After-LIFE Conservation Plan

Restoring Raised Bog In Ireland

(PROJECT No: LIFE04 NAT/IE/000121)

(1ST OCTOBER 2004 – 30th SEPTEMBER 2008)

coillte

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After-LIFE Conservation Plan

For the:-

LIFE-Nature/Coillte co-funded project "Restoring Raised Bog In Ireland"
(Project No: LIFE04 NAT/IE/000121; 1ST October 2004 – 30th September 2008)

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Preface

This After-LIFE conservation plan represents the final deliverable of the project "Restoring Raised Bog in Ireland" and was appended to the Final Technical Report on that project as Appendix **27**. In addition to indicating how the project sites will be managed for conservation into the future, it outlines the historical context of how the sites came to need restoration and the main actions of the restoration project.

Introduction

The peatlands of the Irish Midlands are among the most important raised bog systems remaining in Europe. It is estimated that the Republic of Ireland contains a significant proportion of the intact oceanic raised bog systems remaining in Europe. Raised bog habitat was once extensive over the Midlands and mid-west of Ireland, covering an estimated 310,000ha, however today it is estimated that a mere 21,500ha of raised bog habitat of conservation value remain. Most of the loss of raised bog habitat is a result of harvesting of peat for household fuel, electricity production and the manufacture of horticultural products. Ireland began a reforestation programme in the early 1900s following centuries of exploitation of native woodlands and deforestation for agriculture. Successive governments supported a programme of plantation establishment but a strong farming lobby ensured that this was confined mainly to sites marginal, or unsuitable, for agriculture. Peatlands (both blanket and raised peats) were such site types and until their ecological value was fully appreciated they were regarded as wasteland to be converted to more productive uses. Forestry was one of these uses and afforestation of raised bogs has also resulted in habitat loss, but on a much smaller scale than peat harvesting – it is estimated that about 2% of Irish raised bogs has been afforested (Ryan & Cross, 1984). Most of the afforested areas of raised bogs are currently under the ownership of Coillte Teoranta [The Irish Forestry Board].

Since 1997, 11,832ha of "high" raised bog has been proposed for designation in candidate SACs, under the EU Habitats Directive (Council Directive 92/43/EEC). Many of these SACs include areas of cutover bog which typically surround the intact bog cores and act as a buffer between the intact bog and surrounding farmland. This project focused on forestry plantations within these SACs, included because they continue to impact on the raised bog habitat. In this project, in line with national and EU efforts to conserve raised bog habitat, Coillte has undertaken actions aimed at restoring active raised bog habitat on 14 sites, all owned and managed by Coillte, that have been partially or wholly afforested. The project sites covered 571ha within 14 candidate

SACs, spread over 7_counties especially Counties Galway and Roscommon where a wide range of raised bogs occurs. Two of these sites (Nos. 8 and 11) were selected as project demonstration sites, these were the focus of a public awareness Programme over the four year period of project implementation.

This project addressed the main ecological threats which affect raised bog habitats through the following actions:

- Removal of 450 ha of plantation forest
- Blocking forestry drains in order to elevate water levels and hence restore the hydrological balance of the peatland areas
- Removal of naturally regenerated trees from open, unplanted bogs
- Perimeter protection of vulnerable raised bog sites against fire
- Consultations to secure control of turbary (turf-cutting) rights

In addition to restoring active raised bog habitat in previously afforested/drained areas, it was also expected that restoration would have a positive effect on adjoining intact bog that had been subject to drainage effects. Bog restoration techniques on afforested peatland systems pioneered in the LIFE funded projects in Ireland and the United Kingdom (UK) were to be further developed in this project. Links with LIFE-funded projects with an emphasis on tree clearance were also be made. This restoration project was to build on a previous LIFE-funded project, managed by Dúchas The Heritage Service, in which conservation management plans were prepared for Irish SACs.

This was the largest single raised bog restoration project of its kind to be undertaken in Ireland. By the end of this project, significant habitat restoration work has been completed on over 5% of the national area of raised bog conserved in SACs and some 50% of the afforested raised bogs in Coillte's ownership – a significant contribution to conservation of the most valuable raised bog habitat in Europe. The project has served as a hands-on demonstration of the best approaches to restoration of raised bog habitats.

The implementation of all project actions had been successfully concluded by 30 September 2008, when the project officially ended. Now that the project has been completed, the project sites will be incorporated into Coillte's biodiversity programme, in that they will continue to be managed with nature conservation as the primary management objective. Notwithstanding the successful implementation of these actions, there is a need for ongoing conservation management on the project sites into the future, hence the production of this After-LIFE Conservation Plan.

Recommendations for the Future Management Plan

The ultimate aim of the restoration work which has taken place during the LIFE-Nature/Coillte co-funded project "Restoring Raised Bog in Ireland" is to restore sites to active raised bog, i.e. have a high watertable and support peat-forming vegetation. In areas where the shallow peat depth will not allow the development of wet raised bog, wet woodland will be promoted as this habitat naturally occurs on the lagg zones of raised bogs. If high water-levels are maintained parts of this area with the appropriate soil and water types should develop into Bog Woodland, which is also an Annex 1 habitat. Whilst is it clear, even at this early stage in the restoration process, that some sites will take much longer to achieve favourable status than others it is essential that all sites are managed in a sensitive way into the future. As all of the sites within the project are dominated by raised bog habitat the same management prescriptions will, by and large, apply to all.

Upon completion of the restoration works carried out as part of the of the LIFE project at the end of September 2008, the project sites will be handed back to be managed under Coillte's general forest management structure of Regions, Districts and Forests. These sites will form part of the commitment to manage 15% of the Coillte estate area for nature conservation. The sites will also meet Coillte's commitment under FSC certification to restore valuable habitats.

As part of Coillte's Forest Management Plans (FMPs) within the relevant Districts, the sites will be monitored and managed into the future in order to promote the further recovery of raised bog and wet woodland and this will be achieved in a number of ways.

(1) Each site will be monitored annually for regeneration of seedlings of pine and other unwanted tree/shrub species. This process will be carried out until the site is free of naturally regenerating shrubs/trees. As conifer seed does not survive on bog conditions for more than a few years, it is not expected that this will be a long term requirement. The presence of Rhododendron on Carn Park and Lough Ree is an on-going problem which should be controlled on a planned basis.

(2) In the case of the project sites Killyconny Bog, Mount Hevey Bog, Carn Park Bog, Crosswood Bog, Ardgullion Bog, Coolrain Bog and Curraghlehanagh Bog the regeneration of native shrubs such as Downy Birch is occurring repeatedly within areas where the peat depth is thin. In view of the repeated regeneration occurring in these areas a decision was taken in 2006 that part of these sites will be managed for the development of wet woodland into the future. Part of these sites may develop into the priority Annex I habitat bog woodland, if high water-levels are maintained and soil and water quality are appropriate Bog woodland is itself a very valuable wildlife habitat and the establishment of the habitat at some of these sites should be viewed as an opportunity to increase the area and range of this very rare habitat in Ireland.

(3) The perimeter fence of each site will be checked and repaired if necessary, in order to prevent stock trespass and grazing. Trespassing stock will be removed when necessary. It should be noted however that a low level of livestock grazing may occasionally be beneficial to the development of raised bog habitat where there are ongoing problems with shrub regeneration.

(4) Vegetation recovery will be monitored within sites. Permanent vegetation monitoring quadrats have been established as part of the restoration project and will be resurveyed every 5 years in order to document changes in the vegetation. This vegetation monitoring will provide important data regarding the recovery of the raised bog habitat. Monitoring the return and spread of indicator plant species of wet bog habitat such as *Rhynchospora alba, Eriophorum vaginatum* and *Sphagnum cuspidatum* will provide a good indication of the return of active raised bog conditions (such monitoring could be carried out in cooperation with university research projects). These monitoring results will contribute to and be compared with available NPWS monitoring results, including the national standard raised bog monitoring programme results, to gain an understanding of the contribution of this restoration work to the overall condition of each SAC.

(5) Water levels will be monitored every three years. At Ardgullion Bog, Crosswood Bog, Coolrain Bog and Killyconny Bog drain-blocking was restricted due to adjacent turbary. This situation will be monitored on an on-going basis with a view to damming the remaining open drains, once peat-cutting has ceased under the NPWS turbary buy-out scheme.

(6) Two of the sites have been designated as LIFE project demonstration sites, with information signage, parking and boardwalk access, which need to be maintained. Already in 2008, there have been visits by the International Peat Congress which was held in Ireland this year.

(7) As the restoration sites lie within Special Areas of Conservation regular consultation with the National Parks and Wildlife Service (NPWS) will also form an important part of the future management of each site. The management plans for these sites will be discussed and agreed with appropriate scientific and regional management staff within NPWS.

The site specific After-LIFE Actions are outlined in **Table 1.**

Table 1: Outline of restoration actions and After-LIFE actions required for each site

Site No.	Site Name	Conifers on High Bog Only	Conifers on High Bog & Cutover	Conifers on Cutover Only	Drain Blocking	Recommendations
1	Lough Lurgeen Bog & Glenamaddy Turlough			Clearfell	Peat	Control pine regeneration Monitor Water-levels
2	Camderry Bog	Clearfell			Peat	Control regeneration Monitor Water-levels
3	Curraghelanagh Bog		Clearfell/ Fell to Waste		Peat	Birch Control Control regeneration Monitor Water-levels
4	Kilsallagh Bog	Fell to Waste			Peat/ Plastic	Control regeneration Monitor Water-levels
5	Lough Ree		Clearfell		Peat	Control regeneration Monitor Water-levels Control Rhododendron
6	Lisnageeragh Bog & Ballinastack Turlough		Clearfell/ Fell to Waste		Peat	Control regeneration Monitor Water-levels
7	Drumalough Bog		Clearfell/ Fell to Waste		Peat	Control regeneration Monitor Water-levels
8*	Cloonshanville Bog		Clearfell/ Fell to Waste		Peat	Control regeneration Monitor Water-levels Maintain Car Park, Boardwalk and Signage
9	Killyconny Bog			Clearfell	Peat	Birch Control Control regeneration Monitor Water-levels
10	Ardgullion Bog		Clearfell/ Fell to Waste		Peat	Control regeneration Monitor Water-levels
11*	Carn Park Bog		Clearfell/ Fell to Waste		Peat/ Plastic	Birch Control Control regeneration Monitor Water-levels Control Rhododendron Maintain Car Park, Boardwalk and Signage
12	Crosswood Bog			Clearfell	Peat	Birch Control Control regeneration Monitor Water-levels Turbury issues
13	Mount Hevey Bog		Clearfell/ Fell to Waste		Peat/ plastic	Birch Control Control regeneration Monitor Water-levels
14	Coolrain Bog			Clearfell/ Fell to Waste	Peat/ Plastic	Birch Control Control regeneration Monitor Water-levels Turbury issues

How the Longer-Term Management of the Sites will be assured

Coillte is a private limited company in which all the shares are held by the State, so the long-term ownership of the project sites is assured. Coillte secured FSC certification for well managed forests in 2001, and has maintained this status since. In this context, ecology surveys took place to identify 15% of the estate to be managed primarily for biodiversity. All of the LIFE raised bog project sites will be managed within this 15% of the company's estate into the future. Measures are also being taken to maximise the academic value of the project sites by facilitating their use by third level educational institutions for research purposes. Coillte is also interested in carrying out further raised bog restoration works on its estate if funding can be secured through the Rural Development Programme or LIFE+.