

Northern Ireland Species Action Plan

Hen harrier *Circus cyaneus* March 2005

1 Current Status and Condition

- 1.1 The hen harrier is a ground nesting bird of prey associated with open country. It is primarily an upland breeding species in Northern Ireland associated with heather moorland, blanket bog and young forestry plantations (Cramp *et al.*, 1980; Norris *et al.*, 2002; Scott *et al.*, various years).
- 1.2 The nest is normally located in deep heather, rushes, gorse associated with forestry plantations or young conifers (Watson, 1977). In recent years it has also been recorded nesting in the closed canopy of mature spruce plantations in Northern Ireland. This behaviour is considered to be unique in Europe. (Scott *et al.*, 1991, 1992 & 1993a.). A maximum of eight pairs in any one year in Northern Ireland have nested using this method (Scott, 2000). The single clutch of 4-6 pale blue eggs hatch in 5 weeks, the chicks flying in a further 5 weeks (Cramp *et al.*, 1980).
- 1.3 During the winter, birds disperse over upland areas, farmland and coastal lowlands both within Ireland and further afield. The species uses communal winter roost sites located in moorland or reedbeds although most roost sites in Northern Ireland are used by only a handful of birds unlike major sites elsewhere in the British Isles such as Ballaugh Curragh in the Isle of Man (Scott, 1998).
- 1.4 Hen harriers require large expanses of suitable open habitat for hunting. Prey consists primarily of small birds and mammals. Frogs, bird's eggs and larger prey such as red grouse *Lagopus lagopus* and rabbit *Oryctolagus cuniculus* also form part of the diet (Scott *et al.*, 1991, 1992 & 1993).
- 1.5 The hen harrier was formerly widespread throughout Britain and Ireland when it earned its name through its predation of domestic poultry. It was described as "pretty generally distributed over the island" by Thompson (1849) but Usher and Warren (1900) noted a decline through the second half of the nineteenth century.
- 1.6 As a result of persecution, the species had become extinct as a breeding bird in Britain during this same period. It remained present in small numbers in strongholds in Ireland, the Outer Hebrides and Orkney, from where it re-colonised northern Scotland after the Second World War. (Sharrock, 1976; Watson, 1977).
- 1.7 It has extended its range to other areas of suitable habitat in Scotland, northern England, Wales and Ireland. There was a period of population stability in many areas

of Scotland between the 1968-72 Breeding Atlas (Sharrock, 1976) and the 1988-91 Breeding Atlas (Gibbons *et al.*, 1993), although a marked decline in range and numbers occurred elsewhere, particularly southern Ireland and northern England.

- 1.8** Since the mid twentieth century the population of hen harriers in Northern Ireland is considered to have increased and the species has now successfully colonised the Isle of Man. The increase in the Northern Ireland population is likely to be due to increased commercial forestry, which provides nesting cover and feeding opportunities in their early stages (Sharrock, 1976; O'Flynn, 1983). As the plantations mature, they become less suitable for harriers. However, mature plantations can still be of some importance for harriers which nest at edges of, in gaps in, and in rides and clearfell areas. Also, wind farm consultants have recorded harriers foraging over the canopy of mature forest in recent years. These benefits may also have been offset in some areas by the loss of suitable upland feeding areas due to agricultural improvement or overgrazing.
- 1.9** A UK-wide hen harrier survey was undertaken in 1998. The UK population was estimated at 570 pairs with a maximum of 38 pairs in Northern Ireland. The hen harrier's stronghold in Northern Ireland is the Antrim Plateau with other important populations in the uplands of Co. Fermanagh and south Co. Tyrone (RSPB, 1998). Several potentially suitable areas remain unoccupied most notably in the Sperrins. A repeat UK survey was undertaken in 2004. Early indications are that the population in Northern Ireland has grown with a preliminary estimate of 57 pairs (RSPB pers. comm.)
- 1.10** In the Republic of Ireland a hen harrier survey was undertaken in 1998/99 with fieldwork completed in 2000. One hundred and two pairs were confirmed as breeding with another 27 unconfirmed (Norris *et al.*, 2002).
- 1.11** The hen harrier is specially protected under Schedule 1 of the *Wildlife (Northern Ireland) Order 1985*. It is listed in Annex I of the EU Birds Directive, in Appendix 2 of the Berne Convention and as a Species of European Conservation Concern (SPEC 3 – species whose global populations are not concentrated in Europe but which have an Unfavourable Conservation Status in Europe. Threat status; Vulnerable).
- 1.12** It is Red listed in Birds of Conservation Concern in the UK (Gregory *et al.*, 2002) due to its historical declines. It is Red listed in Birds of Conservation Concern in Ireland (Newton *et al.*, 1999) as a declining breeding species.

2 Current Factors Affecting the Population

- 2.1** Agricultural reclamation - loss of upland habitats such as heather moorland and blanket bog due to agricultural reclamation is likely to have been an important limiting factor on

hen harriers. Despite the positive effect of agri-environment schemes, habitat loss due to agricultural reclamation is still occurring in some areas, such as north east Antrim.

- 2.2** Grazing - overgrazing of uplands over the past two decades has also adversely affected the vegetation structure of many areas, resulting in reduced feeding opportunities and nesting cover. As a result, (though this may also be due to increased predation threat from foxes) virtually no harriers now nest on open moorland, instead finding more secure nest sites in turbary patches or clear fell within forestry plantations (Donaghy and Mellon, 1998). Uniquely in Northern Ireland hen harrier are now regularly recorded tree-nesting in forests in County Antrim (Scott & Scott *et al.*, 1991, 1993 & 2000).
- 2.3** Disturbance - the hen harrier's close association with forestry plantations on upland sites makes it vulnerable to disturbance from forestry operations such as clear felling, thinning and aerial fertilising. Other activities occurring within or near forests such as recreation, shooting, car rallies, mechanical peat extraction and uncontrolled heather burning have potential to cause disturbance during the breeding season (Scott, 2002).
- 2.4** Forestry - the maturation of young conifers is also likely to have a negative effect on hen harriers, since young conifers afford both feeding and nesting opportunities. However, although valuable foraging areas may be lost, birds have chosen to nest in mature and near-mature conifers in certain County Antrim forests (Scott & Scott *et al.*, 1991, 1993 & 2000).
- 2.5** Persecution – is not as significant or systematic in Northern Ireland as in Great Britain, however, there is some indication that persecution may be a problem in some areas, such as County Antrim (Scott, 2002).
- 2.6** Windfarm developments - have become a feature of upland areas in Northern Ireland in recent years. Many more proposals are likely to be considered by the Planning Service of the Department of the Environment. There are concerns that windfarm construction could disturb nesting harriers and that new access tracks could encourage more human and predator activity and therefore increase disturbance of nesting birds. There is also a risk that harriers, particularly displaying or young birds, could collide with turbines and/or associated power lines. Another concern is that harriers may avoid hunting in areas covered by turbines, thereby reducing the potential foraging area of the birds. Further research is ongoing to establish just how significant these impacts may be (RSPB, pers. comm.).
- 2.7** Heather beetle damage - is extensive in some areas. The beetle larva causes the death of heather over large tracts of moorland. The 2004 outbreak of heather beetle was the worst since the mid 1980s, and one of the worst in the past 50 years. This may be due

to lack of moorland management e.g. burning and/or favourable climatic conditions such as mild winters and wet springs.

- 2.8** Predation – hen harrier nests and young are vulnerable to predation. However, there is no evidence that this presents a significant problem to the Northern Ireland population at present.

3 Current Action

- 3.1** *Council Directive (79/409/EEC) on the conservation of wild birds*, (the Birds Directive), was adopted in 1979 and requires member states to identify areas to be given special protection for rare or vulnerable species, and for regularly occurring migratory species. There are as yet no sites classified as a Special Protection Area (SPA) for hen harrier in Northern Ireland.
- 3.2** Under the *Nature Conservation and Amenity Lands (Northern Ireland) Order 1985*, Areas of Special Scientific Interest (ASSIs) are identified and declared by the Department of the Environment (DOE) through the Environment and Heritage Service (EHS). *The Environment (Northern Ireland) Order 2002*, strengthened the protection of ASSIs, recognising the importance of working in partnership with owners and occupiers and facilitating the positive management of these sites. Several upland areas which support hen harrier populations have been designated as ASSIs, although not specifically for hen harrier. One key site, Slieve Beagh ASSI, is also a candidate Special Area of Conservation (cSAC) under the terms of *Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna*, (the Habitats Directive).
- 3.3** The Management of Sensitive Sites Scheme (MOSS), launched in 2002 by EHS, is a voluntary scheme designed to ensure the positive management of ASSI features to maintain their extent and favourable condition. Under the scheme, landowners can receive payment for carrying out conservation work within the framework of a written agreement. MOSS covers issues such as dumping, grazing and control of invasive species.
- 3.4** The single farm payment system and decoupling as a major shift in emphasis within the CAP reform came into place on January 1st 2005. These changes could lead to a reduction in stocking rates in some upland areas, which could benefit harriers by enhancing numbers of key prey species such as skylark and meadow pipits (Cramp *et al.*, 1980; Scott *et al.*, 1992 & 2002).
- 3.5** Forest Service's 1993 Environmental Policy ended the establishment of conifer plantations on heather moorland and blanket bog habitats. Grant aid for private

landowners on such habitats was also withdrawn. This policy effectively ended the loss of harrier hunting areas to afforestation.

- 3.6** Forest Service, in conjunction with the Northern Ireland Raptor Study Group and RSPB, are developing procedures designed to prevent disturbance and destruction of nests in forests under their control and are actively pursuing policies aimed at enhancing biodiversity interests in their forests.
- 3.7** 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 as part of a modification to the current Northern Ireland Rural Development Programme (2000-2006). Their objective is to protect and enhance semi-natural habitats by encouraging more sensitive management practices. Both these schemes have similar management provisions, are voluntary and apply to the whole farm.
- 3.8** 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).
- 3.9** The CMS, launched in 1999, was developed with the primary aim of maintaining and enhancing biodiversity and is open to application from all farmers and landowners outside ESAs. As 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 > 0.1 ha in area within the farm unit, where it meets clearly defined criteria. The priority habitat must be brought under agreement and managed according to the specific objectives and prescriptions of the agri-environment scheme. A range of habitats are under long-term monitoring by QUB's Agri-environment Monitoring Unit (QUB, 2004b).
- 3.10** Both CMS and ESA heather moorland prescriptions are compulsory where present. The original ESA scheme was not replaced with CMS. The original ESA was replaced with a revised ESA scheme in 2000 which is very similar to CMS. Farmers who entered 10 year ESA agreements prior to 2000 will still be required to meet the conditions as stated on their agreement. Transfer to the revised scheme conditions is voluntary.

- 3.11** 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.
- 3.12** The *Environmental Impact Assessment (Uncultivated land and Semi-natural areas) Regulations (Northern Ireland) 2001* may help to prevent areas of suitable harrier habitat from being agriculturally improved.
- 3.13** RSPB has surveyed the hen harrier population in Northern Ireland as part of UK wide surveys in 1998 and 2004. Some additional monitoring is undertaken annually by Northern Ireland Raptor Study Group members, particularly of tree-nesting birds in the Antrim Hills.
- 3.14** The Northern Ireland Peatland Policy seeks to protect peatland habitats from loss and damage. The policy is currently undergoing a major review.

4 Action Plan Targets

- 4.1 Maintain the current population of 57 nesting females.
- 4.2 Maintain the range of breeding birds at 20 10km².
- 4.3 By 2010, increase the population to 68 nesting females.
- 4.4 Increase the range of breeding birds to 25 10km² by 2010.
- 4.5 By 2020, increase the population to 90 nesting females.
- 4.6 Increase the range of breeding birds to 30 10km² by 2020.

5 Proposed Actions with Lead Agencies

5.1 Policy and legislation

- 5.1.1 By 2006, seek to encourage positive environmental change through the reformed Common Agricultural Policy (CAP), by targeting increased uptake of the CMS in marginal and upland habitats, especially in moorland areas and subsequent implementation of appropriate management options.
(ACTION: DARD, EHS)
- 5.1.2 By 2007, target positive management through agri-environment schemes, MOSS, river maintenance schemes, the LBAP process and grant aid for biodiversity to secure favourable management on hen harrier sites (including SLNCIs).
(ACTION: EHS, DARD)
- 5.1.3 By 2007, ensure that agri-environment scheme prescriptions relevant/appropriate to hen harrier are contributing to maintaining and enhancing the population across Northern Ireland.
(ACTION: DARD, EHS)
- 5.1.4 By 2006, ensure that all farmers receiving agri-environment scheme payments and LFA Compensatory Allowance Payments are complying with GFP.
(ACTION: DARD, EHS)
- 5.1.5 Ensure careful definition and implementation of Good Agriculture and Environmental Condition (GAEC), in order to prevent either under or over grazing either of which could decrease the suitability of breeding areas for hen harrier.
(ACTION: DARD)

- 5.1.6 By 2006, review *Planning Policy Statement 2 (PPS2) – Planning and Nature Conservation*, to include policies relating to priority habitat and species.
(ACTION: Planning Service, EHS)
- 5.1.7 By 2005, produce *Planning Policy Statement (PPS14) on Sustainable Development in the Countryside* which incorporates 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, Planning Service, EHS,)
- 5.1.8 Ensure that important hen harrier habitats and their conservation management requirements are recognised and site protection policies are included in statutory and non-statutory plans e.g. Development Plans, Local Biodiversity Action Plans (LBAP's) and appropriate management strategies.
(ACTION: Planning Service, EHS, DARD, Forest Service, District Councils)
- 5.1.9 Ensure that future policy or strategy for the locations of all renewable technologies, in particular windfarm developments take into account the conservation requirements of hen harrier.
(ACTION: DETI, Planning Service, EHS)
- 5.1.10 By 2008, consider the development of new agri-environment measures to benefit hen harrier, such as area based payments for the reversion of improved pasture.
(ACTION: DARD)

5.2 Site safeguard and management

- 5.2.1. By 2006, produce ornithological selection criteria for ASSIs.
(ACTION: EHS)
- 5.2.2 By 2006, produce conservation objectives for all statutory sites including cSACs, pSPAs, ASSIs and NNRs ensuring that the objectives do not conflict with the requirements of hen harrier.
(ACTION: EHS)
- 5.2.3 By 2007, review hen harrier breeding and foraging sites within SPA, ASSI and NNR series and notify further sites to fill significant gaps.
(ACTION: EHS)
- 5.2.4 By 2007, establish agreements with landowners for the positive management of areas important for breeding hen harrier within ASSIs through the MOSS scheme.
(ACTION: EHS)

- 5.2.5 By 2007, ensure that the CMS and ESA measures relevant to hen harrier are carefully targeted at key areas .
(ACTION: DARD)
- 5.2.6 By 2006, enhance management of relevant Nature Reserves/National Nature Reserves for breeding hen harrier.
(ACTION: EHS, District Councils)
- 5.2.7 By 2006, develop strategies to create a diversity of age structure in upland coniferous forestry plantations to provide suitable hen harrier nesting and foraging habitats to include, where practicable, leaving clear-felled areas unplanted to increase foraging area for hen harriers.
(ACTION: Forest Service, EHS)
- 5.2.8 Retain and protect groups of trees known to be used by tree-nesting hen harriers, where practicable.
(ACTION: Forest Service, EHS)
- 5.2.9 By 2006, ensure that timber harvesting and restocking operations in forestry blocks close enough to known breeding hen harrier sites that would cause any disturbance or disruption, are carried out outside the hen harrier breeding season.
(ACTION: Forest Service, EHS)

5.3 Species management and protection

- 5.3.1 By 2007, discourage landowners and site managers from undertaking activities which are likely to disturb breeding hen harriers
(ACTION: EHS, DARD)
- 5.3.2 By 2006, ensure that disturbance to nesting birds in upland coniferous forestry plantations, by car rallies and other recreational pursuits, is minimised.
(ACTION: DARD, Forest Service)
- 5.3.3 By 2008, develop a Code of Practice to promote hen harrier conservation which is suitable for adoption by private owners of upland coniferous forestry plantations.
(ACTION: DARD, Forest Service, EHS)
- 5.3.4 By 2008, consider the seasonal appointment of species protection officers to liaise with upland owners and managers in key hen harrier areas.
(ACTION: EHS)

- 5.3.5 By 2008, create experimental artificial nest sites in suitable trees within key forests if research shows they are effective.
(ACTION: DARD)

5.4 Advisory

- 5.4.1 By 2006, ensure that those responsible for implementing and supporting agri-environment schemes and MOSS agreements continue to receive effective training and up-to-date advice on appropriate land management practices which benefit breeding hen harrier.

(ACTION: EHS, DARD)

- 5.4.2 By 2006, ensure that farmers and landowners are aware of the presence of hen harrier on their land and mechanisms available to instigate appropriate management.

(ACTION: EHS, DARD)

- 5.4.3 By 2006, ensure that information on hen harrier in Northern Ireland is available to all those who could play a role in their conservation and recovery.

(ACTION: EHS, DARD)

5.5 International

- 5.5.1 Develop links with those involved in hen harrier conservation where breeding conditions are most similar to Northern Ireland. Also further develop links with the Republic of Ireland and other European and international organisations and programmes such as the European Environment Agency and the European Centre for Nature Conservation, to promote the exchange of information and experience in research, management techniques, education and conservation strategies.

(ACTION: EHS)

5.6 Future research and monitoring

- 5.6.1 By 2007, initiate research into hen harrier ecology, and factors influencing and limiting the Northern Ireland population should include further research into the viability of artificial nest platforms.

(ACTION: EHS)

- 5.6.2 Continue to carry out a regular monitoring programme at key sites to assess changes in response to management.

(ACTION: EHS)

- 5.6.3 By 2007, ensure that relevant agri-environment scheme prescriptions are contributing to maintaining or enhancing hen harrier habitats and populations across Northern Ireland.
(ACTION: EHS, DARD)
- 5.6.4 Monitor the effects of decoupling, particularly on extensive livestock and mixed farming systems, for changes which may have implications for hen harrier.
(ACTION: DARD)
- 5.6.5 By 2008, review and where necessary, contribute to research on the effects of wind farms and associated power lines on hen harrier mortality, productivity and foraging behaviour.
(ACTION: EHS)
- 5.6.6 By 2007, undertake survey work to establish the location and usage of the most important winter roost sites in Northern Ireland.
(ACTION: EHS)
- 5.6.7 By 2006, ensure mechanisms are in place to ensure a quick and effective response to alleged persecution incidents.
(ACTION: EHS)

5.7 Communications and publicity

- 5.7.1 By 2006, ensure the provision of high quality advisory materials to landowners and land managers and seek opportunities to promote and publicise mechanisms for delivering positive management.
(ACTION: EHS, DARD)

5.8 Links with other action plans

- 5.8.1 It is likely that the implementation of this plan will also benefit the Northern Ireland Populations of the following Northern Ireland priority species and should be considered in conjunction with the following Northern Ireland SAPs:

- Irish hare *Lepus timidus hibernicus*
- Curlew *Numenius arquata*

- 5.8.2 This plan should be considered in conjunction with the following Northern Ireland & UK Habitat Action Plans :-

- Blanket Bog
- Upland Heath

6. Costings

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

7 References

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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