

RESTORING RAISED BOG IN IRELAND

PROJECT No: LIFE04 NAT/IE/000121

(1ST OCTOBER 2004 – 30TH SEPTEMBER 2008)



1st Progress Report – To End of Year 1

COVERING PERIOD

1ST OCTOBER 2004 – 30TH SEPTEMBER 2005

COILLTE TEORANTA

30th NOVEMBER 2005



Contents

I	Background to the Project	
	Background.....	3
II	Introduction, Project Objective, Expected Results, and Links to Other Activities	
	Introduction.....	4
III	Summary of Principal Achievements	
	Summary.....	6
IV	Technical Report – All Relevant Actions	
	A Actions - Preparatory.....	7
	C Actions – Non-recurring biotope management.....	10
	D Actions – Recurring biotope management.....	16
	E Actions – Public awareness.....	20
	F Actions – Overall project operation.....	23
V	Time Planning	
	Action activity at end Year 1.....	26
VI	Summary of deliverable products	
	Summary.....	29
VII	Activity Reports Foreseen	
	Progress reports.....	30
VIII	Summary of Project Milestones	
	Milestones.....	31
IX	Financial Summary	
	Summary Financial Report.....	32

I BACKGROUND TO THE PROJECT

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. Peatland (both raised and blanket peats) was one of these 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 in the midland region, many plantations were established on the cutaway edges of raised bogs and also in some cases on high bog. The main period of afforestation occurred over a 20 year period from the mid 1960s to the mid 1980s with the cutaway peats being favoured as being more accessible, fertile and easier to cultivate than the high bogs.

Today the Coillte estate comprises a total raised bog area of 31,815ha of which 6,496ha are virgin raised bog.

Since 1997, 10,290ha of high raised bog has been proposed for designation in candidate SACs under the EU Habitats Directive (92/43/EEC). The Coillte estate contains many partially or wholly afforested areas that have been included in SACs and which continue to impact on the raised bog habitat. In this project 14 of these sites have been selected, in conjunction with the National Parks and Wildlife Service (NPWS), that have the potential for restoration. They represent the largest and best raised bog areas owned by Coillte within SACs and form an important part of the company's nature conservation programme. When restoration work is completed their management objectives will change from timber production to the conservation of raised bog habitat.

At all stages during the project, the work we require to do on each site is being offered to local contractors, where practicable. Every effort is being made to involve local people as much as possible in the project, from working on sites to participating in interpretive meetings and demonstrations.

II INTRODUCTION, PROJECT OBJECTIVES, EXPECTED RESULTS, AND LINKS TO OTHER ACTIVITIES

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 50% 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 18,000ha 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. Afforestation of raised bogs has also resulted in habitat loss, but on a much smaller scale – it is estimated that about 2% of the original total area of Irish raised bogs has been afforested. Most of the afforested areas of raised bogs are currently under the ownership of Coillte Teoranta [The Irish Forestry Board].

Since 1997, 10,290ha 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 focuses on forestry plantations within these SACs, included because they continue to impact on the raised bog habitat. In line with national and EU efforts to conserve raised bog habitat, Coillte will undertake actions aimed at restoring active raised bog habitat on 14 sites, all owned and managed by Coillte Teoranta, that have been partially or wholly afforested. The project sites cover 571ha within 14 candidate SACs, spread over 5 counties.

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. Two of the project sites (No’s 8 and 11) have been selected as project Demonstration Sites; these will be the focus of a public awareness programme over a four-year period.

This project will address 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 is also expected that restoration will have a positive effect on adjoining intact bog that has 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) will be further developed in this project. Links with LIFE-funded projects with an emphasis on tree clearance will also be made. This restoration project will build on a previous LIFE-funded project, managed by Dúchas The

Heritage Service, in which conservation management plans were prepared for Irish SACs.

This is the largest single raised bog restoration project to be undertaken in Ireland. By the end of this project, significant habitat restoration work will have been completed on over 5% of the national area of raised bog conserved in SACs – a significant contribution to conservation of the most valuable raised bog habitat in Europe. The project will serve as a hands-on demonstration of the best approaches to restoration of raised bog habitats.

Project links with Coillte's Nature Conservation Programme

The first year of working on this raised bog conservation project has resulted in strong links being developed between the project and Coillte's nature conservation management programme.

As part of this programme, bio-diversity surveys were undertaken to select 15% of each forest management unit (FMU) for nature conservation management. These surveys have shown that Coillte's estate includes substantial areas of raised bog, of which a certain percentage is within or adjoining SACs (special areas of conservation) and would be ideal for inclusion in a national programme under the new Council Regulation (EC) No. 1698/2005 for rural development (NATURA 2000 payments).

Lessons learned, and techniques used in the blanket bog project to date, have been recommended and are being incorporated into forest management plans for raised bog areas identified in these bio-diversity surveys. The primary management objective for these areas is nature conservation. The project manager and site managers are involved in this work as part of their day to day management.

Project Links with further Education

Best practices identified during the project to date, will form part of work on a dissertation titled "A review of methodologies used for Restoring Active Blanket Bog in the West of Ireland". This is being prepared by a staff member studying BSc. Honours Degree in Forestry Management at the University of Central Lancashire.

III SUMMARY OF PRINCIPAL ACHIEVEMENTS

At the end of the first year of project implementation, progress on Project LIFE04 NAT/IE/000121 “Restoring Raised Bog in Ireland” has been significant.

- All preparatory “A” actions have made good progress, however experience has shown that some of these actions need to continue to some extent, for the duration of the project;
- All non-recurring management “C” actions have begun;
- Work done in the first year of the project under the “C” actions includes fell and windrow (C1), harvesting (C2), install dams (C3), fencing (C4), and installation of dipwells (C6);
- All recurring management “D” actions have taken place as necessary;
- Work done here includes removal of natural regeneration (D1), drainage pattern survey (D3), fire prevention (D4), refuse removal (D5) and vegetation control (D6);
- All public awareness “E” actions programmed for Year 1 began;
- Work done in the first year includes land manager training courses (E1), project website constructed (E2), project information brochure produced (E3), media publicity campaign begun (E6) (including newspaper articles and various items published in Coillte’s in-house magazine (*Coillte Contact*) and in external magazines).
- All project management “F” actions which were programmed for Year 1 began;
- Work done during the first year under the “F” actions included Project Management Group meetings (F1), preparation for the Project Advisory Panel (F2), visit from DG-environment/external team and project report preparation (F3), procurement of expert advice (F4), hydrology monitoring (F5) and vegetation monitoring (F6).

Good links have been made with personnel from other LIFE projects, including Coillte’s blanket bog project and the Finnish LIFE project "Protection of Aapa Mire wilderness in Ostrobothnia and Kainuu 2002-2005".

Further detail on all the aforementioned can be seen in the **REPORT BY ACTION** section which follows.

IV TECHNICAL REPORT – ALL RELEVANT ACTIONS

“A” Actions - Preparatory Actions, Elaboration of Management Plans

A1: Site Visit to see another LIFE sponsored project

Scheduled Duration and main objective

The scheduled duration of this action was Year 1, Quarters 1,2, 3 and 4.

The main purpose of this action was to give project staff experience of similar LIFE projects already in existence.

Completed to date

On the 1st of October 2004 Project staff visited Coillte’s 1st LIFE Project on Blanket Bog Restoration (LIFE02 NAT/IRL/8490). Project staff also attended LIFE Workshops on Raised Bogs/Dunes in Holland in October 2004, and in Latvia/Estonia in August 2005. The project hosted visits from the Homebond Architects Group, the Finnish LIFE project "Protection of Aapa Mire wilderness in Ostrobothnia and Kainuu 2002-2005" and a group of French forestry students.

See Appendix 1.

Comments

To date, these visits have proved very successful for information exchange and networking. This action will continue until the budget is utilised. Some funding is set aside for project staff to attend end of project conferences on other projects as they arise.

A2: Elaboration of Action Plans

Scheduled Duration and main objective

The scheduled duration of this action was Year 1, Quarter 1 and 2. The main thrust of this action was consultation with stakeholders in particular NPWS in relation to operational work on all sites.

Completed to date

This action is now formally completed on all sites. A meeting was held in the NPWS Office in Mullingar on 9th November 2004 to brief them on the background, actions and objectives of the Raised Bog Restoration Project. As a follow on from this meeting, contact details for all Coillte Staff working on the project were e-mailed to NPWS for distribution to relevant staff. NPWS reciprocated by sending Coillte a list of their personnel working in the project areas. However on-going consultation by site managers still continues at local level with the National Parks and Wildlife Staff

(NPWS) and other stakeholders as required - particularly with turbary holders on sites 3, 10, 11 and 14 and adjoining landowners on sites 12. In addition to having a member of Research Branch (NPWS) specialising in raised bog on the Project Management Group (PMG) a member of NPWS Regional Management will be joining the Group.

Other consultation activity included:

Visit by the Social and Environmental Panel (including representatives of the Forest Service, NPWS, Shannon Regional Fisheries Board, Galway County Council) to site 3;

Consultation with Roscommon County Council and a local landowner concerning road repairs to a right-of way at site 5;

During felling operations at Site 2, officials from the Shannon Regional Fisheries Board made a visual inspection for water discolouration and silting;

See Appendix 2.

Comments

Consultation will be an integral part of our continuing work on each site, therefore this part of the action will continue for the duration of the project. This action has been most useful in developing good working relationships at local level between Coillte and the National Parks and Wildlife Service, Fisheries Boards, relevant county councils and the Forest Service on raised bog restoration.

A3: Identify Safety Hazards and draw up a general safety plan for all sites

Scheduled Duration and main objective

The schedule duration of this action was Year 1, Quarter 1 and 2. The requirement of this action was for Safety plans to be drawn up, hazard identification risk assessment forms (HIRA) to be completed for sites.

Completed to date

HIRA forms have been completed for all operational work to date and safety regulations are adhered to on all sites.

See Appendix 3.

Comments

Safety is an extremely important issue on our sites and this action will be implemented throughout the duration of the project. All site managers and project

personnel will continue to work together with Coillte's safety and training team to ensure that appropriate safety procedures are in place on all sites.

A4: Survey of fence lines and enclosures

Scheduled Duration

The scheduled duration of this action was Year 1, Quarters 1 and 2. Survey work was scheduled to be completed on sites 7 (Dromalough), 10 (Ardgullion), 11 (Carn Park), 12 (Crosswood), 13 (Mount Heavey), and 14 (Coolrain) in order to identify site boundaries.

Completed to date

As provided for in the approved application (Durable Goods), 5 hand-held GPS units have been purchased. Surveys have been completed on site 14 Coolrain Bog, site No. 10 Ardgullion, site No. 11 Carn Park and site No 12 Crosswood by the end of the 1st project year - 30th September, 2005.

Comments

Surveys on the remaining 2 sites will be carried out during the first half of Year 2.

A5: Land Survey

Scheduled Duration and main objective

The scheduled duration of this action was Year 1, Quarters 1,2,3 and 4. All sites were to be surveyed to determine levels for blocking drains. All sites were to have land survey to an accuracy of 10cm contours to optimise the distribution and location of dams.

Completed to date

Land survey has been carried out on sites No. 3, 5, 10, 11 (partially) and 14.

Comments

This action can only take place on sites after Actions C1 and C2 have been completed.

“C” Actions - Non-Recurring Management**C1: Fell and windrow****Scheduled Duration**

The scheduled duration of this action was, Year 1, Quarters 1,2, 3 and 4, and Year 2.

Completed to date

The following table outlines progress to date against programme for each site which required this action.

Action C1 – Fell and windrow

Site	Detail of action	Area	Species	Area complete to 30/09/05 (Ha)	Balance to complete (Ha)	Expected completion date
1	Windrow	6.7	LPS/SS	0.0	6.7	12/06
1	Fell/Windrow	0.6	SS	0.0	0.6	12/06
3	Fell/Windrow	7.4	LPS	6.8	0.6	12/05
4	Fell/Windrow	10.8	LPS	0.0	10.8	09/06
5	Fell/Windrow	29.1	LPS	2.9	26.2	06/06
6	Fell/Windrow	2.4	SS	0.0	2.4	09/06
6	Fell/Windrow	7.2	LPS	0.0	7.2	09/06
7	Fell/Windrow	0.0	LPS	7.0	0.0	*Complete
9	Fell/Windrow	11.6	LPS	0.0	11.6	12/05
10	Fell/Windrow	21.9	NS,LPC,BI	21.9	0.0	Complete
11	Fell/Windrow	8.2	NS	0.0	8.2	03/06
11	Fell/Windrow	9.2	SS	0.0	9.2	03/06
11	Fell/Windrow	8.5	LPS	0.9	7.6	03/06
11	Fell/Windrow	10.4	SS	0.0	10.4	03/06
11	Fell/Windrow	14.1	LPS	14.1	0.0	Complete
12	Fell/Windrow	17.1	BI	0.0	17.1	06/06
12	Fell/Windrow	3.7	BI (Burned)	0.0	3.7	06/06
13	Fell/Windrow	13.4	NS	0.0	13.4	06/06
13	Fell/Windrow	8.0	LPS	0.0	8.0	06/06
13	Fell/Windrow	3.0	LPS	0.0	3.0	06/06
13	Fell/Windrow	0.9	SS	0.0	0.9	06/06
13	Fell/Windrow	0.8	BI	0.0	0.0	**Complete
14	Fell/Windrow	11.2	SS/LPS	11.2	0.0	Complete
14	Windrow	14.1	Felled area	14.1	0.0	Complete
14	Fell/Windrow	27.1	Regen conifers	27.1	0.0	Complete
		247.4		106.0	147.6	

Comments

*Site 7 Drumalough - Fell and windrow was not programmed but was carried out on this site as, on approximately 7.0 ha of the area, the timber quality proved to be too poor to harvest.

**Site 13 Mount Hevey - it has been decided, on the advise of Stuart Brooks (UK Consultant, Action F4) not to fell a light covering of birch on the lagg area, as it may regenerate more prolifically if cut.

C2: Harvesting

Scheduled Duration

The scheduled duration of this action was all of Year 1, and Year 2.

Completed to date

The following table outlines progress to date against programme for each site which required this action.

Action C2 – Harvesting

Site	Detail of action	Area	Species	Area complete to 30/09/05 (Ha)	Balance to complete (Ha)	Expected completion date
2	Harvesting	13.8	LPS/SS	13.8	0.0	Complete
3	Harvesting	33.2	SS	33.2	0.01	Complete
7	Harvesting	24.3	LPS	17.3	0.0	*Complete
8	Harvesting	18.5	LPS	0.0	18.5	12/06
8	Harvesting	10.5	SS	0.0	10.5	12/06
10	Harvesting	3.1	SS/LPS	3.1	0.0	Complete
11	Harvesting	8.1	SS	8.1	0.0	Complete
11	Harvesting	16.7	LPS	12.2	4.5	**06/06
11	Harvesting	15.9	LPS	0.0	15.9	11/05
12	Harvesting	22.5	SS	0.0	22.5	12/06
13	Harvesting	19.1	LPS	11.0	8.1	***06/06
13	Harvesting	5.6	SS	5.6	0.0	Complete
13	Harvesting	5.4	SS	5.4	0.0	Complete
14	Harvesting	4.1	SS/LPS	4.1	0.0	Complete
		200.8		113.8	80.0	

Comments

*Site 7 Drumalough - only 17.3 ha of commercial harvesting completed at this site, balance of 7.0 ha was of too poor quality to harvest commercially and was completed as fell and windrow under Action C1.

Site 8 Cloonshanville - water monitoring has delayed harvesting on this site, the sensitivity of the site demands that water monitoring be carried out for a full year before harvesting can take place, hence the delay on this site.

**Site 11 Carn Park – 4.5 ha too wet to harvest at present, maybe felled to waste in first half of Year 2 under Action C1.

***Site 13 Mount Hevey – harvesting not complete as site became too wet, remaining material may have to be cut to waste; it is envisaged that this work will be complete by mid year 2006.

C3: Install Dams**Scheduled Duration**

The Scheduled duration of this action was the last quarter of Year 1, all Quarters, Year 2, and Year 3.

Completed to date**Action C3 – Install dams**

Site	Details of Action	Number of dams programmed	Area to be treated (Ha)	Area complete to 30/09/05 (Ha)	Balance to complete (Ha)	Expected completion date
1	Install dams, peat	5,110 Peat dams	7.3	0.0	7.3	09/07
2	Install dams, peat	1710 Peat dams	13.8	0.0	13.8	12/06
3	Install dams, peat	24,060 peat dams	40.6	15.0	25.6	09/07
4	Install dams, peat	5,000 Peat dams	10.8	0.0	10.8	09/07
5	Instal dams plastic	19,380 dams	29.1	0.0	29.1	09/07
6	Install dams, peat	5,000 Peat dams	9.6	0.0	9.6	09/07
7	Install dams, plastic	1400 plastic dams	32.0	0.0	32.0	12/06
8	Install dams, plastic	5200 plastic dams	30.7	0.0	30.7	09/07
9	Install dams (plastic)	375 dams	11.6	0.0	11.6	09/07
10	Install dams, peat	5200 Peat dams	25.0	10.0	15.0	09/07
11	Install dams, peat	10300 dams	91.4	0.0	91.4	09/07
12	Install peat dams	5200 peat dams	39.1	0.0	39.1	09/07

13	Install dams plastic	5200 plastic/peat dams	56.7	0.0	56.7	12/06
14	Install dams plastic	900 plastic dams	29.4	0.0	29.4	12/05
		94,035 peat/plastic dams	427.1	25.0	402.1	

Comments

Site 8 Cloonshanville Bog - water monitoring will delay commencement of work on this site; clearfell delayed until mid 2006, and drain blocking thereafter.

Site 9 Killyconny Bog - ongoing consultation with NPWS may delay work installing dams, they are proposing to do similar work on adjoining bog in tandem with the work we are doing on our section of the bog. Michael Hackett, NPWS, to arrange site visit (per phone call on 9/11/05).

Action C4: Fencing

Scheduled Duration

The scheduled duration of this action was all of Year 1, Quarters 1 and 2 of Year 2. Approx 9000m of stock fence to be erected where necessary.

Completed to date

The following table outlines progress to date against programme for each site which required this action.

Action C4 – Fencing

Site	Details of action	Area to be protected (Ha)	Metres of fence to be erected	Area complete to 30/09/05 (Ha)	Metres of fence erected to 30/09/05	Balance to complete (Ha)	Balance metres of fence to erect	Expected completion date
7	Erect fences	5.0	590	1.7	225	3.3	365	06/06
10	Erect fences	25.0	1400	10.0	905	15.0	495	12/05
11	Erect fences	132.2	2800	0.0	0.0	132.2	2800	06/06
12	Erect fences	42.7	1900	0.0	0.0	42.7	1900	06/06
13	Erect fences	58.2	1210	0.0	0.0	58.2	1210	12/06

14	Erect fences	56.5	1100	0.0	0.0	56.5	1100	06/06
		319.6	9000	11.7	1130	307.9	7870	

Comments

Main progress will take place when tree felling on all sites is completed.

C5: Build roads onto sites for safe access**Scheduled Duration and main objective**

The scheduled duration of this action was Year 1, Quarters ,2,3, 4 and Year 2 quarter 2,3,and 4. 1,600m of new road were to be constructed plus 2 car parks, to give access to demonstration sites.

Completed to date

The following table outlines progress to date against programme for each site which required this action.

Action C5 – Build/Repair Road

Site	Details of Action	Metres of road/Car Parks	Complete to 30/09/05	Balance to complete	Expected completion date
8	Construct New Road	150m	Nil	150m	12/06
8	Construct Car Park	1 park	Nil	1 Car Park	12/06
11	Construct New Road	1450m	Nil	1450m	06/06
11	Construct Car Park	1 park	Nil	1 Car park	06/06

Comments

Site8 Cloonshanville – this work has been delayed to facilitate water monitoring on this site for 1 full year pre harvesting – all other works have been deferred for this reason.

C6: Install Dipwells**Scheduled Duration and main objective**

The schedule duration for this action was throughout Year 1, Quarters 1 and 2 of Year 2. The installation of 142 Dipwells was scheduled to be completed during the 1st year and a half of the project. These dipwells operate mechanically and give maximum and minimum readings for water levels.

Completed to date

115 dipwells have been installed on all 14 sites to the end of the 1st project year the remaining 27 will be used as required to replace damaged/broken dipwells.

Action C6 – Install dipwells – Progress to 30/09/2005

Site No.	Site Name	Detail of action	Complete to 30/09/2005
1	Lough Lurteen/Glenamaddy	Install dipwell	4
2	Camderry Bog	Install dipwell	8
3	Curraghlahanagh Bog	Install dipwell	8
4	Kilsallagh Bog	Install dipwell	8
5	Lough Ree	Install dipwell	12
6	Lisnageeragh/Ballinastack	Install dipwell	8
7	Drumalough Bog	Install dipwell	10
8	Cloonshanville Bog	Install dipwell	12
9	Killyconny Bog	Install dipwell	5
10	Ardgullion Bog	Install dipwell	8
11	Carn Park Bog	Install dipwell	12
12	Crosswood Bog	Install dipwell	8
13	Mount Heavey Bog	Install dipwell	4
14	Coolrain Bog	Install dipwell	8
	Total		115

Comments

This action is now complete.

See Appendix 4.

“D” Actions – Recurring biotope management**D1: Remove natural regeneration****Scheduled Duration and main objective**

The schedule duration of this action was Year 1, Quarters 2, 3 and 4 and Year 2, Quarter 1. [It is also scheduled for Year 4, all Quarters.] This action will prevent the bog-land from drying out and increase the rate of re-colonisation by bog species.

Completed to date

Site No.	Site Name	Detail of action	Target for Action (Ha.)	Complete to 30/09/05 (Ha.)
1	Lough Lurgeen Bog & Glenamaddy Turlough	Remove regen	As required	0.0
2	Camderry Bog	Remove regen	As required	0.0
3	Curraglehanagh Bog	Remove regen	As required	0.0
4	Kilsallagh Bog	Remove regen	As required	0.0
5	Lough Ree	Remove regen	As required	0.0
6	Lisnageeragh Bog & Ballinastack Turlough	Remove regen	As required	0.0
7	Drumalough Bog	Remove regen	As required	14.0
8	Cloonshanville Bog	Remove regen	As required	0.0
9	Killyconny Bog	Remove regen	As required	0.0
10	Ardgullion Bog	Remove regen	As required	0.0
11	Carn Park Bog	Remove regen	As required	0.0
12	Crosswood Bog	Remove regen	As required	0.0
13	Mount Heavey Bog	Remove regen	As required	0.0
14	Coolrain Bog	Remove regen	As required	5.0
	Total			19.0

Comments

This action will vary from site to site depending on the strike of the re-generating conifers (which cannot be predicted with any accuracy) and will be carried out as the need arises mostly in the final year of the project. It will be monitored closely on all sites.

D2: Removal of trespassing livestock

Scheduled Duration and main objective

The scheduled duration of this action at this point is quarter 3 of each of the project years. The problems of adjoining landowner's livestock trespassing on the project area is small. However periodic removal of trespassing stock will be carried out as necessary. This action will be carried out all sites as required.

Completed to date

Nil – not required during Year 1.

Comments

None required.

Action D3: Drainage pattern survey and inventory

Scheduled Duration and main objective

The scheduled duration of this action at this stage is all of Year 1, the last 2 quarters of year 3 and the first quarters of year 4.

Completed to date

This work is ongoing on all sites where fell/fell and windrow has taken place.

Comments

Will continue in advance of the remaining drain blocking.

Action D4: Fire Prevention

Scheduled Duration and main objective

The scheduled duration of this action is quarters 2 and 3 of each of the 4 project years. Approximately 21,360 m of fire breaks will be cleared of vegetation, as fire protection for the project sites.

Completed to date

See table below for progress on this action.

Action D4 – Fire prevention

Site	Details of Action	Number of metres of fireline	Complete to 30/09/05	Balance to complete	Expected completion date
1	Fireline	710m fireline-clear vegetation	0	0	See note below
1	Renew Fireline	710 m fireline	0	0	See note below
2	Fireline	1230m firline-clear vegetation	0	0	See note below
2	Renew Fireline	1230m fireline	0	0	See note below
3	Fireline	2030m fireline-clear vegetation	0	0	See note below
3	Renew Fireline	2030m fireline-clear vegetation	0	0	See note below
4	Fireline	2320m fireline-clear vegetation	0	0	See note below
4	Renew Fireline	2320 lin.m.*4m	0	0	See note below
5	Fireline	2000m fireline	0	0	See note below
5	Renew firelines	2000m fireline	0	0	See note below
6	Fireline	1300m fireline-clear vegetation	0	0	See note below
6	Renew Fireline	1300m fireline			See note below
7	Fireline	720m	0	720	03/06
7	Renew Fireline	720m	0	720	09/08
8	Fireline	1000m	0	1000	03/06
8	Renew Fireline	1000m	0	1000	09/08
9	Fireline	Clear 650m@4m wide	0		See note below
9	Renew Fireline	Refresh fireline 650m*4m			See note below
10	Fire line	Clear vegetation 1200M	1200	0	Complete
10	Renew firelines	Clear vegetation 1200M	0	1200	09/08
11	Fireline	4700m fireline	0	4700	03/06
11	Renew fire lines	Remove regrowth 4700m	0	4700	09/08
12	Fire prev/controls	Remove vegetation on 1300m	0	1300	03/06
12	Fire/prev/controls	Refresh fireline1300	0	1300	09/08
13	Fireline	1200m fireline-clear vegetation	0	1200	03/06
13	Renew fireline	1200 m		1200	09/08
14	Fireline	1000 m clear vegetation	900	100	Complete
14	Renew fireline	1000 m	1000	1000	09/08
		21,360 metres of fireline			

Comments

Following consultations, NPWS personnel in East Galway and Roscommon did not want any firelines cut on Sites 1–6 and Site 9.

Action D5: Refuse Removal**Scheduled Duration and main objective**

The scheduled duration of this action at this stage is the 2nd and 4th Quarter of each of the project years. Approximately 18 loads of refuse will be removed from the 2 demonstration sites over the duration of the project.

Completed to date

See table for progress on this action.

Action D5 – Refuse removal

Site	Details of Action	Number of Loads	Complete to 30/09/05	Balance to complete	Expected completion date
8	Refuse Removal	8 Loads	0	8 loads	09/08
11	Refuse Removal	10 Loads	4 loads	6 loads	09/08
		18 Loads	4 loads	14 loads	

Comments (none)

Action D6: Vegetation control**Scheduled Duration and main objective**

The scheduled duration of this action at this stage is the 3rd Quarter of each of the project years. Re-growth of vegetation after tree felling will be cleared on 450 ha.

Completed to date

3.6 ha of vegetation control done at Site 3-- Curraglehanagh Bog.
2.0 ha of vegetation control done at Site 11 – Carn Park Bog.

Comments

This action will be carried out as required on all sites.

Action D7: Check/repair dams

Scheduled Duration and main objective

Not scheduled for year 1.

“E“ Actions – Public awareness and dissemination of results

E1: Land manager training course

Scheduled Duration and main objective

The scheduled duration of this action is for the 2nd quarter of each year. This action is to disseminate the skills and experience needed to restore bogland and to promote awareness and understanding of the LIFE project.

Completed to date

The purpose of the training course was well served for Year 1 by a visit of the raised bog site managers to two of Coillte’s Blanket Bog project sites (LIFE04 NAT/IRL/008490) where specially prepared training material was distributed. In addition, the recent publication “Conservation and Restoration of Raised Bogs”, edited by M. G. C. Schouten, was circulated to all site managers.

Comments

Further land managers training will take place as scheduled in the remaining three years of the project.

E2: Project Website

Scheduled Duration and main objective

The scheduled duration of this action is throughout the four years of the project. This action will be utilised to publicise the project objectives and to disseminate on-going results from the LIFE project.

Completed to date

A website has been constructed and can be visited at www.raisedbogrestoration.ie It contains information relating to the project objectives, expected results, location of sites, background information on bogs and LIFE/Natura 2000, along with links to other relevant websites.

Comments

The site is in operation at present on an ‘under construction’ basis. The site will be updated regularly throughout the duration of the project, in areas such as project events, project progress, press releases, and project results.

See Appendix 5.

E3: Project Information Brochure

Scheduled Duration and main objective

The scheduled duration of this action was Year 1, Quarters 2, 3 and 4. The purpose of the brochure (20,000 copies) is to promote public awareness of the project.

Completed to date

The project brochure was produced, and distribution began by the end of Year 1.

See Appendix 6.

Comments

Wider distribution to a large number of stakeholders will continue in Year 2 and subsequent years.

E4: Project results booklet

Scheduled Duration

This action is not scheduled for Year 1.

E5: Annual bog walk

Scheduled Duration

This action is not scheduled for Year 1.

E6: Media Publicity Campaign

Scheduled duration and main objective

The scheduled duration of this action is throughout the project. The main focus of this action is to promote public awareness of the background, objectives, actions and events of the Raised Bog LIFE Project. A big effort has been made and continues by the Public Relations/Administration Manager to promote the project and its objectives, and to ensure that LIFE-Nature, and joint funding of the project both by

EU DG-Environment and Coillte, is acknowledged through all forums of media publicity.

Completed to date

Communication of the objectives of the project through the use of the media has taken place throughout Year 1 of the project. The main tasks completed were as follows:

- **Internal Publicity Campaign**

Various articles in our in-house magazine, *Coillte Contact*, and in our in-house e-newsletter, *Inside Coillte*.

See Appendix 7.

- **External Publicity Campaign**

- Coverage of the project was included in *Peatland News*, magazine of the Irish Peatland Conservation Council;

- Nature in Westmeath, Westmeath County Council heritage Plan; and

- Roscommon Herald newspaper for Water Heritage Day

See Appendix 8.

Comments

Publicity of the project, its objectives and actions will continue, and as experience is gained on the different techniques used to complete the restoration work, we feel it will be even more interesting for our stakeholders to begin seeing results based on the work carried out.

E7: Interpretative displays and boardwalks

Scheduled Duration and main objective

This action was only scheduled to commence in the 4th quarter of Year 1. It is proposed to have two demonstration sites for the project, one at Cloonshanville Bog (Site 8), and one at Carn Park Bog (Site 11). At each of these sites we will provide an information panel, and boardwalk for safe visitor access and habitat protection.

Completed to date

Preparatory work has commenced on Carn Park Site 11, and it is expected that the information panel/boardwalk will be put in place in Year 2.

Comments

Construction of the boardwalk is not feasible on sites until major operational works such as commercial felling and felling to waste have been completed. In the case of Cloonshanville Bog Site 08 – these works have been delayed to allow for monitoring of water quality on this site for a full year prior to tree felling and extraction. It is envisaged that the felling operation will commence in the second half of Year 2, and that the information panel/boardwalk will be put in place in Year 3.

“F” Actions – Overall project operation and monitoring

F1: Project Management

Scheduled Duration and main objective:

This action is scheduled for the duration of the project. The main objective of this action is to manage the project and evaluate progress in relation to its aims and objectives.

Completed to date

The following vacancies were filled on the Project Management Group:

- PR/Administration Manager - Angela Wallace
- Project Accountant – Oh Peng Lim
- National Parks and Wildlife Service representatives – Jim Ryan, Judit Kelemen
- Forest Service representative – Pat O’Callaghan

Four successful Project Management Group (PMG) meetings were held in Year 1.

Comments

PMG meetings have been productive and positive, always proceeding on the basis of consensus.

F2: Project Advisory Panel

Scheduled Duration and main objective

The scheduled duration of this action was the last quarter of each year. The panel will be available to provide technical or management advice should the project management group request it.

Completed to date

Preparatory work has begun for this action, including identifying potential interested organisations and drafting invitations.

Comments

It has been decided to defer the 1st meeting of the Advisory Panel until the 2nd quarter of Year 2, as ground conditions will be favourable for a site visit.

F3: Project Reporting

Scheduled Duration and main objective

The scheduled duration of this action is 1st quarter of years 2,3,and 4. and also the final quarter of year 4. This action is required in order to report to the European Commission on activities and progress during the project in relation to its aims and objectives.

Completed to date

Progress Report for Year 1 was produced and submitted to the European Commission and external team during December, 2005.

Comments

All reports submitted to the Commission will be distributed to all members of the Project Management Group and kept on file for reference.

F4: Procure the use of expert advice

Scheduled Duration and main objective

The scheduled duration of this action was Year 1, Quarter 1. The raised bog restoration project will benefit from the expertise of a consultant experienced in similar LIFE funded projects in the UK.

Completed to date:

Action Complete in Year 1. Report of project site evaluations by Stuart Brooks (Peatland Consulting, Scotland) received and utilised while formulating site action plans (A2). Mr. Brooks also gave a presentation of his findings at the second PMG meeting on 17th February 2005. Mr Brooks recommendations regarding the retention of birch on lagg areas have been taken on board as indicated above in Actions C1 and C2.

See Appendix 9.

Comments

Mr Brooks has proved to be a very useful contact as he was involved in some of the earliest UK raised bog LIFE projects dating to the early 1990s; it is intended to visit some of these sites to see longer term results.

F5: Hydrology monitoring

Scheduled duration and main objective

The scheduled duration of this action was throughout the project. The objective of this action is to record changes in water levels which are expected to increase following removal of exotic tree species and blocking of drains.

Completed to date

As already outlined under Action C6, 115 of 142 dipwells have been installed on all 14 project sites. Readings are being taken monthly and recorded.

Comments

These readings will be collated as the project progresses to provide information in relation to changes in water levels.

See Appendix 4.

F6: Vegetation Monitoring

Scheduled duration and main objective

The scheduled duration of this action is throughout the 4 years of the project. The main objective of the action is to determine through the use of vegetation transects the recovery of the bog vegetation, and therefore the degree of success of the restoration project.

Completed to date

Vegetation transects have been laid down on cleared areas, and open bog areas on all sites.

See Appendix 4.

Comments

Changes in vegetation composition will be recorded and will help to indicate the progress of the restoration work.

F7: Mid-point and end of project mapping

This action is not scheduled for Year 1.

V TIME PLANNING

Action activity at end of Year 1.

Table Legend

- ✓ = original time planning schedule
 ▼ = action continuing through specific quarters
 ■ = action fully completed for specific year

Action Number/ name	Calendar Year 1				Calendar Year 2				Calendar Year 3				Calendar Year 4			
	*I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
A. Preparatory actions, elaboration of management plans and/or action plans:																
A1 Project visits to see other LIFE-Nature sites.	✓ ▼	✓ ▼	✓ ▼	✓ ▼												
A2 Elaboration of action plans.	✓ ▼	✓ ▼	▼	▼												
A3 Identify Safety Hazards and draw up a general safety plan for sites.	✓ ▼	✓ ▼	▼	▼	✓				✓				✓			
A4 Survey of fence lines and enclosures.	✓ ▼	✓ ▼														
A5 Land Survey.	✓ ▼	✓ ▼	✓ ▼	✓ ▼			✓				✓					
B. Purchase/lease of land and/or rights:																
None																

Action Number/ name	Calendar Year 1				Calendar Year 2				Calendar Year 3				Calendar Year 4			
	*I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
C. Non-recurring biotope management:																
C1 Fell non-commercial.	✓ ▼	✓ ▼	✓ ▼	✓ ▼	✓	✓	✓	✓								
C2 Harvesting.	✓ ▼	✓ ▼	✓ ▼	✓ ▼	✓	✓	✓	✓								
C3 Install dams.				✓ ▼	✓	✓	✓	✓	✓	✓	✓	✓				
C4 Fencing.	✓	✓	✓ ▼	✓ ▼	✓	✓										
C5 Build roads onto sites for safe access and the removal of trees.		✓	✓	✓		✓	✓	✓								
C6 Install dipwells.	✓ ▼	✓ ▼	✓ ▼	✓ ■	✓	✓										
D. Recurring biotope management:																
D1 Remove natural regeneration.		✓ ▼	✓ ▼	✓ ▼	✓								✓	✓	✓	✓
D2 Removal of trespassing livestock.			✓				✓				✓				✓	
D3 Drainage pattern survey and inventory.	✓ ▼	✓ ▼	✓ ▼	✓ ▼							✓	✓	✓	✓		
D4 Fire prevention		✓ ▼	✓ ▼			✓	✓			✓	✓			✓	✓	
D5 Refuse removal		✓ ▼		✓		✓		✓		✓		✓		✓		✓
D6 Vegetation control			✓ ▼				✓				✓				✓	

Action Number/ name	Calendar Year 1				Calendar Year 2				Calendar Year 3				Calendar Year 4			
	*I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
D7Check/ repair dams					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E. Public awareness and dissemination of results:																
E1 Land Manager Training Course	▼	✓				✓				✓				✓		
E2 Project Website	✓ ▼	✓ ▼	✓ ▼	✓ ▼	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E3 Project Information Brochure		✓ ▼	✓ ▼	✓ ▼												
E4 Project Results Book															✓	✓
E5 Annual Bog Walk								✓				✓				✓
E6 Media Publicity Campaign	✓ ▼	✓ ▼	✓ ▼	✓ ▼	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E7 Site Interpretative Displays and Boardwalks				✓ ▼	✓	✓	✓	✓	✓	✓		✓				✓
F. Overall project operation and monitoring:																
F1 Project management	✓ ▼	✓ ▼	✓ ▼	✓ ▼	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F2 Project advisory panel				✓				✓				✓				✓
F3 Project reporting					✓ ▼				✓				✓			✓
F4 Procure the use of expert advice	✓ ▼	▼														
F5 Hydrology monitoring.	✓ ▼	✓ ▼	✓ ▼	✓ ▼	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F6 Vegetation monitoring.			✓ ▼				✓				✓				✓	
F7 Mid-point and end mapping.									✓							✓

VI SUMMARY OF DELIVERABLE PRODUCTS

Product	No. of Action	Deadline	Progress to end Year 3
Safety Plan and Hazard Identification	A3	31.03.2005	A safety plan has been produced and HIRA (hazard identification, risk assessment forms) are completed on all sites before actions begin. Site managers will continue to work with Coillte's safety & training team to ensure that appropriate safety procedures are in place at all times while work is ongoing during the project.
Land Managers Training Course	E1	31.03.2005	A visit of the raised bog site managers to two of Coillte's Blanket Bog project sites (LIFE04 NAT/IRL/008490) where specially prepared training material was presented and distributed.
Drainage Pattern Survey (Initial survey)	D3	31.10.2005	Ongoing through conductivity and pH readings and laboratory analysis where necessary. A full year's data is being recorded by autosampler at Site 8 Cloonshanville (finishing June 2006).
Project Information Brochure	E3	31.10.2005	20,000 copies produced by this date – distribution of same has commenced.
Hydrology Monitoring Interim Report	F5	30.11.2006	Not yet required
Mid-point Project Mapping	F7	31.12.2006	Not yet required
Produce 1 technical article during the life of the project	E6	31.12.2006	Not yet required.
Drainage Pattern Survey (Final Report)	D3	30.09.2008	Not yet required
Project Results Booklet	E4	31.12.2008	Not yet required
Vegetation Monitoring (Final Report)	F6	31.12.2008	Not yet required
Hydrology Monitoring (Final Report)	F5	30.11.2008	Not yet required
End of Project Mapping	F7	31.12.2008	Not yet required
Produce layman articles for inclusion in Coillte Contact, Newsletters, etc 2 per year	E6	01.10.2004 – 31.12.2008	Done for Year 1.

VII ACTIVITY REPORTS FORESEEN
 (Progress Report, Interim Report, Final Report)

Progress Report Year I	30.11.2005	Submitted 22.12.2005
Progress Report Year II with interim report	30.11.2006	
Progress Report Year III	30.11.2007	
Progress Report Year IV with Final Report	30.12.2008	

VIII SUMMARY OF PROJECT MILESTONES

Milestone	No. of Action	Deadline	Progress to end Year 1
Other LIFE Projects visited	A1	30.09.2005	Visits to Coillte's blanket bog project and LIFE workshops in Holland and Latvia/Estonia.
Action Plans elaborated	A2	30.09.2005	Completed.
Fence lines surveyed	A4	30.09.2005	Completed.
Land Survey completed	A5	30.09.2005	Ongoing as sites are cleared of trees.
Project Website operational	E2	30.09.2005	www.raisedbogrestoration.ie operational by 30.09.2005.
Information Brochure produced	E3	30.09.2005	20,000 copies produced by 30.09.2005.
Install Dipwells completed	C6	31.03.2006	115 dipwells have been installed throughout the 14 project sites.
Fell non-commercial completed	C1	30.09.2006	Not yet due.
Harvesting completed	C2	30.09.2006	Not yet due.
Fencing completed	C4	30.09.2006	Not yet due.
Install dams completed	C3	30.09.2007	Not yet due.
Build roads / Car Parks in 2 Demonstration sites	C5	30.09.2006	Not yet due.
Displays and boardwalks completed	E7	31.03.2007	Not yet due.
End of project conference	E6	30.09.2008	Not yet due.
Project results booklet produced	E4	31.12.2008	Not yet due.

IX Financial Summary

Category →	A	A	C	C	D	D	E	E	F	F	Total costs € Actual	Total costs € Budget	Total Variance €
Budget item ↓	↓												
↓	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	
1. Personnel	6,709	26,400	10,031	34,210	2,576	48,296	11,680	12,111	89,554	99,209	120,550	220,226	99,676
2. Travel	4,936	11,460	1,569	5,874	1,054	7,244	1,398	842	22,436	14,416	31,393	39,836	8,443
3. External assistance	10,543		96,481	122,176	4,805	4,805	4,785	25,870	19,228	26,955	135,482	179,806	44,324
4. Durable goods	450	1,000	39,781	46,088	2,036	3,200			3,075	5,000	45,342	55,288	9,946
5. Land purchase/lease											0	0	0
6. Consumable material		6,200	690	500				1,210	1,991	2,250	2,681	9,325	6,644
7. Other costs							468	1,210	1,428	2,500	1,896	3,710	1,814
8. Overheads	557	1,545	3,645	7,178	397	4,975	703	708	8,294	7,922	13,596	26,144	12,548
TOTAL	23,196	47,313	152,197	214,833	10,868	71,098	19,034	42,348	146,006	158,744	351,300	534,336	183,036

SUMMARY FINANCIAL REPORT**Comments**

- Total costs incurred in Year 1 are behind budget by €183,036 (costs arising €51,300, provisional budget €34,336)
- This shortfall against budget comprises:

Project Action	Amount (€'000s)
A: Preparatory Actions, Elaboration of Management Plans and/or Action Plans	24
C: Non-recurring Biotope Management	63
D: Recurring Biotope Management	60
E: Public Awareness & Dissemination of Results	23
F: Overall Project Operation & Monitoring	13

An example of a Project Timesheet, which is completed monthly by Coillte personnel working on the project, is attached.

See Appendix 10.

An example of a Contract Work Recording Form for the payment to contract staff working on the Raised Bog project is attached.

See Appendix 11.