

**Northern Ireland Habitat Action Plan**  
**Lowland Heathland**  
**Final Draft – April 2003**

**1. Current status**

**1.1 Biological status**

- 1.1.1 Heathland vegetation occurs widely on mineral soils and thin peats (<0.5 m deep) throughout the uplands and moorlands of the UK and the Republic of Ireland. Characterised by the presence of dwarf shrubs, heathland communities range from the lowest altitudes right through to the highest mountain summits. Dwarf shrub heaths are recognised as being of international importance because they are largely confined within Europe to the British Isles and the western seaboard of mainland Europe. Northern Ireland has a range of heathland communities which have developed under an oceanic climate. For the purposes of the Habitat Action Plans, these are divided into three main habitats:- Lowland Heathland, generally found below 300 m in altitude; Upland Heathland, lying above the upper edge of agricultural land (generally around 300 m) and below the alpine or montane zone (at about 600 m); and Montane Heath, generally above 600m. Separate plans have been produced for each of the three habitat types.
- 1.1.2 Lowland Heathland is therefore defined as lying below the upper limit of agricultural enclosure, generally below 300 m and supports a range of flora and fauna not found on upland heath. Lowland heathland is characterised by the presence of dwarf shrubs such as Heather *Calluna vulgaris* and Bell Heather *Erica cinerea* at a cover of at least 25%.
- 1.1.3 Lowland heathland incorporates both dry and wet heaths, dependent on local environmental conditions. A range of dwarf shrubs such as Bell Heather, Heather and Western Gorse *Ulex gallii* typically dominate dry heaths, with the latter restricted to lowland heathlands. These dwarf shrubs generally comprise over 75% cover where the dry heath is in good condition. On Rathlin Island and other coastal sites, dry heaths tend to be more extensive than wet heaths and Spring Squill *Scilla verna* is a typical component of these lowland maritime heaths. Wet heaths, which are generally more widespread throughout the rest of Northern Ireland, are dominated by a mixture of Heather, Cross-leaved Heath *E. tetralix* and Purple Moor-grass *Molinia caerulea*. In flushes around the lower slopes of the Mourne, Black Bog-rush *Schoenus nigricans* is locally important in these lowland wet heath communities. Wet heaths can be highly variable, with some communities naturally supporting a dwarf shrub cover as low as 25% or as high as 90%. However, within Northern Ireland, a dwarf shrub cover of 50 – 75% is typical of wet heaths in good condition.

- 1.1.4 High quality lowland heathlands are usually structurally diverse, consisting of an ericaceous layer of varying heights and structures representing different stages of growth including areas of mature Heather. Other habitats such as scattered scrub, bracken, gorse, flushes, mires and pockets of bare ground often form intimate mosaics with lowland heathland vegetation. Although the plan concentrates on lowland heathland communities, it also recognises the importance of habitat mosaics.
- 1.1.5 Within Northern Ireland, lowland heathland 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. *Calluna vulgaris* - *Erica cinerea* heath (H10) is widespread ranging from Rathlin Island in the far north to the Mourne Mountains and the Ring of Gullion in the south-east and *C. vulgaris* – *Scilla verna* heath (H7) is scattered around the coastal cliffs and on Rathlin. Other, more localised, communities such as *C. vulgaris* – *Ulex gallii* heath (H8) and *E. tetralix* - *Sphagnum compactum* heath (M16) are generally confined to the lowlands of the Mourne Mountains and the Ring of Gullion, while dune heaths *Calluna vulgaris* – *Carex arenaria* (H11) are even more restricted, the best example being Murlough in County Down. Flush communities containing Black Bog-rush are of particular note at lower altitudes. The distribution of these lowland heathland communities is influenced by climate, altitude, aspect, slope, maritime influences and management practices including grazing and burning.
- 1.1.6 The presence and numbers of characteristic vertebrates, invertebrates, vascular plants, mosses and lichens are important indicators of habitat quality. Important invertebrates associated with lowland heathland in the Mourne Mountains include the Keeled Skimmer Dragonfly *Orthetrum coerulescens* and the water beetles *Paracymus scutellaris* and *Laccobius atratus*, typically in flushes associated with the wet heathland communities.
- 1.1.7 Favourable condition is defined by setting targets or target ranges for a series of different attributes. These are components or characteristics of the vegetation that are relatively easy to measure, but which are reliable indicators of the ‘health’ of the habitat. For lowland heathland, these include the cover of dwarf-shrubs, the vegetation structure, the presence of certain key indicator species, and the absence of vegetation, species or factors associated with disturbance such as burning or overgrazing. The standards for assessing favourable condition of lowland heathland, taking cognisance of the variability of the habitat across Northern Ireland, have still to be finalised for the purposes of this habitat action plan.
- 1.1.8 Within Northern Ireland, lowland heathland is generally fragmented and restricted in its occurrence. It is largely confined to the lower slopes of the Mourne Mountains and the Ring of Gullion, Rathlin Island and narrow coastal strips in Counties Antrim and

Down, and small heathland areas associated with some fens in Counties Down and Armagh. Significant regional variations have been recognised, with Rathlin heaths typically more maritime in character than others and the Mourne heaths displaying a gradation from lowland heathland to montane heaths that is notable in the UK.

- 1.1.9 Lowland heathland is a rare and threatened habitat, and the UK represents an important proportion (about 20%) of the international total for this habitat. In total, the UK has some 58,000 ha of lowland heathland of which the largest proportion (55%) is found in the southern counties of England.

- 1.1.10 There has been no comprehensive assessment of the extent, distribution or condition of the lowland heathland resource in Northern Ireland. However, the *Northern Ireland Countryside Survey (NICS) 2000* (Cooper & McCann, 2001) (see below section 3.2.10), estimates that the area of lowland heathland in Northern Ireland is c 5,000 ha. This is a more accurate and up-to-date figure than the previous published estimate of 5,400 (UK Biodiversity Steering Group, 1995). Although 5,000 ha is the best estimate, it should be noted that this figure is based on lowland land classes, defined by NICS as land below 500 ft (c150 m), i.e. at a lower level than the definition for lowland heath in this plan. Although an underestimate, for the purposes of this habitat action plan 5,000 ha is a realistic area on which to base all subsequent targets within Northern Ireland.
- 1.1.11 There have been locally significant losses of lowland heathland in recent years around the lower slopes of the Mourne Mountains. Much of this habitat loss is attributed to agricultural intensification. The NICS 2000, however, did not record any statistically significant loss of lowland heathland in Northern Ireland between 1992 and 1998 with an 11% loss of lowland wet heath, no loss of lowland dry heath and an increase in both dry and wet lowland heathland mosaics (Cooper & McCann, 2001).

## **1.2 Links with other action plans**

- 1.2.1 This Lowland Heathland Action Plan identifies specific targets and actions required to deliver Northern Ireland's contribution to the UK Lowland Heathland Action Plan, published in 1995 (UK Biodiversity Steering Group, 1995).
- 1.2.2 Lowland heathland is an important component of the lower slopes of the upland environment where at around 300 m it grades into upland heathland habitats. In the enclosed lowlands, heathland occurs adjacent to woodland and scrub, fens in Counties Down and Armagh and forms complex mosaics with maritime cliff and slopes where it occurs in coastal locations. Each of these associated habitats will be subject to their own Northern Ireland Habitat Action Plans. The requirements of these habitats should be taken into account during the implementation of this plan.
- 1.2.3 Within Northern Ireland, lowland heathland is important for a number of UK priority species identified as part of the UK Biodiversity Action Plan programme. These include Linnet *Carduelis cannabina*, Skylark *Alauda arvensis* and the Marsh Fritillary Butterfly *Euphydryas aurinia*.
- 1.2.4 In addition to the UK priority species list, a number of additional priority species and species of conservation concern within a Northern Ireland context have been identified. Northern Ireland priority species associated with lowland heathland mosaics in association with other open habitats include Curlew *Numenius arquata* and Irish Hare *Lepus timidus hibernicus*, as well as Chough *Pyrrhocorax pyrrhocorax* (on the north

coast and Rathlin Island).

- 1.2.5 The requirements of these species should be taken into account during the implementation of this plan. Action plans are currently being drafted for a number of Northern Ireland priority species and a local Curlew Species Action Plan, Chough Species Action Plan and Irish Hare Species Action Plan have been published (DOE, 2000).

## **2. Current factors affecting the habitat**

- 2.1 Lowland heathland is dependent on management by light grazing and to a lesser extent burning or cutting to prevent succession to scrub or woodland. Although many areas of lowland heath lack any form of management, other areas suffer from overgrazing and environmentally damaging burning regimes. As well as direct loss of habitat, many areas of lowland heathland are characterised by limited structural diversity with few natural transitions from open heath into associated habitats. Current management and other factors are continuing to prevent development of these features in most areas.

- 2.1.1 Grazing - high stocking levels of sheep, and to lesser extent cattle, currently have the most significant impact on Heather and other dwarf shrubs and affect the condition of much of the lowland heathland resource throughout Northern Ireland. Heavy grazing and trampling also prevents regeneration by native woodland and scrub, notably along lowland heathland margins and streams where such habitat transitions would enhance biodiversity. Supplementary feeding and burning contribute to the problem of high stocking densities. However, where there is no grazing due to land abandonment, lowland heathland may be lost to scattered scrub and semi-natural woodland. This is particularly apparent in parts of County Armagh. An appropriate level of grazing is therefore required to maintain lowland heathland communities.

- 2.1.2 Agricultural improvement - conversion to grassland occurs through drainage of wet heaths and boulder removal from dry heaths followed by ploughing, reseeded, liming and fertiliser application. These factors occurred frequently in the past, but are currently much less common since withdrawal of improvement grants in 1985 (DOE, 1993). However, agricultural improvement of lowland heathland is still locally significant, especially around the lower slopes of the Mourne Mountains.

- 2.1.3 Forestry – in addition to the direct physical impacts of existing plantations on lowland heathland, the aerial application of fertilisers can result in drift onto adjacent areas of lowland heath and mature trees can act as an invasive seed source. There is currently a presumption against afforestation of dry heath including lowland heathland (DANI, 1993). In addition, both temporary and permanent areas of lowland heathland are being created within some existing forests by restructuring after the first rotation, particularly adjacent to lakes and fens.

- 2.1.4 Burning - agricultural management often involves the use of fire to modify lowland

heathland vegetation for livestock, primarily sheep, and occasionally cattle. Whilst occasional small-scale burning can be beneficial for maintaining the quality of the habitat, some areas experience uncontrolled and accidental fires. Large-scale and too frequent burning reduces the quality of lowland heath by causing a simplification of the vegetation structure, loss of lower plant assemblages and erosion of peat.

- 2.1.5 Planning developments - housing, road construction and quarries, together with their associated infrastructure can cause direct habitat fragmentation and loss as well as ongoing disturbance to wildlife.

- 2.1.6 Invasive species - encroachment by Bracken *Pteridium aquilinum* and Gorse *Ulex europaeus* can lead to a loss of lowland heathland; this is an increasing problem in some lowland heathland areas.
- 2.1.7 Recreation and other use – many popular walking routes, including parts of the ‘Ulster Way’, traverse areas of lowland heathland which is very sensitive to such pressure, e.g. the Mourne Mountains. The increased use of all-terrain vehicles for recreational, agricultural and sporting activities can result in local disturbance.
- 2.1.8 Nutrient enrichment – acidification and nitrogen enrichment caused by atmospheric deposition could potentially lead to vegetation changes, especially lichen and bryophyte interest.
- 2.1.9 Climate change - 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). Heathland development may benefit from the prediction of increased rainfall, especially in winter, in northern regions of the UK, which together with milder winters, will result in extended growth periods. However, although suitable climatic conditions are likely to persist for the maintenance and restoration of lowland heathland in Northern Ireland, the species composition of the plant communities may well change.

### **3. Current action**

#### **3.1 Legal status**

- 3.1.1 Statutory site designation plays an important part in the conservation of this habitat. A proportion of lowland heathland is given legal protection both nationally as Areas of Special Scientific Interest (ASSIs) and National Nature Reserves (NNRs), and internationally as candidate Special Areas of Conservation (cSACs).
- 3.1.2 Under the *Nature Conservation and Amenity Lands (Northern Ireland) Order 1985*, five ASSIs which include lowland heathland as a selection feature have been identified and declared by the Department of the Environment (DOE) through Environment and Heritage Service (EHS). In addition, a number of fen, grassland and upland sites also contain small areas of lowland heathland. It is estimated that the area of lowland heathland protected within the ASSI network covers around 1,200 ha representing just under 25% of the total lowland heathland resource. Further declarations are planned within the next few years. Although a large proportion of the Eastern Mournes is in public ownership, the majority of the lowland heathland within the ASSI is privately owned with parts covered by management agreements between EHS and landowners

and occupiers. EHS has recently launched a new Management of Special Sites (MOSS) Scheme for landowners and occupiers aimed at establishing the favourable management of designated sites to arrest, and if possible reverse, any negative trends in lowland heathland condition.

- 3.1.3 A portion of the Murlough ASSI in County Down has been declared as a NNR and is owned and managed by the National Trust (NT) for nature conservation. An extensive area of dune heath lies within the NNR, with an additional area owned and managed by the Ministry of Defence (MOD).
- 3.1.4 Most international designations are underpinned by ASSI declaration. 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 Habitats Directive requires member states to designate and manage SACs for 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 three lowland heathland habitats; ‘northern Atlantic wet heaths with *Erica tetralix*’, ‘European dry heaths’ and ‘Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)’.
- 3.1.5 The original UK list of cSACs was submitted to the EC in July 1999 and included 21 cSACs from Northern Ireland, only two of which, the Eastern Mourne and Murlough, were included for their lowland heathland interest. The Eastern Mourne was listed for its European dry heath interest (including both lowland and upland heaths) and Murlough was listed for its Atlantic decalcified fixed dunes. In 1999, this list was then assessed within the context of the relevant bio-geographical region and the EC as a whole - a process known as moderation. Atlantic wet heaths with *Erica tetralix* was listed as an additional SAC selection feature under the moderation process for the Eastern Mourne. By 2001, the revised UK list submitted to the EC included 178 sites for heathland, both upland and lowland. However, only Eastern Mourne and Murlough have been submitted as part of this list from Northern Ireland. In the Republic of Ireland, 40 cSACs (30,232 ha) have been submitted for European dry heaths and 29 cSACs (34,349 ha) have been submitted for northern Atlantic wet heath interest (Caitriona Douglas, personal communication, 2003). Sites designated under the Habitats Directive will eventually be part of an EC wide network of nature conservation sites known as the *Natura 2000* network.
- 3.1.6 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), provides a framework for sustainable development in Northern Ireland which includes the full integration of the conservation of biological diversity and the Northern Ireland Biodiversity Strategy. At a local planning level, policies to protect and enhance biodiversity are being included as part of new Development Plans. These include the identification of Sites of Local Nature Conservation Importance (SLNCIs) for Planning Service. Planning Service is currently considering which SLNCIs 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. The SLNCI network will include a significant number of lowland heathland sites of substantive nature conservation interest, which are not designated as ASSI or NNR.

- 3.1.7 The development of Local Biodiversity Action Plans (LBAPs), probably based on District Council Areas and/or discrete landscape areas, will help to build on the SLNCI network by co-ordinating and informing local biodiversity action.
- 3.1.8 The date and conditions under which lowland heathland can be burnt are defined by Law to protect breeding birds. The burning regulations as stated in the *Game Law Amendment Act (Northern Ireland), 1951* as amended by the *Wildlife (Northern Ireland) Order, 1985*, make it unlawful in Northern Ireland to burn Heather and associated dwarf shrub vegetation between the 15<sup>th</sup> April and the 31<sup>st</sup> August.

### **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 cSACs. Common standards monitoring protocols are also being established across the UK to assess the condition of lowland heathland. The current monitoring programme for assessing the condition of lowland heathland cSACs in Northern Ireland has been initiated. This programme will be extended to include additional ASSIs that contain lowland heathland as a selection feature.
- 3.2.2 Management/rehabilitation plans exist for Murlough NNR, which is owned and managed by the NT who also maintain an active programme of conservation management over other lowland heathland areas in the Mourne Mountains. Several ASSIs with a lowland heath component also receive beneficial management through management agreements.
- 3.2.3 The most notable project to develop and improve the management of lowland heathlands in Northern Ireland is the ‘South Down Heathland Project’. Heritage Lottery Funding (HLF) under the Tomorrow’s Heathland Heritage (THH) Programme co-ordinated by English Nature, allocated £14 million towards reversing the trend in the loss of lowland heath. The ‘South Down Heathland project’ is funded by EHS and the NT in addition to a small proportion of the HLF which was allocated to Northern Ireland. The primary objective of the project is to manage, restore and enhance 250 ha of lowland heathland. The greater part, some 230 ha, is on Murlough NNR, an area of decalcified dunes within the Murlough ASSI and cSAC and the smaller area of 20 ha is at Bloody Bridge within the Eastern Mournes ASSI and cSAC.
- 3.2.4 The Department of Agriculture and Rural Development (DARD), through its Countryside Management Division (CMD), has developed a series of agri-environment schemes including the Environmentally Sensitive Area (ESA) Scheme, the New Environmentally Sensitive Area (NESA) Scheme and the Countryside Management Scheme (CMS). These schemes are potentially the most successful mechanism of contributing to delivery of targets listed under action plans for many

species and habitats. Their objective is to protect and enhance semi-natural habitats such as ‘heather moorland’ (which includes lowland heathland) by encouraging appropriate stocking levels and more sensitive management practices to allow the restoration of dwarf shrub heath on acid grasslands. There is also an emphasis on reducing fragmentation to create and maintain larger blocks of lowland heathland. All three schemes are voluntary and apply to the whole farm.

- 3.2.5 The Countryside Management Scheme, 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 ‘heather moorland’ >1 ha within the farm unit where it meets clearly defined criteria. Heather moorland is land with more than 25% heather cover and comprises five main habitats including dry and wet heath. Where more than 1 ha of lowland heathland is identified on a participating farm, the heath must be brought under agreement and managed according to the specific objectives and prescriptions of the agri-environment scheme. In recognition of the value of small habitat areas, CMD are proposing that that from April 2003, the minimum eligible area for management and payment will be reduced to 0.1 ha. Within agri-environment schemes c 27,000 ha of moorland with a heather component of >25% cover is currently managed under ESA agreement with 7,315 ha managed under CMS. It is likely that the majority of heather moorland in both schemes will be blanket bog and upland heathland, with only a very small proportion of lowland heathland below 300 m being under agreement. The management of habitat mosaics incorporating lowland heathland, marginal hill pasture, woodland and scrub and other farmed land is also incorporated into agri-environment schemes. Future reviews of agri-environment schemes may permit ‘fine-tuning’ of habitat definitions to correspond with delivering targets listed in habitat and species action plans where appropriate.
- 3.2.6 The introduction of Good Farming Practice (GFP), which is applicable to farmers receiving Less Favoured Area (LFA) compensatory payments and those who enter any of the agri-environment schemes, provides protection for lowland heathland and heathland mosaics. Farmers must comply with a list of verifiable standards in relation to GFP and adhere to the Codes of Good Agricultural Practice (COGAP). These standards and codes apply to the whole farm and are compatible with the need to safeguard the environment and maintain the countryside by sustainable farming. Over 70% of Northern Ireland is classified as LFA.
- 3.2.7 In addition to agri-environment schemes and other statutory requirements, semi-natural areas, which are likely to be of particular environmental importance, are further 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 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 there is currently a direct involvement of public bodies and also landuse changes aimed at restoring or enhancing lowland heathland.

- 3.2.8 Forestry is subject to the *Environmental Impact Assessment (Forestry) Regulations (Northern Ireland) 2000*, which state that afforestation of designated sites, nature reserves and parks and other sensitive areas may only be carried out with the consent of the Department of Agriculture and Rural Development. *Afforestation – the DANI Statement on Environmental Policy* (1993) states that dry heath should not be afforested. This statement of policy is incorporated into the *UK Forestry Standard* (Forestry Commission and DANI, 1998), the government’s approach to sustainable forestry.
- 3.2.9 The *UK Woodland Assurance Standard* (UKWAS Steering Group, 2000), a voluntary certification standard, requires that valuable semi-natural habitats which have been colonised, planted, or incorporated into plantations, but which have retained their ecological characteristics (or have a high potential to be restored) are being restored or treated in a manner that does not lead to further loss of biodiversity or cultural value. A strategy for prioritisation of restoration projects has been developed for the Forest Service estate. Deforestation is also subject to the *Environmental Impact Assessment (Forestry) Regulations (Northern Ireland) 2000*.
- 3.2.10 The Rivers Agency currently works closely and consults with EHS on their annual programme of works to maintain the effective drainage function of designated watercourses 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.
- 3.2.11 Within Northern Ireland, planning control is administered by Planning Service (DOE). *Planning Policy Statement 2 (PPS2) - Planning and Nature Conservation*, contains policy for the protection of habitats worthy of conservation against development. This policy is currently under review.
- 3.2.12 There is a significant amount of survey information currently available for the lowland heathland resource although a comprehensive survey and evaluation has not yet been completed. The *Northern Ireland Countryside Survey* (NICS) is a sample survey of Northern Ireland vegetation communities used to estimate habitat extent and distribution (Cooper *et al*, 1997). 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 the early 1990s (Murray *et al*, 1992). *NICS 2000*

(Cooper & McCann, 2001) repeated the survey in 1998, and the findings can be used to estimate the current area of lowland heathland in Northern Ireland. Additional research has included a *Vegetation survey of heath and moorland in Northern Ireland and County Donegal* (Kirkpatrick, 1988), a phase 1 survey of vegetation communities in the Mourne Mountains (Wilson, 1992) and a series of Scientific Reports completed by the NT for Murlough NNR (Whatmough, 1983). Survey information on flora and invertebrates of heather moorland, which includes lowland heathland, within agri-environment schemes has been collected by DARD (under The Queen's University of Belfast Agri-Environment Monitoring Unit). Future research projects could be extended to include topics not thoroughly studied to date, such as vegetation dynamics, vertebrate and invertebrate populations.

3.2.13 Biological records are currently stored by 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. There are currently over 1.4 million records 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.

#### **4. Action plan targets**

- 4.1 Maintain the current extent and overall distribution of all existing lowland heathland (5,000 ha).
- 4.2 Achieve appropriate management on all lowland heathland within ASSIs so that it is in or approaching favourable condition by 2010.
- 4.3 Improve by management, all existing lowland heathland currently in unfavourable condition.
- 4.4 Encourage the re-establishment by 2010 of a further 130 ha of lowland heathland.

#### **5. Proposed action with lead agencies**

##### **5.1 Policy and legislation**

- 5.1.1 By 2004, initiate discussions between government departments to ensure appropriate consultation mechanisms exist for proposed changes in land-use.

(ACTION: DARD, EHS, Planning Service, Roads Service, Ministry of Defence (MOD), Department of Enterprise Trade and Investment (DETI), DRD)

5.1.2 By 2004, review *Planning Policy Statement 2 (PPS2) – Planning and Nature Conservation*, taking cognisance of the experience gained in the rest of the UK, the Republic of Ireland and where appropriate, best practice in environmentally sensitive planning in other countries.

(ACTION: Planning Service, EHS)

5.1.3 By 2005, produce Planning Policy Statements (PPSs) on the countryside and the coast to incorporate the conservation of lowland heathland.

(ACTION: DRD)

5.1.4 By 2006, ensure that important lowland heathlands not already identified 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)

5.1.5 By 2006, produce Northern Ireland guidelines, through a cross-sectoral steering group, on the requirements of lowland heathland conservation, including issues of land use in a wider landscape context.

(ACTION: EHS, DARD, Forest Service)

5.1.6 By 2007, monitor and review the effectiveness of agri-environment schemes, GFP and woodland initiatives to ensure that lowland heathlands are being maintained and enhanced across Northern Ireland.

(ACTION: DARD, Forest Service, EHS)

5.1.7 Continue to establish appropriate stocking levels on lowland heathland by promoting agri-environment schemes and implementing the environmental cross-compliance conditions including GFP.

(ACTION: DARD, EHS)

5.1.8 By 2010, review, and modify where necessary, proposed policy relating to heather burning to ensure appropriate management of lowland heathland.

(ACTION: DARD, DOE, EHS)

## **5.2 Site safeguard and management**

5.2.1 By 2004, produce conservation objectives for all statutory designated lowland heathlands including cSACs, ASSIs and NNRs.

(ACTION: EHS)

- 5.2.2 By 2004, develop agreed methods for describing and assessing favourable condition for lowland heathland habitats.  
(ACTION: EHS)
- 5.2.3 By 2004, promote the uptake of long-term management agreements with landowners and occupiers on statutory designated sites aimed at creating or maintaining favourable condition.  
(ACTION: EHS, DARD, Forest Service)
- 5.2.4 By 2006, seek to identify further examples of lowland heathland as SLNCIs in Development Plans.  
(ACTION: Planning Service, EHS)
- 5.2.5 By 2006, prioritise areas, timescales and targets, based on designation status, and restoration potential, for the conservation, improvement and expansion of lowland heathland.  
(ACTION: EHS, DARD, Forest Service)
- 5.2.6 By 2007, begin measures to secure favourable management on sites prioritised in 5.2.5 according to agreed timescales.  
(ACTION: EHS, DARD, Forest Service)
- 5.2.7 By 2008, identify locally important lowland heathland sites (including SLNCIs) to target positive management through the LBAP process, agri-environment schemes, grant aid for biodiversity and restoration management.  
(ACTION: EHS, DARD, Forest Service, River Agency)

5.2.8 By 2010, review the coverage of lowland heathland 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)

5.2.9 By 2010, designate as SACs, those areas of lowland heathland approved by the EC under the Habitats Directive.

(ACTION: EHS)

### **5.3 Advisory**

5.3.1 By 2006, provide information to landowners and occupiers on the conservation importance of lowland heathland through the production, promotion and dissemination of literature.

(ACTION: EHS, DARD)

5.3.2 By 2006, develop guidelines which identify those circumstances under which restoration of degraded lowland heathland should be actively encouraged.

(ACTION: EHS, DARD, Forest Service)

5.3.3 By 2006, develop guidance on restoration practices for lowland heathland.

(ACTION: EHS, DARD, Forest Service)

5.3.4 By 2006, develop and promote awareness and training programmes on the conservation, management and rehabilitation of lowland heathland through organisations/individuals involved in the delivery of advice to farmers and land managers.

(ACTION: DARD, EHS)

5.3.5 By 2008, encourage applications from potential partners to obtain funding to bring areas of lowland heathland into favourable management.

(ACTION: EHS, DARD, Forest Service, Water Service, District Councils)

5.3.6 By 2010, further develop demonstration sites including the Mourne Mountains and Murlough NNR, to reflect the range of ecological variation and applied management techniques throughout Northern Ireland.

(ACTION: EHS, Forest Service, DARD)

### **5.4 International**

5.4.1 Further develop links with Great Britain, the Republic of Ireland and other European and international organisations and programmes to promote the exchange of

information and experience in research, management techniques, education and conservation strategies.

(ACTION: EHS)

- 5.4.2 Seek to encourage change in the European policy framework through reform of the Common Agricultural Policy (CAP), for example, by reviewing livestock support mechanisms and promoting sustainable agricultural management of lowland heathland.  
(ACTION: DARD, EHS)

## **5.5 Monitoring and research**

- 5.5.1 By 2004, set standards for assessing favourable condition of lowland heathland throughout Northern Ireland.  
(ACTION: EHS, DARD, Forest Service)
- 5.5.2 By 2004, encourage access throughout the UK to the records held at CEDaR by contributing to the National Biodiversity Network www-based catalogue of survey information.  
(ACTION: EHS)
- 5.5.3 By 2006, initiate a programme to monitor the total extent and condition of the lowland heathland resource in Northern Ireland.  
(ACTION: EHS)
- 5.5.4 By 2006, establish surveillance and monitoring programmes to assess the condition of the lowland heathland habitats within designated sites to aid site management.  
(ACTION: EHS)
- 5.5.5 By 2006, encourage the dissemination and the use of existing research in Northern Ireland, Great Britain and the rest of Europe and commission new research where necessary, to improve the understanding of lowland heathland diversity.  
(ACTION: EHS, DARD, Academic Partners)
- 5.5.6 By 2006, continue to commission applied research to help develop beneficial and practical management techniques (including appropriate stocking levels and burning regimes) for the enhancement, restoration and re-creation of lowland heathland and populations of associated characteristic species.  
(ACTION: DARD, EHS, Forest Service)
- 5.5.7 By 2008, commission and undertake cross-disciplinary research into the impact of major land uses on the condition of the lowland heathland resource.  
(ACTION: EHS)
- 5.5.8 By 2010, review research requirements for further research on the effects of pollution and climate change on lowland heathland, and promote research needs accordingly.  
(ACTION: EHS)

## **5.6 Communications and publicity**

5.6.1 Promote the conservation of lowland heathland through the scientific press and popular media.

(ACTION: EHS, DARD)

5.6.2 Encourage appropriate access as well as interpretative and educational provisions on lowland heathland such as Murlough and the Mourne Mountains, to increase enjoyment and public awareness of this sensitive habitat.

(ACTION: EHS, DARD, Forest Service, Water Service, District Councils, DCAL, DETI, DRD)

## **6. Costings**

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

## **7. References**

Conaghan, J. (2001). *A Review Study of Heathlands in Ireland*. The Heritage Council, Dublin.

Cooper, A. & McCann, T. (1995). *The botanical composition of upland heath and mire land cover types in Northern Ireland*. Environment and Heritage Service. Belfast.

Cooper, A. & McCann, T. (2001). *Northern Ireland Countryside Survey 2000*. Environment and Heritage Service. Belfast.

Cooper, A., McCann, T. & Meharg, M. (2002). *Habitat change in the Northern Ireland countryside: summary report of the Northern Ireland Countryside Survey 2000*. Environment and Heritage Service. Belfast.

Cooper, A., Murray, R. & McCann, T. (ed. Warnock, S.). (1997). *Northern Ireland Countryside Survey*. Environment and Heritage Service. Belfast.

Cooper, A. & McCann, T. (2001). *The Northern Ireland Countryside Survey 2000*. Environment and Heritage Service. Belfast.

Department of Agriculture for Northern Ireland (1993). *Afforestation - The DANI*

*statement on environmental policy.* Department of Agriculture for Northern Ireland (Forest Service). Belfast.

- Department of Agriculture for Northern Ireland (2000). *The Environmental Impact Assessment (Forestry) Regulations (Northern Ireland) 2000*. Department of Agriculture for Northern Ireland (Forestry Service). Belfast.
- Department of the Environment for Northern Ireland (1993). *Conserving Peatland in Northern Ireland – A Statement of Policy*. Department of the Environment for Northern Ireland (Environment Service). Belfast.
- Department of the Environment for Northern Ireland (1998). *Planning Policy Statement 2: Planning and Nature Conservation*. Department of the Environment for Northern Ireland (Planning Service). Belfast.
- Department of the Environment for Northern Ireland (2000). *Northern Ireland Species Action Plans: Irish Hare, Chough, Curlew*. Environment and Heritage Service. Belfast.
- Department of the Environment for Northern Ireland (2002). *Northern Ireland Biodiversity Strategy*. Environment and Heritage Service. Belfast.
- Department of Regional Development (2001). *The Regional Development Strategy 2025*. DRD. Belfast.
- Felton, M. & Marsden J. H. (1990). *Heather regeneration in England and Wales. A feasibility study for the Department of the Environment*. Nature Conservancy Council. Peterborough.
- Forestry Commission and the Department of the Environment for Northern Ireland. (1998). *The UK Forestry Standard*. Forestry Commission. Edinburgh.
- Harrison, P. A., Berry, P. M. & Dawson, T.P. (2001). *Climate Change and Nature Conservation in Britain and Ireland: Modelling natural responses to climate change (the MONARCH project)*. Oxford, UKCIP Technical Report.
- Kirkpatrick, A. H. (1988). *A vegetation survey of heath and moorland in Northern Ireland and County Donegal*. PhD thesis, University of Ulster.
- Murray, R., McCann, T. & Cooper A. (1992). *A land classification and landscape ecological study of Northern Ireland*. Environment and Heritage Service. Belfast.

- Northern Ireland Biodiversity Group (NIBG). (1999). *Northern Ireland Biodiversity Strategy : Proposals June 1999*. HMSO. Belfast.
- Northern Ireland Biodiversity Group (NIBG). (2000). *Biodiversity in Northern Ireland: Recommendations to Government for a Biodiversity Strategy*. HMSO. Belfast.
- Rodwell, J. S. (ed). (1991). *British plant communities. Volume 2 Mires and Heaths*. University Press. Cambridge.
- Scottish Natural Heritage (1993). *A Muirburn Code*. Scottish Natural Heritage. Battleby.
- Shaw, S. C., Wheeler, B. D., Kirby, P., Philipson, P. & Edmunds R. (1996). *Literature review of the historical effects of burning and grazing of blanket bog and upland wet heath*. English Nature Research Reports, No 172. English Nature. Peterborough.
- Thompson, D. B. A., Hester, A. J. & Usher, M. B. (Eds.) (1995). *Heaths and moorland: cultural landscapes*. HMSO, Edinburgh.
- UK Biodiversity Steering Group. (1995). *Biodiversity : UK Biodiversity Steering Group report; Vol. 2 : Action Plans*. HMSO. London.
- UKWAS Steering Group. (2000). *The UK Woodland Assurance Standard*. UKWAS Steering Group. Forestry Commission. Edinburgh.
- Warnock, J. (2000). *Heathland Productivity and the Determination of Stocking Densities in the Eastern Mourne Area of Special Scientific Interest*. PhD thesis, The Queen's University of Belfast.
- Wilson, C. (1992). *A vegetation survey of the Mourne uplands 1990 – 1992, Final Report*. Mourne Advisory Council. Newcastle.
- Whatmough, J. (1983). *Murlough NNR Reports*. National Trust.

**List of useful Acronyms**

ASSI	Area of Special Scientific Interest
BTO	British Trust for Ornithology
CAP	Common Agricultural Policy
CEDaR	Centre for Environmental Data and Recording
CMD	Countryside Management Division
CMS	Countryside Management Scheme
DANI	Department of Agriculture for Northern Ireland
DARD	Department of Agriculture and Rural Development
DCAL	Department of Culture, Arts and Leisure
DETI	Department of Enterprise, Trade and Industry
DOE	Department of the Environment
DRD	Department of Rural Development
EC	European Commission
EHS	Environment and Heritage Service
EN	English Nature
ESA	Environmentally Sensitive Area
GFP	Good Farming Practice
JNCC	Joint Nature Conservation Committee
LBAP	Local Biodiversity Action Plan
LFA	Less Favoured Area

MAGNI	Museums and Galleries of Northern Ireland
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
MOSS	Management of Sensitive Sites
NESA	New Environmentally Sensitive Area Scheme
NIBG	Northern Ireland Biodiversity Group
NICS	Northern Ireland Countryside Survey
NNR	National Nature Reserves
NT	National Trust
NVC	National Vegetation Classification
OSPAR	Convention for the Protection of the Marine Environment of the North East Atlantic
RSPB	Royal Society for the Protection of Birds
cSAC	candidate Special Area of Conservation
SAC	Special Area of Conservation
SLNCI	Site of Local Nature Conservation Interest
SNH	Scottish Natural Heritage
SoCC	Species of Conservation Concern
SPA	Special Protection Area
UWT	Ulster Wildlife Trust
WFD	Water Framework Directive
WWT	Wildfowl and Wetlands Trust