## **Department of Agriculture and Rural Development**



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Agriculture and Rural Development

## Agri-environment Scheme Explanatory Booklet

## **Environmentally Sensitive Areas Scheme**

## Countryside Management Scheme



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# Environmentally Sensitive Areas Scheme

and

# Countryside Management Scheme

Agri-environment schemes have been developed by the Department of Agriculture and Rural Development (DARD) to encourage farmers and landowners to adopt environmentally friendly management practices. The schemes are co-funded by the European Union. This booklet explains how the Environmentally Sensitive Areas Scheme and the Countryside Management Scheme work and provides guidance on the requirements of the schemes.

When you join an agri-environment scheme, the scheme requirements and management plans appropriate to your circumstances, described in this Explanatory Booklet, form part of your legal agreement with DARD.

The requirements of the Environmentally Sensitive Areas Scheme and the Countryside Management Scheme are very similar. Throughout this booklet the term 'scheme' refers to both of these agri-environment schemes.

Please retain this Explanatory Booklet for the duration of your agreement. Further information and advice can be obtained from the points of contact provided at the back of this booklet.

This booklet is available on-line at www.dardni.gov.uk.

If required, this publication can be made available in an alternative format. For further details please contact Tel: (028) 8675 7507

#### Introduction

Page 2

Farming is the cornerstone of Northern Ireland's rural economy through its widely accepted roles in food production and the protection and enhancement of the countryside.

The Environmentally Sensitive Areas (ESA) Scheme was the first 'on farm' programme designed to promote the integration of production of wholesome food with responsible management of the countryside. Covering 20% of Northern Ireland, the ESA Scheme has proven highly successful - raising awareness, changing attitudes and perceptions, and delivering environmental benefits.

The Countryside Management Scheme was first introduced in 1999. This scheme encourages farmers to positively manage habitats, improve water quality, enhance the landscape and protect heritage by integrating good farming practice with care and protection of the environment.

Under recent CAP Reform (Council Regulation 1782/2003), farmers must protect the environment and attain standards of animal health and welfare and public health in order to receive direct agricultural support. These requirements are known as 'Cross-Compliance'.

Agri-environment schemes have been developed since the late 1980s. Current schemes require farmers to attain standards of environmental management that are over and above those required under Cross-Compliance.

Through agri-environment schemes, agriculture can make a significant contribution to biodiversity, and ensure the long-term sustainability of our unique and attractive countryside.

#### Contents

#### Section I General information

- 1. General information
- 2. Application criteria
- 3. Application procedure
- 4. Scheme requirements
- 5. Scheme agreement
- Payments 6.
- 7. Scheme alterations and changes
- Scheme inspections 8.
- 9. Contact with other statutory agencie
- 10. Environmental training

#### Section 2 Whole farm manage

- 1. General environmental requirement
- 2. Good Farming Practice
- 3. Field boundary management
- Farm waste management 4.

## Section 3

## Farm habitats - bacl management require

- 1. Grasslands
  - i. Improved land
  - Unimproved grassland ii.
  - iii. Species-rich dry and species-r
  - iv. Species-rich wet grassland
  - Species-rich grassland cut for V.

1	10
	11
	12
	15
	16
	20
	22
	23
	24
es	24
	25
ment requirements	26
S	27
	28
	29
	31
kground and	
ements	34
	35
	35
	35
ich calcareous grassland	36
0	38
hay	40

41

41

44

45

58

-----

2. Bird breeding, feeding and nesting sites

ii. Chough option

Page 4

Breeding wader sites i.

- 3. Wetlands
- i. Fen, swamp and reedbeds 45 4. Moorland and raised bog 46 Heather moorland 46 i. ii. Rough moorland grazing 49 iii. Lowland raised bog 51 5. Woodland, scrub and parkland 53 Woodland 53 i. 55 ii. Scrub 57 iii. Parkland
- 6. Archaeological features

Optional habitats – background information Section 4 and management requirements 60 61 1. Field boundary restoration Hedge regeneration and planting 61 i. Restoration of dry stone walls 68 ii. iii. Reinstatement of sod banks 68 2. Grass margins 70 Ungrazed grass margins 70 i. 71 ii. Ungrazed grass margins planted with native trees Bird breeding, feeding and nesting sites 76 3. Lapwing breeding sites 76 i. ii. Winter feeding sites for swans and geese 78 4. Arable 80 Retention of winter stubble 80 i. 81 Conservation cereal ii.

- iii. Wild bird cover
- Undersown cereals iv.
- Rough grass margins ۷.
- vi. Lapwing fallow plots
- 5. Traditional orchard restoration

## Section 5 Specific conservation

- 1. Control of bracken
- 2. Regeneration of heather

## Section 6 Further advice and

- 1. Points of contact
- 2. On-line DARD publications
- Codes of Good Agricultural Practice 3. Pollution of Water, Air and Soil
- 4. Farmland birds information pack

## Section 7 Appendices

- 1. Tenancy agreement for leased land
- 2. Definition of habitats
- List of species-rich grassland indicate 3.
- 4. Scrub control
- Protective fencing 5.
- Control of rushes and noxious weed 6.
- DARD Office addresses 7.
- 9. Countryside Management Branch O

	83
	89
	90
	92
	93
n measures	98
	99
	99
nformation	104
	105
	105
for the Prevention of	
	105
	106
	107
	108
	109
or plants	110
	112
	114
S	117
	119
ffice addresses	120

#### List of Tables

- 1. Heather moorland grazing
- 2. Stocking density for lowland raised bog
- 3. Suitable tree species for planting
- Number of trees to plant in an area 4.
- Minimum length of conservation cereal margins per field 5.
- 6. Sowing rates for wild bird cover crops
- Crops preferred by bird species 7.
- Traditional orchard tree varieties 8.
- Other varieties of traditional fruit 9.

#### List of Figures

- 1. Environmentally Sensitive Areas in Northern Ireland
- 2. Scheme summary
- Capital enhancement works 3.
- 4. An example of a scheme farm map
- 5. An example of a Farm Waste Management Map
- Hedge planting 6.
- Cross-section of a traditional earthen bank 7.
- 8. Grass species suitable for use in rough grass margins
- 9. Sheep-proof guard for orchard trees

#### **Abbreviations**

**ASSI** – Area of Special Scientific Interest **BACS** – Bank Automated Clearing System **BAP** – Biodiversity Action Plan **CAFRE** – College of Agriculture, Food and Rural Enterprise **CMB** – Countryside Management Branch **CMS** – Countryside Management Scheme **CoGAP** – Codes of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil **DARD** – Department of Agriculture and Rural Development **DOE** – Department of the Environment **DRD** – Department of Regional Development, Roads Service **EC** – European Commission **EU** – European Union **EHS** – Environment and Heritage Service **ESA** – Environmentally Sensitive Area **GFP** – Good Farming Practice ha - hectare **kg** - kilogram LFACA – Less Favoured Area Compensatory Allowance LMC – Livestock and Meat Commission LU – Livestock Unit m - metre **mm** - millimetre **MOSS** – Management of Sensitive Sites N - Nitrogen NI – Northern Ireland **NIBG** - Northern Ireland Biodiversity Group **OS** – Ordnance Survey **SFP** – Single Farm Payment **UK** – United Kingdom

**Environmentally Sensitive Areas Scheme and Countryside Management Scheme** 

Page 8

#### Definitions

'agriculture' includes horticulture, fruit growing, seed growing, dairy farming, livestock breeding or keeping, the use of land as grazing land, meadowland, osier land, reedbeds, market gardens and nursery ground.

'biodiversity' is the diversity of the natural world, ecological variety and richness.

'breach of agreement' is a failure to adhere to the conditions of the agreement and/or failure to carry out something on which grant is/was paid.

'fertilisation' is the application of chemical fertiliser, slurry, farmyard manure, sewage sludge, poultry litter, lime or any other organic fertiliser.

'field boundaries' include dry stone walls, ditches, earth banks, hedges and rows of trees.

'cultivation' includes reclamation, ploughing, reseeding, direct drilling, surface seeding or new drainage including activities associated with cultivation including rolling and chain harrowing.

'habitat' means the normal abode or locality of animals or plants.

'pesticides and herbicides' includes all herbicides, pesticides, insecticides (including spent sheep dip), fungicides, molluscicides and nematicides.

'noxious weeds' are as listed under the Noxious Weeds Order 1977 and include wild oat (Avena fatua L.); thistle (Cirsium vulgare (Savi) Ten.); Cirsium arvense (L.) Scop.), dock (Rumex obtusifolius L.; Rumex cripsus L.) and ragwort (Senecio jacobaea L.). Where rushes (Juncus effusus) cover more than one third of an unimproved field, rush shall be included in this definition.

'overgrazing' is grazing land with livestock in such numbers as to damage the growth, quality or species composition of the vegetation to a significant degree.

'poaching' is severe trampling by livestock or vehicle rutting and may include one of the following: no visible remains of grass/vegetation with bare soil; deep bare soil trenches caused by vehicle tracks; bare soil often mixed with frequent amounts of livestock manure; waterlogged soils with livestock 'wading in muck'.

'farmyard manure' means a mixture of bedding material and animal excreta in solid form arising from the housing of cattle, sheep and other livestock, excluding poultry manure, but including spent mushroom compost and the stackable solids fraction from mechanical separation of slurry excluding pig slurry.

'slurry' means (a) excreta produced by livestock whilst in a yard or building or (b) a mixture of such excreta with bedding, rainwater, seepage, washings or any other extraneous material from a building or yard used by livestock or in which livestock manure is stored or any combination of these, of a consistency that allows it to be pumped or discharged by gravity at any stage in the handling process and includes dirty water that is stored with slurry or mixed with slurry.

**Environmentally Sensitive Areas Scheme and Countryside Management Scheme** 

Page 10

## **1.** General information

#### What is an agri-environment scheme?

Agri-environment schemes are co-funded by the European Union as part of their Rural Development Programme. They are the main mechanism Government uses to encourage farmers and landowners to adopt environmentally friendly practices. Agri-environment schemes contribute to the delivery of the Northern Ireland Biodiversity Strategy.

This booklet provides details on the following agri-environment schemes: • Environmentally Sensitive Areas (ESA) Scheme

- Countryside Management Scheme (CMS)

These schemes have very similar aims and structure, and will subsequently be referred to in this booklet as either 'agri-environment scheme' or 'scheme'.

#### What are the scheme aims?

The main aims of agri-environment schemes are to:

- enhance biodiversity by maintaining species diversity through the positive management of wildlife habitats;
- enhance landscape and heritage features by integrating their management into the everyday workings of the farm.

#### How do the schemes contribute to biodiversity?

At the Rio Summit in 1992 the United Kingdom (UK) was one of 178 countries to sign the Convention on Biological Diversity. Each signatory recognised that action was required to halt the global decline of animal and plant species. On the basis of the convention the UK government produced its own Biodiversity Action Plan in June 1994, with the aim:

'To conserve and enhance biological diversity within the UK and to contribute to the conservation of global biodiversity through all appropriate mechanisms'.

# Section I **General information**

Section I provides general information on the **Environmentally Sensitive Areas (ESA) Scheme and Countryside Management Scheme (CMS).** 

> General information **Application criteria Application procedure Scheme requirements** Scheme agreement **Payments** Scheme alterations and changes Scheme inspections Contact with other statutory agencies **Environmental training**

As a result, the Northern Ireland Biodiversity Group (NIBG) identified issues affecting biodiversity in Northern Ireland and proposed a number of specific recommendations. In response, the Environment and Heritage Service (EHS), Department of Environment (DOE) produced the Northern Ireland Biodiversity Strategy and a list of Priority Species and Habitats. A number of Biodiversity Action Plans (BAPs) have been produced to look specifically at the issues affecting our most vulnerable habitats and species. The schemes take account of the Priority Habitats and Species outlined in these plans. The scheme habitat management plans specify how farmers can best contribute to the conservation of important habitats and species in Northern Ireland, and so assist the delivery of associated BAP targets.

#### 2. Application Criteria

#### What are the application criteria?

- All farmers or landowners must own, and/or have on a five-year written lease, a minimum of 3 hectares (ha) of agricultural land.
- A current DARD Business Reference Number.

#### What if I do not have a DARD Business Reference Number?

You should seek advice from your local DARD Office (Appendix 7).

#### What scheme should I apply for?

The ESA Scheme applies only to land inside one of the five designated ESA areas (see Figure 1) in Northern Ireland - Mournes and Slieve Croob, Antrim Coast, Glens and Rathlin, West Fermanagh and Erne Lakeland, Sperrins and Slieve Gullion. The CMS applies to land outside the ESAs.



Figure 1: Environmentally Sensitive Areas in Northern Ireland

#### Do I have to join an agri-environment scheme? No, all agri-environment schemes are voluntary.

How much of my land do I have to enter? The schemes adopt a whole farm approach, which means that all eligible land must be entered into the scheme. Participation is voluntary, offering an annual payment in return for integrating positive environmental management into farming practices. In addition to complying with the application criteria, participants must follow the management requirements for all farm and/or optional habitats.

#### Will participation in the scheme affect my Single Farm Payment (SFP)?

A landowner and farmer may participate in both an agri-environment scheme and the Single Farm Payment Scheme.

Certain areas of the farm may become ineligible for SFP if they are classified as follows under an agri-environment scheme:

- Woodland habitat;
- Orchards with a tree density greater than 50 trees per hectare.

In addition, the following areas on your farm are not eligible for payment under the SFP, although it may be possible to consolidate SFP entitlements already established on these options:

- Field corners planted with native trees;
- Orchards with a tree density greater than 50 trees per hectare.

Agri-environment scheme payments can only be made where the management requirements exceed the SFP set-aside management requirements. This means you will be unable to claim payments for some agrienvironment measures in addition to set-aside payments on the same land area. You will therefore not be able to site the following options on land that is used to fulfil set-aside requirements:

- Ungrazed grass margins along watercourses;
- Ungrazed grass margins planted with native trees along watercourses;
- Retention of winter stubbles;
- Conservation cereals:
- Wild bird cover:
- Ungrazed grass margins/field corners;
- Ungrazed grass margins/field corners planted with native trees.

Queries relating to eligibility for the Single Farm Payment Scheme should be addressed to Grants and Subsidies Branch at your local DARD office (Appendix 7).

#### How long does an agreement last?

A scheme agreement normally lasts for 10 years starting from the commencement date outlined in the acceptance letter issued by DARD. However, either you or DARD may withdraw from the agreement in the year following completion of the first five years. The commencement date is usually the date on which DARD receives the signed agreement from the farmer. No work associated with the application should be undertaken until receipt of an acceptance letter, stating the start date of the agreement, from DARD.

#### Can I participate in more than one agri-environment scheme?

A landowner or farmer may only receive funding from either the ESA Scheme or CMS on any one individual portion of ground. However, a landowner can participate in more than one scheme if he owns and/or has on a long-term lease, land within an ESA and also owns and/or has on a long term lease land outside an ESA.

#### Can I enter only part of my farm into these schemes?

Agri-environment schemes are 'whole' farm schemes, and hence all land owned must be entered into the scheme. Land held under a leasing agreement may be entered into the scheme.

#### If I let all of my land in conacre can I apply?

The landowner is deemed to have responsibility for the management of the land and is eligible to apply. In this instance the landowner should inform the person renting the land that they are entering into an agri-environment scheme and make them aware of the scheme obligations and management requirements.

#### Can I enter common or shared grazing land?

Common land can be entered into the schemes provided all the common graziers (those having shares in the common) are in agreement and sign a scheme agreement at the same time.

#### Is conacre eligible?

As agreements are for a minimum of five years, land taken in conacre cannot be entered into an agri-environment scheme.

## Can leased land be entered into a Scheme?

Leased land may be entered into a scheme. In order to do this, you must notify the owner of the land of your intention to apply for a scheme and provide a written tenancy agreement (or lease) from the landowner. This tenancy agreement/lease must permit you to manage the land under the terms of the scheme for at least five years. It is the applicant's responsibility to seek legal advice as required regarding lease agreements. Basic information on the requirements of a tenancy agreement/lease is given in Appendix 1.

## 3. Application procedure

#### When can I make an application?

Farmers/landowners within an ESA can make an application at any time by completing a simple application form. Forms can be obtained at local DARD Offices (Appendix 7). Details of the CMS application period can be obtained from Countryside Management Branch staff. Addresses and telephone numbers are provided in Appendix 8.

#### What happens if my farm map is not up to date?

It is important that your farm map is up to date, as errors can lead to delays in processing your application. Check your farm map and note if there have been any changes since the last map update.

If you have undertaken any activity that has altered the land area of your farm, you should inform your local DARD Office and obtain a revised farm map. This also applies to land that you intend to, or are taking on a long-term lease. You must ensure the accuracy of these maps with the landowner.

## What happens after I apply for the scheme?

Upon receipt of a completed application form, DARD will issue an acknowledgement letter. A member of Countryside Management Branch will then contact you to arrange a suitable date and time to carry out the farm audit. You must be present while the audit is being carried out. A farm audit will usually take a minimum of two hours, but may take longer depending on the size of the farm.

#### What happens during a farm audit visit?

During the audit:

- The scheme rules will be fully explained.
- A Farm Waste Management advisory and assessment visit will be carried out.
- All fields on the farm will be classified according to the habitat type, and any archaeological features present will be noted.
- Participation in suitable optional habitats will be agreed.
- The length of protective fencing (if required) to meet the conditions of the scheme will be agreed.
- Other capital enhancement items will be agreed.

After the audit has been completed, and provided your farm is eligible, you will receive a folder containing details of the scheme for your farm. This will include a management agreement for you to sign and return to DARD (and a copy to keep). The scheme is voluntary and you may still choose to cancel your application at this stage by not signing the agreement.

#### What happens during the Farm Waste Management assessment?

All scheme applicants will be subject to a compulsory farm waste management advisory visit as part of the farm audit process. During the audit the member of Countryside Management Branch and the applicant will complete a Farm Waste Management checklist. A completed copy of this checklist and an advisory letter will be issued to the applicant shortly after the visit. These will highlight the river catchment in which the farm is located, outline any remedial works or changes in management practice that are necessary on the farm to comply with scheme requirements and general farm waste management advice. All remedial works or changes in management practice must be carried out as soon as possible. Details on farm waste management are given in Section 2.

#### 4. Scheme requirements

#### What are the scheme requirements?

Follow the General Environmental Requirements (Section 2). Follow Good Farming Practice (Section 2). Attend locally based, agri-environment scheme workshops (Section 1). Manage all field boundaries on the farm.

Produce and implement a Farm Waste Management Plan (Section 2). Follow the management requirements for all farm habitats and features

(Section 3).

Follow the management requirements for all optional habitats (Section 4).

If there are no farm habitats (for example, species-rich grassland, breeding wader sites, wetlands, moorland, farm scrub, woodland or parkland), you must undertake at least one optional habitat to ensure the scheme will benefit the environment.

Figure 2 provides an overview of the structure of the schemes.

#### How are payments calculated?

Payment rates for the ESA Scheme and the CMS are identical. Annual management payments, based on £/hectare (ha), compensate for the loss of income and costs incurred associated with adhering to the management requirements of the scheme.

The minimum area for most habitats is 0.1 ha. Exceptions are wild bird cover, which has a minimum area of 0.2ha; ungrazed grass margins and ungrazed grass margins planted with trees which have a minimum area of 0.01 ha and restoration of traditional orchards, which also has a minimum area of 0.01 ha.

#### Are there additional payments to regenerate habitats?

It may be necessary to undertake regeneration or control works, such as heather regeneration and bracken control, to improve the environmental quality of the habitats under scheme agreement. Additional payment can be made for this work.

#### Capital enhancement works

In addition to the annual management payment, funding is available for capital enhancement works to meet the management requirements of the scheme and to enhance the farm landscape. Capital enhancement items are listed in Figure 3. The eligibility for, and availability of these items may vary, and participants should consult local Countryside Management staff for further details. Payment for enhancement works can be claimed as soon as the work is completed.

Section 1 – General Information

#### Figure 2: Scheme summary

#### Whole farm requirements

- All of these requirements are compulsory
- General scheme requirements
- Good Farming Practice
- Field boundary management
- Farm waste management

#### Positive management of farm habitats

If the habitats listed below are present on the farm they must be managed according to the management plan requirements. - Improved land

- Unimproved land
- Species-rich grassland
- Breeding wader sites
- Moorland
- Farm scrub and woodland
- Parkland
- Archaeological features

If only improved and/or unimproved land is present on the farm, one of the optional habitats (listed below) must be chosen.

#### **Optional habitats**

You can choose one or more of these optional habitats.

- Field boundary restoration (includes protective fencing)
- Grass margins planted with native trees (maximum area 0.2ha)
- Ungrazed grass margins
- Arable options
- Lapwing sites and fallow plots
- Winter sites for swans and geese
- Traditional orchard restoration

#### Specific conservation measures

- These measures are optional.
- Heather regeneration by burning or flailing
- Bracken control by tractor or knapsack spraying

#### Figure 3: Capital enhancement works

#### **Enhancement Item**

#### **Field Boundary Restoration**

Dry stone wall - double skinned Dry stone wall - single-skinned Hedge laying Hedge coppicing Hedge interplanting / reinstatement Sod bank reinstatement

#### Tree planting / management

Tree/shrub planting Tree guard and stake Spiral rabbit guard Planting standard parkland trees Planting traditional fruit trees Tree surgery Tree pollarding Restorative pruning for traditional orchards

#### Items to enhance wildlife value

Nest boxes for small birds Nest boxes for large birds Nest boxes for bats Red squirrel feeders

#### **Provision of alternative watering** sites

Installation of water trough Installation of up to 150m pipeline Installation of over 150m pipeline

#### Structures / work to raise water levels Structures/work to raise water levels

## Section 1 – General Information

#### Page 19

#### **Creation of scrapes** Creation of scrapes

## **Restoration of traditional** and heritage features

Traditional farm buildings Features of historic interest Traditional gates- wooden Traditional gates- metal Traditional gates- composite **Rebuilding pillar** Re-pointing pillar cap Rebuilding or re-plastering pillar cap Wooden post Stone post

#### **Erection of protective fencing**

3 line wire Additional line wire Woven (sheep) wire + 2 lines Woven (sheep) wire + 3 lines Proofing against rabbits and hares Parkland tree guard (1.8m square) Parkland tree guard (3.6m triangular) Parkland tree guard (3.6m square)

#### **Plastic recycling bin** Plastic recycling bin

## 5. Scheme agreement

#### What is a scheme agreement?

After the farm audit is completed, you will receive details of the scheme for your farm. These will include:

- This agri-environment scheme booklet, containing background information and those management plans applicable to you;
- Your farm map(s) showing all farm habitats, optional habitats, management requirements, details of field boundary restoration and details of capital enhancement works;
- Good Farming Practice requirements;
- Duplicate copies of the scheme agreement.

You should read all documentation carefully and sign both copies of the scheme agreement if you wish to enter into the scheme. One copy should be returned to DARD. The date on which the signed agreement is received by DARD is usually the date on which your scheme commences. This is known as your 'anniversary date'.

#### What information is included on the farm map?

An example of a scheme farm map is given in Figure 4. The map provides details on the location of all farm habitats and any optional habitats undertaken. All fields are given a coloured classification code, representing improved grassland/arable land or a habitat. The 'Land Management Classification' table on the map tells you what each code represents.

In addition, details of all field boundary restoration works are shown, including the location of the restoration, the restoration type (hedge, stone wall, sod bank), what fencing is required and the minimum length to be carried out each year. Details of any capital enhancement work to be carried out will also be given on the farm map.



#### When do I have to put in place management/creation of habitats?

All habitat management and creation must be put in place as soon as possible after signing the scheme agreement. For example, if fencing is required to enable you to adhere to a farm habitat management prescription, it should be completed as soon as possible.

#### Page 21

#### Figure 4: An example of a scheme farm map

#### **6.** Payments

#### What do I need to do to qualify for scheme payment?

All works must be completed as specified in the scheme agreement, including the management requirements for all farm and optional habitats. Payment for field boundary restoration is included in the annual management and it is important that the specified type and length of restoration is completed each year. DARD must be notified as soon as possible of any works which have not been completed.

#### What will be my annual payment?

Annual payments vary according to farm size, the habitats and archaeological features that are present on the farm and the area/length of optional habitats agreed. The annual payment, and how it is calculated will be clearly stated on the agreement.

#### How are payments made?

The date on which the signed agreement is received by DARD is usually called the 'anniversary date'. Payment is usually made on or about the anniversary date of your agreement.

#### When will I get paid?

Payment, subject to scheme conditions, will normally be issued within 12 weeks from confirmation of claim.

#### Can I have my monies paid directly into my bank account using Bank **Automated Clearing System (BACS)?**

Yes. Information on how to use BACS is available from:

BACS Section, Room 9, Orchard House, 40 Foyle Street, Derry/Londonderry BT48 6AT Tel: (028) 7131 9895

### 7. Scheme alterations and changes

#### Can I change the terms and conditions of the scheme agreement?

Normally you cannot change the terms and conditions of the agreement you have entered with DARD. The options you have chosen and the management requirements within those options must be carried out for the duration of the scheme. However, if you acquire land, your agreement will be revised to add in the new area. If you wish to make changes to the optional habitats chosen, it may be possible to revise your agreement.

If you withdraw from your agreement, or if the DARD terminates it, DARD may reclaim some or all of the payments already issued. 'Force majeure' may apply in exceptional circumstances.

#### What happens if I acquire additional land?

You must notify DARD in writing as soon as you acquire the land. The new area of land will be added to your original agreement after your next anniversary date and will be subject to the conditions of the scheme.

#### Can I sell, let or lease all, or part of, the land entered into the scheme?

If you sell or lease land under agreement you should notify DARD in writing. If you sell land and the new owner continues with the agreement, DARD will not seek to recover any monies already paid. If, however, the new owner does not accept the obligations of the agreement within three months of the sale or transfer of the land, DARD may reclaim some or all of the payments already issued.

Should you lease or let your farm, it is your responsibility to ensure that the tenant adheres to the requirements of the scheme.

#### Will changes to European Community (EC) legislation affect the scheme agreement?

Changes to EC legislation may affect the requirements of the agreement. DARD will inform you of any changes in advance.

#### 8. Scheme inspections

#### What happens if, after joining the scheme, I fail to comply with the scheme rules?

A proportion of agreements will be inspected prior to payment. If you do not comply with your scheme requirements, or if you make any false or misleading statements, DARD may invoke a financial penalty or terminate your agreement depending on the type and severity of the breach of agreement. In the event of a dispute as to whether a breach of agreement has occurred, you may have your case referred to arbitration. However it is recognised that certain problems, such as extreme weather, may prevent you from fully complying with the requirements of your agreement. If this occurs you should contact your local Countryside Management Branch staff.

#### 9. Contact with other statutory agencies

#### What if I have an Area of Special Scientific Interest (ASSI), scheduled historic monument or other designated area on my farm?

The designation of an area of land as an ASSI, other designated site or scheduled monument does not affect your eligibility to join a scheme. However, if you have land under agreement within the Management of Sensitive Sites (MOSS) Scheme or other types of management agreement, the specific land area within the farm will not be eligible for payment. This does not affect the eligibility of the remainder of the farm.

Written consent must be obtained from Environment and Heritage Service (EHS), Department of Environment (DOE) before any works are carried out within an ASSI or along an ASSI boundary. It is the responsibility of the agreement holder to obtain this consent.

The EHS contact telephone number for further information is (028) 9054 6595.

#### What happens if I need to fence along a roadside?

Approval will not be given for fencing on the outer (road) side of restored field boundaries that run alongside public roads. Fencing will only be approved on the field side of such hedges. Approval should be sought from the Department of Regional Development (DRD), Roads Service before new fences are erected

along the outer (road) side of public roads. Roads Service can be contacted on telephone number (028) 9054 0540.

Replacement fences on the field side of restored field boundaries must follow the line of existing fences and the restored field boundary must follow the line of the original boundary.

#### 10. Environmental training

Environmental training workshops are delivered by the College of Agriculture, Food and Rural Enterprise (CAFRE). Workshops are available to all farmers and are delivered locally at various locations and farms throughout Northern Ireland. Each workshop consists of one or more sessions lasting approximately two hours and all are designed to give farmers practical help and guidance.

#### Environmental training and agri-environment schemes

Farmers who join an agri-environment scheme are expected to attend the following three workshops:

- Cross-Compliance and Good Farming Practice;
- Field Boundary Management;
- Dealing with Farm Wastes.

#### Other environmental training

Other workshops in the programme are:

- Environmental Legislation;
- Nutrient Management Planning;
- Water Quality;
- Habitats;
- Heritage Features.

For further information on environmental training please telephone (028) 9442 6874 or E-mail enquiries@dardni.gov.uk

Page 26

#### **1.** General environmental requirements

Agri-environment scheme participants must adhere to the following requirements for the whole farm, in addition to following specific management requirements for each farm and optional habitat under agreement.

#### You must:

- Follow the requirements of Good Farming Practice;
- Retain and not damage any habitat, landscape or heritage feature;
- Keep all parts of the farm and farmyard(s) free from rubbish and litter;
- Follow a Field Boundary Management Plan for your farm;
- Prepare and follow a Farm Waste Management Plan for your farm.

#### You must not:

- by spot treatment or weed wiper on noxious weeds);
- Apply lime to any land other than 'improved' or 'unimproved grassland';
- Permit severe damage to land by poaching or repeated vehicular access;
- Carry out any activity on your farm likely to detract significantly from the landscape quality and character.

You must also follow any further requirements listed in your agri-environment scheme agreement. You should obtain permission from DARD before undertaking any work that may have a detrimental impact on any habitat, landscape or heritage feature on your farm.

Written consent must be obtained from Environment and Heritage Service (EHS), Department of Environment (DOE) before any works are carried out within an ASSI or along an ASSI boundary. It is the responsibility of the agreement holder to obtain this consent. The EHS contact telephone number for further information is (028) 9054 6595.

# Section 2 Whole Farm Management Requirements

Section 2 explains the management requirements that you must follow to gualify for the whole farm payment.

> **General environmental requirements Good Farming Practice** Field boundary management Farm waste management

#### Page 27

Cultivate or surface seed any land other than land classified as 'improved'; Apply herbicide or pesticide on any land other than 'improved' (except herbicide

#### **2. Good Farming Practice**

All participants in agri-environment schemes must follow Good Farming Practice (GFP). GFP consists of three elements – Legislation, Verifiable Standards and Codes of Good Agricultural Practice.

**Legislation** – you must comply with all relevant environmental protection legislation.

Verifiable Standards – you must adhere to the following verifiable standards:

- Overgrazing is not permitted.
- Supplementary feeding is not permitted on moorland, wetland, speciesrich grassland, coastal habitats, broad-leaved woodland/scrub habitats or archaeological features or within 10 metres of a watercourse (see Appendix 2 for habitat definitions).
- Removal of field boundaries is not permitted, except by prior written permission from DARD.
- Areas of Special Scientific Interest (ASSI): Environment and Heritage Service (EHS) must be notified and give prior written consent before proceeding with any intended operations that are likely to damage ASSIs. The EHS contact telephone number for further information is (028) 9054 6595.
- Pollution: no pollution or unauthorised waste disposal is permitted.
- Sheep dip disposal requires written authorisation from EHS (Groundwater Regulations (Northern Ireland) 1998).
- Hedgerow management (for example, cutting and restoration) must not be carried out between 1 March and 31 August.
- Damage to Habitats, Archaeological Features and Earth Science Sites is prohibited. In-filling, reclamation or extraction of peat, sand or gravel is not permitted. Compliance with the Environmental Impact Assessment (Uncultivated land and Semi-Natural Areas) Regulations (Northern Ireland) 2001.

Codes - you must retain a copy of the Codes of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil (refer to DARD website for further information on the Codes at www.dardni.gov.uk).



Trees improve the wildlife value of hedgerows

an invaluable habitat for wildlife, including plants, birds, mammals and insects. Field boundaries are important for landscape, shelter for livestock (animal welfare) and disease control by assisting in reducing the spread of Bovine tuberculosis and brucellosis. Field boundaries are culturally and historically important and often retain archaeological features.

**Biodiversity objectives:** field boundary management contributes to the Northern Ireland Biodiversity Action Plan targets for ancient and/or species-rich hedgerows, the Irish hare and yellowhammer. Within Northern Ireland species-rich hedgerows are important for a number of UK Priority Species identified as part of the UK Biodiversity Action Plan programme. These include red squirrel, common pipistrelle, soprano pipistrelle, linnet, reed bunting, spotted flycatcher, tree sparrow, bullfinch, song thrush and purple ramping fumitory. In addition a number of Northern Ireland Priority Species will benefit, such as whitethroat and barn owl.

#### **Management requirements**

- All external farm boundaries adjoining other farms ('march ditches') must be in stock-proof condition to maximise biosecurity.
- fertiliser, pesticides or herbicides are not permitted in this strip.

#### Page 29

## 3. Field boundary management

'Field boundary management' covers the general management of all on farm field boundaries such as hedges, stone walls, stone banks and earth banks. Managing field boundaries is a compulsory aspect of all agri-environment schemes.

#### Background

The landscape of Northern Ireland is characterised by a dense patchwork of fields. Wellmanaged field boundaries provide

#### All field boundaries, including any in derelict condition, must be retained.

A 1 m uncultivated strip must be left as a buffer from farming operations from the edge of the field boundary. Application of organic or inorganic

- Stone walls and stone banks must be protected from deterioration and all in-situ stone from walls retained.
- Maintain a variety of hedge heights, widths and shapes.
- Allow suitable hedges to grow uncut for five years or longer, trimming sides only as necessary.



A sheugh

- Do not cut any hedge more than once in two years. Hedges along roads may be faced annually for safety reasons.
- Existing mature trees must be retained and some saplings left to grow into hedgerow trees.
- Hedges must not be cut between 1 March and 31 August.
- All sheughs must be kept open; infilling or laying drainage pipes in sheughs is not permitted.
- New or improved drainage systems must not be installed on any land, except for improved land. Existing drainage systems on unimproved grassland and permanent habitats may be repaired if necessary.

#### **Further advice**

#### Hedge management

Hedge cutting should be left as late in winter as practical so that birds

can feed on berries and fruits. Maintain hedges to a minimum height of 1.5m. Hedges along roads and lanes may be trimmed annually for safety reasons. You are expected to attend a training workshop on Field Boundary Management.

#### Stone wall management

Dislodged stones along dry stone walls should be replaced if possible, or retained where they fall.

# Sheugh Maintenance

The primary function of sheughs (or ditches) is to drain land. However, they are also valuable landscape and wildlife features, important for many plants, animals, birds and insects. Sheughs should therefore be managed, not only as drainage channels, but also as valuable wildlife habitats.

Only carry out sheugh maintenance and cleaning during the autumn to late winter period. Clear away only vegetation and silt from sheughs; deepening or widening is not permitted. Leave the vegetation untouched along one side of the sheugh at cleaning. Retain a balance of trees, shrubs and fringing vegetation to maintain the natural appearance of the sheugh in the landscape. When cleaning out sheughs retain as many water loving plants as possible in the sheugh. Bulrush, water- plantain and water-crowfoot bring benefits such as algae control, providing fish spawning beds and encouraging insects.

#### 4. Farm waste management

All participants must prepare and implement a Farm Waste Management Plan.

#### Background

Responsible farm waste management aims to improve the quality of our watercourses beyond a level that is required by current legislation and Good Farming Practice and will improve the visual appearance of the farm and farmyard.

Biodiversity objective: to improve water quality.

#### **Management requirements**

- Responsibly store, use and dispose of all farm wastes, for example slurry, silage effluent dirty water, plastics and rubbish.
- Remove rubbish and derelict equipment.
- Remove eyesores.
- Produce a Farm Waste Management Plan as outlined in the sections below.
- Implement the Farm Waste Management Plan throughout the duration of the scheme, and update the plan annually.

Page 30

Section 2 – Whole Farm Management Requirements

#### **Further advice**

Retain, and refer to, a copy of the Codes of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil for farm waste management guidance.

#### The Farm Waste Management Plan

The Farm Waste Management Plan must take into account the collection, storage and disposal of all farm wastes. Implementation of the plan will reduce the risk of pollution and prevent the loss of valuable nutrients in slurry and farmyard manure. The plan consists of two parts:

- Part 1 a completed Farm Waste Checklist for the farm. The checklist completed as part of the scheme audit may be used as an initial Part 1 of the Farm Waste Management Plan, after you have signed it. The purpose of the checklist is to identify remedial works and changes in management practice that are required to ensure a high standard of farm waste management.
- Part 2 – a completed Farm Waste Application Plan. This plan is a copy of your farm map showing areas of the farm that are suitable and unsuitable for spreading agricultural wastes.

#### Part 1. Farm Waste Checklist with identified remedial works/changes in management practice

This is a record of the condition of farm waste facilities and management practices as observed on the date of the farm audit. Completion of the checklist will enable you to audit your farmyard and farm to ensure that farm waste management standards, including disposal of manures, silage effluent, waste plastics, fallen animals and veterinary wastes are managed to a standard beyond current legislation and Good Farming Practice. The checklist must be continually kept under review and updated annually. Keep the whole farm free of rubbish, litter and anything that would detract from the appearance of the countryside.

Note: A pollution incident detected by the enforcing authority (Environment and Heritage Service, Department of Environment) may result in prosecution and lead to a reduction in your agri-environment scheme and/or Less Favoured Areas Compensatory Allowance (LFACA) scheme payments.

Remedial works/changes in management practice required to improve your farm waste management should be listed on the last page of the Farm Waste Checklist

#### Part 2. Farm Waste Application Plan

A farm waste application plan is a copy of your farm map colour coded as follows:

**BLUE** – Waterways, boreholes, springs and wells

**RED** – Do not spread on this land

**ORANGE** – May be used for spreading at certain times

**GREEN** – Can be used when land and weather conditions are suitable

## WHITE MARKED WITH AN X – Not used for spreading

Further information on the preparation of a Farm Waste Management Plan is available through the 'Dealing with Farm Wastes' training workshop, which you are expected to attend, organised by College of Agriculture and Rural Enterprise (CAFRE) or by reference to the Codes of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil.

#### Figure 5: An example of a Farm Waste Management map



#### Page 33



X Not used for spreading

Waterways, boreholes, springs or wells



Do not spread on this land

May be used for spreading at certain times

Can be used when land and weather conditions are suitable Page 34

3

# Section 3

# Farm Habitats – Background **Information and Management** Requirements

All farm habitats must be brought under agreement and managed as specified in Section 3. The management requirements, which are highlighted in green, are designed to maintain and enhance the habitat.

#### Grasslands

Bird breeding, feeding and nesting sites Wetlands Moorland and raised bog Woodland, scrub and parkland **Archaeological features** 

#### I. Grasslands

#### (i) Improved land

Improved land includes arable land and grassland where the sward contains more than 25% ryegrass, Timothy, white clover or other sown species indicative of cultivation and will generally have no native grasses, sedges or wild flowers present.

Improved land should be managed in accordance with the 'Whole Farm Requirements' detailed in Section 2.

#### (ii) Unimproved grassland

Unimproved grassland is permanent grassland which has not been cultivated for some years. Native grasses such as crested dog's tail and Yorkshire fog may be present. The sward contains less than 25% ryegrass, Timothy, white clover or other sown grass species indicative of cultivation. This habitat will have less than five wild flowers, grasses or sedges indicative of species-rich grassland (see Appendix 3 for full list) present in an area of one square metre, at six out of ten random points in a field area.

Aim: to maintain and enhance the biodiversity value of unimproved grassland and extensive grassland systems.

**Biodiversity objectives:** unimproved grassland contributes to a range of Northern Ireland Biodiversity Action Plan targets such as the Irish hare, skylark and various insects, beetles and spiders.

#### Management requirements

- Annual nitrogen applications must not exceed 125kg per hectare.
- Unimproved grassland must be maintained by grazing. A hay crop or light silage crop may be removed.
- No cultivations, ploughing or reseeding are permitted.
- New or improved drainage systems must not be installed.

Section 3 – Farm Habitats – Background Information And Management Requirements Page 35

**Unimproved** grassland

- Rush control must be carried out where rushes cover more than one third of the area. Rushes must be controlled by cutting or weed wiping preferably between 15 July and 15 March leaving 10% uncut/not wiped.
- No applications of pesticides or herbicides are permitted except by weedwiper or by spot spraying to control rushes or noxious weeds.
- The spread of scrub/trees must be controlled.
- Supplementary feeders must be rotated to avoid excessive poaching.
- No poaching.

#### Further advice

Grazing management should be at a level that prevents undergrazing or overgrazing. Existing drainage on unimproved grassland may be repaired if necessary, with areas of disturbed soil levelled and allowed to regenerate naturally. The annual payment includes an element for routine positive management such as scrub control and rush cutting.

Written permission must be obtained from DARD before the application of insecticide for leatherjacket control.



#### calcareous grassland Species-rich dry and calcareous

(iii) Species-rich dry and species-rich

grassland occurs on moderately well drained and/or calcareous soils. If more than five wildflower species, indicative of dry/calcareous conditions, are located in an area of one square metre at six out of ten random points in the field then it is species-rich dry or species-rich calcareous grassland. Indicator species include bird's foot trefoil, thyme and lady's bedstraw. (A

full list of species-rich indicator plants is found in Appendix 3). There must be less than 25% ryegrass, Timothy and white clover in the sward. There are two grazing options for managing species-rich dry/calcareous grassland. The most suitable grazing option will be agreed at the outset of the agreement and will be noted on the farm management map.

Aim: to maintain and enhance the conservation value of species-rich grassland through appropriate agricultural practices such as positive grazing management and restrictions on fertiliser and pesticide use.

**Biodiversity objectives:** species-rich dry and calcareous grassland contribute to the Northern Ireland Biodiversity Action Plan targets for the Irish hare, chough, lowland meadow, maritime cliff and slopes, coastal sand dunes and calcareous grassland. The proposed Biodiversity Action Plans for meadow cranesbill, yellowhammer, the marsh fritillary and some Northern Ireland Priority Species, such as the wall brown, dingy skipper and small blue butterflies and Irish eyebright will also benefit.

#### **Management requirements**

**Option 1:** Year round grazing at a stocking density of 0.5LU/ha.

#### OR

**Option 2:** No grazing between 1 May and 31 July. Stocking density must not exceed 0.75LU/ha between 1 August and 30 April.

In addition to Option 1 or 2 for grazing, the following requirements must also be followed:

- Excess grass may be saved for hay or silage but must not be cut until after 15 July.
- or application of lime, herbicide, pesticide, slurry, poultry litter or any other material, is permitted.
- Where fertiliser has traditionally been applied, applications of farmyard manure only must not exceed 15kg Nitrogen (N) per hectare per year.
- Application of lime requires written permission from DARD.
- Supplementary feeding sites, temporary silage clamps and storage areas for big bale silage or hay are not permitted.
- The spread of scrub/trees must be controlled.
- Trees must not be planted on species-rich grassland.
- Rolling can be carried out between 1 June and 1 April.
- No poaching.

Page 36

No cultivation, reclamation, chain harrowing, infilling, dumping, drainage

CCCCCCCCCCCCCCCCCC

#### **Further advice**

The annual payment includes an element for routine positive management such as scrub control. Scrub should be prevented from spreading on speciesrich grassland - see Appendix 4 for further information. Noxious weeds may be controlled by cutting between 15 July and 15 March or with herbicides, applied using a spot sprayer only.

Existing drainage systems can be maintained but not widened, deepened or extended.

## (iv) Species-rich wet grassland

Species-rich wet grassland occurs on poorly drained soils. If more than five wild flower species, indicative of wet conditions, are located in an area of one square metre at six out of ten random points in the field area then it is speciesrich wet grassland. Indicator species include meadowsweet,



marsh bedstraw, marsh marigold, yellow flag iris and several species of sedges and/or rushes. (A full list of species-rich indicator plants is found in Appendix 3). There must be less than 25% ryegrass, Timothy and white clover in the sward.

Aim: to maintain and enhance the conservation value of species-rich wet grassland through appropriate agricultural practices such as positive grazing management, implementing a no grazing period and restrictions on fertiliser and pesticide use.

**Biodiversity objectives:** the species-rich wet grassland contributes to the Northern Ireland Biodiversity Action Plan targets for the Irish hare and chough. The proposed Biodiversity Action Plans for meadow cranesbill, yellowhammer, redshank, the marsh fritillary butterfly, lowland meadows, lowland dry acid grassland, maritime cliffs and slopes and coastal sand dunes and some Northern Ireland Priority Species, such as the dingy skipper, wall brown, narrow small-reed, melancholy thistle, great burnet and fen violet will also benefit.

#### **Management requirements**

- No grazing is permitted between 1 January and 15 May.
- stocking density of 1.0LU/ha.
- the 15 July.
- of the area. Rushes must be controlled by cutting between 15 July and 15 March retaining 10% uncut. Herbicide control is not permitted. If ground conditions do not permit rush cutting contact Countryside Management Branch for further advice\*, (see Appendix 9 for contact details).
- material is permitted.
- Where fertiliser has traditionally been applied, applications of farmyard manure only must not exceed 15kg N per hectare per year.
- Supplementary feeding sites, temporary silage clamps and storage areas for big bale silage or hay are not permitted.
- Trees must not be planted on species-rich sites.
- The spread of scrub/trees must be controlled.
- No poaching.
- No rolling between 1 April and 1 June.

\*Prior written approval must be obtained from Countryside Management Branch if you wish to use any method of rush control other than cutting.

#### **Further advice**

Scrub should be prevented from spreading on species-rich grassland – see Appendix 4 for further information. The annual payment includes an element for routine positive management such as scrub control and rush cutting.

Noxious weeds may be controlled by cutting between 15 July and 15 March or with herbicides, applied using a spot sprayer only.

Existing drainage systems can be maintained but not widened, deepened or extended.

Page 38

Section 3 – Farm Habitats – Background Information And Management Requirements Page 39

• Grazing is permitted between 16 May and 31 December at a maximum

Excess grass may be saved for hay or silage but must not be cut until after

Rush control must be undertaken where rush cover is more than one third

No cultivation, reclamation, infilling, dumping, drainage or application of lime, herbicide, pesticide, sheep dip, slurry, poultry litter or any other

Species-rich grassland for hay

#### (v) Species-rich grassland cut for hay

If more than five indicator wild flower, grass or sedge species are located in an area of one square metre at six out of ten random points in the field area, and the field is traditionally cut for hay, then it is species-rich grassland cut for hay. (A full list of species-rich indicator plants is found in Appendix 3).

Aim: to maintain and enhance the conservation value of species-rich grassland cut for hay and ensure the survival of a traditional farming practice through appropriate cutting periods, appropriate aftermath grazing and restrictions on fertiliser and pesticide use.

**Biodiversity objectives:** the proposed Biodiversity Action Plans for meadow cranesbill, yellowhammer, the marsh fritillary, lowland meadows, and some Northern Ireland Priority Species, such as the dingy skipper, wall brown, narrow small-reed and Irish eyebright will also benefit.

#### Management requirements

- Hay must be cut, but not before 1 July.
- Spring grazing during April and May is permitted where this is traditional practice. Fields must, however, be closed up by 15 May and hay not cut until after 31 July.
- The aftermath must be grazed, to prevent grasses becoming too lush.
- Grazing is not permitted between 1 November and 31 March.
- No cultivation, reclamation, infilling, dumping, drainage or application of lime, herbicide, pesticide, sheep dip, slurry, poultry litter or any other material, is permitted.
- Where fertiliser has traditionally been applied, applications of farmyard manure only must not exceed 15kg N per hectare per year.
- Rolling is not permitted from 1 April to 30 June.
- Supplementary feeding sites, temporary silage clamps and storage areas for big bale silage or hay are not permitted.

- Trees must not be planted on species-rich grassland sites.
- The spread of scrub/trees must be controlled.
- No poaching.

#### Further advice

In extreme weather conditions, grass may be made into big bale silage, with prior written permission from DARD, The grass must have been cut and turned twice. Noxious weeds may be controlled by cutting between 1 July and 15 March or with herbicides, applied using a spot sprayer only.

Existing drainage systems can be maintained but not widened, deepened or extended.

The annual payment includes an element for routine positive management such as scrub control - see Appendix 4 for further information.

## 2. Bird breeding, feeding and nesting sites

#### (i) Breeding wader sites

Breeding wader sites are fields of improved, unimproved or rough pastures with at least one breeding pair of curlew, redshank or snipe. These sites are usually wet for much of the year and the vegetation present includes a range of **Breeding wader habitat** grasses, sedges and rushes, with few or no wild flowers present. Breeding waders benefit from cattle or mixed grazing which gives a range of sward heights with tussocks for nesting in and short-grazed areas for feeding. There are two options for managing breeding wader sites - closed grazing or restricted grazing. The most suitable grazing option will be decided at the outset of the agreement and will be noted on the farm management map.

Section 3 – Farm Habitats – Background Information And Management Requirements Page 41

Curley

Snipe

Aims: to maintain and increase the breeding success of breeding waders through appropriate management.

**Biodiversity objectives:** breeding wader sites contribute to the Northern Ireland Biodiversity Action Plan targets for the curlew, redshank and lapwing. The proposed Northern Ireland Biodiversity Action Plans and the Northern Ireland Priority Species - grasshopper warbler and reed bunting - will benefit.

#### Management requirements

1. Breeding wader site: closed grazing – no grazing permitted from 15 April to 30 June. From 1 July to 14 April there are no stocking density restrictions, however cattle should be grazed at some point during this period, if possible.

#### OR

2. Breeding wader site: restricted grazing - from 15 April to 30 June the stocking density must not exceed 0.75 LU/ha for cattle or sheep. From 1 July to 14 April there are no stocking density restrictions. However cattle should be grazed at some point during this period, if possible.

In addition to Option 1 or 2 for grazing, the following requirements must also be followed:

- Cattle must not be released directly on to breeding wader sites after being wintered indoors.
- Field operations are not permitted between 15 April and 30 June.
- Do not apply any organic or inorganic fertiliser or lime between 1 February and 30 June. When using farmyard manure, do not apply between 15 April and 30 June.
- On unimproved grassland sites nitrogen must not exceed 125kgN/ha. No fertiliser, slurry, farmyard manure or lime is permitted on rough moorland grazing sites.
- No cultivation, reseeding, reclamation, infilling, dumping or application of herbicide, pesticide, sheep dip, poultry litter or any other material is permitted on these sites.
- Installation of new drainage systems is not permitted.
- Supplementary feeding sites, between 15 April and 30 June, require the written permission from DARD and their location marked on the farm management map.

- Where a silage crop is taken from breeding wader sites, the fields must not be closed up until 1 July.
- Rush control must be carried out where rushes cover more than one third of the area. Rushes must be controlled by cutting between 15 July and 15 March, retaining 10% uncut. Herbicide control is not permitted. See Appendix 6 for further information on control of rushes. If ground Branch (CMB) for further advice\*. Contact details are in Appendix 9.
- The spread of scrub/trees must be controlled.
- New tree or hedge planting, or fencing on or next to breeding wader sites requires written permission from DARD.
- No poaching.

\*Prior written approval must be obtained from Countryside Management Branch if you wish to use any method of rush control other than cutting.

#### Further advice

From 1 July to 14 April there are no stocking density restrictions, but cattle should be grazed at some point during this period, if possible. Aim to create a medium sward less than 15cm (6 inches) with taller tussocks 30cm (12 inches) or above for nesting by mid April. Heavier grazing after 30 June is recommended to remove rank grasses and create a mixture of tussocks and open areas for next year's breeding season.

Cattle must be outside for at least one week before being put on to breeding wader fields.

Water levels in sheughs and drains should be maintained as close as possible to bank height during the period 1 March to 30 June to create soft ground if this is within the farmer's control.

Noxious weeds such as thistles and ragwort may be controlled by cutting between 15 July and 15 March or with herbicides, applied using a spot sprayer only.

Existing drainage systems can be maintained but not widened or extended.

Section 3 – Farm Habitats – Background Information And Management Requirements Page 43

conditions do not permit rush cutting contact Countryside Management



Page 44

#### (ii) Chough option

The chough option is available to farmers who farm within a targeted area along the north Antrim coastline of the Antrim Coast, Glens and Rathlin Environmentally Sensitive Area (ESA) on which the chough feed. An individual plan is drawn up for each field entered into the option. The most suitable option will be decided at the outset of the agreement and will be noted on the farm management map.

Aims: to maintain and enhance grassland and cliff slope habitat for feeding chough and thereby increase the numbers of nesting chough within the targeted chough area.

**Biodiversity objectives:** this option contributes to the Northern Ireland Biodiversity Action Plan targets for the chough and the Irish hare.

#### Management requirements

- Grassland entered into chough option see individual field management plans for management required.
- Grassland fields must be grazed to create a sward height of less than 5cm. This should be achieved through mixed grazing, grazing some fields all year through, topping of grass tussocks and by staggering silage cutting dates.
- Spreading scrub/trees, particularly gorse (whin), must be controlled.
- Rushes must be controlled by cutting from 15 July to 15 March only.
- Application of pesticides, herbicides, sheep dip or other material is not permitted.
- No poaching.

Other farm habitats - within the chough option area, fields identified as habitat (for example, species-rich grassland) or arable options (for example, winter stubble) will be classified as that habitat. Applicants will be paid for these options and receive the relevant management plans for these.

#### **Further advice**

Noxious weeds such as thistles and ragwort may be controlled with herbicides, applied using a weed wiper or spot sprayer.

#### 3. Wetlands

#### (i) Fen, swamp and reedbeds

Wetlands have a naturally high water table. They are usually flooded for part of the year and remain wet until at least the middle of June. Wetlands consist of fen, swamp and reedbed habitats.

Fens are peaty wetlands, which are so wet or waterlogged all year that they can only be occasionally grazed, and then late in the season. Fen vegetation consists of a mixture of sedges, mosses, rushes and flowering plants such as devil's-



bit scabious, marsh cinquefoil and orchids. Swamp and reedbed vegetation is dominated by common reed, bulrush, tall sedges or rushes. They are often found in shallow water around lakes and rivers. Reedbeds are periodically flooded, whereas the vegetation of a swamp is permanently flooded.

Aims: to provide suitable habitat for associated wetland wildlife by the implementation of appropriate agricultural practices.

## Plan targets for curlew, lapwing, blue-eyed grass, marsh fritillary butterfly, fens and reedbeds. Some Northern Ireland Priority Species such as Irish lady's

Section 3 – Farm Habitats – Background Information And Management Requirements Page 45

**Biodiversity objectives:** this option contributes to the Biodiversity Action tresses orchid, reed bunting and redshank will also benefit.

#### Management requirements

- No grazing is permitted from 1 January to 31 May.
- Between 1 June and 31 December the stocking density must not exceed 0.075LU/ha at any time.
- No cultivation, reclamation, infilling, dumping, fertilisation, drainage or application of slurry, farmyard manure, lime, herbicide, pesticide, sheep dip or any other material is permitted.
- Supplementary feeding sites, temporary silage clamps and the storage of big bale silage or hay are not permitted.
- The spread of scrub/trees must be controlled.
- Trees must not be planted on fen, swamp or reedbeds.

#### Further advice

Funding for alternative drinking sites, to reduce poaching and trampling damage, may be available under Capital Enhancement Works (Section 1, Figure 3). The annual payment includes an element for routine positive management such as scrub control (Appendix 4) and reed cutting each year.

Water levels in sheughs and open drains should be maintained as close as possible to bank height during the period 1 March and 15 June, to create soft ground, which improves feeding areas for snipe and curlew.

## 4. Moorland and raised bog

#### (i) Heather moorland -

#### Dry heath, wet heath, blanket bog and degraded heath

There are four types of heather moorland - dry heath, wet heath, blanket bog and degraded heath. All heather moorland types have at least 25% cover of heather and heath indicator species including western gorse, with the exception of degraded heath, which has between 5 and 25% cover.



Dry heath occurs on well-drained shallow peat less than 0.5 metres deep. The vegetation comprises heather, bell heather, bilberry, western gorse with tormentil and grasses.



Wet heath occurs on lower slopes too dry or steep for deep peat deposits normally under 200m. Peat depth is up to 0.5m. The vegetation comprises heather, cross-leaved heath, bilberry, deer grass, and purple moor grass with Sphagnum mosses.



Blanket bog occurs on deep peat deposits over 0.5m deep. The average depth of peat is 2m to 3m. It is formed on areas normally over 200m. Blanket bogs develop topography with numerous pools and raised hummocks, which are formed by Sphagnum mosses. Vegetation comprises heather, cross-leaved heath, cotton-grasses, deer-grass, crowberry, bog asphodel and sedges such as white-beaked sedge. Bog pools and margins support bog bean, sundews and bladderworts. Sphagnum mosses are very frequent. Black bog rush and purple moor grass are found on western blanket bogs at lower altitudes.

**Degraded heath** is principally formed as a result of overgrazing and/or peat extraction on moorland and can be classified as either degraded dry heath or wet heath. Heather plants will exhibit characteristic signs of overgrazing such as topiary, drumstick and distorted growth forms. Areas of bare or sparsely covered ground may be present. The vegetation will reflect the original category and will include heather, bell heather, cross-leaved heath, bilberry, cotton grasses and deer grass. Unpalatable grasses such as mat grass and purple moor-grass and rushes may dominate a high proportion of the sward.

Aim: to maintain and increase the extent of heather moorland in Northern Ireland through the implementation of appropriate grazing and agricultural practices.

**Biodiversity objectives**: heather moorland contributes to the Biodiversity Action Plan targets for the Irish hare, curlew, hen harrier, small cow wheat, blanket bog, upland heathland, and montane heath. Some Northern Ireland Priority Species such as red grouse, golden plover, few-flowered sedge and cloudberry will also benefit.

#### Management requirements

- No grazing from 1 November to 28/29 February on all heather moorland types. However, within the grazing period, the stocking density and length of grazing will vary depending on the heather moorland type and whether sheep or cattle are used (Table 1).
- No cultivation, fertilisation, liming, reclamation, mineral extraction, dumping, drainage or construction of new lanes is permitted.
- No application of slurry, farmyard manure, herbicides, pesticides, insecticides, sheep dip, fungicides, basic slag, sewage sludge, poultry litter or any other material is permitted.
- Existing drainage systems can be maintained but not widened, deepened or extended.
- Supplementary feeding sites, temporary silage clamps and storage areas for big bale silage or hay are not permitted on heather moorland.
- Peat cutting is limited to 0.1ha for domestic use. Mechanised peat cutting is not permitted.
- The spread of scrub/trees must be controlled.
- The removal of western gorse on dry heath is not permitted.
- New fencing is not permitted without the permission of DARD.
- Trees must not be planted on heather moorland.
- No poaching.
- Burning requires written permission from DARD and cannot be carried out from 15 April to 31 August.

#### Table 1: Heather moorland grazing

Heather moorland type	No grazing period	Stocking density and grazing animal	Grazing period
Dry heath	1 November to 28/29 February	0.30LU/ha sheep	1 March to 31 October
	or 1 September to 31 May	0.30LU/ha cattle	1 June to 31 August
Wet heath	1 November to 28/29 February	0.25LU/ha sheep	1 March to 31 October
	or 1 September to 31 May	0.20LU/ha cattle	1 June to 31 August
Blanket bog	1 November to 28/29 February	0.075LU/ha sheep only	1 March to 31 October
Degraded heath (dry)	1 November to 28/29 February	0.30LU/ha sheep and/or cattle	1 March to 31 October
Degraded heath (wet)	1 November to 28/29 February	0.25LU/ha sheep	1 March to 31 October
	or 1 September to 31 May	0.20LU/ha cattle	1 June to 31 August

#### Further advice

Where a mix of heather types occur within the same grazing unit, an average stocking density based on the ratio of different types will apply to the whole unit, where there is at least 20% of each type. Areas of common grazing will be eligible provided all graziers/shareholders agree to follow the relevant management requirements. The control of bracken and heather regeneration, by burning or flailing, may be funded through Specific Conservation Measures (Section 5). Existing drains may require infilling where DARD deems this necessary. Noxious weeds such as thistles and ragwort may be controlled with herbicides, applied using a weed wiper or spot sprayer. The annual payment includes an element for routine positive management such as scrub control (see Appendix 4).

#### (ii) Rough moorland grazing

Rough moorland grazing is widespread in the uplands and marginal hill land and is dominated by coarse grasses such as purple moor grass, matt grass, tufted hair grass, cotton grasses, wavy hair grass, heath rush, soft rush and sedges. Rough moorland grazing contains less than 25% heather cover and less than 25% ryegrasses, Timothy and white clover.

Aim: to maintain and enhance the conservation value of rough moorland grazing through the implementation of low level grazing and appropriate agricultural practices.

**Biodiversity objectives:** rough moorland grazing contributes to the Biodiversity Action Plan targets for Irish hare and curlew. The proposed Biodiversity Action Plans for purple moor grass and rush pastures, upland calcareous grassland and some Northern Ireland Priority Species such as the golden plover, hen harrier and marsh saxifrage will also benefit.

#### Management requirements

- Stocking rate restriction of 0.75LU per hectare all year.
- No cultivation, fertilisation, liming, reclamation, drainage, dumping or mineral extraction is permitted.

Page 48

Section 3 – Farm Habitats – Background Information And Management Requirements Page 49



- No application of slurry, farmyard manure, herbicides, insecticides, sheep dip, fungicides, sewage sludge, basic slag, poultry litter or any other material is permitted.
- Existing drainage systems can be maintained but not widened, deepened or extended.
- Supplementary feeding is permitted on rough moorland grazing. All feeding sites must be regularly moved to prevent trampling and overgrazing damage. Care must be taken to avoid damage by vehicles.
- Supplementary feeders or troughs should be placed on lanes or other hard areas within rough moorland grazing and at least 10m away from watercourses.
- Peat cutting is limited to 0.1ha for domestic use. Mechanised peat cutting is not permitted.
- New fencing is not permitted without the permission of DARD.
- Trees must not be planted on rough moorland grazing.
- The spread of scrub/trees must be controlled.
- No poaching.

#### Further advice on rough moorland grazing

The grazing regime and stocking density for rough moorland and heather moorland mosaics, if present, will be given on the farm management map. Where rough moorland grazing constitutes 50% or less of a grazing unit within a block of heather moorland, the stocking density for heather moorland applies to be whole unit. Where rough moorland constitutes more than 50% of a grazing unit, the stocking density for the whole unit will be an average of the heather moorland and rough grazing stocking densities at a ratio of 1:1 irrespective of the area of rough moorland grazing.

Areas of common grazing will be eligible provided all graziers/shareholders agree to follow the relevant management requirements. Existing drains may require infilling where DARD deems this necessary.

The annual payment includes an element for routine positive management such as scrub control (see Appendix 4). Noxious weeds such as thistles and ragwort may be controlled with herbicides, applied using a weed wiper or spot sprayer.

#### (iii) Lowland raised bog

Lowland raised bogs occur in low-lying areas where a dome of peat has accumulated high above the surrounding land. Formed on old lakebeds and waterlogged depressions, the depth of peat can exceed 13m. They support a wide range of plant species including common heather, cotton grasses, bog asphodel, sundew and bog mosses. A mixture of vegetation types such as fen/swamp, wet heath, woodland and semi-natural grassland can be found on lowland raised bogs. The presence and proportion of each type will be agreed at the outset of the agreement and will be noted on the farm management map. Most lowland raised bogs have been cut over for peat in the past.

Aim: to maintain and enhance the conservation value of lowland raised bog and the suitability of habitat for the associated wildlife through the implementation of appropriate grazing and scrub control management practices.

**Biodiversity objectives:** the option contributes to the Biodiversity Action Plan targets for lowland raised bog, curlew, marsh fritillary butterfly and Irish hare. Some Northern Ireland Priority Species such as the red grouse, the bordered grey moth, Irish damselfly and keeled skimmer dragonfly will also benefit.

#### **Management requirements**

- On cutover bogs grazing is not permitted from 1 November to 31 May inclusive.
- The stocking density for each lowland raised bog vegetation type is given in Table 2.
- No cultivation, dumping, fertilisation, liming, reclamation, drainage or mineral extraction is permitted.
- No application of slurry, farmyard manure herbicides, insecticides, sheep dip, fungicides, basic slag, sewage sludge, poultry manure or any other material is permitted.
- Supplementary feeding sites, temporary silage clamps and storage areas for big bale silage are not permitted.

Page 50

Section 3 – Farm Habitats – Background Information And Management Requirements Page 51



- Burning is not permitted at any time.
- Spreading shrubs/trees must be controlled by hand cutting and selective spraying of stumps using guidelines in Appendix 4.
- The area cannot be used by all terrain vehicles.
- Peat cutting is not permitted on areas of intact uncut lowland raised bog.
- Peat cutting on existing cut over bog is limited to 0.1ha for domestic use. Mechanised peat cutting is not permitted.
- Erection of new fences requires the permission of DARD.
- Trees must not be planted on lowland raised bog.

#### Table 2: Stocking density for lowland raised bog

Vegetation type	Stocking	Grazing period	Grazing period
	density	(sheep)	(cattle)
Fen/swamp	0.075LU/ha	1 June to 31 October	1 June to 31 August
Wet heath	0.25LU/ha	1 June to 31 October	1 June to 31 August
Semi natural grassland	1.0LU/ha	1 June to 31 October	1 June to 31 August
Woodland (greater than0.2ha)	0.20LU/ha	1 June to 31 October	1 June to 31 August
Woodland (less than 0.20ha)	0 LU/ha	1 June to 31 October	1 June to 31 August

#### **Further advice**

Temporary electric fencing may be needed to prevent cattle gaining access to the uncut bog. To minimise permanent fencing, sheep will normally be allowed access to the area of uncut bog (see Table 2). Areas of common grazing will be eligible provided that ALL graziers/shareholders agree to follow the relevant management requirements. Existing drains may require infilling where DARD deems this necessary. The annual payment includes an element for routine positive management such as scrub control (see Appendix 4).

#### 5. Woodland, scrub and parkland

#### (i) Woodland – mixed ash woodland, oak woodland and wet woodland

Woodlands are areas where the tree canopy covers at least 50% of the ground area. The canopy must contain at least 50% native broad-leaf or native conifer tree species. There are three types of woodland - mixed ash, oak and wet woodland.



Oak woodland is dominated by oak, but other tree species such as birch, rowan, holly, ash and hazel may be present. Typical oak woodland plants include bluebell, wood anemone, bramble, wood-rush, ferns and bracken with a large number of mosses and lichens likely to be present.

Tree species commonly found in wet woodland include alder, birch and willow. Ash, oak or other tree species can be found on drier areas within wet woodlands. Typical plants of wet woodland include lesser celandine, marsh marigold, marsh-bedstraw, opposite-leaved golden



Section 3 – Farm Habitats – Background Information And Management Requirements Page 53

Mixed ash woodland is usually dominated by ash, although oak, birch and hazel may be abundant. Other species found in mixed ash woodland include rowan, holly, sycamore or beech. Typical ash woodland plants include bluebell, wood anemone.

primrose and wild garlic.



saxifrage, heather, sedges, mosses and lichens. Plants, indicative of nutrient rich conditions, such as nettle, docks and grasses, may also be present.

There are two options for managing woodland – no grazing and light grazing. The 'no grazing' option is suitable for woodlands which have been subject to prolonged grazing, used for over-wintering of livestock and where there is little evidence of natural regeneration. The 'light grazing' option will only apply to woodlands which have been closed off to livestock for a considerable length of time, where saplings are present indicating successful natural regeneration and where there is a well developed shrub layer such as bramble, ivy, honeysuckle and other climbers. The most suitable grazing option will be agreed at the outset of the agreement and will be noted on the farm management map.

Aim: to maintain and enhance the conservation value of woodland habitat by encouraging natural regeneration of native species and increasing the diversity of woodland ground flora.

**Biodiversity objectives:** the woodland option contributes to the Northern Ireland Biodiversity Action Plan targets for wet woodland, mixed ash woodland, oak woodland, small cow wheat, wood cranesbill, yellow bird's-nest, one-sided wintergreen and red squirrel.

#### **Management requirements**

1. No grazing option - livestock must be excluded throughout the year. OR

2. Lightly grazed option - during the period 1 June to 30 September the stocking density must not exceed 0.50 LU/ha at any time. No grazing is permitted from 1 October to 31 May.

In addition to Option 1 or 2 for grazing, the following requirements must also be followed:

- Retain all deadwood. Individual windblown trees must be left where they lie. Living trees must not be cut down without the prior written consent of DARD.
- Retain important features, such as old vehicular tracks, natural open space and existing ponds. Brashings must not be burned.
- No cultivation, ploughing, fertilisation, drainage, infilling, dumping, burning or application of fertiliser, slurry, farmyard manure, lime, herbicide, pesticide, sheep dip or any other material is permitted.
- Supplementary feeding sites, temporary silage clamps and the storage of big bale silage or hay are not permitted.

- The spread of non-native species, for example rhododendron or laurel, must be controlled.
- Tree management must not be carried out between 1 March and 31 August.

#### Further advice

If lightly grazing woodland use mature cattle if possible. Where no cattle are available, sheep or horses may be used. The annual payment includes an element for routine positive management such as control of non-native species (see Appendix 4), keeping pathways open and an annual inspection to remove rubbish. Pathways can be kept open by cutting overhanging branches. Natural open space should be retained by hand cutting regenerating trees and shrubs. New fencing and installation of traditional wooden gates may be funded as Capital Enhancement Works (Section 1).

Important husbandry considerations when grazing woodland:

- Oak acorns poison cattle, sheep and horses when eaten in autumn and the young buds and leaves are poisonous when eaten in spring.
- All parts of the yew tree are poisonous. The poison is not reduced by wilting or drying, so clippings and fallen leaves are as toxic as the fresh plant. One mouthful may be enough to cause death.
- Hemlock is a tall flowering plant, similar to cow parsley, found along the margins of watercourses and in wet woodlands. It is poisonous to all livestock and humans.
- Rhododendron is extremely poisonous to livestock, particularly sheep and goats - as few as three leaves of the shrub may be fatal to sheep.
- Sheep and lambs are likely to get caught in briars, thorn scrub and holly the trees.
- Fluke may be a problem in wet woodlands.

#### (ii) Scrub

Scrub is an area dominated by at least 50% cover of shrubs, stunted trees or brambles. Scrub may be open, dense or impenetrable, and may contain hawthorn, blackthorn, gorse (whin), bramble, honeysuckle, dog rose, bushy willows (sally) or

Section 3 – Farm Habitats – Background Information And Management Requirements Page 55

bushes. If forage is limited sheep will strip the bark of trees. This may kill



stunted hazel with few or no mature trees present. Examples of scrub include blackthorn thickets, hawthorn scrub on steep slopes, willow scrub on wet ground, hazel scrub on rocky slopes or on open limestone, mixed species scrub on exposed sites and whin scrub on marginal grassland. Scrub is usually grazed in association with the surrounding grassland/habitat.

Aim: to maintain and enhance the conservation value of scrub habitat and features within it through appropriate management.

**Biodiversity objectives:** scrub contributes to the Northern Ireland Biodiversity Action Plan targets for yellowhammer and Irish hare.

#### Management requirements

- Scrub and features within it, such as open spaces and ponds, must be retained and managed with no burning or mechanised removal permitted.
- Within the scrub habitat, small areas (less than 0.1ha) must be cut by hand each year so that at least 50% of the field is capable of being grazed.
- Coppiced stumps must not be treated with herbicide, except where gorse or blackthorn is spreading on to adjoining land (see Appendix 4).
- Cut stems may be left on site to rot down, but must not be burnt on site.
- No cultivation, reclamation, infilling, dumping, drainage or application of fertiliser, slurry, farmyard manure, lime, herbicide, pesticide or sheep dip or any other material is permitted.
- Supplementary feeding sites, temporary silage clamps and the storage of big bale silage or hay are not permitted.
- Scrub management must not be carried out between 1 March and 31 August.

#### Further advice

The annual payment includes an element for routine positive management such as cutting back small areas of scrub in rotation to increase the diversity of scrub. Small quantities of cut gorse may be left on site to rot down. If gorse is cut in large quantities it may only be burnt off site on unimproved or improved grassland. When cutting other scrub species such as blackthorn, hazel or hawthorn the cut stems can be left in habitat piles on site. Noxious weeds such as thistles and ragwort may be controlled with herbicides, applied using a weed wiper or spot sprayer.

#### (iii) Parkland

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Parkland is a term used to describe areas of open grassland with widely spaced mature trees within an historic designed landscape. Eligible parkland must be (i) recorded on the Inventory of Historic Parkland Parks, Gardens and Demesnes (compiled by the Department of the Environment – Environment and Heritage Service); or (ii) show clear evidence on the ground of a designed landscape being (or having once been) present; or (iii) have historical or documentary for example, Ordnance Survey (OS) map, evidence for an historic designed landscape having been created on the site.

Aim: To maintain, enhance and replant areas of parkland through sensitive land management and a programme of replacement tree planting, thereby benefiting the local landscape and associated wildlife.

**Biodiversity objectives:** this option contributes to the Northern Ireland Biodiversity Action Plan targets for lowland wood-pasture and parkland.

#### **Management requirements**

- Reseeding, ploughing and drainage of existing parkland grassland is not permitted during the period of the agreement unless specifically agreed by DARD.
- Fertilisers, slurry, farmyard manure, sewage sludge, herbicides, lime, material, are not permitted within a 10m radius from the edge of the canopy of a parkland tree.
- Parkland must not be used for supplementary feeding sites or for the storage of round bale hay or silage.
- No alteration to, or removal of, existing landscape features (for example, gorse, scrub, bracken, field boundaries) is permitted without the prior written approval of DARD.
- All standard trees planted under the scheme must be staked and protected from grazing.
- No poaching.

Section 3 – Farm Habitats – Background Information And Management Requirements Page 57



insecticides, pesticides, sheep dip, fungicides, or application of any other

#### Further advice

Standard trees or whips may be used to establish replacement parkland trees. A farm specific restoration plan, (based on the original design of the historic landscape), will be drawn up by DARD and will include the tree species and number of trees to be planted.

Tree surgery may be necessary to prolong the life of some veteran parkland trees or for Health and Safety reasons, but this should be kept to the minimum (standing dead wood in veteran/old trees and branches is an important habitat for many insects and fungi).

Noxious weeds may be controlled within the 10m radius from the edge of the tree canopy but only applied using a weed wiper or spot sprayer.

#### **6.** Archaeological features



Raths are the most common field monument in the countryside

To date 15,500 historic monuments and archaeological features have been identified in Northern Ireland; all of these are unique and irreplaceable. If an archaeological feature is present, the area around it must be protected from damaging farming practices. This 'protection zone' will normally extend 10m immediately surrounding the feature, but in some cases this may be further - refer to the farm management plan for further information.

Aim: to protect and maintain sites which are vulnerable to farming practices by restricting damaging operations and implementing positive management such as scrub control, if required.

**Biodiversity objectives:** to protect and conserve archaeological features and any associated Priority Species.

#### Management requirements

- Cultivation, ploughing, reseeding, drainage, any ground disturbance or removal of any material is not permitted.
- Fertilisers, slurry, farmyard manure, sewage sludge, herbicides, lime, material, are not permitted.
- or the storage of any material such as round bale silage or hay.
- Dumping and burning is not permitted.
- New lanes or access routes are not permitted.
- No poaching within the protected area.
- Spreading scrub/trees must be controlled by hand cutting.

#### **Further advice**

Grazing is permitted within the protected area and grass cover must be maintained on and around the archaeological feature. Farm access tracks should, where possible, be re-routed away from archaeological sites. Dead, dying or unstable trees should be cut down before they fall. They should then be cut into pieces and removed from the site for disposal elsewhere. Large tree trunks must not be dragged along the ground in the protected area. Uprooted trees should be cut into pieces and removed from the site. The remaining root plate should then be replaced into the existing root depression. Further information on scrub control is given in Appendix 4.

Page 58

Section 3 – Farm Habitats – Background Information And Management Requirements Page 59

An Ogham stone

insecticides, pesticides, sheep dip, fungicides, or application of any other

• Archaeological features must not be used for supplementary feeding sites

Operation of tractors and other agricultural machinery is not permitted.

Eroded areas must be repaired by covering with soil and then reseeded.

Additional specific management requirements, which may be provided by the Environment and Heritage Service, Built Heritage, must be followed.

Page 60

#### **I. Field boundary restoration**

#### (i) Hedge regeneration and planting

Well-managed hedges provide food and shelter for wildlife, a barrier to livestock, help stop the spread of disease, provide shelter to livestock, are an important part of our landscape and define the boundaries of the farm. However many are in poor condition due to neglect, over-**Recently laid hedge** management or damage by livestock. A positive programme for hedge restoration and regeneration by laying, coppicing with interplanting in the gaps or hedge replanting offers the opportunity to improve the value of hedges. The length of hedge regeneration to be carried out each year is agreed at the time of the farm audit and will be noted on the farm management map.

Aim: to maintain the structure, landscape patterns and biodiversity of field boundaries in the countryside through the implementation of a five-year field boundary management plan through the regeneration and planting of mixed species native hedges.

Biodiversity objectives: the option contributes to the Northern Ireland Biodiversity Action Plan targets for ancient and/or species-rich hedgerows, the Irish hare and yellowhammer. Within Northern Ireland species-rich hedgerows are important for a number of UK Priority Species identified as part of the UK Biodiversity Action Plan programme. These include red squirrel, common



# Section 4 **Optional Habitats – Background Information and Management Requirements**

Section 4 outlines the management requirements for the optional habitats, which are voluntary. If chosen, the management requirements, highlighted in green must be followed.

If there are no farm habitats then at least one optional habitat must be undertaken.

> **Field boundary restoration** Grass margins Bird breeding, feeding and nesting sites Arable Traditional orchard restoration

Page 61



pipistrelle, soprano pipistrelle, reed bunting, spotted flycatcher, tree sparrow, bullfinch, song thrush and purple ramping fumitory. In addition a number of Priority Species will benefit. These include whitethroat, linnet and barn owl.

#### Management requirements

Page 62

- All hedge regeneration **must** follow the exact line and contours of the original field boundary. Existing earth/stone banks **must** never be removed to provide a site for a new hedge. Mechanical aids such as diggers or excavators **must** not be used to straighten, level or remove existing field boundaries or habitats.
- Newly planted or regenerated hedgerow species **must** be successfully established along the field boundary. Action **must** be taken to ensure plants are not grazed by livestock and/or rabbits and hares, or suffer from competition from weeds/grasses.
- All dead plants **must** be replaced at the end of the first year.
- When planting a new hedge a mixture of hedgerow species must be planted along the length of the hedgerow. Plant at least five native woody species throughout each 30 metre length of hedge, using a recommended mixture consisting of 75% hawthorn to 25% other species such as blackthorn, hazel, holly, dog rose, whin, beech, guelder rose and willow. Ensure that a mix of species is planted along the full length of the hedge.
- Single species hedges, for example, beech or hawthorn, are not acceptable. No ornamental species are acceptable for grant aid and these should never be planted in the open countryside.
- When planting a new hedge, a double, staggered row (Figure 6), must be planted with 250-300mm (10-12") between plants and 300mm (12") between rows. This works out at approximately eight plants per metre. A single row is acceptable if planting up short gaps (less than 2m) in an existing hedge, provided the plants are spaced at 15cm (6") apart. A double row should be planted where gaps are more than 2m.
- Hedgerow trees (in the form of whips) must be planted along the length of a newly planted hedge, placed about 10-15m apart, avoiding regular spacing of the trees.
- Grass and weeds must be controlled in a newly planted hedge (see below for details on different control methods).
- A newly regenerated/planted hedge must be protected from grazing livestock and rabbits. It is recommended that the fences should be at least 2m apart, each fence being 1m away from the centre of the hedge. Refer to Appendix 5 for further details on field boundary fencing.
- The stems of hedges suitable for coppicing must be cut down to about 15cm (6") above the ground along the full length of the hedge and any gaps replanted. A single row is acceptable if planting up short gaps (less

than 2m) in an existing hedge, provided the plants are spaced at 15cm (6") apart. A double row should be planted where gaps are more than two metres.

- The stems of hedges suitable for laying must be laid over along the full length of the hedge (see below for hedge laying details) and any gaps replanted. A single row is acceptable if planting up short gaps (less than 2m) in an existing hedge, provided the plants are spaced at 15cm (6") apart. A double row should be planted where gaps are more than 2m.
- Plant gaps in the coppiced/laid hedge with a mixture of species including hawthorn, holly, hazel, beech, blackthorn, guelder rose and dog rose. hedge, more than 50% of the new hedge plants should be species other than hawthorn. For longer gaps, follow the guidelines in the hedge planting section below. Include native trees at intervals of 10 -15m, avoiding regular spacing.

#### **Further advice**

When planting a new hedge never:

- Remove existing earth/stone bank;
- Plant a hedge where hedges did not previously exist;
- occasional shrub or tree;
- Plant a hedge along existing stone walls;
- Remove a stone wall and replace with a hedge.

Approval will not be given for fencing on the outer (road) side of restored field boundaries that run alongside public roads. Fencing will only be approved on the field side of such hedges. Approval must be sought from DRD Roads Service before new fences are erected alongside roadways. Replacement fences must follow the line of existing fences. Roads Service can be contacted on (028) 9054 0540.

Written consent must be obtained from Environment and Heritage Service (EHS), Department of Environment (DOE) before any works are carried out within an ASSI or along an ASSI boundary. It is the responsibility of the agreement holder to obtain this consent. The EHS contact telephone number for further information is (028) 9054 6595.

Page 63

When planting short gaps (less two metres) of a predominantly hawthorn

Plant a hedge in upland areas dominated by earth/sod banks with only an

#### Hedge laying

Page 64

- Hedge laying is best suited to hedges with stems around 5 -15cm in diameter and 2.5 - 3m high. However it is possible to lay thicker stems.
- All hedge laying must be carried out during the winter months (October to February), but not during periods of hard frost.
- If necessary face the hedge on both sides with a mechanical hedge trimmer or billhook/slasher. Leave the tops of the hawthorn bushy so that they will form an effective barrier when laid.
- Cut between half to three-quarters of the way through the main stems at 3-10cm (1-4") above ground level and lay over the stems at an angle of about 30 degrees, always working in the same direction. Always lay the stems uphill. Take care not to break the bark on the underside when laying the stems.
- Cut stems may be held in position using stakes as required. This helps to stabilise the hedge.

#### **Hedge coppicing**

- Hawthorn and blackthorn will readily produce shoots from cut stems. Hedges can be regenerated by cutting down to ground level (coppicing).
- Cut the hedge to within 10cm (4") of ground level. Cut at a slope to shed rain.
- Coppice in the dormant season, but not after 28/29 February.

#### Hedge planting

- Careful site preparation is essential. On grassy sites, spray off a one metre wide strip with glyphosate about four weeks before planting. Dig or cultivate a trench 300mm deep and 600mm wide. Alternatively, spray off a 1m wide strip with glyphosate, plough two furrows back to back and plant on the ridge that is formed. When planting on a bank, plant at the base of the bank to avoid the plants suffering from drought.
- Avoid planting on waterlogged or very exposed sites and always ensure the site has sufficient topsoil. Where a new hedge is to be planted on the site of an old hedge, add some well rotted farmyard manure into the bottom of the trench.
- Suitable hedgerow species include hawthorn, blackthorn, hazel, holly, gorse (whin), willow, beech and dog rose. Suitable tree species include

oak, rowan, whitebeam, birch, alder, willow, crab apple and wild cherry. Do not plant beech, horse chestnut, lime or sycamore as hedgerow trees these will shade out the hedge.

- Hedging plants should have a minimum root collar diameter (measured at the base of the stem) of 6 mm, a minimum height of 40-60cm with a cell grown.
- Plant hedges during periods of mild, dry weather between October and March. Avoid planting in very wet or frosty weather.
- Hedging plants will dry out and die very quickly if the roots are exposed to wind. If there is any delay between purchase and planting, bury the roots of the plants in moist soil. Never store the plants in water.
- When planting, work the soil in and around the roots carefully and firm staggered row with 250mm between plants and 300mm between rows (Figure 6).
- Prune newly planted hedge plants to 10 15cm (4" to 6") immediately after planting to encourage buds to break from the base and produce thick dense growth (except holly, beech or hedgerow trees).
- Plants grown from seed collected locally within Northern Ireland are better adapted to our climate and soil conditions.
- Hedges must be fenced off from livestock and rabbits. To ensure cattle cannot reach over and graze the hedge, it is recommended that a Appendix 5 for further details on field boundary fencing.
- Water thoroughly in prolonged periods of dry weather during the first summer after planting.

#### Figure 6: Hedge planting

Cultivated strip

Page 65

healthy fibrous root system. Hedging plants may be either bare-rooted or

the plants into the ground at the same depth as they were in the nursery (marked by a ring around the bark). Plants should be planted in a double

minimum width of 2m should be left between fence lines. Where rabbits or hares are a problem, rabbit-proof netting wire will be needed. Refer to



Page 66

#### Weed Control

Newly planted hedges will suffer severe damage or complete destruction if weeds are not properly controlled during the first few years after planting.

Weed control can be achieved using black polythene sheeting, mulches, residual herbicides or hand weeding. Of the three, polythene sheeting gives by far the most reliable results.

#### **Black polythene sheeting**

Where practical, the most satisfactory method of weed control is achieved by using 200-gauge black polythene sheeting. A one metre wide strip is ideal. It is best laid after planting thorn quicks and other species that can be coppiced, but before planting hedgerow trees and species such as holly and beech.

After planting at the recommended spacing, use secateurs to prune hawthorn, blackthorn, hazel, guelder rose and dog rose at 10 - 15cm above ground level. Cut at a steep angle, preferably a few millimetres above a bud.

Lay the polythene over the pruned stems and push downwards - the stems will pierce the polythene. Place some loose gravel here and there to hold the polythene in place until planting is completed.

Plant hedgerow trees plus holly and beech by making two short cuts in the polythene in the shape of an 'X' and folding back the flaps of polythene. Dig a suitable hole in the exposed soil, plant the tree whip or holly/beech and replace the flaps.

Finally cover the polythene completely with 30 - 40mm of loose gravel or other heavy inert material.

Polythene put in place in this manner will give good weed control provided weeds and particularly creeping grasses are not allowed to spread across the polythene from the sides. Sites should be closely inspected several times each year for the first three or four years and any weed problem dealt with immediately.

#### Mulches

Mulches help to conserve moisture and suppress annual weed growth. However they do not suppress perennial weeds such as thistles or docks and are thus ineffective where these weeds are a problem. An example of a suitable mulching material is bark chips.

Ideally, spray the area to be planted with glyphosate two to four weeks before planting. The sprayed area and the mulch must extend 300mm beyond the width of the hedge along both sides. Organic mulches must be 10-15cm (4-6") deep to prevent weed germination, but the mulch must not be allowed to smother the stems of the hedge plants. Apply the mulch as soon as possible after planting.

#### **Herbicides**

Herbicides approved for use along hedges are available in either liquid or granular form. Granular types are particularly easy to apply, there is no risk of drift and spray equipment is not needed. Liquid herbicides can be applied using a knapsack sprayer. Herbicides suitable for use in hedges include:

**Propyzamide** - Available in granular or liquid form as 'Kerb'. It is only effective in cold weather and should be applied before the end of December in lowland and the end of January in upland areas. 'Kerb' is the only herbicide recommended for use in the first year after planting. It should not be used more than once in any nine month period.

Glyphosate - Weeds must be actively growing with adequate green leaf area for effective control. Always use a guard fitted to the sprayer. Extreme caution must be used to ensure spray drift does not make contact with the leaves of the hedge.

Dichlobenil - in the granular form, known as 'Casoron G', may be applied from November to March to control weeds such as grass, docks, nettle, bracken and thistle. Casoron G should only be applied to hedgerows, which have been established for two years or more.

Always read the label carefully before using any of these herbicides and follow manufacturer's instructions.

#### (ii) Restoration of dry stone walls

Page 68

Dry stone walls are an important component of the landscape. While many dry stone walls have been well maintained and remain effective stockproof barriers, others are now in need of rebuilding.

**Aim:** to maintain the structure, landscape patterns and biodiversity of field boundaries in the countryside through the implementation of a five year field boundary management plan through the restoration of dry stone walls.

# Building a dry stone wall

#### **Management requirements**

- The removal of dry stone walls is not permitted unless approved in writing by DARD.
- All stone wall restoration must follow the exact line and contours of the original field boundary.
- Dry stone walls must be built in accordance with the best standards, traditions and designs of the district and to a standard judged acceptable by DARD.
- Rebuilt walls must not exceed the traditional height for such features in the locality (unless the agreement of DARD is obtained in writing). Wall height must not exceed 1.5m (5 feet) measured from ground level.
- Land reclamation to obtain stone is not permitted.
- Stones used for restoring dry stone walls must be sourced from within the farm.
- Fencing along or on top of stone walls may be permitted to help maintain the restored wall.

#### **Further advice**

Small gaps in dry stone walls should be repaired as soon as they develop.

#### (iii) Reinstatement of sod banks

Earthen banks or sod banks, as they are locally known, form the basis of boundaries mainly on the higher areas of Northern Ireland where hedgerows could not grow. These banks now often contain an interesting vegetation, and on some farms, they may be the only surviving areas of semi-natural grasslands. The banks generally contain a core of stones cleared from the land with a covering layer of sod derived from the adjacent ditch. The ratio of sod to stone and construction techniques vary, but when reinstating banks they should be constructed as per a cross section of the existing sod bank, using both stone and sod from the immediate area (Figure 7). New sod banks are not eligible for grant.

In most cases the core of the bank will be made of local stone, then a layer of sod lifted from the associated ditch should be placed over the stone to give a similar shape as the existing bank allowing some leeway for shrinkage. Cattle or sheep may need to be excluded from the area using an electric fence until the sods have knitted together.

Aim: to maintain the structure, landscape patterns and biodiversity of field boundaries in the countryside through the implementation of a five year field boundary management plan through the reinstatement of sod banks.

#### **Management requirements**

- The removal of sod banks is not permitted unless approved in writing by DARD.
- original field boundary.
- judged acceptable by DARD.
- features in the locality.
- Land reclamation to obtain stone is not permitted.

#### Figure 7:

Cross-section of a traditional earthen bank

Page 69

All sod bank reinstatement must follow the exact line and contours of the

• Sod banks must be built in accordance with the best standards, traditions and designs of the district, based on the diagram below, and to a standard

Reinstated sod banks must not exceed the traditional height for such

Stones from the surrounding fields make up the bank, followed by a layer of soil, and the sods are placed on the constructed bank with grass side up.

#### 2. Grass margins

Page 70

#### (i) Ungrazed grass margins

An ungrazed grass margin is a strip of land, a minimum width of 2m, from which livestock are excluded. A margin can extend from the edge of : a) a hedge, stone wall, woodland, designated Area of Special Scientific Interest



or to provide a corridor between two existing wildlife areas OR (b) from the edge of a watercourse, which can be either a lake, river or stream, but must be at least 1m in width and have running water for the greater part of the year.

Margins alongside stone wall or hedgerow field boundaries may be up to a maximum of 6m wide; stone walls or hedges must either not require restoration, or, if they

require restoration, they must be entered under the field boundary restoration option.

All other ungrazed grass margins, alongside watercourses more than 1m wide, woodlands or ASSI, may be up to a maximum of 25m wide. No more than 1ha or 5% of the total grass area (whichever is greater) may be entered as ungrazed grass margin. Total grass area is unimproved grassland plus improved grassland, excluding land used for arable crops or arable options. The minimum area is 0.01 ha in any one field.

Aim: to provide additional habitat and food source for a range of farmland birds and mammals, and to reduce nutrient runoff from farmland if they extend from the edge of a watercourse.

**Biodiversity objectives:** this option contributes to the Northern Ireland Biodiversity Action plan targets for the Irish hare. The Northern Ireland Priority Species - linnet, tree sparrow, barn owl, bats and invertebrates will also benefit.

#### **Management requirements**

• Margins must be created on improved/arable land or unimproved grassland only.

- Margins must have a minimum width of 2m and a maximum width of 25m.
- Grass on ungrazed grass margins must be cut and removed once in three years, cutting to take place after 15 July.
- If cutting/mowing, the cut vegetation should be disposed of in a manner which does not harm the environment.
- The margin must not be grazed.
- Margins are permanent and must be retained in the same field(s) for the duration of the scheme agreement.
- No cultivation, fertilisation, liming, ploughing, reseeding, cutting silage and/or hay, or application of herbicides, pesticides or any other material is permitted.
- The area must not be used for regular access, supplementary feeding sites or for the storage of round bale hay or silage.
- It is possible to combine the field boundary restoration of hedgerows with an ungrazed grass margin.

#### **Further advice**

Margins should not be situated on habitat such as grassland with wild flowers, heather moorland or woodland. Noxious weeds such as thistles and ragwort may be controlled with herbicides, applied using a weed wiper or spot sprayer. Margin fences and positioning of gates for access should be sited to permit grass management.

Written consent must be obtained from Environment and Heritage Service (EHS), Department of Environment (DOE) before any works are carried out within an ASSI or along an ASSI boundary. It is the responsibility of the agreement holder to obtain this consent. The EHS contact telephone number for further information is (028) 9054 6595.

#### (ii) Ungrazed grass margins planted with native trees

An ungrazed grass margin planted with native trees is a strip of land, a minimum width of 2m, which is ungrazed and planted with native broad-leaf trees and shrubs. There are two options for creating ungrazed grass margins planted with native broad-leaf trees. Firstly, they can extend from the edge of a hedge, stone wall, woodland, designated Area of Special Scientific Interest or they can be planted in a field corner, on a steep slope, or to provide a corridor

Section 4 – Optional Habitats – Background and Management Requirements

Field corner planted trees

Page 72

between two existing wildlife areas. Secondly, they can extend from the edge of a watercourse. The watercourse beside the margin can be either a lake, river or stream, but must be at least one metre in width and have running water at all times.

Aims: to increase the area of new native broad-leaf woodland, provide

wildlife corridors and areas free from disturbance for a range of wildlife and contribute to the landscape character of the countryside.

**Biodiversity objectives:** to contribute to the Northern Ireland Biodiversity Action Plan targets for the Irish hare. The Northern Ireland Priority Species - tree sparrow, the barn owl, bats and invertebrates - will also benefit.

#### Management requirements

- Margins must be created on improved/arable land or unimproved grassland only.
- The minimum width of the planted area must be 2m and each area planted must be 0.2 hectares or less. The maximum area that can be planted on each farm is 1 hectare, or 5% of the eligible area, whichever is the least.
- The margin must not be grazed.
- Sites planted with trees are permanent and must be retained in the same field(s) for the duration of the scheme agreement.
- 90% of the trees/shrubs planted must be native broad-leaved/conifer species (see Table 3 for suitable species).
- The planted area must include 30% shrub species.
- Plant at least five different species of native broad-leaved/conifer trees or shrubs in any one place.
- Plant larger trees, such as oak, at 3m apart. Smaller trees such as birch, willow and alder must be spaced 2m apart and low growing shrubs 1m apart.
- Trees must be staked and guards erected (except on beech and holly). Guards should be removed when the trees are well established.

- Ornamental species such as Castlewellan gold and Leylandii must not be planted.
- Dead trees must be replaced. Care must be taken to ensure successful the newly planted trees for 2-3 years (see Further advice ).
- No cultivation, reclamation, infilling, dumping, fertilisation, drainage or application of lime, herbicide, pesticide, sheep dip or other material is permitted.
- The area must not be used for regular access, supplementary feeding sites, or for the storage of big bale hay or silage.

#### Further advice

Trees should not be planted on any habitat, above the natural tree line, near roadsides, at lane and road junctions where the line of vision could be obstructed, within 10m from overhead power lines, close to buildings or where they will interfere with future farm development.

The area to be planted should contain 70% tree species such as ash, oak, birch, alder, Scots pine, wild cherry and crab apple and 30% shrubs such as hazel, holly, guelder rose, blackthorn, hawthorn, gorse (whin), dog rose and willow.

Prior to planting grass sites, spot spray patches, one metre in diameter, with glyphosate 3-4 weeks before planting. Plant individual trees in the centre of these areas, taking care to firm the soil around the tree. Guards should be used for all broad-leaved species with the exception of beech and low growing shrubs. Plant trees between early November and mid-March, but not when the soil is frozen or waterlogged. To avoid the risk of fireblight, only buy planting material known to be from either a fireblight free zone or an officially designated buffer zone. Native stock will be better adapted to our climatic conditions.

Bare-rooted feathered 'whips' or cell grown plants should be planted and have advantages over larger 'standards'. When planting care should be taken so that the bare roots do not dry out. Keep the whips in a bag or in loose soil until you are ready to plant.

Table 3 gives a guide to selecting tree species for a range of sites. Take into account soil type, drainage, exposure and look at the trees growing in the surrounding location.

Page 73

establishment of the trees. This will require control of weeds/grass around

Page 74

Table 3: Suite	able tree s	species for	planting
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Site	Suitable Species	Comments
	Alder	Stabilises stream banks
	Birch	Intolerant of shade
Wet sites	Willow	Grows from cuttings
	Guelder rose	
	Crab apple	Unsuitable for shade
Dry sites	Oak	Excellent for wildlife
Dry sites	Scots pine	Native conifer
Exposed sites	Birch	Suitable for poorly drained peat
Exposed sites	Rowan	Tolerates thin, acid soils
Louised sites	Scots pine Birch Rowan Wild cherry Crab apple	
Lowland sites	Blackthorn Hawthorn	Low growing shrubs provide shelter
Coastal sites	Hazel Whin Blackthorn	All are good for steep banks
Winter shelter for wildlife	Scots pine Holly Gorse (whin)	All retain leaves/needles over winter
Red squirrel areas	Scots pine Hawthorn Birch Rowan Ash Willow Alder Guelder rose Dog rose	All are small seeded trees and shrubs
Upland sites	Rowan Birch Blackthorn	All are hardy species
Screening	Birch Rowan Scots pine Hawthorn	
buildings	Hazel	Include shrub species

For successful planting follow these guidelines.

- Keep the tree roots moist at all times.
- Make the planting holes big enough for the roots. Excessively long roots may be trimmed prior to planting.
- Plant trees at the same depth at which they were growing in the nursery, shown by a lighter soil mark on the stem close to the roots.
- Plant trees with the stems upright.
- Firm the soil around the plants by treading it well with your heel.
- in the ground where the tree is to be planted.
- On wet sites planting on mounds or ridges will give the tree extra height above the wet soil and is useful on poorly drained soils. However there is the danger of the mound drying out thereby putting the tree at risk. Mounds have the added advantage that they may reduce weed competition in the first year.
- or deep subsoiling may be necessary.
- Do not plant in straight rows.
- Plant trees/shrubs at a spacing of 1m-3m. This will provide quick canopy closure. See Table 4 for the approximate number of trees to plant in an area.

#### Table 4: Number of trees to plant in an area

Spacing (metres)	Approximate trees/ shrubs per hectare	Approximate trees/ shrubs per 0.2ha
3	1,111	220
2.5	1,600	320
2	2,500	500
1.5	4,400	880
1	10,000	2000

Weeds and grass should be controlled, in an area of about 1m diameter, around the trees for 2-3 years after planting by hand weeding, polythene, squares cut from old silo covers or old carpet, or using a 10-15cm mulch such

Page 75

On normal soils dig holes/pits for planting or cut an L- or T-shaped notch

• The soil in compacted areas should be loosened prior to planting. Ripping

as bark or lawn clippings or with herbicides approved for use on young trees. Mowing or scything grass around the trees is not recommended as it will stimulate grass growth.

If using herbicides such as glyphosate or paraquat, extreme care must be taken not to allow the spray on to leaves. Propyzamide, in a liquid or granular form known as 'Kerb' is effective if applied before winter/spring frosts but it cannot be used more than once in a nine-month period. Dichlobenil, in the granular form, known as 'Casoron G', may be applied from November to March to control weeds such as grass, docks, nettle, bracken and thistle. Casoron G should not be applied to trees which have not been established for two years or more. Always read the product label carefully and follow the manufacturer's instructions and use the appropriate protective clothing. Further advice on how to plant trees and on weed control can be obtained from the on-line Countryside Management publication 'Trees' available at www.ruralni.gov.uk. Noxious weeds such as thistles and ragwort may be controlled with herbicides, applied using a weed wiper or spot sprayer.

#### 3. Bird breeding, feeding and nesting sites



#### (i) Lapwing breeding sites

Lapwing (or peewit) sites are fields of improved or unimproved grassland with at least one breeding pair of lapwing. These sites are likely to be prone to winter flooding or will occur next to areas of wet grassland. Lapwing will nest on sites with a low, closely grazed sward in early spring and where there is damp ground for adults and chicks to feed. Sites with nesting lapwing and other breeding waders (curlew, snipe, redshank) will be classed as breeding wader sites.

Aim: this option aims to maintain and increase the breeding success of lapwing nesting on improved and unimproved grassland by providing suitable breeding, nesting and feeding conditions through the implementation of a positive grazing regime.

Biodiversity objectives: this option contributes to the proposed Northern Ireland Biodiversity Action Plan targets for lapwing.

#### **Management requirements**

- Graze during the winter or early spring to produce a short sward 3cm (1 inch) by mid March.
- From 1 April to 15 June stocking density must not exceed 0.75LU/ha to produce a sward height of between 3 and 12cm (1 and 5").
- If taking a silage crop from lapwing sites, the fields must not be closed up until 1 July.
- Cattle must not be released directly on to lapwing sites after being wintered indoors. Cattle must be outside for at least one week before being put on to lapwing breeding sites.
- Field operations are not permitted between 1 April and 30 June.
- Do not apply any organic or inorganic fertiliser or lime between 1 February and 30 June. When using farmyard manure, do not apply between 1 April and 30 June.
- of the area. Rushes must be controlled by cutting between 15 July and 15 March retaining 10% uncut. Herbicide control is not permitted. See Appendix 6 for further information on the control of rushes. If ground Branch for further advice\*.
- is permitted.
- Installation of new drainage systems is not permitted.
- their location should be marked on the scheme management map.
- The spread of scrub/trees must be controlled.
- New tree or hedge planting, or fencing on or next to breeding sites, requires written permission from DARD's Countryside Management Branch (see Annexe 9 for contact details).
- No poaching.

\*Prior written approval must be obtained from DARD if you wish to use any method of rush control other than cutting.

Section 4 – Optional Habitats – Background and Management Requirements

Page 77

Rush control must be carried out where rushes cover more than one third conditions do not permit rush cutting contact Countryside Management

No cultivation, reseeding, reclamation, infilling, dumping, drainage or application of lime, herbicide, pesticide, sheep dip or any other material

Supplementary feeding sites require the written permission of DARD and

#### **Further advice**

Page 78

Water levels in sheughs and drains should be maintained as close as possible to bank height during the period 1 March to 30 June to create damp ground if this is within the farmer's control.

Noxious weeds such as thistles and ragwort may be controlled by cutting between 15 July and 15 March or with herbicides, applied using a spot sprayer only.

Existing drainage systems can be maintained but not widened, deepened or extended.

#### (ii) Winter feeding sites for swans and geese

Winter feeding sites for swans and geese are fields of improved grassland, winter cereals or winter oilseed rape that are regularly used for grazing, by a minimum of 25 migratory swans and/or geese per hectare, during the period October to March. Only migratory swans and geese (whooper swans, Bewick's swans, Greenland white-fronted geese, pale-bellied Brent geese and migratory greylag geese) can be included in the count.





Aims: to safeguard and enhance the suitability of wintering swan and geese feeding sites through appropriate agricultural practices.

Biodiversity objectives: this option will contribute to the Northern Ireland Biodiversity Action Plan for the pale-bellied Brent goose.

#### **Management requirements** Improved grassland sites

- No grazing is permitted from 1 October to 31 March there are no grazing restrictions from 1 April to 30 September.
- Sward height must be between 5cm and 10cm by 1 October each year.
- Pesticides cannot be applied between 1 October and 31 March.
- Slurry, farmyard manure, lime or other organic manure must not be applied between 15 September and 31 March.
- No poaching.

#### Winter cereals/oilseed rape sites

- Winter cereal or oilseed rape must be established in autumn by normal cultivation practices.
- Cultivation and sowing of winter cereals and winter oilseed rape must be completed before 1 October. In exceptional weather conditions exceptions will require the written approval of DARD.
- Pesticides (with the exception of Barley Yellow Dwarf Virus insecticides and residual herbicides) and growth promoters must not be applied between sowing the autumn crop and 31 March.

#### All sites

- Cultivations, ploughing, rolling, drainage or reseeding is not permitted between 1 October to 31 March.
- The use of bird scarers or other equipment to disturb feeding swans and geese is not permitted between 1 October and 31 March.
- New tree or hedge planting and fencing are only permitted with the written permission of DARD.

#### **Further advice**

If grassland has suffered extensive poaching and grazing damage caused by grazing swans/geese, the damaged area may be re-seeded after 31 March.

Slug pellets may be applied to winter cereals and winter oilseed rape sites only with prior written permission from DARD.

#### 4. Arable

#### (i) Retention of winter stubble

Stubbles of cereals or oilseed rape are eligible where straw is removed as soon as practicable after harvest and the stubble retained until 15 February the following year.



Aim: to increase the diversity of habitats and species within farming systems. The option is designed to benefit farmland birds that feed on grain, left behind after harvest, and weed seeds. Weeds of arable land, many of which have declined over recent decades, should also benefit.

**Biodiversity objectives:** this option contributes to the Northern Ireland Biodiversity Action Plan targets for the Irish hare, chough and yellowhammer. The proposed Northern Ireland Biodiversity Action Plans for cereal field margins and the Northern Ireland Priority Species skylark, linnet and twite, will also benefit.

#### **Management requirements**

- Must not be sited on land used to fulfil set-aside requirements.
- Stubble must be retained until 15 February after harvesting.
- The crop must not be undersown with a grass or grass/legume mixture.

- Straw must be removed after harvest.
- Pre- and post-harvest application of non-selective herbicides such as glyphosate is prohibited.
- Pesticides, fertiliser, slurry, farmyard manure, sewage sludge, lime or other February.
- Straw or stubble must not be burnt.
- The area entered for retention of winter stubble must be present each year.

#### **Further advice**

Provided the minimum area is maintained each year this option can move from field to field within the normal crop rotation. The straw may be baled before removal. The stubble may be lightly grazed and supplementary feeding sites established, provided there is no poaching. Retention of winter stubbles option may be carried out on whole crop silage.

#### (ii) Conservation cereal

Conservation cereals are cereals on which the use of pesticides is restricted with the aim of allowing a greater range of broad-leaved weeds in the crop. They are established as a whole field or as a field margin.

Aim: to increase the diversity of habitats and species within farming systems. The option is designed to benefit weeds of arable land, many of which have declined over recent decades, invertebrates and farmland birds that feed on invertebrates and weed seeds.

**Biodiversity objectives:** this option contributes to the Northern Ireland Biodiversity Action Plan targets for the Irish hare, chough and yellowhammer. The Northern Ireland Priority Species - twite, skylark, reed bunting, tree sparrow and linnet - will also benefit.

Page 81

materials must not be applied to stubble from harvest to the following 15



Knotgrass, chickweed and red dead-nettle growing in a conservation cereal

#### **Management requirements**

- Must not be sited on land used to fulfil set-aside requirements.
- Conservation cereal must not be harvested as whole crop silage.
- Conservation cereal must not be undersown with grass and/or grass/ legume mixture.
- Herbicides must not be applied to the growing crop, except for:
  - approved wild oat herbicides (but those, such as isoproturon, that also control broad-leaved weeds must not be used);
  - approved herbicides containing amidosulfuron as the sole active ingredient which are permitted for control of cleavers;
- Spray application records must be kept if using these products.
- Application of molluscicides or nematicides is not permitted.
- Insecticides must not be applied after 15 March.
- Remove straw after harvest. Burning of straw/stubbles is not permitted
- Where grown as a margin, the option must be established as a margin, between 6 and 12 metres wide, alongside field edges. The minimum length of conservation cereal margins per field is shown in Table 5.

#### Table 5: Minimum length of conservation cereal margins per field

Field size (ha)	Minimum percentage of field perimeter as conservation cereal margins
0-5.99	50%
6-10	67%
More than 10	100%

#### **Further advice**

If lapwing normally nest in your fields, establish the crop preferably before 20 April, and complete all establishment operations within ten days. This should allow lapwing to nest successfully.

Conservation cereal may be established as a margin of between 6 and 12 metres wide or as the whole field on winter or spring cereals. Whole fields on which the conservation cereal option is used may also qualify for payment

through the Retention of Winter Stubble option. Provided the minimum area is maintained this option can move from field to field within the normal arable rotation. Fungicides and plant growth regulators may be applied to the growing crop.

#### (iii) Wild bird cover

Wild bird cover is a spring sown crop mixture, sown on improved or arable ground, which is left unharvested to provide food for farmland birds.

Aim: to provide food, primarily during winter, in the form of crop and weed seeds for farmland birds. Wild bird cover will also provide summer food for chicks and adult birds in the form of weed seeds and invertebrates. Arable weeds, many of which have declined in recent decades, and invertebrates are also likely to benefit from this option.

**Biodiversity objectives:** the option contributes to the Northern Ireland Biodiversity Action Plan targets for the Irish hare, chough and yellowhammer. The Northern Ireland Priority Species skylark, reed bunting, linnet and tree sparrow will also benefit.

#### **Management requirements**

- Must not be sited on land used to fulfil set-aside requirements.
- Wild bird cover must be sown on improved or arable ground only.
- exceed 2ha.
- cover, with a maximum of 8ha in one agreement.
- cover, with an option to increase the area after two years up to 10% of the farm, with a maximum of 8ha in one agreement.

Page 83

A wild bird cover crop of cereals and linseed sited next to a hedge can provide a valuable winter feeding habitat for a range of farmland birds

Individual plots must be at least 0.20ha, with a minimum width of 6m. Total area of wild bird cover in a single field or in adjacent fields must not

On arable cropping farms with machinery for cultivating and sowing, or where wild bird cover has been grown successfully in the past two years, up to 2ha or 10% of the farm (whichever is the greater) may be wild bird

On other farms a maximum of 2ha may be initially entered as wild bird

- If more than 2ha of wild bird cover is to be grown, then plots must be split up over the farm.
- Under-sowing is not permitted.

Page 84

- Sow seed between 1 March and 31 May.
- Two-year mixes must contain kale and at least one from the following: quinoa, spring barley, spring oats, spring wheat, spring triticale and linseed.
- One-year mixes must contain a spring cereal (oats, barley, triticale) and one from the following: quinoa, oilseed rape, linseed and mustard.
- Wild bird cover must be retained from establishment to 1 March the following year.
- No cultivations are permitted from establishment to 1 March the following year.
- Glyphosate and fertiliser can be applied during establishment but pesticides must not be applied to the growing crop.
- Grazing is not permitted except between 1 March and establishment.
- Siting of supplementary feeding sites, drinking troughs, temporary silage clamps and storage of big bale hay or silage is not permitted.
- Crops that fail to establish successfully or, in the case of two-year mixes, that have a very low kale population in the spring following establishment, must be re-sown.
- The area should not be used for access, turning or storage.

#### **Further advice**

#### Location

Wild bird cover should be sited next to thick hedges where possible. If there are no hedges, sites should be preferably next to woodland or scrub. Plots of around one hectare are most beneficial, as they hold seed for longer into the winter. Plots may be kept in the same place or rotated.

Avoid using mixtures containing brassicas near commercial orchards or beehives.

#### **Establishment**

Good establishment is critical to the success of wild bird cover. Soil testing should be carried out and lime applied where necessary. The optimum pH for most crops is 6.5 but some crops (oats, linseed, triticale) can tolerate more acid soils. Glyphosate may be used before cultivation to control grass weeds, especially where wild bird cover follows permanent grassland or stubbles containing couch grass (scutch grass). The sterile seedbed technique to control broad-leaved weeds is recommended, as herbicide application is not permitted after sowing. Low weed levels, provided they do not prevent crop establishment, are beneficial. Weeds such as redshank and fat hen attract insects, which birds use for feeding chicks, and also provide an important seed source. Inorganic fertilisers and organic manures may be applied to the seedbed in accordance with crop requirements. Two-thirds of normal rates should suffice as the aim is to create a more open crop which increases access to fallen seeds for birds.

#### Sowing wild bird cover

Sow between 1 March and 31 May. Drilling is the preferred sowing method as seeds are placed at the correct depth. However if a drill is not suitable or available acceptable results can still be achieved, with care, by broadcasting.

Surface sown seeds are at risk of being eaten by birds and rodents while deeply sown seeds may have insufficient energy reserves for successful emergence of seedlings. Small seeds require shallower sowing than larger seeds.

Careful seedbed preparation helps control sowing depth and ensures good seed/soil contact. In fluffy, unconsolidated seedbeds rolling prior to sowing can reduce the risk of deep planting.

A seed drill is best suited to sowing mixtures where the seed is of a similar size, for example, kale and guinoa. Seed may be mixed in the drill if it is not already pre-mixed.

The following methods can be used where the mixture comprises seed of different sizes (for example, cereals and brassicas): drilling one component and broadcasting the next or

- drilling one component and over-drilling or
- cross drilling the next.

All ingredients should be sown on the same day in case poor weather delays sowing of the remaining ingredients.

Page 86

Where seed is broadcast, harrowing after sowing can help to cover seed, but care should be taken to avoid burying small seeds too deeply. Rolling after broadcasting can help ensure good seed/soil contact, and may be all that is needed after broadcasting small seeds. A fertiliser spreader can be used to broadcast the seed if it is mixed with a bulking agent such as fertiliser or sand. If broadcasting, increase seed rates by between one third (for smaller seeds) and a half (for larger seeds).

#### **Re-establishing wild bird cover**

Use a flail type topper or conventional topper to pulverise stems and clear brash before ploughing. If carried out by early March removing the vegetation will allow birds access to fallen seed and may also allow the use of the stale seedbed technique for weed control.

#### Wild bird cover mixes

Wild bird cover can be made up of a mix that is sown every year or a mix that is sown every other year. Recommended seed rates are lower than those for commercial crop production as a more open crop increases access to fallen seeds and weeds for birds.

One-year mixes must contain a spring cereal (oats, barley, wheat, triticale) and at least one from the following: quinoa, oilseed rape\*, linseed, mustard\*. An example of a one-year mix is oats and linseed. This mix is a good option on heavier, acid soils. Note that these rates are for drilled seed, increase seed rate by one third to a half if broadcasting.

Oats and linseed: 60 kg/ha of oats and 25 kg/ha of linseed

\*Do not include brassicas (oilseed rape, mustard etc.) if using the one-year mix as a break crop between kale mixes.

Two-year mixes must contain kale and at least one from the following: quinoa, barley, oats, wheat, triticale, and linseed. Kale must be included because it is the only crop that seeds in the second year. The other component of the mix provides seed in the first year. Examples of two-year mixes are given below. Note that these rates are for drilled seed, increase seed rate by one third to a half if broadcasting:

- Kale and quinoa: 2.5 kg/ha of kale and 5 kg/ha of quinoa
- Kale and cereal (oats, barley, wheat, triticale): 2.5 kg/ha of kale and 60 kg/ha of cereal

Crops for wild bird cover mixes can be purchased as straights or as a branded mixture. In branded mixtures it is important that at least two of the species in any mixture are suitable for Northern Ireland growing conditions. The following crop species are discouraged: sunflowers, red clover, peas, maize, buckwheat, millet, sorghum, artichokes, canary grass, beans and fodder beet. These either do not reliably set seed in Northern Ireland or do not provide the right type of seed for farmland birds.

#### Making up mixes from straights

The sowing rates in Table 6 can be used when making up mixes. For example, for mixes with two crop types the sowing rate should be halved, if three crop types are sown each one should be sown at a third of the usual rate. However, use at least 2.5 kg/ha kale in two-year mixes, as kale will be the sole seed source in year two. Rates are lower than commercial crop rates to create a more open crop.

#### Table 6: Sowing rates for wild bird cover crops

Species	Sowing rate * kg/ha (kg/acre)	Optimum pH range	Sowing depth (cm)
Kale	5.0 (2)	6.5 - 7.0	1 – 1.5
Oilseed rape	7.5 (3)	6.0 - 6.5	1 – 1.5
Mustard	12 (5)	6.0 - 6.5	1 – 1.5
Quinoa	10 (4.5)	6.0 - 6.5	2 - 3
Spring Triticale	125 (50)	5.5 - 6.5	2 - 3
Spring Oats	125 (50)	5.5 - 6.5	2 - 3
Spring Barley	125 (50)	6.0 - 6.5	2 - 3
Spring Wheat	125(50)	6.0 - 6.5	2 - 3
Spring Linseed	60 (25)	5.5 - 6.5	2 - 3

\* Sowing rate given for drilled seed. Increase seed rate by one third to a half if broadcasting.

#### Advantages/disadvantages of different crop types

Kale attracts a wide variety of birds but requires a pH of over 6.5 and is prone to club root if sown too frequently in the same place. If planting, check soil pH, and leave a gap of three years between kale crops to prevent club root. The kale

variety "Caledonian" offers greater resistance to club root where brassicas are grown more often than one year in four. Thousand-headed kale is more winter hardy and better suited to northern areas. Maris Kestrel is a short variety more resistant to lodging.

Quinoa is related to fat hen. It produces a large amount of nutritious seed and is good for a wide range of birds.

Oats, triticale and linseed are more tolerant of acid soils (pH down to 5.5).

Triticale is less liable to rabbit damage than other cereals, and the stiff straw stands throughout the winter. Ensure that spring triticale varieties are used for spring sowings.

Barley is more suited to lighter soils.

Recent research has shown that different birds prefer different crop species. Using this information, crops can be grown to benefit certain bird species as indicated in Table 7.

#### Table 7: Crops preferred by bird species

Bird species	Crop preference
Yellowhammer	Cereal Kale Linseed Oilseed rape
Skylark	Kale Linseed
Tree sparrow	Kale Oilseed rape Quinoa Mustard Cereal
Linnet	Linseed Oilseed rape Mustard Kale
Reed bunting	Oilseed rape Kale Quinoa

#### (iv) Undersown cereals

Undersown cereals are spring cereals, established after 15 February, which are undersown with a grass and clover ley mixture containing at least 10% clover by weight.

Aim: to increase the diversity of habitats and species within farming systems and provide additional habitat for a range of farmland birds, invertebrates and plants.

**Biodiversity objectives:** this option contributes to the Northern Ireland Biodiversity Action Plan targets for the Irish hare, chough, lapwing and yellowhammer. The Northern Ireland Priority Species - skylark, reed bunting and tree sparrow - will also benefit.

#### **Management requirements**

- Must not be sited on land used to fulfil set-aside requirements.
- The cereal crop must not be established before 15 February.
- The cereal seed rate must be at least 100kg/ha.
- The cereal crop must not be harvested for 14 weeks after sowing and not before 1 August.
- The crop must be undersown with a grass and clover ley mixture containing at least 10% clover by weight. The ley must be retained until at least 15 July the following year after the crop is harvested.
- Only herbicides approved for use on cereals undersown with grass and clover may be used.
- Fertilisers, organic manures and lime applications are permitted to meet crop requirements.
- No cultivation or rolling is permitted following establishment.
- The application of insecticides, molluscicides or nematicides is not permitted.

#### **Further advice**

If lapwing normally nest in your fields, establish the crop preferably before 20 April, and complete all establishment operations within ten days. This should allow lapwing to nest successfully.

To ensure a successful reseed select an early cereal variety with a short stiff straw and sow at approximately three-quarters of the normal seed rate. This will reduce competition with the grass and reduce lodging risk.

Herbicides, fungicides and growth regulators are permitted. However, ensure that products used are approved for use on newly sown grass and clover mixtures.

The undersown cereals option may be carried out on whole crop cereals.



A cereal field with rough grass margin

(v) Rough grass margins

A rough grass field margin is a strip of land, sown with a recommended grass seed mixture (Figure 8), at least 2m wide around arable fields in which cereal, oilseed or protein crops have been planted.

Aim: to provide habitat for overwintering invertebrates, some of which prey on pests of cereals, and to provide nesting and forage sites for birds and mammals.

Biodiversity objectives: this option contributes to the Northern Ireland Biodiversity Action Plan targets for the Irish hare and yellowhammer. The Northern Ireland Priority Species barn owl, tree sparrow, twite and ground beetles will also benefit.

#### **Management requirements**

- Must not be sited on land used to fulfil set-aside requirements.
- A mixture of non-cultivated grass species must be sown (see Figure 8). Grasses must be sown at a rate of 20kg/ha. Cocksfoot must form no more than 15% (maximum 2kg/ha) of the mixture.
- Margins must be established on at least 50% of the field perimeter.
- Minimum area of 1000m<sup>2</sup> (0.10ha) and between 2 and 12 metres wide.

- Must be retained for at least three years and preferably five years. If the be established elsewhere on the farm for the remainder of the period.
- Must be mown at least three times between 15 July and 30 September during the year following sowing to encourage tillering and minimise weed development. Thereafter may be mown no more often than one year in three (between 15 July and 30 September) to prevent scrub development.
- No grazing, cultivation, ploughing, drainage, reseeding, fertilisers, slurry, farmyard manure, sewage sludge, lime or application of pesticides or herbicides is permitted after establishment.
- Rough grass field margins must not be used for supplementary feeding sites, drinking troughs, temporary silage clamps or storage of materials including big bale hay and silage.
- Rough grass field margins must not be used as a headland, roadway, regular access route or as a farm lane.

#### **Further advice**

Rough grass field margins should be sited adjacent to a hedge, scrub, woodland or watercourse for maximum wildlife benefit. Herbicides may be used to control noxious weeds by the use of a weed wiper or spot spray.

#### Figure 8: Grass species suitable for use in rough grass margins

Cocksfoot	R
Common bent	R
Creeping bent	S
Creeping fescue	S
Crested dog's tail	S
Meadow foxtail	Y

Section 4 – Optional Habitats – Background and Management Requirements

Page 91

rough grass field margin is removed, a new margin equivalent in size must

Red fescue Rough stalk meadow grass mooth meadow grass heep's fescue weet vernal grass 'orkshire fog

#### (vi) Lapwing fallow plots

Page 92

Lapwing will nest in fields of spring cereals or potatoes, especially if there is damp, grazing land nearby for chick feeding. A fallow plot is an area left fallow, from when it is created in the spring (or in the previous autumn) until 31 July. Fallow plots allow lapwing to nest without disturbance. Large, open arable fields with nesting lapwing are eligible. The option can be introduced as whole or part fields or as plots within fields.

Aims: to maintain and increase the breeding success of lapwing nesting on arable farmland by providing suitable breeding, nesting and feeding conditions.

**Biodiversity objectives:** this option contributes to the Northern Ireland Biodiversity Action Plan targets for the lapwing, yellowhammer, chough and Irish hare. The Northern Ireland Priority Species - reed bunting, tree sparrow and linnet - will also benefit.

#### **Management requirements**

- Must not be sited on land used to fulfil set-aside requirements.
- The minimum fallow plot size is 1ha and the maximum is 2ha.
- The fallow plot must be in place by 20 March.
- Following cultivation, no operations (further cultivation, rolling, cutting, grazing, spraying, pesticides, farmyard manure, sewage sludge, fertiliser/ lime application or drainage) are permitted on the fallow plot.
- The fallow plot must be kept in place until 31 July.
- Fallow plots must not be used for access, turning, storage of materials or any other activity.

#### **Further advice**

Fallow plots are best created by cultivations between 15 February and 20 March, or during the previous autumn if spring cultivations are not possible. Severe infestations of annual grass weeds may be controlled by the use of glyphosate before cultivation. Control of serious infestations of grass or noxious weeds on the fallow plot may be permitted in exceptional circumstances and requires the written permission of DARD.

#### 5. Traditional orchard restoration

Areas of unimproved and improved grassland suitable for planting with native fruit varieties.

Aims: The option offers the opportunity to conserve local history, ensure the survival of old fruit varieties and enhance the visual and historical value of the landscape.

**Biodiversity objectives:** to reintroduce biodiversity in a practical manner and maintain genetic resource, which may help in the future development of new varieties or play a part in strengthening the diseaseresistant properties of modern varieties.

#### **Management requirements**

- during the dormant season (November to March).
- Grafted trees must be grown on standard or half-standard rootstock (M106 or M111). Dwarfing varieties are not eligible.
- At least three different varieties of apple trees must be planted. No variety should comprise more than half the total number of trees in the orchard. Intersperse different varieties and types of tree to assist crosspollination.
- cattle.
- weed-free for 3-4 years.
- trees.
- Cultivation, ploughing, re-seeding, rolling or chain harrowing is not permitted.

#### Section 4 – Optional Habitats – Background and Management Requirements

Page 93



Fruit trees must be from the approved list of varieties given in Table 8.

Plant bare-rooted trees at a minimum spacing of seven metres spacing

The orchard may be grazed with sheep or mown. Mowing before July is not permitted. Sheep grazing is only permitted if the newly planted fruit trees are protected with suitable guards (see Figure 9). Do not graze with

A one-metre diameter area around newly planted trees must be kept

Inorganic/organic fertiliser or lime must not be broadcast between the

- Application of insecticides or fungicides is not permitted. Noxious weeds such as thistles and ragwort may be controlled with herbicides, applied using a weed wiper or spot sprayer.
- Supplementary feeding sites, temporary silage clamps or storage areas for big bale silage or hay are not permitted.
- Trees that do not survive must be replaced.

#### Further advice

The ideal site is a south-facing gentle slope with deep soil, open to the sun with shelter from prevailing wind and low frost occurrence. The soil should be reasonably deep and slightly acid (pH 6.5). Shallow, alkaline or waterlogged soils are unsuitable, as are sites exposed to sea-laden salt breezes. Exposed sites will require protection in the form of a high hedge.

Choose varieties traditionally grown in the same area as indicated in the list in Table 8. When planting, avoid digging an excessively large 'tree pit', which can create a drainage sump, particularly in clay soils. This can result in roots sitting in water and cause tree death.

For successful pit planting:

- strip excess grass from the site;
- dig a hole just large enough to hold the entire root system;
- place the sods, grass downwards, at the bottom of the hole;
- drive a suitable stake into the bottom of the hole;
- carefully place the tree roots in the hole;
- replace the soil, using the best soil around the roots, gently shaking the tree to ensure the soil is well settled around the root system;
- trample the soil firmly around the tree;
- tie the tree to the stake with a suitable tree tie.

When grazing an orchard, mature sheep are preferable, as lambs are more likely to eat the bark of the fruit trees.

A 1m diameter area around newly planted trees should be kept weed-free for 3-4 years. Use polythene with fine gravel or quarry waste, a mulch of organic matter or a mulch mat.

Inorganic/organic fertiliser or lime must not be broadcast throughout the orchard. However, well-rotted farmyard manure may be applied around each tree. Fertiliser applied around the base of the tree can also be beneficial, particularly in the second year after planting. Lime may be applied in a similar manner but restrict applications to one year in four. Avoid over-liming.

#### Guarding young trees

If sheep are to be grazed in the orchard, some protection is required around the tree. The guard illustrated below can be used for trees from maiden up to standard size.

#### Figure 9: Sheep-proof guard for orchard trees



Section 4 – Optional Habitats – Background and Management Requirements

#### **Table 8:** Traditional orchard tree varieties

Varieties of fruit approved for use under agri-environment schemes for Recreation of traditional orchards option.

Variety

April queen Ard cairn russet Ballyfatten Barnhill pippin Ballyvaughan cooker Ireland Ballyvaughan seedling Ireland **Bloody butcher** Crown crofton Cavan wine Cavan Clearheart Davy apple Dockney Ecklinville seedling **Eight square** Gibbons russet Golden russet Ireland Golden royal Greasy pippin Irish peach Keegan's crab Armagh Kemp Kerry pippin Kilkenny permain Kill apple Lady's finger Martin's seedling Munster tulip Peche melba Red brandy Kilkenny Reid's seedling Ross nonpareil Sam Young/Irish russet Scarlet crofton Sligo Ireland Sheep's snout Sovereign Armagh Strippy Summer John Thompson's apple

Area found Ireland (c1908) Co Cork (c1890) North of Ireland (c 1800) Northern Ireland (c1934) Ireland (c1950) Ireland (c1950) Ireland (c1950) Ireland (c1950) Northern Ireland - Armagh (c1941) Eckinville (before 1800) Co Monaghan Cork (c1897) Ireland (c1950) Tyrone and Fermanagh (c1950) Co Sligo (c1820) Probably Northern Ireland - Armagh (c1837) Co Kerry (c1802) Co Kilkenny (c1831) Ireland (c1950) Co Offaly and Monaghan (c1951) NI - Antrim Munster (c1950) Co Kilkenny (before 1930) Richill, Co Armagh (c1880) Ireland (before 1802) Ireland (before 1818) Co Armagh (c1949) Fermanagh Tyrone and Monaghan (c1950)

Туре Eating Culinary Eating Eating Dual Eating Culinary Eating Culinary Dual Eating Culinary Culinary Eating Eating/cider Eating Culinary Eating Eating Eating Eating Culinary Eating Eating Dual Eating Eating Eating Eating

Variety	Area found	Туре	
Uncle John's cooker Widow's friend Winston coloured sport Yellow pitcher	Kilkenny Armagh Loughgall (c1950) Ireland (c1951)	Culinary Eating Eating Eating	

Rare or unusual apple cultivars grown in Ireland but not of Irish origin include

Gascoyne scarlet Gladstone Lord Derby Northern greening

#### Table 9: Other varieties of traditional fruit

Pear	Cherry	Plum
Conference	Morello	Victoria
		Damson
		Young river
		Green gauge
		Horse

Acknowledgement: Above lists generated by J W Choiseul (1997) Faculty of General Agriculture University College, Dublin.

Sources of trees/varieties in the above lists: The Irish Seed Savers. Capparoe Scarrif Co Clare Telephone: (00353) 6192 1866 Website: www.irishseedsavers.ie

Page 97

Golden noble Norfolk royal **Red Gascoyne scarlet Ribstons pippin** 

- **Future Forests**
- Kealkill
- Bantry
- Co Cork
- Telephone: (00353) 2766176
- Website: www.futureforests.net

# Section 5 **Special Conservation Measures**

Funding is available to carry out work to ensure the conservation interest of habitats.

Control of bracken

**Regeneration of heather** 

## I. Control of bracken

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Bracken is a very invasive weed on agricultural land and can be damaging to the conservation interest of farm habitats such as species-rich grassland, heather moorland, rough moorland grazing and lowland raised bogs. Bracken spreads by way of underground stems or rhizomes. Ease of access determines the methods of control and either a manual knapsack sprayer or tractor boom sprayer can be used. The method of control must be agreed in advance with DARD.

#### **Conditions and standards**

- Use Asulam (trade name Asulox) for the control of bracken. It gives good selective control with little long-term damage to most plants except ferns.
- For dense stands, follow up treatments after the first spray treatment, will be needed to give a complete kill.
- Protective clothing must be worn during spraying operations and manufacturer's instructions followed at all times.
- sprayer or tractor boom sprayer.

Areas of Special Scientific Interest (ASSIs) Written consent must be obtained from the Environment and Heritage Service (EHS), Department of the Environment before any works are carried out within an ASSI or along an ASSI boundary. It is the responsibility of the agreement holder to obtain this consent. The EHS contact telephone number for further information is (028) 9054 6595.

## 2. Regeneration of heather

Well-managed heather is a tremendous asset to the farm, providing a valuable grazing resource for both sheep and cattle. In addition, heather forms a distinctive component of the landscape and it is an important wildlife habitat.

Funding is available for burning or flailing blocks (approximately 0.5 hectares) of heather moorland in a planned sequence to encourage regeneration. The aim is to produce a patchwork with range of heather ages, which increases

Page 99



Grant aid is available for the control of bracken by either manual knapsack

**Page 100** 

grazing quality, encourage livestock to graze the whole area and benefits wildlife. A heather regeneration plan must be agreed with DARD, outlining the extent and location of the areas to be burnt or flailed before approval can be given.



#### **Conditions and standards**

#### Heather burning

- Burning of heather or hill pasture is controlled by law and must not be carried out between 15 April and 31 August to protect ground-nesting birds.
- Burning heather is a skilled job requiring careful supervision and sufficient labour to keep the fire under control.
- Burning must not be carried out on blanket bog, bracken, woodland and scrub, including gorse, archaeological and historic sites, heather over 30cm tall and Areas of Special Scientific Interest without the written consent of Environment and Heritage Service (EHS) Department of Environment. The EHS contact telephone number for further information is (028) 9054 6595.
- Give notice of burning you must, by law, give notice of intent to burn to neighbours, owners or occupiers of adjacent land at least 24 hours before burning. If the burn is to take place within one mile of a state-owned forest, permission must be obtained from the local District Forest Officer.

Suitable conditions for burning - burning must only take place in suitable Light winds are often variable in strength and direction, which make control of the burn difficult. Always aim to burn when the breeze is blowing downhill if possible.

- Fires should be kept to around 30m wide and not allowed to spread to greater than 50m in width and can be as long as is practical. A normal burning team should consist of at least 5-6 people. It is a legal requirement to have sufficient people on hand to control a burn. A realistic target would be five burns per day each covering 0.4 - 0.8ha (1 -2 acres).
- Firebreaks must be present these can either be natural features such as gullies, wet strips or flushes, farm tracks or rock outcrops. If no natural firebreaks exist artificial ones must be created. All firebreaks must cut preferably 10m wide.
- It is essential to create 10m wide firebreaks around any areas of commercial forestry. These should be maintained annually by one of the following methods:
- By burning: a fire burned against the wind so that it burns hot and slow can be used to create a firebreak.
- By flailing: if a tractor-powered flail can gain access to the area a firebreak dries out.
- Safety when burning each member of the burning squad should have a face mask (BS2092) and a long handled beater. The latter should be 3-4m long and are best constructed from aluminium with either a flat rectangular aluminium end or a rectangle of reinforced rubber conveyor belting.
- It is essential that all fires be properly extinguished before leaving the site.

#### **Flailing heather**

- Heather flailing must not be carried out during the period 15 April to 31 August to protect ground-nesting birds.
- Flailing heather by mechanical means is an acceptable way of encouraging regeneration. Suitable machines range

#### Page 101

weather conditions, which occur, on average, on only ten days each year.

across the line of the proposed fire. Firebreaks should be at least 6m and

can be cut in the heather and the burn completed before the cut material



from a specifically designed heather swipe to old single or double chop forage harvesters.

The technique is simple - the same planning approach as outlined for heather burning must be followed. Leave the side of the block as irregular as possible to give a more natural appearance. A layer of mulch may suppress heather regeneration and, if possible, try to spread off the cut area or place into rows.

#### **Further advice**

- Burning is the most widely used method of regenerating heather and it encourages new growth to sprout from existing heather plants;
- removes old, dead material, recycles nutrients;
- stimulates heather seed germination.

#### Future management after burning

If the burn has been carried out properly heather stems will regenerate both from the plant base and the underlying seed bank. These young tender shoots will invariably attract sheep and, if overgrazing results, the heather may be grazed out. This can be avoided if the burning programme is spread around the whole moor in small blocks rather than concentrating it in one large block. If the block of regenerated heather is at a risk from overgrazing, some form of temporary fencing, for example electric fencing, should be considered.

#### Flailing has the following advantages when compared with burning.

- Less weather dependent.
- Requires less labour and is easier to control.
- Can be used on old woody heather.
- No risk of fires getting out of control.
- Useful for creating firebreaks.

#### Flailing has disadvantages which include the following.

- Rate of regeneration is slower than with burning.
- Operational area is limited by terrain.
- Health and safety needs considered.
- Equipment is more expensive.

Areas of Special Scientific Interest (ASSIs) Note: Written consent must be obtained from the Environment & Heritage Service (EHS), Department of the Environment before any works are carried out within an ASSI or along an an ASSI boundary. It is the responsibility of the agreement holder to obtain this consent. The EHS contact telephone number for further information is (028) 9054 6595.

## Further advice and information

#### 1. Points of contact

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Further information and advice on all aspects of agri-environment schemes can be obtained from the points of contact provided at the back of this explanatory booklet. This booklet is available on-line at www.dardni.gov.uk

#### 2. On-line DARD publications

All publications are available on the DARD website address as follows: www. dardni.gov.uk

**Trees** - practical advice on all aspects of tree planting as well as giving information on the importance of trees for wildlife.

**Field boundaries** - information on the rich history and wildlife associated with field boundaries, together with practical information on their management and restoration.

**Farm ponds** - practical advice on the siting, design and construction of farm ponds.

**Heather moorland** - information on managing heather as a grazing resource and for wildlife.

# 3. Codes of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil

The "Codes" contain practical management advice on how farm wastes such as silage effluent, slurry and manure can be collected, stored and spread with minimum risk to the environment. Guidance on how to prevent pollution from pesticides, sheep dip and fuel oil is also included.

Farmers in receipt of LFACA payments, participating in an agri-environment scheme or in the Livestock and Meat Commission (LMC) Farm Quality Assurance Scheme for Beef or Lamb must retain copies of the Codes of Good Agricultural Practice for the Prevention of Pollution.

The "Codes" are available on-line at www.dardni.gov.uk

# Section 6 Further Advice and Information

Points of contact

**On-line DARD publications** 

Codes of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil

Farmland birds information pack

#### 4. Farmland birds information pack

An information pack about farmland birds has been produced jointly by DARD and the Royal Society for the Protection of Birds (RSPB).

Information and photographs on full colour, glossy sheets help farmers identify 12 farmland birds and provide useful guidance on how to encourage wild birds to the farm. Information is also provided about rush management and hedgerow care, to help land managers help wildlife.

Copies of the full pack or individual sheets are available from your local DARD office or by telephoning (028) 9052 5041 and these are also available from DARD and RSPB staff at agricultural shows and other events.

# Section 7 **Appendices**

Tenancy agreement for leased land **Definition of habitats** List of species-rich grassland indicator plants Scrub control **Protective fencing** Control of rushes and noxious weeds **DARD** Office addresses Countryside Management Branch Office addresses

#### Appendix 1: Tenancy agreement for leased land

For leased land to be included in your agreement you must provide evidence that you have an agreement with the owner of the land. The lease agreement must:

- Provide the names and addresses of the tenant and landowner;
- Give the location and area of the leased land (farm survey number(s) and field numbers will suffice);
- Indicate that the lease is for a minimum of five years, from date of application;
- Indicate that the landowner has been notified by the tenant of his intention to apply for an agri-environment scheme;
- Be signed by both tenant, landowner and an independent witness;
- Must be dated.

## Appendix 2: Good Farming Practice definition of habitats

**Moorland** – areas of bog, dwarf shrub heath and montane habitat.

Wetlands - areas of naturally high water table including fen, marsh, swamp, standing waters, saline lagoons, rivers and streams.

Species-rich grasslands - areas of neutral, acid, wet and calcareous grassland (including limestone pavement). These have a low productive sward. Ryegrass, Timothy and white clover comprise less than 25% of the sward.

**Broad-leaved woodland/scrub** – areas where vegetation is dominated by broad-leaved trees and shrubs containing less than 15% conifers.

Coastal habitats - areas of maritime cliff and slopes, sand dunes, vegetated shingle, saltmarsh and all areas below high water mark.

**Archaeological features** – the man-made parts of the environment, which represent the physical effort, aspirations and achievements of all previous generations. They date from the earliest human presence in Ireland to the recent past and are a finite and non-renewable resource. These include megalithic tombs, standing stones, stone circles, cairns, barrows, hillforts, raths, cashels, churches and castles.

**Earth science sites** – areas of bedrock or surface deposits that provide important evidence for the patterns, processes and dating of geological and biological events from the beginning of the Earth's history to the present day.

## Appendix 3: List of species-rich grassland indicator plants

If more than five species are located in an area of one square metre at six out of ten random points in the field area, then the area is classified as species-rich. These will be coded according to the species-rich type they are most indicative of, some may be found in all species-rich grassland types.

#### W - wet grassland indicator species.

	Common name		Common name
	Flowering Plants		Lady's mantle
	Bedstraw, heath	W	Lady's smock
	Bedstraw, lady's	W	Lesser spearwort
W	Bedstraw, marsh		Lousewort, common
	Bilberry	W	Lousewort, marsh
	Birds'-foot-trefoil, common	W	Marsh cinquefoil
W	Birds' foot trefoil, greater	W	Marsh marigold
	Bluebell	W	Marsh pennywort
	Bugle	W	Meadow sweet
	Cat's-ear		Meadow thistle
	Celandine, lesser		Milkwort
	Common twayblade		Orchid species
	Cranberry		Orchid, common spotted
	Crane's bill, species		Orchid, early purple
W	Creeping Jenny		Orchid, heath spotted
	Devil's bit scabious		Ox-eye daisy
	Eyebright		Pignut
	Flax species		Plantain species
W	Forget-me-not, marsh		Primrose
	Harebell		Ragged robin
	Hawkbit species		Red clover
	Knapweed		Sanicle

	Common name		Common name
	Saxifrage		Yarrow
	Self heal	W	Yellow flag
	St. John's wort species		Yellow pimpernel
	Stitchwort, greater		Yellow rattle
	Stitchwort, lesser		
	Thyme species		Grasses
	Tormentil		Crested dog's tail
	Vetch, kidney		Quaking grass
	Vetch, tufted		
	Vetchling, meadow		Sedges and rushes
	Vetchling, bitter		Rush, jointed
W	Violet, marsh		Rush, sharp-flowered
	Violet, species		Rush, hard
W	Water avens		Sedges species
W	Water mint		Woodrush, field
	Wood anemone		Woodrush, heath
	Wood sorrel		

## Ineligible weeds which are NOT species-rich indicators

The following list of species are regarded as weeds and do NOT contribute to the list of species (that is, five per square metre) required for grassland to be classified as species-rich.

Creeping buttercup
Cleavers
Daisy (except ox-eye/
Dandelion
Nettle
Ragwort
Soft rush
Thistle (except mead

/dog daisy) low thistle)

#### Appendix 4: Scrub control

#### Types of scrub

- Blackthorn and whin (European gorse) scrub are valuable wildlife and landscape features, however, they can be invasive.
- Rhododendron (Rhododendron ponticum) is an invasive non-native shrub. Dense shade cast by these plants kills off all ground vegetation and toxic chemicals released by the decomposing leaves prevent other plants from regenerating.
- Spreading blackthorn, whin and rhododendron can damage important wildlife areas such as species-rich grassland, woodland and lowland raised bogs and control may be required.

Scrub cannot be removed without the prior written permission of DARD.

#### **Controlling scrub**

- Control of scrub cannot be undertaken between 1 March and 31 August.
- Mechanical grubbing out and removal of scrub is not permitted.
- Burning of scrub is not permitted.

#### Blackthorn and whin/gorse

- Blackthorn must be controlled by cutting stumps to 10-20cm (4-8 inches) high. Drill holes in the stump surface and fill holes with a solution of ammonium sulphamate (brand name Amcide or Root-Out) or glyphosate. This should be carried out in late autumn/winter. The stumps must not be removed.
- Whin must be controlled by cutting and immediately painting the stump with glyphosate. The stumps must not be removed.

Cut material may only be burnt if it is removed from the wildlife habitat and burnt at a site agreed in writing beforehand by DARD.

#### Rhododendron

When controlling rhododendron, cutting back to ground level is not recommended as this results in very vigorous regrowth. Control can be by either of the two methods below:

- 1. Cut the rhododendron to leave 300mm (12 inch) stumps. Use a ammonium sulphate (brand name Amcide or Root-Out).
- 2. Cut the rhododendron to leave a 300mm (12 inch) stump during (plus a sticking agent) in May or June.

Ensure at all times when using pesticides that the manufacturer's recommendations are followed and suitable protective clothing is worn.

#### Page 113

12 - 13 mm ( $\frac{1}{2}$  inch) deep hole for every square inch of the stump's surface. Fill the holes (but not overflowing) with a solution of

the winter months and then spray the regrowth with glyphosate

#### Appendix 5: Protective fencing

Properly erected fences are required to protect new hedges and hedges that have been laid or coppiced. A fence may also be required to protect newly planted trees. Normally hedge restoration includes fencing on one or both sides of the restored hedge. Where the hedge is fenced on both sides, it is recommendended that the fences should be at least 2m apart.

Hedge restoration, whether by planting, coppicing or laying, must follow the line and contours of the original field boundary. Mechanical aids such as diggers or excavators must not be used to straighten, level or remove existing field boundaries or habitats.

Normally a woven wire (sheep) fence with two strands of barbed wire is the minimum requirement for all types of fencing, which must be completed to at least BS 1722 standards (see summary of specifications below). Any alternative form of fencing must be agreed in advance and specified in written approval.

#### Summary of the standards required

- 1. The overall height of the fence shall be not less than 1.05m high from the ground level to the top wire.
- 2. Straining posts shall be equivalent in strength and durability to 125mm top diameter round timber OR 125mm by 125mm sawn timber and at least 2.17m long when not set in concrete and at least 1.87m long when set in concrete.
- 3. Straining posts shall be set at centres not exceeding 150m or at each change in direction or gradient.
- 4. Holes for straining posts shall be excavated with vertical sides and the soil shall be thoroughly rammed back around the post in 150mm layers. If the post is set in concrete, holes shall be 450 x 450 mm on plan or 450 mm diameter and 750 mm deep; otherwise they shall be not less than 1050 mm deep.
- 5. The top end of the strut shall fit into a notch in the straining post and the bottom end shall be set in a hole at least 450 mm deep x 300 x 450 mm and bear against a suitable base plate. Struts shall be set at 45 degrees to the straining post. Struts shall be equivalent in strength and durability to 65mm top diameter round timber OR 75mm by 75mm sawn timber and at least 2.17m long when not set in concrete and at least 1.87m long when set in concrete.

- 6. Intermediate posts shall be equivalent in strength and durability to 65mm top diameter round timber OR 75mm by 75mm sawn timber and at least 1.72m long and set at centres not exceeding 2.7m.
- 7. If cleft (split) posts are used, these must be of sufficient size to contain a circle of at least 65mm diameter on top, for example, a half-round post must be at least 130mm on the flat side.
- 8. All posts shall be free of bark.
- 9. Both line wire and woven wire shall be galvanised and comply with BS staples. To allow for future adjustments and to prevent damage to the galvanising, staples shall be driven in obliquely but not fully home.
- 10. Unless otherwise specified on your approval, fencing of field boundary restoration must be woven wire plus two strands of barbed wire (regardless of the presence or absence of sheep). Specifications for the woven wire are C8/80/30 for cattle, horses and sheep or C8/80/15 for lambs, with two strands of barbed wire to BS 4102. Use of green-coated wire is optional. Both strands of barbed wire may be above or one strand may be above with one strand below the woven (sheep) wire.
- 11. If rabbits and hares are a problem in the vicinity the fence must be wide and have mesh no larger than 31mm. The top edge of the netting to the fencing, and the bottom edge of the fencing should be buried in gates in protective fences must also be proofed.

#### Woven (sheep) wire and 2 strands of wire (not to scale)



**Page 114** 

Page 115

4102. Line wire shall normally be 2.5mm mild steel 2 ply barbed wire. The wire shall be properly strained and fastened to the posts with galvanised

proofed against them. Proofing against rabbits and hares must be carried out with galvanised wire netting. The netting must be not less than 1.05m must be fixed not less than 0.75m in height. The netting must be fastened the ground 150mm and then turned outward 150mm and anchored. All

Page 116

#### Areas of Special Scientific Interest (ASSIs)

**Note:** Written consent must be obtained from Environment and Heritage Service (EHS), Department of Environment (DOE) before any works are carried out within an ASSI or along an ASSI boundary. It is the responsibility of the agreement holder to obtain this consent. The EHS contact telephone number for further information is (028) 9054 6595.

## Appendix 6: Control of rushes and noxious weeds

Rush tussocks provide nesting sites for waders such as lapwing and curlew, and small birds such as meadow pipit. Rushes also provide cover for the Irish hare. A small amount of rush is thus acceptable, but too much is undesirable and must be controlled.

#### **Rush control**

- Rush control must be carried out when rushes cover more than a third of a field.
- the field are left uncut.
- The following table gives details of the permitted methods of rush control, and the control of noxious weeds, for land under agri-environment agreement:

	Improved grassland/ arable	Unimproved grassland	Breeding wader habitats	Species-rich grassland
Overall application of herbicide	Yes	No	No	No
Weed wiper application of herbicide	Yes	Yes	No*	No*
Rush control by cutting	Anytime	Preferably between 15 July and 15 March only	Between 15 July and 15 March only	Between 15 July and 15 March only
Control of noxious weeds in grassland (creeping thistle, docks and ragwort)	Cutting, overall herbicide, weed wipe or spot spray	Cutting, weed wipe or spot spray only	Cutting or spot spray only	Cutting or spot spray only

Notes: \* On breeding wader or species-rich grassland sites, if ground conditions do not permit rush cutting, contact DARD Countryside Management Branch (CMB) for further advice. Prior written approval must be obtained from CMB before any alternative method of rush control is used on these sites.

Section 7 – Appendicies

Page 117

When carrying out rush control ensure that at least 10% of the rushes in

#### Management of Rushes

- For heavy infestations of rush, a second cut at least a month later may reduce the vigour of the plant. Cut as close as possible to ground level to give the best control.
- If rush cover becomes very sparse then reduce the intensity of cutting, for example, cut opposite halves of the field each year or cut all on alternate years.
- Cut rushes should ideally be removed by baling, raking or burning. Where this is not possible graze with cattle immediately after cutting to help break up the mat of cut rush.
- Herbicides must not be applied within 1m of all field boundaries.
- The cost of rush control is included in your annual payment, and failure to carry out rush control may result in a breach of your agreement.

#### Appendix 7: DARD Office addresses

Department of Agriculture and Rural Development Kilpatrick House 38-54 High Street BALLYMENA Co Antrim BT43 6DT Tel: (028) 2566 2800	De Ru Ini Kil EN Cc BT Te
Department of Agriculture and Rural Development 2 Newry Road ARMAGH BT60 1EN Tel: (028) 3751 5600	De Ru Cr Ar CC Cc BT Te
Department of Agriculture and Rural Development Rathkeltair House Market Street DOWNPATRICK Co Down BT30 6LZ Tel: (028) 4461 2211	De Ru Sp Se Ol Cc BT Te
Department of Agriculture and	

Rural Development Grants and Subsidies (Payments) Branch **Orchard House Foyle Street** DERRY /LONDONDERRY **BT48 6AT** Tel: (028) 7131 9900

Page 119

epartment of Agriculture and aral Development ishkeen House llyhevlin NNISKILLEN o Fermanagh [74 4EJ el: (028) 6632 5004

epartment of Agriculture and aral Development rown Buildings rtillery Road OLERAINE o Derry / Londonderry [52 2AJ el: (028) 7034 1111

epartment of Agriculture and aral Development errin House dan Avenue MAGH o Tyrone 79 7AQ el: (028) 8225 3409

**Page 120** 

**Environmentally Sensitive Areas Scheme and Countryside Management Scheme** 

## **Appendix 8:** Countryside Management Branch Office addresses

#### **Co Antrim**

**Kilpatrick House** 38 / 54 High Street, BALLYMENA BT43 6DT Tel. (028) 2566 2800 Fax (028) 2566 2838

#### Co Armagh

2 Newry Road ARMAGH **BT60 1EN** Tel (028) 3751 5659 Fax (028) 3751 5611

#### Co Down

**2b Portaferry Road** NEWTOWNARDS **BT23 3NT** Tel (028) 9181 3570 Fax (028) 9182 2106

#### Headquarters

Annexe D **Dundonald House** Upper Newtownards Road Belfast BT4 3SB Tel (028) 9052 0922 Fax (028) 9052 0924 Email:cmbenquiries@dardni.gov.uk

#### **Co Fermanagh**

Inishkeen House Killyhevlin ENNISKILLEN BT74 4EJ Tel (028) 6632 5004 Fax (028) 6634 3000

#### **Co Derry/Londonderry**

31 Station Road, MAGHERAFELT, BT45 5DN Tel. (028) 7930 2112 Fax (028) 7930 2067

#### **Co Tyrone**

Sperrin House Sedan Avenue OMAGH **BT79 7AQ** Tel (028) 8225 3410 Fax (028) 8225 3409