Northern Ireland Habitat Action Plan
Wet Woodland
March 2005

1. Current Status

1.1 Biological status

1.1.1 The term wet woodland is used to describe a range of woodland and scrub that occurs on poorly drained or at least seasonally waterlogged soils. The wet woodland resource is diverse in composition and structure, usually dominated by willow *Salix* spp., alder *Alnus glutinosa* or downy birch *Betula pubescens*, but also sometimes includes ash *Fraxinus excelsior* or oak *Quercus* spp. on the drier riparian areas or margins of flushes. Wet woodland habitats occur on a range of soil types including nutrient-rich mineral and acid soils and nutrient-poor peaty soils. They occur on the margins of water bodies along lowland and upland streams, on hill-side flushes and as successional habitat on fens and bogs. Wet woods frequently occur in a mosaic with other woodland habitats e.g. with mixed ashwood or oakwoods and with wetland habitats. Boundaries with other woodland types can sometimes be sharp but are often gradual transitions. The type of wet woodland may change over time through succession, depending on the hydrological conditions and the management of the wood and surrounding habitat. Management of mosaic sites needs to consider wet woodland in relation to the requirements of each of the habitats.

1.1.2 Within Northern Ireland, wet woodland encompasses a range of plant communities that are similar to those identified in the National Vegetation Classification (NVC) of Great Britain (Rodwell, 1991). NVC descriptions and codes are given to associations of plants that are characteristic of particular environmental and management conditions. Seven NVC communities, (W1-W7) have been described within the wet woodland resource.

1.1.3 Willow scrub woodland, W1 *Salix cinerea - Galium palustre* is the most widespread wet woodland community in Northern Ireland often occurring as an early pioneer wet woodland habitat prior to the development of mature wet woodland. The distribution in Northern Ireland of the two other scrub willow wet woodland types, (W2 *Salix cinerea-Betula pubescens - Phragmites australis* woodland and W3 *Salix pentandra - Carex rostrata* woodland) is currently uncertain. W2 scrub woodland is often associated with wetland sites dominated by a combination of open water and fen. In these circumstances the expansion of wet woodland can sometimes be viewed as undesirable as it reduces the area of other priority habitat types, such as reedbed. The combination of wet woodland and fen often enhances the nature conservation value of a site and in these circumstances, striking the correct balance between apparently competing priority habitats is difficult to determine.

1.1.4 Alder wood and alder carr are not common in Ireland (Cabot, 1999). W5 *Alnus glutinosa - Carex paniculata* woodland occurs throughout Northern Ireland, but is not extensive and is characteristic of permanently wet nutrient-rich peats. Examples within the Erne basin are of particular importance. W6 *Alnus glutinosa - Urtica dioica* woodland is associated

with the margins of the large eutrophic lakes subject to flooding. W7 *Alnus glutinosa - Fraxinus excelsior – Lysimachia nemorum* woodland is characteristic of the base-rich flushes and valley sides, often occurring in larger mixed ashwoods and oakwoods. Some more extensive stands of this wet woodland type occur in County Fermanagh on heavy base-rich clays. Extensive stands of *Alnus glutinosa –Urtica dioica* (W6) and *Alnus glutinosa-Fraxinus excelsior-Lysimachia nemorum* (W7) have colonized ground exposed as a result of numerous drainage schemes in Lough Neagh (Christine Butler, The Ecology of Lough Neagh Woodlands, D. Phil., 1996).

1.1.5 Wet woodland dominated by birch, W4 *Betula pubescens - Molinia caerulea* woodland is common throughout Northern Ireland occurring on nutrient-poor peat soils. Most examples of W4 scrub woodland have recently developed on drying peats such as those associated with cut-over bogs, where they are often seen as being undesirable in terms of bog restoration. This community does develop naturally on the margins of peatland sites and the mosaic of wet woodland and ombrotrophic bog can enhance the site's nature conservation value. In these circumstances striking the correct balance between open bog habitats and wet woodland can be difficult to determine. W4 scrub woodland also occurs on lake shores within other woodland types where the soils are acidic. Throughout Ireland, small areas of natural downy birch dominated wet woodland occur within wetland/peat bog complexes where there is mineral water influence from flushes or soaks (Cross, 1997).

1.1.6 Wet woodland was defined by the UK Native Woodland Habitat Action Plans Definitions Working Group and adapted for Northern Ireland wet woodland.
To qualify as the wet woodland priority habitat, the woodland must conform to the description outlined in sections 1.1.1 – 1.1.5 above and meet the following criteria:

- woodland area greater than 0.5 ha.
- 20% or more canopy cover or the potential to achieve this in the case of regenerating or newly planted stands.
- a canopy composed of 50% or more site-native trees or shrubs (or will be at canopy closure in the case of younger stands). Site-native trees are those which are native to the locality and capable of growing naturally on the site
  and/or
- the presence of typical wet woodland ground flora.

1.1.7 In general, wet woodland is unmanaged in Northern Ireland and is often utilised for grazing and shelter by livestock. The extent of coppicing in Northern Ireland is not known but in the past some wet woodlands were coppiced, particularly Willow around the shores of Lough Neagh.

1.1.8 There are no precise data on the total extent of wet woodland in the UK, but a crude estimate places the total between 50,000 - 70,000 ha (JNCC, 2001). The historical large-scale clearance of woodlands in Northern Ireland means that much of the current wet woodland resource is largely secondary and of relatively recent origin (less than 100 years old) (Paul Corbett, pers. comm.). Wet woodlands are now a scattered habitat, tending to be small stands 3-5 ha in size (Cabot, 1999). It is estimated that wet woodland occupies

in the region of 2,600 ha in Northern Ireland (EHS unpublished estimates, based upon Graham, 1975). This figure may represent something of an underestimate given that the habitat has a scattered distribution and has been under recorded in the past. For example, a more recent estimate of the extent of fen carr is 3,265 ha (Cooper and McCann, 2002) but this will not include Downy Birch regeneration on cut-over bogs which is considered to make up a significant percentage of the total wet woodland resource.

1.1.9 The *Northern Ireland Countryside Survey* (NICS), funded by EHS, is a sample survey of Northern Ireland vegetation communities used to estimate the extent and distribution of broad habitats such as broad-leaved, semi-natural woodland, including wet woodland. Repeat surveys are used to assess land-use change. The first phase in the process was *A land classification and landscape ecological study of Northern Ireland* carried out in 1988 (Murray *et al.*, 1992). The *NICS 2000* (Cooper & McCann, 2001) repeated the survey in 1998. NICS 2000 indicates a 9 % increase in the extent of woodland and scrub between 1988 and 1998. This estimated increase of 11,211 ha is a result of tree planting, both broad-leaved and coniferous, and natural regeneration. Within this broad habitat, broad-leaved semi-natural woodland (which includes both oakwood and mixed ashwoods, in addition to some wet woodland) increased by 1,249 ha and now covers 1.7 % (23,027 ha) of Northern Ireland (Cooper *et al.*, 2002).

1.1.10 The conservation value of wet woodland can be partly determined by the condition of the habitat. Favourable condition is defined by setting targets or target ranges for a series of attributes. These are components or characteristics of the vegetation that are relatively easy to measure and which are reliable indicators of the 'health' of the habitat. For wet woodland, these include the percentage cover of native trees and shrubs, the vegetation structure, the presence of key indicator species and the absence of vegetation, species or factors associated with disturbance such as invasive species, overgrazing or dumping. Methods have been developed for assessing favourable condition of wet woodland in designated sites, but the standards for assessing favourable condition of the habitat in the wider countryside have not yet been agreed.

1.1.11 Little information exists on the condition of wet woodland in Northern Ireland. A few sites are known to have compartments which have low cover of native trees, poor structure and/or lack a characteristic ground flora. The condition assessment of a site needs to consider the management history and potential nature conservation value of that individual site.

1.1.12 Wet woodland can be of significant value for flora and fauna. Few rare plant species depend on wet woodland *per se*, however, W5 *Alnus glutinosa - Carex paniculata* supports rare species such as elongated sedge *Carex elongata* and large bitter-cress *Cardamine amara*. There may be relict species from the former open wetlands or ground flora found in old woodlands including bog mosses *Sphagnum* spp., sedges *Carex* spp., marsh marigold *Caltha palustris*, bottle sedge *Carex rostrata* and common arsh-bedstraw *Galium palustre*. Standing and fallen dead wood is an important element of wet woodland, and its association with water provides specialised habitats not found in dry woodland types. The high humidity found in the wet woodland favours bryophyte growth.

1.1.13 Wet woodland fauna has been poorly recorded but the number of invertebrate species associated with alder, downy birch and willow is very large. Wet woodland habitat also provides cover and breeding sites for otter *Lutra lutra* and is of value for the bats and a number of breeding birds.

1.2 Links with other action plans

1.2.1 Wet woodland may be associated with other habitats such as fens, lowland raised bog, reedbeds, mesotrophic lakes, crowfoot rivers, oakwoods and mixed ashwoods' which have their own Northern Ireland HAPs. The requirements of these plans will need to be given due regard during the implementation of this HAP, especially as the expansion of wet woodland frequently reduces the area of associated priority habitats. However, scrub dominated wet woodland invading other habitats may be a seral stage in the succession to mature wet woodland and it is important that the development and retention of the wet woodland resource is also considered.

1.2.2 Within Northern Ireland wet woodlands are an important habitat for several UK Northern priority species. These include, spotted flycatcher *Muscipapa striata*, song thrush *Turdus philomelos*, common pipistrelle, the beetle *Rhynchaenus testaceus* and the moss *Orthotrichium sprucei* (Simonson & Thomas 1999). The requirements of these species should be taken into account during the implementation of this plan.

1.2.3 In addition, several Northern Ireland priority species are associated with wet woodland. These include a number of bat species, the snail *Succinea oblonga*, alder buckthorn *Frangula alnus*, water-violet *Hottonia palustris* and globeflower *Trollius europaeus*.

2. Current Factors Affecting the Habitat

2.1 Inappropriate grazing - by domestic livestock and/or large deer populations can lead to grazing pressure and poaching of soil which over time leads to a change in the woodland structure, ground flora impoverishment and difficulties for regeneration.

2.2 Invasive species - including replacement of native trees by species that are not native to Northern Ireland such as sycamore *Acer pseudoolatanus* and rhododendron *Rhododendron* spp. and alien ground flora species including Indian balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*, can lead to changes in the composition of the woodland and alteration of vegetation composition and a lowering of the conservation value of woodland.

2.3 Habitat loss and fragmentation – can be a result of deforestation for agricultural practices, industrial or residential development leading to simplification of the landscape. It can lead to greater ecological isolation of existing woods through the removal of trees in field boundaries and small patches of wet woodland and scrub in fields. Formal landfill applications and illegal dumping of building rubble, agricultural and domestic waste leading to changes in the composition of the ground flora and invertebrate communities.

2.4 Lack of woodland management – can result in loss of structural diversity and reduction of the biodiversity value of the habitat.

2.5 Water level changes - due to drainage, agricultural practices, peat extraction or water abstraction, can result in changes from wet to drier woodland types. Flood prevention measures, river control and canalization can lead to a loss of dynamic disturbance succession systems and invertebrate communities, as well as possible reductions in the extent of individual sites.

2.6 Nutrient enrichment - leading to changes in soils and ground flora, may occur from spray drift or runoff from adjacent agricultural land. In addition, pesticide drift into woodland margins may cause localised damage to some flora and fauna.

2.7 Disease - such as the fungus-like organism *Phytophthora*, which causes root disease in alder.

2.8 Air pollution - derived remotely from cars and/or industry and agro-chemical application. may influence bryophyte and lichen communities.

2.9 Climate change - potentially resulting in changes in the vegetation communities. Summary predictions for temperature and sea level rise as a result of global warming have been modelled by the MONARCH project (Harrison *et al*, 2001). These models indicate a much smaller impact in Ireland than in Britain.

3. Current Action

3.1 Legal status

3.1.1 In 1992, the EC adopted the *Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora*, known as the 'Habitats Directive'. The Directive requires member states to designate and manage Special Areas of Conservation (SACs) for selected habitats (listed in Annex 1 of the Directive) and species (listed in Annex 2). A small proportion of these habitats and species, which are considered to be most in need of conservation at a European level, are given priority status. Annex 1 contains residual *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* and *Bog woodland*. A few sites put forward as candidate Special Areas of Conservation (cSACs) support wet woodland habitat. Wet woodland communities at Rea's Wood and Farr's Bay NNR/cSAC and the Alder wood at Hollymount ASSI/cSAC support the most structurally diverse stands in Northern Ireland. Extensive areas of wet woodland are also included within the Upper Lough Erne ASSI/cSAC, but much of this is relatively recent in origin. Small areas of wet woodland occur as part of the woodland mosaic of other priority forest types including the *Tilio-Acerion forests of slopes, screes and ravines* and *Old sessile oak woods with Ilex and Blechnum*. In the Republic of Ireland 10 sites of alluvial forest, covering less than 1,000 ha and 6 sites of bog woodland, covering less than 100 ha have been proposed as cSACs.

3.1.2 The *Conservation (Nature Habitats, etc.) Regulations (Northern Ireland) 1995* and *The Conservation (Natural Habitats, etc.) (Amendment) Regulations (Northern Ireland) 2004* (The Habitat Regulations) require competent authorities, when considering a plan or project not directly connected with the management of a European site e.g. an SAC or SPA, to undertake an Article 6 assessment. This assessment will determine if the plan or project, either alone or in combination with other plans or projects, is likely to have a significant impact on the site. In the case of a negative or undetermined assessment, a competent authority may only agree to the plan or project where it is satisfied that there are no alternative solutions and that the plan or project must be carried out for imperative reasons of overriding public interest, which may be of a social or economic nature. However, if the site hosts a priority habitat or species then the plan or project may only be approved for: a) reasons of human health, public safety, beneficial consequences of primary importance to the environment, or b) other reasons which the Department (DOE), having considered the opinion of the European Commission (EC), determines are imperative reasons of overriding public interest.

3.1.3 Under the terms of the Habitat Regulations, the above Article 6 assessment by the competent authority is required for plans or projects e.g. land reclamation, which are outside European sites but may still have an impact on the site.

3.1.4 Guidance to help competent authorities and others to interpret the Habitat Regulations has been published (EHS, 2002).

3.1.5 Guidance on the completion of an Article 6 assessment has also been published (European Commission, 2000)

3.1.6 Designation as ASSIs under the *Nature Conservation and Amenity Lands (Northern Ireland) Order 1985* ensures compulsory consultation with EHS over management operations and development proposals. An estimated 24% (637 ha) of the wet woodland resource was protected within the ASSI series at 31st March 2004. This comprises 12 sites where wet woodland is a feature of the designation. Further ASSI declarations under the *Environment (Northern Ireland) Order 2002* are proposed by 2014, to extend the overall proportion of the resource protected and its geographical coverage.

3.1.7 A number of wet woodlands within designated sites are owned, partially owned or leased by EHS and are managed for nature conservation. Several of these including Rea's Wood, Farr's Bay and Hollymount, owned by the Forest Service, are designated as National Nature Reserves (NNRs). NNRs are subject to a site management plan and positive management of these sites has been undertaken by EHS in association with Forest Service using best-practice management techniques.

3.1.8 In 2000, the Northern Ireland Biodiversity Group (NIBG) made its Recommendations to Government (NIBG, 2000). These were largely accepted by the Northern Ireland Executive in 2002, with the publication of the *Northern Ireland Biodiversity Strategy* (DoE, 2002). *The Regional Development Strategy 2025* (DRD, 2001) is underpinned by the sustainable approach and includes Strategic Planning Guidelines (SPGs) on the

protection of the environment which bring together a comprehensive collection of natural heritage and built heritage strategic guidance that includes sustaining and enhancing biodiversity.

3.1.9 Regional Planning and Transportation Division within DRD is responsible for co-ordinating the implementation of the *Regional Development Strategy (RDS) for Northern Ireland 2025* (DRD, 2001). The RDS contains a Spatial Development Strategy and related Strategic Planning Guidelines (SPGs). The emphasis in the SPGs is on competitiveness, sustainable development and tackling social exclusion and division. Operational policies to give effect to the SPGs are contained in Planning Policy Statements (PPSs). Some of these policies have a direct or indirect bearing on the prevention of adverse impacts on priority habitats and species.

3.1.10 *PPS2 Planning and Nature Conservation* (DOE, 1997) (under review) contains planning policy for the hierarchy of sites of nature conservation importance. It also addresses trees and woodlands, protection of species and peatlands.

3.1.11 PPS2 also refers to the making of Tree Preservation Orders (TPOs) by Planning Service. The process for making a TPO is set out in *the Planning (Trees) Regulations (Northern Ireland) 2003*. These can be made to:

(a) reinforce a condition, for the preservation of existing trees;
(b) protect trees of outstanding natural beauty or of special value to a particular area, even though no direct threat exists to them;
(c) ensure the retention of trees, not protected by a condition of a planning permission which are threatened and whose loss would significantly lower amenity, and
(d) protect a woodland area of amenity value, by securing the replacement of trees, which have been felled with the Department of the Environment's consent.

3.1.12 *PPS15 Planning and Floodrisk* is currently out to public consultation. It embodies the Government's commitment to sustainable development and the conservation of biodiversity and adopts a precautionary approach to decision making that takes account of climate change.

3.1.13 *PPS14 Sustainable Development in the Countryside* is due to be published by the end of 2005.

3.1.14 Site protection policies are included in Development Plans. These include the identification of Sites of Local Nature Conservation Importance (SLNCI's). Planning Service is currently considering which SLNCI's will be formally identified in Development Plans. Where such sites are confirmed in adopted plans, specific planning policies will be applied to development proposals on those sites.

3.1.15 Semi-natural areas, which are likely to be of particular environmental importance, are protected through the *Environmental Impact Assessment (Uncultivated Land and Semi-Natural Areas) Regulations (Northern Ireland) 2001*. These regulations, which came into operation in Northern Ireland in February 2002, are administered by Department of Agriculture and Rural Development (DARD) and seek to ensure that agricultural

development of uncultivated land or semi-natural areas must first be assessed for environmental significance. This would include cases where the landuse changes are aimed at restoring or enhancing wet woodland.

3.1.16 Certain large-scale development projects and developments likely to have a significant impact may require an Environmental Impact Assessment (EIA) under the *Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999*. EIA is mandatory for those types of projects listed in Schedule 1 to the Regulations and is also required for those types of projects, listed and described in Schedule 2 to the Regulations, which is either wholly or in part in a 'sensitive area' or meet or exceeds one of the relevant thresholds and is likely to have significant environmental effects. Sensitive areas include designated Areas of Special Scientific Interest (ASSIs), including Ramsar sites, a designated Area of Outstanding Natural Beauty (AONB), a designated National Park, World Heritage Site, Scheduled Historic Monument or European Site as defined in Regulation 9 of the *Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995*. EIAs assist Planning Service and EHS in reaching decisions regarding environmental impacts of proposed developments.

3.1.17 The UK Woodland Assurance Standard (UKWAS Steering Group, 2000), a voluntary certification standard, requires that valuable semi-natural habitats are being treated in a manner that does not lead to further loss of biodiversity. Forest Service is certified against this standard and is undertaking a survey of its lands to identify valuable semi-natural habitats which include grasslands.

3.1.18 *The Environmental Impact Assessment (Forestry) Regulations (Northern Ireland) 2000* require anyone who wishes to carry out a project including afforestation, deforestation, forest road works or forest quarry works that is likely to have significant effects on the environment to obtain consent for the work from the Department of Agriculture and Rural Development.

3.1.19 Forest Service acquisition policy is outlined in *Afforestation – the DANI Statement on Environmental Policy* (DANI, 1993). It states that there should be a presumption against afforestation of botanically rich sites, which have undergone little disturbance for many years.

3.1.20 Forests and Water Guidelines (Forest Commission, 2003), sets out water protection and riparian management standards with which forest managers are required to comply in relation to forest design planning and management of forestry operations which might effect water bodies.

3.1.21 An 'Options for Forestry' paper has recently been out to public consultation (DARD, 2004). One of the proposals for consultation is for Forest Service to seek powers to specify the conditions under which tree felling will be permitted. If implemented, this could add to the suite of protections against tree felling already outlined above and result in the use of approved management plans or such mechanisms similar to 'Felling Licenses' which are used in other parts of the UK and Ireland.

3.1.22 The Rivers Agency, as the statutory Drainage and Flood Protection Authority for Northern Ireland are responsible for maintaining the effective drainage function of designated watercourses under the *Drainage (Northern Ireland) Order 1973*. All drainage and flood defense proposals are subject to the *Drainage (Environmental Assessment) Regulations (Northern Ireland) 1991*, as amended, which require an assessment at planning stage of the environmental impact of the proposed works. Rivers Agency also consult with EHS on their annual programme of drainage maintenance, where this may have an impact on designated sites of nature conservation importance. This includes both localised operations such as the maintenance of outfalls for field drains and more significant river maintenance work. All of these operations can have adverse effects on wet woodlands and other wetlands if not carefully planned and implemented.

3.1.23 The European Water Framework Directive aims to rationalise much of the EC's water legislation with an overall purpose of providing a framework for the protection of surface waters. This aims at preventing the deterioration of aquatic ecosystems with a strong emphasis on ecological quality targets.

3.2 Management, research and guidance

3.2.1 EHS, as part of the requirements of the Habitats Directive, has prepared conservation objectives for those sites submitted as cSAC's. Where wet woodland occurs on cSACs and ASSIs, they are protected by control of potentially damaging operations and by the application of targeted conservation objectives.

3.2.2 Common standards monitoring protocols are also being established across the UK to assess the extent and condition of wet woodland within designated sites. However, standards for assessing favourable condition of the habitat in the wider countryside have not yet been agreed.

3.2.3 The Management of Sensitive Sites Scheme (MOSS), launched in 2002 by EHS, is a voluntary scheme designed to ensure the positive management of the site features to maintain their extent and favourable condition within ASSIs. Under the scheme, landowners can receive payment for carrying out conservation work within the framework of a written agreement. MOSS covers issues that have relevance to the conservation of the site features including dumping, grazing and control of invasive species. EHS has negotiated several management agreements on ASSIs to help secure sympathetic ASSI management through the MOSS scheme.

3.2.4 Forest policy includes a presumption against clearance of broad-leaved woodland for conversion to other land uses, and in particular seeks to maintain the special interest of ancient semi-natural woodland. In Northern Ireland, Forest Service has responsibility for developing and implementing local forestry policies.

3.2.5 Grants for woodland planting, regeneration and some other management practices, are available from the Forest Service. Forest Service offers two grant schemes which are part funded by the European Union (Council Regulation 1257/1999). The Woodland Grant Scheme (WGS) offers grants towards the costs of establishing new woodland and

management of existing woodland. The scheme is wide-ranging in order to encourage multiple use forestry. It is a requirement of the Forest Service that all planting and woodland must be in accordance with good silvicultural practice as determined by the UK Forestry Standard and accompanying guidelines. There are two groups of grant available. Establishment Grants are designed to assist new planting, restocking and natural regeneration. Woodlands must be at least 0.2 ha in area and 20 metres wide to be eligible. Woodland Improvement Grant and Sustainable Forestry Operations Grants are available for existing woodlands to bring them back to sustainable management and secure environmental, social and economic benefits. To be eligible woods must be at least 1.0 ha. All grants are paid as part of an agreement under which the owner undertakes to maintain the woodlands in accordance with good forestry practice for a minimum of 30 years in the case of predominantly broad-leaved woods. The Farm Woodland Premium Scheme (FWPS) is designed to encourage the creation of new woodlands on farms. The Scheme offers annual payments, for either 10 or 15 years, depending on the trees planted and management, to compensate for agricultural income foregone.

3.2.6 New native woodlands should follow the guidelines set in the Forestry Commission *Bulletin 112 Creating New Native Woodlands* (Rodwell & Patterson, 1994). Non site native species should not constitute more than 5% of the canopy cover and ideally should constitute none. Exceptions may be made in terms of mature or veteran trees and naturalised species where these add to the nature conservation value of the site, but each case is assessed on an individual basis. Species which have the potential to be invasive should not be planted. Consideration should be given to the genetic origin of the planting stock. This is especially important in the vicinity of long-established and ancient semi-natural woodlands, where local sources should be used.

3.2.7 DARD, through its Countryside Management Branch (CMB), has developed a series of agri-environment schemes including the Environmentally Sensitive Areas (ESA) Scheme (revised in 2000) and the Countryside Management Scheme (CMS). A further revision to both the ESA and CMS has recently been approved under the current Northern Ireland Rural Development Programme (2000-2006). Their objective is to protect and enhance semi-natural habitats such as wet woodland by encouraging more sensitive management practices. Both these schemes are voluntary and apply to the whole farm. Within agri-environment schemes, 402 ha of broad-leaved woodland is managed under CMS and ESA agreements, including 60 ha of carr (31st March, 2004). The review of agri-environment schemes fine-tuned woodland habitat definitions to correspond with delivering targets listed in Habitat and Species Action Plans where appropriate.

3.2.8 The designation of ESAs commenced in 1988 and today there are five ESAs in Northern Ireland. DARD has determined a number of priority habitats which, if they occur on the farm, must be brought under agreement and managed according to relevant prescriptions determined by DARD. Under the original ESA scheme, there is over 2,695 ha of woodland/scrub and under new ESA agreements there are currently 54 ha of woodland and 98 ha of scrub.

3.2.9 The Habitat Improvement Scheme (HIS) aims to help farmers protect, enhance and establish habitats which are considered to have major conservation value. This is achieved

by taking land out of agricultural production or by entering into a 10 year agreement which involves extensive grazing based on non-application of fertilizers and pesticides to the land. No new applications for the HIS are being accepted as the scheme closed in mid-1999. The scheme has been replaced by the Countryside Management Scheme (CMS).

3.2.10 The CMS, launched in 1999, was developed with the primary aim to maintain and enhance biodiversity and is open to all farmers and landowners outside ESAs. Where funding is limited, entry into the scheme is competitive, being based on who can offer the greatest environmental benefits. DARD can provide area-based payments on blocks of 'broad-leaved farm woodland/scrub' which are a minimum of 0.1 ha in area within the farm unit, where it meets clearly defined criteria. Woodland/scrub cover must be at least 50% and consist of at least 50% broad-leaved tree species to be eligible. There are currently 416 ha of woodland and 713 ha of scrub under CMS agreements, with approximately 50% of the woodlands being wet woodlands.

3.2.11 The CMS has a voluntary option to protect and enhance grass margins adjoining ASSIs, NNRs, SACs, watercourses, lakes, woodlands or field boundaries. Grass margins are at least 2m wide and of a length which DARD will decide. The option of creating grass margins promotes the protection of sensitive habitats from pesticide drift or nutrient enrichment. No grazing, and usually no mowing, is allowed within the buffer strip and funds are available for fencing.

3.2.12 DARD has developed the Entry Level Countryside Management Scheme (ELCMS) which is due to open mid 2005. ELCMS has been designed to be easily accessible and to deliver a range of basic agri-environment improvements. Participants in the scheme will be required to undertake a field boundary management module, one of 3 possible water quality modules and one of 5 further biodiversity modules. The scheme will complement the existing agri-environment programme.

3.2.13 Wet woodland comprising willow, downy birch or alder is often found as part of a mosaic of wetland habitats. The management of small areas of woodland that occur within a wetland system would be eligible for funding through CMS if the wetland mosaic is over 0.1 ha. This funding requires livestock to be excluded between 1 January and 31 May and the levels of grazing to be restricted between 1 June and 31 December. Where water levels in sheughs/drains are controllable, they need to be kept as close as possible to bank height between 1 March and 15 June. In addition, funding covers the cost of routine positive management to be agreed with DARD at the outset, which could include management of wet woodland and the maintenance of water levels in sheughs.

3.2.14 The introduction of Good Farming Practice (GFP), which is applicable to all farmers receiving Less Favoured Area (LFA) compensatory payments and those who enter any of the agri-environment schemes, provides a level of protection for wet woodland. Farmers must comply with a list of 8 verifiable standards in relation to GFP and retain a copy of the Codes of Good Agricultural Practice for water, soil and air. These standards and codes apply to the whole farm and are compatible with the need to safeguard the environment and maintain the countryside through sustainable farming. Damaging

operations and woodland clearance is prohibited without the necessary permissions. Over 70% of Northern Ireland is classified as LFA.

3.2.15 An 'Ancient Woodland Inventory' of Northern Ireland by the Woodland Trust, with funding from EHS and the Heritage Lottery Fund is due for completion in 2007. The aim of the project is to identify and classify ancient and long-established woodland. 'Ancient' woodland is classified as land continuously wooded since at least 1600. 'Long-established' woodland is classified as land continuously wooded since the 1830s but which became wooded after 1600. Physical features, such as pollards, ancient trees, walls, banks, ditches, evidence of other land use, species and woodland type will be recorded. A similar survey has been undertaken in Great Britain. A Native Woodland Inventory is also being prepared in the Republic of Ireland by the Department of the Environment Heritage and Local Government.

3.2.16 A programme of restoration of native woodland in plantations on ancient and long-established woodland sites is being undertaken by Forest Service and will yield valuable information on the regeneration of wet woodland.

3.2.17 Information on woodland type and management is collected as part of the Forest Services's Woodland Grant Scheme and Farm Woodland Premium Scheme. A biodiversity audit undertaken by Forest Service (2002-2005) should assist in identifying areas of wet woodland within their estate. EHS also holds information from surveys of woodlands in AONBs, statutory protected sites and SLNCIs.

3.2.18 Other relevant information is gathered through specialist biological recording groups, Non-Governmental Organisations (NGOs), universities and other government bodies. Biological records are stored in the Museum and Galleries of Northern Ireland (MAGNI) at the Centre for Environmental Data and Recording (CEDaR). CEDaR was established in 1995 in partnership with EHS, MAGNI and the biological recording community. At 31st March 2004, over 1.4 million records were held by CEDaR and there are developments underway to make these records more accessible through the Internet. This will be achieved through the National Biodiversity Network, a union of organisations throughout the UK working together to create an information network of biological data providing an accessible data source for biodiversity information.

3.2.19 The Forestry Commission published a revised Forest Practice Guide for Wet Woodlands in 2002 (Forestry Commission, 2002). Management should follow this guide.

3.2.20 Woodland management advice is available from forestry consultants and management companies and through Forest Service - Private Woodland Branch, and through EHS Regional Operations staff and the MOSS team, DARD – CMB and NGOs such as the Woodland Trust, Conservation Volunteers for Northern Ireland (CVNI), the Ulster Wildlife Trust (UWT) and the National Trust (NT). The experience of woodland managers is also developed and promoted through organisations such as the Forestry and Timber Association, Society of Irish Foresters, Royal Forestry Society, the Institute of Chartered Foresters and the Royal Institution of Chartered Surveyors.

3.2.21 Research in Northern Ireland is undertaken by various bodies and individuals. For example the ongoing biodiversity audit by Forest Service, distribution of deer by EHS, ground flora and tree regeneration following conifer plantation, clearfell and habitat associations of the red and grey squirrels by university departments and monitoring of agri-environment schemes by DARD. The Forestry Authority is also researching *Phytophthora* disease and the conservation of black poplar *Populus nigra*, the RSPB have looked at the impacts of alder on water quality, and the Environment Agency have assessed the potential for restoration of floodplain woodland.

3.2.22 In 2003, a forum was established to ensure that the management of native woodlands is co-ordinated and appropriately supported. This forum is known as the Northern Ireland Native Woodland Group (NINWG). A programme to enhance and extend native woodland in Northern Ireland is currently being developed in partnership between EHS, Forest Service and the NINWG.

3.2.23 The Woodland Trust initiative 'Woods on Your Doorstep', funded by the Millennium Commission (1996-2001), has resulted in the creation and management of 51 new community woods covering 210 ha across Northern Ireland. The majority of these woodlands were created using local provenance native trees. Based on the experiences of this initiative, both in Northern Ireland and Britain, a series of guides on the creation and management of native woodlands in the urban environment was produced.

3.2.24 The current Woodland Trust initiative 'Tree for All' aims to plant 12 million trees throughout the UK between September 2004 and 2009.

3.2.25 Conservation Volunteers, Northern Ireland (CVNI) has been involved in planting trees using volunteers for over 20 years. In October 2002, they launched an importance initiative to help restore Northern Ireland's woodland heritage entitled *Trees of Our Future*. Supported by the Heritage Lottery Fund and EHS, *Trees of Our Future* encourages planting local provenance native trees. The aim is to enhance biodiversity and provide people with an understanding of why planting native trees is important.

3.2.26 In the Republic of Ireland 'The Peoples Millennium Forests Project', funded by Allied Irish Banks, the National Millennium committee and the Forest Service, has resulted in the planting and management of 600 ha of native trees. The Native Woodland Scheme, funded by the National Parks & Wildlife Service, Department of the Environment, Heritage & Local Government, due for completion in 2006, aims to support the establishment of 15,000 ha of new woodland and target 15,000 ha of existing woodland for restoration.

3.2.27 Appointment of Local Biodiversity Officers by many District Councils in Northern Ireland will result in the development of Local Biodiversity Action Plans (LBAPs). These plans will encourage, co-ordinate and inform local biodiversity action.

4. Action Plan Targets

4.1 Maintain the area of all wet woodlands in Northern Ireland at least 2,600 ha.

4.2 Maintain the current area of all ancient or long-established semi-natural wet woodlands.

4.3 Maintain condition, where favourable, of the existing resource.

4.4 Achieve favourable condition of 1650 ha. of wet woodland by 2015.

4.5 Restore 60 ha of former wet woodland on ancient and long-established woodland sites by 2010.

4.6 Restore a further 70 ha of former wet woodland on ancient and long-established woodland sites by 2015.

4.7 Establish 120 ha of wet woodland by 2010.

4.8 Establish a further 140 ha of wet woodland by 2015.

5. Proposed Actions with Lead Agencies

5.1 Policy and legislation

5.1.1 Encourage the development of forestry/landscape strategies to provide a context for and to promote expansion and positive management of wet woodland.
(ACTION: EHS, DARD, Forest Service, Planning Service, District Councils)

5.1.2 By 2006, develop a framework for the management of wet woodland across the range of variation in Northern Ireland.
(ACTION: EHS, DARD, Forest Service)

5.1.3 By 2005, initiate discussions with other government departments to ensure appropriate consultation mechanisms exist for proposed changes in land-use.
(ACTION: DARD, EHS, Forest Service, Planning Service)

5.1.4 By 2006, review *Planning Policy Statement 2 (*PPS2*) – Planning and Nature Conservation*, to include policies relating to the conservation of priority habitat and species.
(ACTION: Planning Service, EHS)

5.1.5 By 2006, produce *Planning Policy Statement (*PPS15) on *Planning and Flood Risk*. This includes an objective to promote an integrated sustainable approach to the management of development and flood risk that, among other matters, will contribute to the conservation and enhancement of the biodiversity of Northern Ireland.
(ACTION: Planning service, EHS)

5.1.6 By 2005, produce *Planning Policy Statement* (PPS14) on *Sustainable Development in the Countryside* which includes objectives to minimise the impact of housing development on the environmental resources of habitat, water quality and biodiversity of the rural area, thereby contributing to the conservation of biodiversity in Northern Ireland.
(ACTION: DRD, EHS, Planning Service)

5.1.7 Identify further examples of wet woodland as SLNCIs for consideration for adoption into appropriate Development Plans.
(ACTION: EHS, Planning Service)

5.1.8 Ensure that important wet woodland sites not already identified e.g. as SLNCIs, are recognised and, where appropriate, site protection policies are included in Development Plans and other strategic plans including Local Biodiversity Action Plans (LBAPs).
(ACTION: Planning Service, EHS, DARD, District Councils, Forest Service)

5.1.9 In the preparation of Planning Policy Statements, the promotion of biodiversity will be taken into account where appropriate.
(ACTION: Planning Service, DRD, EHS)

5.1.10 By 2007, review the effectiveness of agri-environment schemes, Woodland Grant Scheme, MOSS, GFP and other woodland initiatives to ensure the delivery of the targets in this plan.
(ACTION: DARD, Forest Service, EHS)

5.1.11 By 2007, ensure that agri-environment scheme prescriptions relevant/appropriate to wet woodlands are contributing to maintaining and enhancing the habitat across Northern Ireland.
(ACTION: DARD, EHS)

5.1.12 By 2006, review and develop policies to ensure development activities, regulated activities and infrastructure maintenance work (including timing) is sensitive to the requirements of wet woodland.
(ACTION:, Roads Service, Rivers Agency, Water Service, Planning Service, Statutory Undertakers, District Councils, EHS, DETI)

5.1.13 By 2006, encourage the planting of local provenance native trees and encourage planting in the restoration and expansion of wet woodland.
(ACTION: EHS, Forest Service, DARD)

5.1.14 By, 2006, discourage planting of invasive, non-native species including willows adjacent to, or in extant wet woodland.
(ACTION: Forest Service, DARD, EHS)

5.1.15 By 2006, encourage the planting of local provenance trees and discourage planting of invasive, non-native species including adjacent to, or in extant woodlands.
(ACTION: Forest Service, DARD, EHS)

5.1.16 By 2005, agree standards and definitions for the restoration of native wet woodland and the establishment of new native wet woodlands.
(ACTION: Forest Service, EHS, DARD)

5.1.17 Seek to encourage positive environmental change through the reformed Common Agricultural Policy (CAP), for example, by promoting sustainable agricultural management of wet woodland.
(ACTION: DARD, EHS)

5.1.18 By 2007, ensure wet woodland is adequately protected through the CAP.
(ACTION: DARD, EHS)

5.1.19 By 2006, ensure that all farmers receiving agri-environment scheme payments and LFA Compensatory Allowance Payments are complying with GFP.
(ACTION: DARD, EHS)

5.1.20 Ensure that the delivery of this action plan is fully compatible with relevant aspects of forest policy.
(ACTION: EHS, Forest Service)

5.2 Site safeguard and management

5.2.1 By 2008, produce conservation objectives for all statutory designated wet woodlands including cSACs, ASSIs and NNRs.
(ACTION: EHS)

5.2.2 By 2010, review the coverage of wet woodland within both the ASSI and NNR series, and notify further sites as necessary to fill significant gaps in the range of variation throughout Northern Ireland.
(ACTION: EHS)

5.2.3 By 2006, prioritise areas, timescales and targets, based on designation status to identify appropriate areas (i.e. avoiding other priority habitats) for restoration and expansion of wet woodland for example around small sites, to connect sites, to restore hydrological zonation of woodland.
(ACTION: EHS, DARD, Forest Service)

5.2.4 By 2007, target positive management through MOSS, agri-environment schemes, restoration schemes, the LBAP process and grant aid for biodiversity to secure favourable management on wet woodland sites (including SLNCIs) prioritised in 5.2.3 according to agreed timescales.
(ACTION: EHS, Forest Service, DARD)

5.2.5 By 2006, develop and promote the use of long-term management plans (20 years +) by wet woodland owners, aimed at achieving favourable condition of all important examples of this habitat.
(ACTION: Forest Service, EHS, DARD)

5.2.6 By 2006, promote and implement the management and restoration of areas of wet woodland owned or part-funded by government.
(ACTION: Forest Service, DARD, EHS, District Councils)

5.2.7 By 2006, contribute to the implementation of relevant priority Species Action Plans, through the integration of management requirements and advice, in conjunction with relevant steering groups such as Northern Ireland Native Woodland Group.
(ACTION: EHS, Forest Service, DARD)

5.2.8 By 2010, designate as SACs those areas of wet woodland approved by the EC under the Habitats Directive.
(ACTION: EHS)

5.2.9 By 2007, promote amongst site managers and land owners of other wetland and peatland sites the value of wet woodland as part of a habitat mosaic.
(ACTION: EHS)

5.2.10 By 2015, promote the conservation and expansion of wet woodland as part of the measures being implemented to achieve good conservation status in all river basins and defined waterbodies and watercourses under the EC Water Framework Directive.
(ACTION: EHS, DARD, Forest Service)

5.3 Advisory

5.3.1 By 2005, review all relevant guidelines and advisory material on woodland management and restoration practices, and the establishment of new native woodland.
(ACTION: DARD, Forest Service, EHS)

5.3.2 By 2006, provide information to landowners and occupiers on the status and conservation importance of wet woodland through the production, promotion and dissemination of literature.
(ACTION: EHS, DARD, Forest Service)

5.3.3 By 2005, provide advice to landowners, government agencies and NGOs on the selection of suitable provenances and seed origins for planting.
(ACTION: EHS, Forest Service)

5.3.4 Encourage and provide advice on the marketing and sustainable use of products from wet woodland as a means of supporting appropriate management.
(ACTION: EHS)

5.3.5 By 2005, promote awareness of the EIA Regulations by contacting representatives of farmers, land agents, the legal profession and other relevant organisations.
(ACTION: Forest Service, EHS, DARD, Planning Service)

5.3.6 By 2006, provide advice to land managers on management regimes, including grazing regimes, appropriate to the geographical distribution and ecological variation found in wet woodland.
(ACTION: DARD, Forest Service, EHS)

5.3.7 By 2006, encourage applications from potential partners to obtain funding to bring areas of wet woodland into favourable management.
(ACTION: EHS, DARD, Forest Service, District Councils)

5.3.8 By 2010, develop demonstration sites including Rea's Wood, Farr's Bay and Hollymount to reflect the range of ecological variation and applied management techniques throughout Northern Ireland's wet woodland resource.
(ACTION: EHS, Forest Service, DARD)

5.3.9 By 2008, inform all owners of land included in the Ancient Woodland Inventory of the nature conservation value of this habitat.
(ACTION: EHS, DARD, Forest Service)

5.3.10 By 2007, develop and promote training programmes on the conservation, management and restoration of woodland.
(DARD, Forest Service, EHS)

5.4 International

5.4.1 Further develop links with the Republic of Ireland and other European and international organisations such as the European Forestry Institute, the European Environment Agency and the European Centre for Nature Conservation and promote the awareness of, and exchange of data and information relating to experience gained in research, management techniques, education and conservation strategies for the conservation of wet woodlands.
(ACTION: EHS, Forest Service**)**

5.5 Monitoring and Research

5.5.1 By 2006, set standards for assessing favourable condition for the range of wet woodland throughout Northern Ireland.
(ACTION: EHS, DARD, Forest Service)

5.5.2 By 2008, initiate a programme to monitor the extent and condition of the wet woodland resource.
(ACTION: EHS, DARD, Forest Service)

5.5.3 By 2007, complete an Ancient Woodland Inventory which will identify and provide baseline information on long established wet woodlands.
(ACTION: EHS)

5.5.4 By 2008, produce an inventory of wet woodlands and restoration projects in Northern Ireland.
(ACTION: EHS, Forest Service)

5.5.5 By 2006, initiate monitoring programmes to establish the effectiveness of government funded schemes and management methods in achieving the targets of this plan.
(ACTION: DARD, EHS, Forest Service)

5.5.6 By 2005, establish surveillance and monitoring programmes to assess the condition of the wet woodland habitats within designated sites to aid site management.
(ACTION: EHS)

5.5.7 By 2007, review and undertake research on the effects of invasive, non-native plant species on the structure and condition of wet woodland, and produce management recommendations.
(ACTION: EHS, Forest Service, DARD)

5.5.8 By 2006, commission applied research to help develop beneficial and practical management techniques for the enhancement, restoration and expansion of wet woodland and populations of associated characteristic species.
(ACTION: EHS, Forest Service, DARD)

5.5.9 By 2006, commission further research on genetic variation within tree species across the island of Ireland.
(ACTION: EHS, DARD, Forest Service)

5.5.10 By 2006, encourage the dissemination and use of existing research and commission new research where necessary, to improve the understanding of wet woodland diversity particularly in relation to other priority habitats with which it commonly occurs (oakwood, mixed ashwood, bog and fen and reedbed) and for a range of taxa for which little information currently exists.
(ACTION: EHS, DARD)

5.5.11 By 2008, monitor wet woodland restoration sites so that management resources can be focused on areas most likely to show a positive response.
(ACTION: Forest Service, EHS)

5.5.12 Encourage access throughout Britain and Ireland to the records held at CEDaR by contributing to the National Biodiversity Network www-based catalogue of survey information.
(ACTION: EHS)

5.5.13 By 2005, establish surveillance and monitoring programmes for recording the health of trees and the incidences of disease such as *Phytophthora* root disease of alder
(ACTION: DARD, Forest Service, EHS)

5.5.14 By 2015, review the requirement for further research on the effects of pollution and climate changes on wet woodland, and promote research needs accordingly.
(ACTION: EHS)

5.6 Communications and Publicity

5.6.1 By 2005, devise a strategy for ensuring effective distribution of existing advisory material to woodland managers and, if gaps are identified, produce and disseminate appropriate material to fill these.
(ACTION: EHS, Forest Service, DARD)

5.6.2 By 2006, promote the conservation of wet woodland through the scientific press and popular media.
(ACTION: EHS, Forest Service, DARD)

5.6.3 By 2006, facilitate production of a simple web-page, an attractive booklet and CD-ROM for the public and schools which explains the conservation importance of native woodlands in Northern Ireland.
(ACTION: EHS, Department of Education, Forest Service)

5.6.4 By 2006, aim to achieve a minimum of 200 school groups attending woodland education programmes each academic year.
(ACTION: EHS, Forest Service)

5.6.5 By 2006, encourage appropriate access as well as interpretative and educational provisions on key wet woodland sites to increase enjoyment and public awareness of the biodiversity of wet woodland.
(ACTION: EHS, DARD, Forest Service, District Councils)

6 Costings

6.1 A table showing the global costs for this and other HAPs is available on the EHS/Biodiversity web page.

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List of Useful Acronyms

ASSI	Area of Special Scientific Interest
BAP	Biodiversity Action Plan
CEDaR	Centre for Environmental Data and Recording
CMD	Countryside Management Division
CMS	Countryside Management Scheme
DARD	Department of Agricultural and Rural Development
DCAL	Department of Culture, Arts and Leisure
DETI	Department of Enterprise, Trade and Industry
DOE	Department of the Environment
DRD	Department for Regional Development
EHS	Environment and Heritage Service
ESA	Environmentally Sensitive Area
ESCRs	Earth Science Conservation Review Site
HAP	Habitat Action Plan
JNCC	Joint Nature Conservation Committee
MAGNI	The National Museums and Galleries of Northern Ireland
NIBG	Northern Ireland Biodiversity Group
NICS	Northern Ireland Countryside Survey
NNR	National Nature Reserve
PPG	Planning Policy Guideline
PPS	Planning Policy Statement
RA	Rivers Agency
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAP	Species Action Plan
SLNCI	Sites of Local Nature Conservation Importance
SoCC	Species of Conservation Concern
SPA	Special Protection Area
WFD	Water Framework Directive
WWT	Wildfowl and Wetlands Trust