely monitored by the Ranger.

Strategies 1.1-1.3 also apply.

Objective 4.

To maintain the populations of important plants and animals, particularly the Hen Harrier (an Annex I EU Birds Directive species), as well as other notable species, such as Red Grouse.

Strategies:

4.1. Maintain important plant species found within the site

The implementation of strategies 1.1-1.3, 2.2-2.5 and 3.1 and the general monitoring strategies will safeguard the important species occurring within the site.

4.2. Maintain important animal species occurring within the site.

By maintaining the quality and extent of the habitats within the site, populations of species such as the Irish Hare and Badger will also be maintained.

Strategies that ensure the safeguarding of the breeding and feeding sites of Annexed and other notable bird species will contribute to the maintenance of their populations within the site. Population size, breeding status and nest locations of Annexed bird species will be recorded on an annual basis. This will be achieved by regular patrol monitoring (see general monitoring strategies) during the breeding season and by liaising with interest groups and other relevant people in order to co-ordinate information gathering.

Objective 5.

To achieve consensus on the conservation management of the site with landowners, the local community and other interested parties.

Strategies:

- | | |
|---|--|
| <p>5.1. Liaise with interested parties</p> | NPW will strive to maintain effective liaison with landowners (particularly through the Liaison Committee), relevant authorities and interested parties on achieving the objectives for conservation of the site. |
| <p>5.2. Monitor development applications</p> | NPW will continue to monitor applications, including current applications, for planning permission and licenses for lands within and adjacent to the site. Appropriate bodies will be notified if developments are thought to conflict with conservation objectives. |
| <p>5.3. Liaise with REPS planners</p> | REPS planners are required to consult with NPW staff when they are developing plans for land within the site. |

Zoning

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

Zone A: A Natural Zone

Areas of high conservation value, which require no or little intervention (see Map 3).

1A: NON-INTERVENTION AREAS

1A1: Streams & Scrub

Strategies 2.4 and 2.5 apply.

2A: MAINTENANCE AREAS WITH LIMITED INTERVENTION

***2A1: *Species-rich *Nardus* grassland, blanket bog, cut over blanket bog, wet heath, dry heath, flushes, scrub and lowland wet grassland.**

Strategies 1.1, 1.3, 2.1, 2.2 and 2.3 apply.

2A2: Semi-improved Grassland (Reclaimed areas of *species-rich *Nardus* grassland)

Strategies 1.2 and 3.1 apply.

2A3: Blanket bog, wet heath, grassland/heath mosaic

Strategies 2.1-2.3 apply.

Summary of Specific Strategies

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

	Strategy	Action required	Who to implement	When/Duration/Frequency	Estimated Total Cost	Additional Resources needed
1.1.	Maintain sustainable grazing regimes	Conduct grazing impact assessment survey to determine sustainable grazing levels.	NPW			
1.2.	Improve damaged areas of *species-rich <i>Nardus</i> grassland	Limit the use of ring-feeders to areas outside the site and implement grazing regime on reclaimed areas of the site.	NPW			
1.3.	Restrict potentially damaging activities	Ensure that potentially damaging activities are restricted and that consultation occurs prior to potentially damaging activities occurring.	NPW/ Landowners			
2.1.	Maintain and enhance ecological value of other habitats	See strategies 1.1, 1.3 and general monitoring strategies apply.	-			
2.2.	Improve damaged areas of blanket bog and wet heath	Limit the use of ringfeeders to areas outside the site, where possible.	NPW/ Landowners			
2.3.	Maintain extent and ecological value of blanket bog habitats	Implement a sustainable grazing regime (see strategy 1.1), although blanket bog can sustain periods of no grazing.	NPW/ Landowners			
2.4.	Maintain the extent and ecological value of streams	No action required.	-			
2.5.	Maintain the extent and ecological value of scrub	No action required.	-			
3.1.	Management for ecological enhancement	Introduce a controlled grazing regime on reclaimed areas and see strategies 1.1-1.3.	NPW/ Landowners			
4.1.	Maintain important plant species found within the site	See strategies 1.1-1.3, 2.2-2.5, 3.1 and general monitoring strategies apply.	-			
4.2.	Maintain important animal species occurring within the site.	Record population size, breeding status and nest locations. Also see strategies 1.1-1.3, 2.2-2.5, 3.1 and general monitoring strategies.	NPW			
5.1.	Liaise with interested parties	Maintain effective liaison with relevant parties.	NPW			
5.2.	Monitor development applications	Monitor development applications for lands within and adjacent to the site. Inform appropriate bodies if developments are thought to conflict with conservation objectives.	NPW			
5.3.	Liaise with REPS planners	REPS planners are required to consult with NPW staff if developing plans for land within the site.	REPS planners			

APPENDIX I:

GLOSSARY

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

ALTITUDE - Vertical height above sea level.

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

ANGIOSPERMS - Flowering plants. Strictly, those seed bearing plants that develop their seeds from ovules within a closed cavity, the ovary.

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

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

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

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

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

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

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

COMMONAGE – An area of land which 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.

CONSTRAINT OR MODIFIER - An activity or action which might prevent the site manager from attaining an ideal objective.

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

DEHLG - Department of Environment, Heritage and Local Government

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

DIVERSITY - see biodiversity.

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

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

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

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

EPA – Environmental Protection Agency

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

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.).

EVALUATION - A considered or measured assessment of available information leading to a ranking or valuing.

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

FAUNA - Animal life.

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

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

FLORA - plant life.

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

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.

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

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.

IMPROVED GRASSLAND – An NPW habitat classification describing species poor grassland, distinctive by its even appearance and bright colour, usually heavily fertilised and re-seeded with fast growing grasses.

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

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

LIAISON - Communication and contact between two groups.

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

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

LOCAL – A term used in ecology which is applied to distribution of species when assessed on a national grid reference system. The assessment is made on the basis of the number of occupied 10 km National Grid squares. Local applies to 26-75, 10 km squares in this context.

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

MACHAIR - An NPW habitat classification, as well a priority habitat listed in Annex I of the EU Habitats Directive. Machairs are coastal grassy plains with damp, shelly/sandy soil. They occur from Galway Bay to Malin Head, and are maintained by livestock grazing. They are nearly level but close enough to the water table that small undulations lead to a mosaic of wet and dry areas. Due to the absence of plant species that bind the soils of sand dunes, the soil surface is quite unstable and may be disturbed in winter gales.

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.

MANAGEMENT AGREEMENTS - The Wildlife Act, 1976, enables DEHLG to enter into voluntary management agreements with private landowners. Under these agreements landowners will manage their lands to ensure that desirable wildlife habitats and species are protected. Payment for such responsible management may be agreed. However, the number and type of such agreements will vary depending on the resources available to the National Parks and Wildlife at the time.

MANAGEMENT POTENTIAL - This describes the effect of the constraints and modifiers on the ideal objectives and details the possible outcome of management of the site.

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

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

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

National Parks and Wildlife (NPW) – the section of the Environment Infrastructure and Services division of the Department of Environment, Heritage and Local Government with responsibility for nature conservation and implementation of Government conservation policy as enunciated by the Minister for the Environment, Heritage and Local Government.

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

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

NHAs - Proposed Natural Heritage Areas. These are areas that are important for wildlife conservation. Some of these sites are small, such as roosting areas for rare bats; others can be large such as a blanket bog or a sand dune system.

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

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

NPW - National Parks and Wildlife

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.

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.

PRIORITY (setting) - put to determine which objectives, strategies, programmes or tasks will be carried out first, if resources (financial, technological and manpower) are limited, and do not allow all to be carried out.

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

PROGRAMME - When several closely related tasks are grouped together to achieve an objective.

RAISED BOG - An NPW habitat classification 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. Raised bogs can be distinguished from blanket bogs by their paucity of grasses which typify blanket bog.

RECLAIMED LAND - this is applied to lands which have been modified from their natural state by intervention in the form of: a) drainage, b) bulldozed, c) clearance of scrub, d) infilling of wetland, e) ploughed and reseeded.

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.

RESIDUES - Substances remaining after the initial cause has been removed.

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

SACs - Special Areas of Conservation have been selected from the prime examples of wildlife conservation areas in Ireland. Their legal basis from which selection is derived is The Habitats Directive (92/43/EEC of the 21st May 1992). SAC's have also been known as cSAC's which stands for "candidate Special Areas of Conservation", and pcSAC's which stands for "proposed candidate Special Areas of Conservation."

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

SCRUB – An NPW habitat classification which comprises areas with more than 50% cover of shrubs or small trees. There may be scattered standard trees, but in general the canopy height is 5 m or less. This category does not apply to stands of young trees which will eventually grow to a height of more than 5 m.

SEMI-IMPROVED GRASSLAND - An NPW habitat classification which refers to grasslands which have been lightly fertilised but not re-seeded. These grasslands may still support a rich assemblage of grasses and herbs.

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

SITE CONSERVATION ASSESSMENT - A critical examination of the management performance and/or management plan or part of the plan, to measure the quality of the management plan and its implementation, carried out by the management organisation (internal audit) or by an independent “authority” not directly associated with the site (“external audit”), usually at the invitation of the management organisation.

SITE POTENTIAL - The possibilities of the site in ecological, social, cultural and/ or economic terms. This is where management aims, when setting their ideal objectives.

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

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

SPECIES RICH *NARDUS* GRASSLANDS, (on siliceous substrates in mountain areas.)- A priority habitat listed in Annex I of the EU Habitats Directive. Closed dry or mesophile, perennial grasslands occupying siliceous soils. Vegetation is highly varied, but the variation is characterised by continuity. *Nardus stricta* (Mat Grass) is not the dominant vegetation but is characteristic of this habitat type.

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

SUPPLEMENTARY FEEDING - The practice of providing livestock with additional food, usually carried out in winter. This term is most often used when hay, silage or other 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).

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

TURLOUGHS - An NPW habitat classification and a priority habitat listed in Annex I of the Habitat Directive describing temporary lakes in limestone areas which fill and empty through underground passages. Usually filling during the Winter and drying out in the Summer, but often with more rapid fluctuations in response to local rainfall. They are mainly found in counties Clare, Galway and Roscommon. The vegetation of their basins is a mixture of aquatic, terrestrial and especially amphibious plants, usually forming a distinct and characteristic concentric zonation pattern.

UPLAND GRASSLAND ON MINERAL SOIL - An NPW habitat classification describing usually species rich grasslands on mineral soils, normally at altitudes exceeding 100m. Often the vegetation is dominated by calcicolous (lime loving) grasses. Ericaceous scrubs such as Ling, Heather, are scarce or absent, although Gorse, Blackthorn or Hawthorn can occur.

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

APPENDIX II: REFERENCES

Map References:

O.S. 1/2 inch (1:126,720) map:	18
O.S. Discovery (1:50,000) map:	59
O.S. 6 inch (1: 10,560) map:	TI 27, TI 32, TI 33

Data Bases :

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

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

Photographic Coverage:

Department of Environment, Heritage and Local Government, HQ Ely Place, Aerial photo No. 6070, Flight Line 50. Date: 6/1995.

Relevant Legislation:

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

Local Government (Planning and Development) Regulations, 2000.

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APPENDIX III: PHYSICAL PROCESSES AFFECTING THE SITE

Climate

BIRR													
monthly and annual mean and extreme values													
1961-1990													
TEMPERATURE (degrees Celsius)	<i>jan</i>	<i>feb</i>	<i>mar</i>	<i>apr</i>	<i>may</i>	<i>jun</i>	<i>jul</i>	<i>aug</i>	<i>sep</i>	<i>oct</i>	<i>nov</i>	<i>dec</i>	<i>year</i>
<i>mean daily max.</i>	7.5	7.9	9.8	12.2	14.9	17.7	19.2	18.8	16.6	13.6	9.7	8.2	13
<i>mean daily min.</i>	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
<i>mean</i>	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
<i>absolute max.</i>	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
<i>absolute min.</i>	-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
<i>mean no. of days with air frost</i>	9	7.7	7	4.2	1	0.1	0	0	0.3	1.5	7.1	7.8	45.7
<i>mean no. of days with ground frost</i>	17	15.1	13.6	11.8	6.1	1.2	0.1	0.2	2	4.9	13	15	99.9
RELATIVE HUMIDITY (%)													
<i>mean at 0900UTC</i>	90	89	87	82	77	78	80	84	86	89	90	90	85
<i>mean at 1500UTC</i>	83	76	71	65	64	66	67	68	71	76	80	84	73
SUNSHINE (hours)													
<i>mean daily duration</i>	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
<i>greatest daily duration</i>	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
<i>mean no. of days with no sun</i>	11	7	5	3	2	2	3	2	4	6	9	12	66
RAINFALL (mm)													
<i>mean monthly total</i>	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
<i>greatest daily total</i>	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
<i>mean no. of days with $\geq 0.2\text{mm}$</i>	19	15	18	15	17	16	15	17	17	18	18	19	204
<i>mean no. of days with $\geq 1.0\text{mm}$</i>	14	11	13	11	13	11	10	13	12	14	13	14	148
<i>mean no. of days with $\geq 5.0\text{mm}$</i>	6	4	4	4	5	3	4	5	5	6	5	6	57
WIND (knots)													
<i>mean monthly speed</i>	8	8.1	8.1	7	6.7	6.1	5.8	6	6.6	7.2	7.1	7.9	7
<i>max. gust</i>	85	77	62	58	55	49	49	58	81	65	60	69	85
<i>max. mean 10-minute speed</i>	51	40	36	34	31	28	27	35	39	40	34	43	51
<i>mean no. of days with gales</i>	0.4	0.4	0.1	0	0	0	0	0	0	0.1	0	0.2	1.2
WEATHER (mean no. of days with...)													
<i>snow or sleet</i>	4.9	3.8	2.7	1.1	0.1	0	0	0	0	0	0.6	2.6	15.9
<i>snow lying at 0900UTC</i>	3.1	1.9	0.8	0.2	0	0	0	0	0	0	0	0.6	6.6
<i>hail</i>	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
<i>thunder</i>	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
<i>fog</i>	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

APPENDIX IV: NOTIFIABLE ACTIONS

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

Notifiable Action 2.1 – Upland Grassland, Scree and Inland Cliff

Notifiable Action 2.3 – Wet Lowland Grasslands

Notifiable Action 3.1 – Blanket Bog

Notifiable Action 3.2 – Heath (including Juniper scrub)

Notifiable Action 5.2 – Scrub

Notifiable Action 6.1 – Rivers or Streams

HABITAT TYPE 2.1

UPLAND GRASSLAND, SCREE, AND INLAND CLIFF

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

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

<u>SECTION A</u>	<u>SECTION B</u>
<p>Please note that the activities listed in Section A overleaf are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.</p>	<p>Please note that the activities listed in Section B overleaf may, and in most cases do, require a 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 2.1

UPLAND GRASSLAND, SCREE, AND INLAND CLIFF

<u>Section A</u>	<u>Section B</u>
<p>THE MINISTER FOR THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT</p> <p>grazing of livestock above a sustainable density (as defined in approved farm plans)/grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung</p> <p>changing of traditional use from hay meadow (to either grazing or silage making), or from grazing to silage cutting/adding lime</p> <p>adding fertiliser of any sort to areas not previously fertilised applying fertiliser which would increase the level of nitrogen in the soil/ applying fertiliser which would increase the level of phosphorous in the soil applying phosphorous to soils which already have in excess of the REPS index 2 levels</p> <p>using fertiliser on slopes over 25 degrees</p> <p>creation of new tracks or paths</p> <p>burning of vegetation</p> <p>reclamation, infilling, ploughing or land drainage</p> <p>reseeding, planting of trees or any other species</p> <p>rock removal/use of any pesticide or herbicide</p> <p>dumping, burning or storing any materials</p> <p>alteration of the banks, bed or flow of watercourses</p> <p>operation of commercial recreation facilities (e.g. pony trekking)/ introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area</p> <p>any other activity of which notice may be given by the Minister from time to time</p>	<p>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</p> <p>developing leisure facilities including golf courses, sports pitches, caravan or camping facilities.</p> <p>removal of soil, mud, gravel, sand or minerals</p> <p>developing roads or car parks</p> <p>construction of fences, buildings or embankments</p> <p>afforestation</p> <p>commercial turf cutting</p> <p>erecting or operating a windfarm</p>

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

HABITAT TYPE 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.

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

HABITAT TYPE 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/ reseeding, 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 3.1

BLANKET BOG

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

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

SECTION A

Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.

SECTION B

Please note that the activities listed in *Section B overleaf* may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food).

If so, these notifiable actions do not apply.

However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 3.1

BLANKET BOG

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

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

HABITAT TYPE 3.2

HEATH (INCLUDING JUNIPER SCRUB)

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

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

SECTION A

Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.

SECTION B

Please note that the activities listed in *Section B overleaf* may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food).

If so, these notifiable actions do not apply.

However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 3.2

HEATH (INCLUDING JUNIPER SCRUB)

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

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

HABITAT TYPE 5.2

SCRUB

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

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

SECTION A

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

SECTION B

Please note that the activities listed in *Section B* overleaf may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food).

If so, these notifiable actions do not apply.

However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 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 6.1

RIVERS OR STREAMS

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

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

SECTION A

Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment, Heritage and Local Government and should not be undertaken before consent.

SECTION B

Please note that the activities listed in *Section B overleaf* may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food).

If so, these notifiable actions do not apply.

However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment, Heritage and Local Government.

HABITAT TYPE 6.1

RIVERS OR STREAMS

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

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

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: SUMMARY OF FARMING CONDITIONS UNDER REPS

Farming conditions for the Rural Environment Protection Scheme (REPS)

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

General Provisions

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

Detailed Conditions

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

Stocking Density

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

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

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

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

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

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

Supplementary Feeding

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

Use of Fertilisers and Herbicides

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

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

Water Pollution

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

Restricted and Prohibited Practices

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

Complementary Action

(a) Measures to prevent damage by non REPS participants

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

(b) Evaluating and Monitoring

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

(c) Farmer Education /Advice

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

(d) Seminars for Planners

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

(e) Demonstration Farms

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

(f) Quota Rights

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

(g) Scheme Extension

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

(h) Local Co-ordination

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

APPENDIX VII: NATIONAL PARKS AND WILDLIFE MANAGEMENT STAFF

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Divisional Ecologist

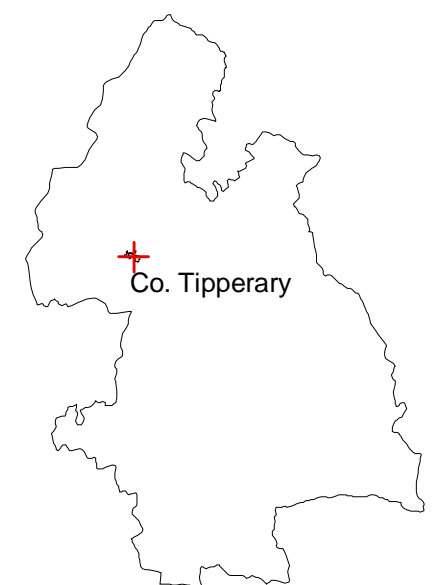
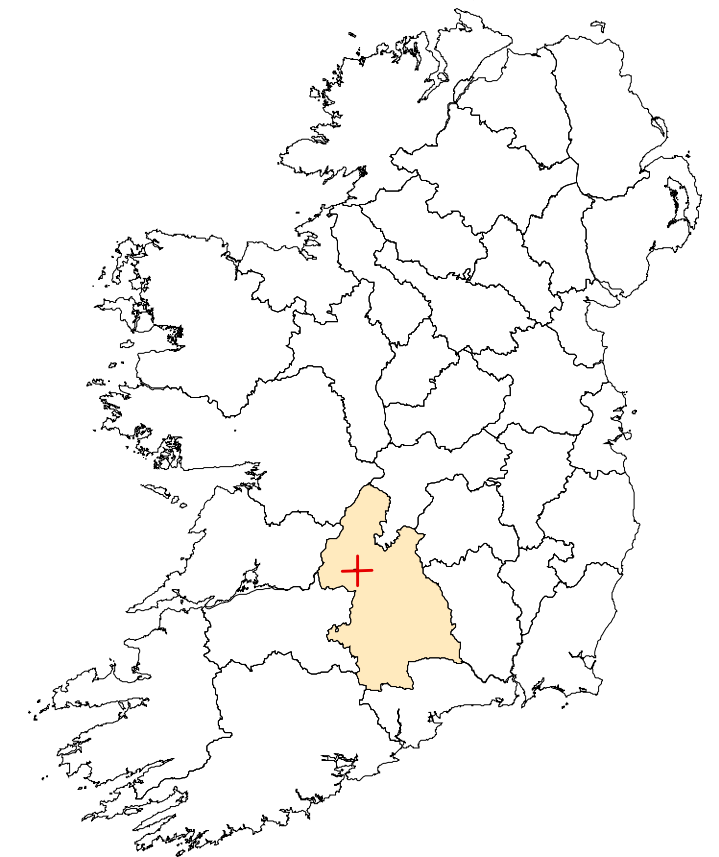
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National Parks and Wildlife

Department of Environment, Heritage and Local Government
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CEANTAR SPEISIALTA CAOMHNAITHE
CANDIDATE SPECIAL AREA OF CONSERVATION
BOLINGBROOK HILL SAC 002124
Version 1.00

Féadtar athruithe a chur ar an gceantair / Sites subject to revision
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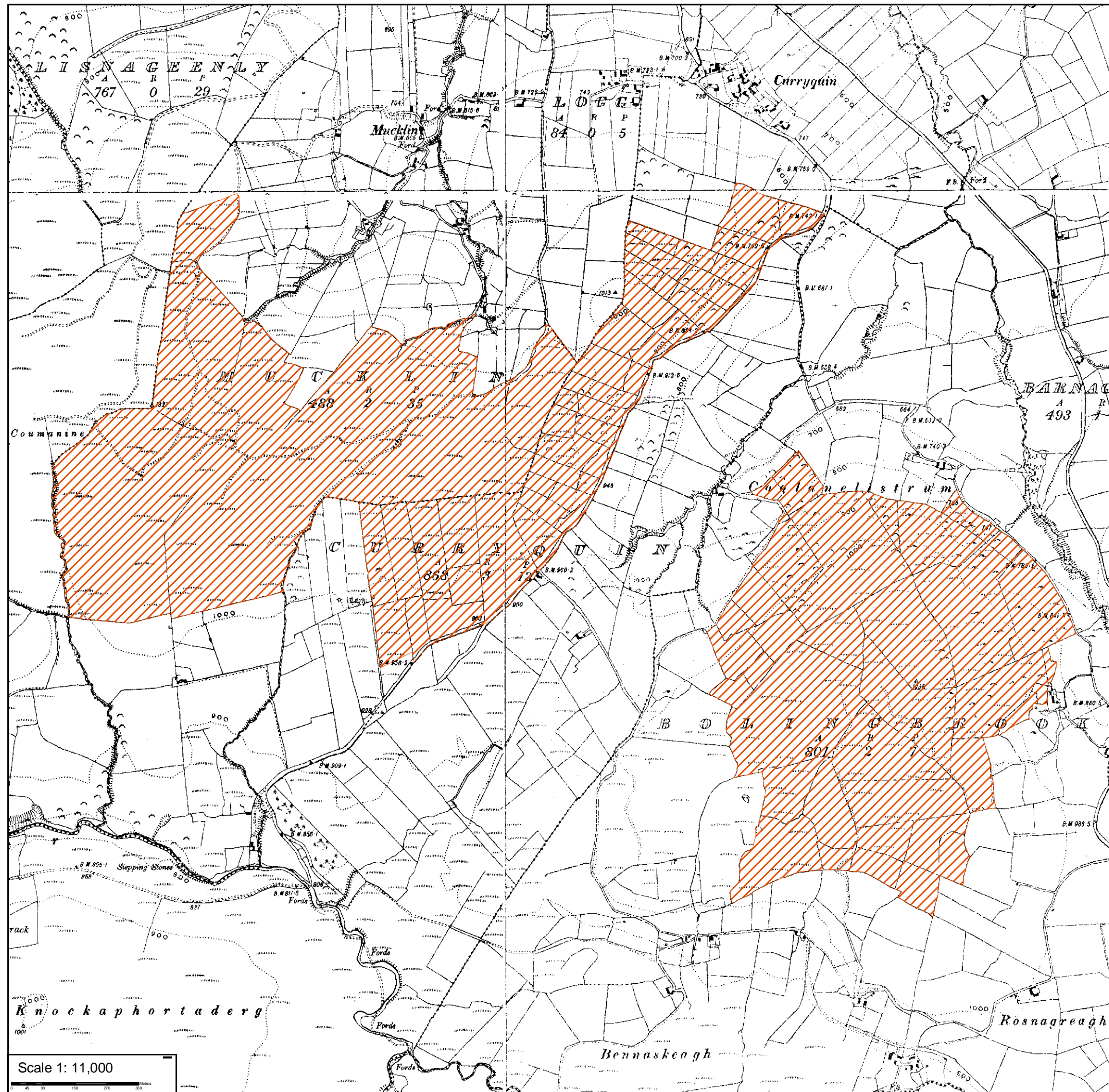


Map 1
LOCATION MAP: BOLINGBROOK HILL 002124

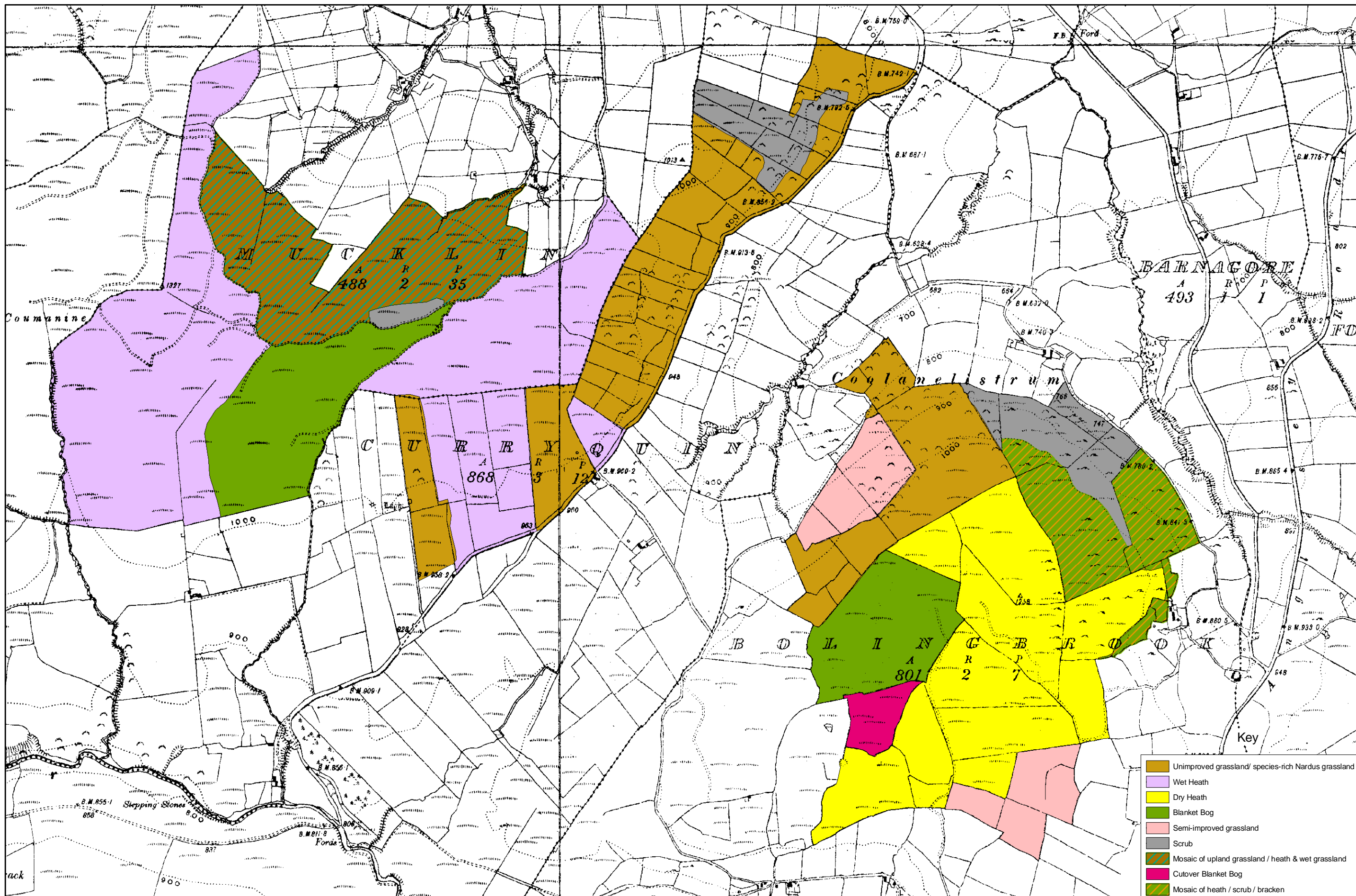


Department of Environment, Heritage and Local Government
An Roinn Comhshaoil, Oidhreacht agus Rialtais Áitiúil

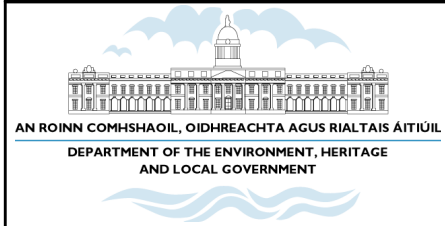
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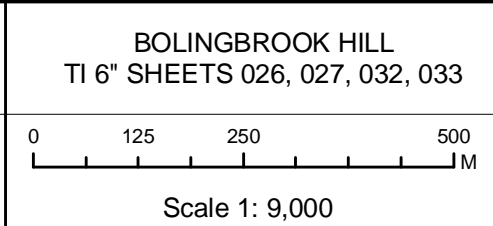


- Key
- Unimproved grassland/ species-rich *Nardus* grassland
 - Wet Heath
 - Dry Heath
 - Blanket Bog
 - Semi-improved grassland
 - Scrub
 - Mosaic of upland grassland / heath & wet grassland
 - Cutover Blanket Bog
 - Mosaic of heath / scrub / bracken



CEANTAR SPEISIALTA CAOMHNATHE
CANDIDATE SPECIAL AREA OF CONSERVATION

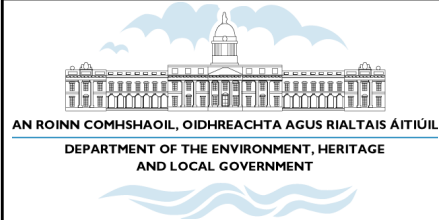
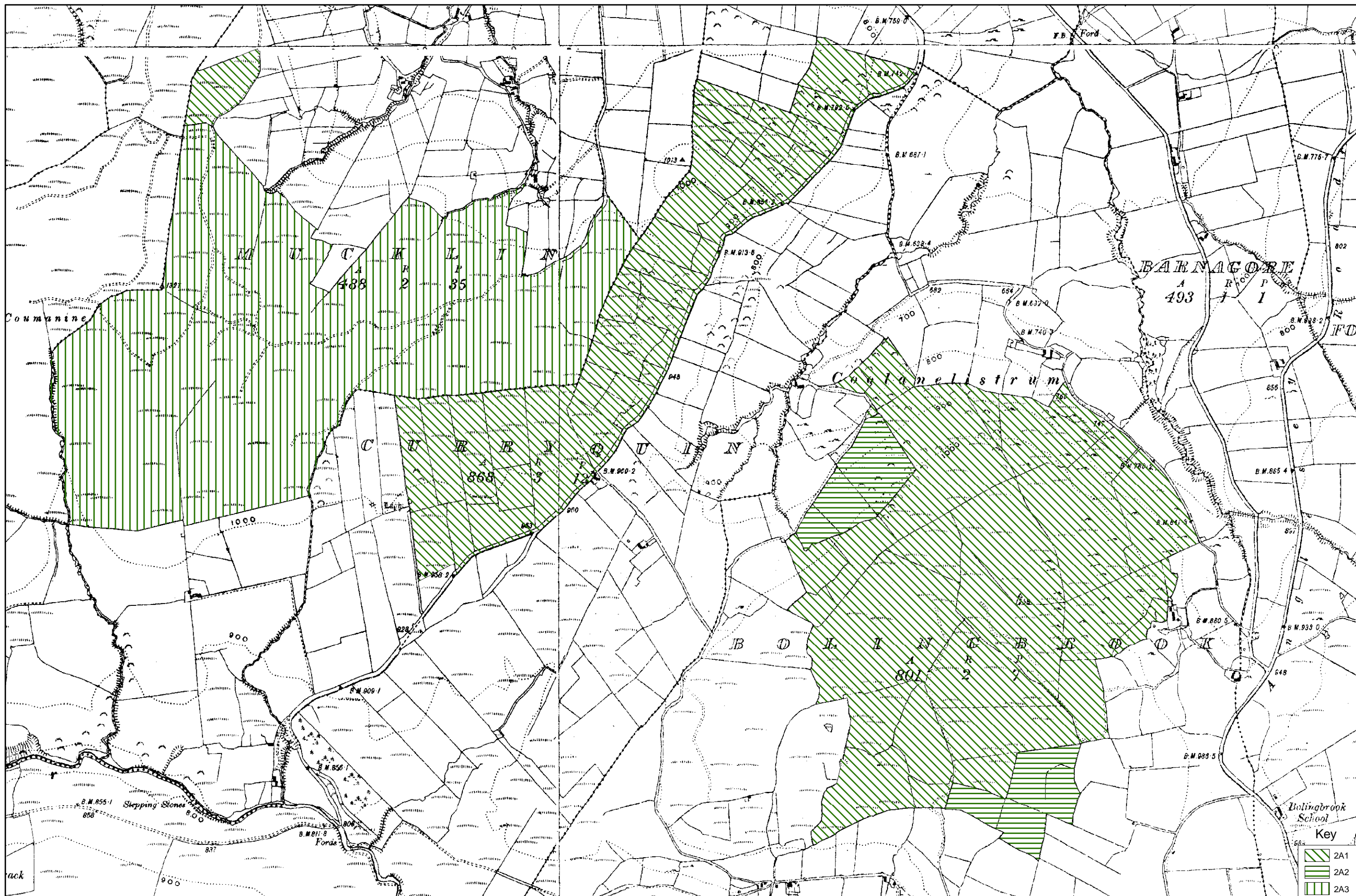
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Map 2
GROSS HABITAT MAP

Map to be read in conjunction with management plan

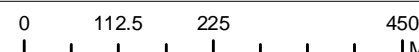
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BOLINGBROOK HILL
TI 6" SHEETS 026, 027, 032, 033



Scale 1: 9,000

Map 3
MANAGEMENT ZONING MAP

Map to be read in conjunction with management plan

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