



LIFE Project Number  
**LIFE04 NAT/IE/000121**

**PROGRESS REPORT No. 3**  
*Covering the project activities from 01.10.2006 to 30.09.2007*

Reporting Date  
**30/09/2007**

LIFE PROJECT NAME  
**Restoring Raised Bog in Ireland**

Data Project

<b>Project location</b>	Ireland
<b>Project start date:</b>	01/10/2004
<b>Project end date:</b>	30/09/2008
<b>Total Project duration</b>	48 months
<b>Total budget</b>	€2,500,000
<b>EC contribution:</b>	€1,875,000
<b>(%) of total costs</b>	75%
<b>(%) of eligible costs</b>	75%

Data Beneficiary

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## **2. KEY-WORDS AND ABBREVIATIONS**

### **(I) Key Words:**

Ireland, raised bog, , tree removal, firelines, exotic tree and shrub removal, removal of natural regeneration, vegetation monitoring, quadrats, dipwells, raising water levels, drain blocking, water level monitoring.

### **(II) Abbreviations:**

HIRA	Hazard Identification and Risk Assessment
IPCC	Irish Peatland Conservation Council
NGO	Non-Governmental Organisation
NPWS	National Parks and Wildlife Service
PAP	Project Advisory Panel
PMG	Project Management Group
SFM	Sustainable Forest Management
UCD	University College Dublin

### 3. EXECUTIVE SUMMARY

#### Project objectives

- To restore 571 ha of raised bog on 14 partially or wholly afforested sites in counties Roscommon, Galway, Longford, Cavan, Meath, Westmeath, and Laois in SACs
- To demonstrate and interpret the techniques of bogland restoration on afforested sites, principally tree felling and drain blocking
- To ameliorate the effects of turbary and reduce hazards to adjoining landowners
- To reduce the risk of fire damage to the project sites
- To increase knowledge of afforested bogland restoration both nationally and throughout the EU.

#### Key deliverables and outputs

<b>Deliverable or Milestone</b>	<b>Action</b>	<b>Deadline</b>	<b>Comments</b>
Safety Plan and Hazard Identification	A3	31.03.2005	Completed
Training Course Project Summary	E1	31.03.2005	Completed
Drainage Pattern Survey (Initial Report)	D3	31.10.2005	Completed
Project Information Brochure	E3	31/10/2005	Completed
Hydrology Monitoring Interim Report	F5	30.11.2006	Completed
Mid-point Project Mapping	F7	31.12.2006	Completed
Produce 1 technical article during the life of the project	E6	31.12.2006	January 2008
Drainage Pattern Survey (Final Report)	D3	30.09.2008	
Project Results Booklet	E4	31.12.2008	
Vegetation monitoring (Final Report)	F6	31.12.2008	
Hydrology Monitoring Final Report	F5	31.11.2008	
End of project mapping	F7	31.12.2008	
Produce layman articles for inclusion in Coillte Contact, newsletters etc 2 per year	E6	30.09.2008	Ongoing until 30 Sept 2008
Other LIFE-funded projects visited	A1	30.09.2005	Ongoing until Budget is exhausted

Action plans elaborated	A2	30.09.2005	Completed
Fence lines surveyed	A4	30.09.2005	Completed
Land Survey completed	A5	30.09.2005	Will be completed by March 2008
Project Website operational	E2	30.09.2005	Completed
Information brochure produced	E3	30.09.2005	Completed
Install dipwells completed	C6	31.03.2006	Completed
Fell non-commercial completed	C1	30.09.2006	Completed end of Year 3
Harvesting completed	C2	30.09.2006	Completed Year 3
Fencing completed	C4	30.09.2006	Will be completed by 31.12.2007
Install dams completed	C3	30.09.2007	Will be completed by May 2008
Build roads completed	C5	30.09.2006	Completed but will require repair in – Spring 08
Displays and boardwalks completed	E7	31.03.2007	Completed
End of project conference held	E6	30.09.2008	Planned 8 <sup>th</sup> & 9 <sup>th</sup> May 2008
Project results booklet produced	E4	31.12.2008	Will be complete for end of project conference

## Summary of each of the following chapters

### Chapter 4: Technical development

All preparatory “A” actions have been formally complete except A5 Land Survey, where the original schedule was over ambitious. However experience has shown that some of these actions will need to continue to some extent, for the duration of the project, for example A3 – Safety. All Non-Recurring management actions have been completed except C3 – Install dams, and C4 Fencing. All recurring management D actions continued as necessary. All relevant Public Awareness and dissemination of results - E Actions continued as necessary. All relevant project operation and monitoring – F Actions continued as necessary.

## **Chapter 5: Problems encountered**

A5 – Land Survey – the original schedule was over ambitious, and could not be carried out until after tree removal.

C3 – Install dams - is behind schedule, due to the very wet summer we experienced in 2007, this operation/action will be completed by the end of May, 2008. In addition as explained previously we have been unable to block some drains on some sites due to possible adverse effects on neighbouring turbary holders.

D4 - Firelines Changes in local personnel in NPWS have hampered progress in agreeing the method of fireline construction, on sites No. 1 – 6. Agreement has been reached with NPWS managers on the PMG. Our site manager has arranged to meet with NPWS conservation ranger in the near future.

D6 – Vegetation Control - Re-invasion of lagg area by predominantly birch and other herbaceous woodland growth may persist and may have to be accepted as constituting an appropriate buffer zone to the raised bog. There are currently indications of this threat at several sites, and this issue is being closely monitored. Work will continue against this threat under Action D6 until the end of the project. Natural regeneration of pine on cleared areas may also be a problem on some sites.

## **Chapter 6: Financial issues**

The only area where we envisage there will be an overspend is in the Personnel budget, where we expect to spend up to the allowed 10%.

There will be savings in both External Assistance and in Durables. We are expecting an underspend in the overall project budget, of approximately €300,000.

## **Chapter 7: Planned project progress**

The main action to be completed is C3 – Drain blocking, and we expect that this will be completed by June 2008. All other actions will continue as scheduled /necessary.

## Chapter 8: Annexes

Annex 1:	Action A2 – Site Action Plans
Annex 2:	Action E1 – Land Managers Training Course – Handout and List of Attendees
Annex 3:	Action E3 – Project Brochure distribution list
Annex 4:	Action E5 – Bog Walk at Carn Park Bog – Handout, Photographs and attendee list
Annex 5:	Action E6 – Internal – Coillte Contact In-house magazine
Annex 6:	Action E6 – Internal – Coillte Annual Report 2006
Annex 7:	Action E6 – Internal – Coillte e-Newsletter
Annex 8:	Action E6 – Media and Publicity – National Press coverage
Annex 9:	Action E6 – Media and Publicity – Regional and Local Newspapers
Annex 10:	Action E6 – Direct Contact with stakeholders – demo sites
Annex 11:	Action E6 – Making the DVD, and Distribution List
Annex 12:	Action E6 – Attendance at the International Association of Landscape Ecology, Wageningen, Holland / Copy of Poster, list of other posters displayed at the Conference
Annex 13:	Action E6 - Visit by Danish LIFE Project to Carn Park Bog, Handout and Photographs
Annex 14:	Action E6 – Visit by UCD (University College Dublin) International Steering Group of its Bogland Project to Cloonshanville Bog
Annex 15	Action E6 – Bog Walk at Coolrain during Heritage Week. Rare Goat Moth found, Photographs and attendee list
Annex 16	Action E6 – The Heritage Council Newsletter / website Re. Rare Goat Moth find
Annex 17	Action E6 – Flyers advertising various bog walks during Year 3
Annex 18	Action E7 – Photographs of Interpretative signage at the demonstration sites (2), and photograph of boardwalk at Cloonshanville Bog
Annex 19	Action F5 & F6 – Project ecologist water and vegetation monitoring report for Year 3
Annex 20	Photograph showing 'bogged' machine – hence the delay in completing Action C3 – Drain Blocking

#### **4. TECHNICAL DEVELOPMENT**

As there are no project partners, all actions are being implemented by Coillte and/or its contractors. The scheduled duration of each action is as per the timetable in the approved application, Section C, LIFE-Nature 2004-22 to 22(3).

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

###### **A1: Site Visit to see other LIFE funded projects**

###### **Completed in Year 3**

Members of our project team visited a number of project sites on Coillte’s other two LIFE Projects - Restoring Active Blanket Bog In Ireland (LIFE02 NAT/IRL/8490), and Restoring Priority Woodland Habitats in Ireland (LIFE05 NAT/IRL/000182) during Year 3. These visits proved invaluable for sharing information and experiences.

###### **A2: Elaboration of Action Plans**

###### **Completed in Year 3**

Consultation with stakeholders continued during the year as necessary.

Sample of Site Action Plans (Site 4 and 11 attached) as requested in letter from the European Commission dated 25<sup>th</sup> July 2007. (**Appendix No. 1**)

###### **A3: Identify Safety Hazards and Prepare a General Safety Plan for Project Sites**

###### **Completed up to end of Year 3**

Coillte general safety statement is basis of all plans. HIRA forms continue to be completed for all operational work to date and safety regulations are adhered to on all sites. Safety signage is displayed at the entrance to all project sites warning visitors of ‘Deep water in the blocked drains’

###### **Comments**

Safety is an integral part of the management of all operations that take place on project sites. 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**

This action was complete in year 2

**A5: Land Survey – (to facilitate location of dams)**

**Completed in Year 3.**

**Land survey carried out on site No's 1,6 and 8 during Year 3**

The following areas are yet to be completed:

13.8 ha of site No. 2 to be surveyed Dec 2007 in advance of drain blocking

10.8 ha of site No 4 to be surveyed early in 2008 in advance of drain blocking

29.1 ha of site No. 5 to be surveyed early in 2008, in advance of drain blocking

15.9 ha of site No. 12 recently cleared of trees, requires land survey, to be carried out in December, 2007.

**Comments:**

The original schedule for this action was over ambitious as this operation can only take place on sites after Actions C1 and C2 have been completed.



**“C” Actions - Non-Recurring Management**

**C1: Fell and Windrow**

**Completed up to end of Year 3**

The following table outlines progress to Sept 2007 against programme for each site which required this action.

**Action C1 – Fell and windrow**

Site	Detail of action	Area	Area complete to 30/09/07 (Ha)	Balance of <u>felling</u> to complete (Ha)	Expected completion date - <u>windrows</u>
1	Windrow	6.7	4.3	Nil	Completed
1	Fell/Windrow	0.6	3.0	Nil	Completed
3	Fell/Windrow	7.4	7.4	Nil	Completed
4	Fell/Windrow	10.8	10.4	Nil	May 2008
5	Fell/Windrow	29.1	4.6	Nil	January 2008
6	Fell/Windrow	2.4	5.3	Nil	Completed
6	Fell/Windrow	7.2	7.2	Nil	Completed
7	Fell/Windrow	Nil	10.3	Nil	Completed
7*	Fell / Windrow	Nil	4.9	Nil	Completed
8	Fell/Windrow	Nil	17.0	Nil	Completed
9	Fell/Windrow	11.6	2.6	Nil	Completed
10	Fell/Windrow	21.9	21.9	Nil	Completed
11	Fell/Windrow	50.4	50.4	Nil	Completed
12	Fell/Windrow	17.1	12.2	Nil	Completed
12	Fell/Windrow	3.7	3.7	Nil	Completed
13	Fell/Windrow	25.3	25.3	Nil	Completed
13	Fell/Windrow	Birch 0.8	0.0	Nil	Completed
13	Fell /Windrow	Nil	11.3	Nil	Completed
14	Fell/Windrow	38.3	38.3	Nil	Completed
14	Windrow	14.1	14.1	Nil	Completed
	<b>Programmed</b>	<b>247.4ha</b>			
	<b>Completed to 30.9.2007</b>		<b>258.5 ha</b>		

**Comments :**

Site No. 1 – L. Lurgeen – 2.4 ha of this site was unsuitable for commercial harvesting - (which was due to be carried out in advance of the LIFE project), and was added to give a total area of 3.0 ha felled to waste under the project. (Accordingly Windrow only area has been reduced from 6.7ha to 4.3 ha).

Site No. 3 - Curraghleanagh – All felling was complete by end of 2<sup>nd</sup> year, remaining 2ha of windrowing was complete by end of year 3.

Site No 4 – Kilsallagh – All felling complete by Sept '06, too wet to windrow until July '07. (10.4 ha only for fell and windrow – area requiring no restoration measures was understated in application by 0.4 ha). Left until summer '07, but still too wet to windrow. For reasons of operational efficiency, we now propose to windrow when machine is on site for drain blocking in May 2008.

Site No. 5 – L. Ree - Only 4.6 ha of 29.1 ha programme was complete as fell and windrow. 24.5 ha was harvested commercially – though not programmed as commercial on original application. All felling complete by Sept '06 – 14 ha of windrowing done, 10.3 ha of windrowing remaining. For reasons of operational efficiency, we now propose to windrow when machine is on site for drain blocking in January 2008. While windrowing is not normally required on commercially harvested sites. This site required windrowing of harvesting waste material, in order to facilitate land Survey A5, and location of drains to be blocked.

Site No. 6 – Lisnageeragh Bog – 12.5 ha felled to waste – (9.6 ha Programmed on approved application – 2.9 ha extra required fell to waste, thus reducing open bog area not requiring restoration measures from 16.3ha to 13.4 ha). 12.5 ha of windrowing carried out - action now complete.

Site 7 - Drumalough – Fell and windrow was not programmed for this site, but proved to be necessary on 10.3 ha. This 10.3 ha consists of 2.6 ha having being transferred from Action C2, and 7.7ha of tree felling omitted from the approved application (but shown on the site maps) was felled and windrowed.

\*4.9 ha (Cloonmaul) originally down for harvesting – was felled to waste because ground conditions were too wet.

Site No 8 – Cloonshanville (total area = 34.2ha) – No fell to waste or windrowing was programmed for this site.

It was not feasible to commercially harvest 24.0 ha of the 29.0ha programmed on this site under Action C2, because of the long access route and the damage this might cause to the Annex 1 raised bog habitat on this SAC. It was decided that fell to waste would be more appropriate. An additional 5.2 ha of tree felling omitted from the C2 Action table in the approved application (but shown on the site maps) was also felled to waste. (24.0ha + 5.2ha = 29.2ha). Of this 17.0ha were felled and windrowed to Sept '06, an additional 12.2ha was felled by the end of Dec 2006. however the project ecologist, and other expert advice, recommend not to windrow in this fen area of 12.2 ha – as it may cause damage to the sensitive surface. This action is now complete on this site.

Site No. 9 – Killyconny – 9.0 ha of the 11.6 of the area programmed for fell and windrow were harvested commercially, and only 2.6 ha fell to waste. All 11.6 ha were windrowed.

Site No 12 – Crosswood - The project area = 42.7 ha as shown on the maps in the approved application, because the programme for tree felling is overstated in Tables C1 / C2 of the approved application by 0.6 ha. (C1 =17.1.ha + 3.7 ha = 20.8 ha, C2 = 22.5 ha. This explains why the total of 43.3 ha is incorrect). Of the 20.2 ha which should have been felled and windrow 4.3 ha proved suitable for commercial harvesting (C2), leaving only 15.9 ha for this action which is now complete.

Site 13 - Mount Hevey – Additional area of 11.3 ha transferred from commercial harvesting (C2) complete to end of year 3. (25.3 ha + 11.3 ha = 36.6 ha in this action). It has been decided, on the expert advice of Stuart Brooks (UK Consultant, Action F4) not to fell a light covering of birch on the lagg area (0.8 ha), as it may regenerate more prolifically if cut.

**C2: Harvesting (commercial)**

**Completed up to end of Year 3**

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

**Action C2 – Harvesting**

Site	Detail of action	Area in application	*Tree Species	Area complete to 30/09/07 (Ha)	Balance to complete (Ha)	Expected completion date
2	Harvesting	13.8	LPS/SS	13.8	Nil	Complete
3	Harvesting	33.2	SS	33.2	Nil	Complete
5	Harvesting Additional not programmed	0.0		24.5	Nil	Complete
7	Harvesting	24.3	LPS	16.8	Nil	Complete
8	Harvesting	29.0	LPS/SS	5.0	Nil	Complete
9	Harvesting additional not programmed	0.0	LPS	9.0	Nil	Complete
10	Harvesting	3.1	SS/LPS	3.1	Nil	Complete
11	Harvesting	40.7	SS / LPS	40.7	Nil	Complete
12	Harvesting	22.5	SS	26.8	Nil	Complete
13	Harvesting	30.1	LPS/SS	19.4	Nil	Complete
14	Harvesting	4.1	SS/LPS	4.1	Nil	Complete
	<b>Programmed</b>	<b>200.8ha</b>				
	<b>Programme completed to 30.9.2007</b>			<b>196.4 ha</b>		

**Comments**

\*Tree Species - SS : Sitka Spruce  
LPS: Lodgepole Pine

Site No. 5 – Lough Ree – 24.5 ha felled commercially – transferred from C1 – following consultation with Roscommon Co. Co – timber extracted via alternative route.

\*Site 7 - Only 21.7 ha of the 24.3 ha on approved application were suitable to be commercially harvested. 16.8 ha complete to the end of year 2, the 4.9 ha which remained, could not be harvested commercially – this area was felled to waste along with balance of 2.6 ha - under Action C1.

Site 8 - Cloonshanville - only 5 ha of the 29.0 ha programmed for commercial felling could be carried out, remainder transferred to fell to waste C1.

Site No 9 – Killyconny - 9 ha harvested on this site not programmed, timber of better quality than expected.

Site No. 12 – Crosswood – 22.5 ha programmed for commercial harvesting – 26.8 ha completed to end of Sept 2006. 4.3ha transferred from C1.

Site 13 - Mount Hevey –19.4 ha of 30.1ha programme for commercial harvesting is completed. The remaining 11.3 ha will not be harvested commercially as the site became too wet, material was too poor to harvest. This area has been transferred to C1 - fell / windrow.

### **C3: Install Dams**

#### **Completed up to end of Year 3**

#### **Action C3 – Install dams**

<b>Site</b>	<b>Details of Action</b>	<b>Area to be treated (Ha)</b>	<b>Area complete to 30/09/07 (Ha)</b>	<b>Balance to complete (Ha)</b>	<b>Expected completion date</b>
1	Install dams, peat	7.3 ha	7.3	Nil	Complete
2	Install dams, peat	13.8 ha	Nil	13.8 ha	December 2007
3	Install dams, peat	40.6 ha	40.6	Nil	Complete
4	Install dams, peat	10.8 ha	Nil	10.8 ha	May 2008
5	Install dams plastic	29.1 ha	Nil	29.1 ha	January 2008
6	Install dams, peat	9.6 ha	7.2 ha	2.4 ha	February 2008
7	Install dams, peat	32.0 ha	27.1 ha	4.9ha	December 2007
8	Install dams peat	30.7 ha	15.0 ha	15.7 ha	December 2007
9	Install dams, peat	11.6 ha	11.6 ha	Nil	Complete
10	Install dams, peat	25.0 ha	25.0 ha	Nil	Complete
11	Install peat dams	91.4 ha	91.4 ha	Nil	Complete
12	Install dams peat/plastic	39.1 ha	20.0 ha	19.1 ha	December 2007
13	Install dams plastic/peat	56.7 ha	21.0 ha	35.7 ha	March 2008
14	Install plastic / peat	29.4 ha	29.4 ha	Nil	Complete
	<b>Totals</b>	<b>427.1 ha</b>	<b>295.6 ha</b>	<b>131.5ha</b>	

## Comments

The very wet summer in 2007, has delayed work under this action, drain blocking is 69% complete to the 30<sup>th</sup> September, 2007 and it is envisaged that all drain blocking will be complete by June 2008.

As previously explained, we have been unable to block perimeter drain on some project sites – No. 9, 10, 11, 12, 14 – as this could adversely affect turbary on adjoining areas outside of the project. We have recently asked NPWS for an update on the Cessation of Turbary Scheme in relation to our project sites.

Using experience gained in this project, Coillte has carried out restoration works (including drain blocking, and profiling of face banks) on the NPWS owned section of Killyconny Bog (Site No. 9). It will now be possible to block the perimeter drain between the project site and the NPWS section of the bog with plastic.

## C4: Fencing

### Completed up to end of Year 3

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 30/09/07 (Ha)	Metres of fence erected to 30/09/07	Balance metres of fence to erect	Expected completion date
7*	Erect fences	5.0	590	1.7	220	Nil	Complete
9	Erect fence Not on programme	11.6	0.0	11.6	600	Nil	Complete
10*	Erect fences	25.0	1400	25.0	1,355	Nil	Complete
11*	Erect fences	132.2	2800	44.0	845	1,000	November '07
12	Erect fences	42.7	1900	22.7	1,000	900	December '07
13	Erect fences	58.2	1210	58.2	1,700	Nil	Complete
14	Erect fences	56.5	1100	56.5	1,100	Nil	Complete
	<b>Original Target</b>	<b>319.6</b>	<b>9,000m</b>		<b>6,820 m</b>	<b>1,900 m</b>	<b>31/12/2007</b>
	<b>Revised Target</b>		<b>8,720 m</b>				

## Comments

The delay in completing this action arose from the fact that the tree felling needed to be complete before this action could take place.

Fencing was not programmed, but 600m were required to secure the site No. 9 – Killyconny Bog.

Extra fencing was required on Site No. 13 - Mount Heavey Bog to mark the boundaries of the LIFE site (490 m)

\*At site No's 7, 10 and 11 not all of the fencing programmed will be required. (Site No. 7 - 370 m less, Site No. 10 - 45m less, and Site No. 11 - 955m less – **Total of 1,370 m**)

## C5: Build roads onto sites for safe access

### Completed in Year 3

The following table outlines progress to date against programme for the two sites which required this action i.e. demonstration sites.

#### Action C5 – Build / Repair Road

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

## Comments

Road to boardwalk at Cloonshanville Bog will require some repairs in the final year – despite the best effort of the site manager a small section of the road has been sinking into the bog.

## C6: Install Dipwells

### Completed in Year 3

122 dipwells were installed on all 14 sites by the end of the 1<sup>st</sup> project year. Readings are taken monthly and being collated by John Derwin the project ecologist. The project ecologist prepares graphs of the reading from the dipwell for various project meetings. (See Appendix No. 19). The remaining dipwells are being used as required to replace damaged/broken dipwells.

## **“D” Actions – Recurring biotope management**

### **D1: Removal of Natural Regeneration from bog dome**

#### **Completed up to end of Year 3**

The following table outlines the progress under this action:

<b>Site No.</b>	<b>Site Name</b>	<b>Detail of action</b>	<b>Target for Action (Ha)</b>	<b>Complete to 30/09/07 (Ha)</b>
7	Drumalough Bog	Remove regen	As required	7.0
8	Cloonshanville Bog	Remove regen	As required	5.0
10	Ardgullion Bog	Remove regen	As required	5.0
11	Carn Park Bog	Remove regen	As required	7.0
13	Mount Hevey Bog	Remove regen	As required	0.5
14	Coolrain Bog	Remove regen	As required	56.0
	<b>Total</b>			<b>80.5 ha</b>

#### **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.

The Interim report reported 2.0 ha complete on site no 2 in error, this work should have been recorded against Op Code 926, Action D6.

We reported 19.1 ha of work against Site No. 5 in the Interim Report in error.

### **D2: Removal of trespassing livestock**

#### **Completed in Year 3**

Nil – not required during Year 3

### **D3: Drainage pattern survey and inventory**

#### **Completed to end of Year 3**

This work is ongoing on site No. 8 and will continue until the project ends in Sept 2008.

#### D4: Fire Prevention – Firebreaks

##### Completed to end of Year 3

Site	Details of Action	Number of metres of fireline	Complete to 30/09/07	Balance to complete	Expected completion date
1	Fireline	710m fireline-clear vegetation	Nil	710m	March 2008
2	Fireline	1230m fireline-clear vegetation	Nil	1230m	March 2008
3	Fireline	2030m fireline-clear vegetation	Nil	2030m	March 2008
4	Fireline	2320m fireline-clear vegetation	Nil	2320m	March 2008
5	Fireline	2000m fireline	Nil	2000m	March 2008
6	Fireline	1300m fireline-clear vegetation	Nil	1300m	March 2008
7	Fireline	720m	720m	Nil	Complete
8	Fireline	1000m	Nil	1000m	February 2008
9*	Fireline	Clear 650m@4m wide	1500m	Nil	Complete
10	Fire line	Clear vegetation 1200M	1200m	Nil	Complete
11	Fireline	4700m fireline	2460m	2240m	Spring 2008
12	Fireline	Remove vegetation on 1300m	400m	900m	Spring 2008
13	Fireline	1200m fireline-clear vegetation	820m	700m	31/12/2007
14*	Fireline	1000 m clear vegetation	1100m	Nil	Complete
		<b>21,360 metres of fireline programmed and approved Revised Target 22,630 m</b>	<b>8,200m</b>	<b>14,430m</b>	

#### Comments

Changes in local personnel in NPWS have hampered progress in agreeing the method of fireline construction, on sites No. 1 – 6. Agreement has been reached with NPWS managers on the PMG. Our site manager has arranged to meet with NPWS conservation ranger in the near future.

\*850m extra complete on site No. 9, and 100m extra complete on site No's 10 and 14 – site managers felt it was required to secure the site.

Site managers – site No. 13 feels it is necessary to cut more (320m) firelines that was originally planned to secure the site from fire.

100m more fireline 'cut' on site No. 14.

#### Action D5: Refuse removal

##### Completed to end of Year 3

See table for progress on this action.



### Action D5 – Refuse removal

Site	Details of Action	Number of Loads	Complete to 30/09/07	Balance to complete	Expected completion date
8	Refuse Removal	8 Loads	8 loads	Nil	Complete
11	Refuse Removal	10 Loads	4 loads	6 loads	Sept 2008
		<b>18 Loads</b>	<b>12 loads</b>	<b>6 loads</b>	

#### Comments:

The project has worked closely with members of Frenchpark Tidy Towns committee who have been vigilant in patrolling the site which is on the edge of the village, and this has meant that dumping is less of a problem than it might have been.

### **Action D6: Vegetation control – on cleared areas**

#### **Completed to end of Year 3**

Site No.	Details of Action	No of Ha	Completed to 30/9/2006
1	Vegetation Control	As required	3.0 ha
2	Vegetation Control	As required	2.0 ha
3	Vegetation Control	As required	8.0 ha
6	Vegetation Control	As required	12.0 ha
7	Vegetation Control	As required	6.0 ha
8	Vegetation Control	As required	5.0 ha
9	Vegetation Control	As required	7.0 ha
10	Vegetation Control	As required	14.0 ha
11	Vegetation Control	As required	6.0 ha
13	Vegetation Control	As required	3.0 ha
14	Vegetation Control	As required	35.0 ha
<b>Total</b>			<b>101 ha</b>

#### Comments

This action will be carried out as required on all sites, throughout the remaining year of the project.

**Action D7: Check/repair dams**

**Completed in Year 3**

Site No.	Details of Action	No. of Ha	Completed to 30.09.2007
9	Check / repair dams	As required	2 ha
14	Check / repair dams	As required	6 ha

**“E“ Actions – Public awareness and dissemination of results**

**E1: Land Manager Training Course**

**Completed to end of Year 3**

A Land Managers training course was held on 18<sup>th</sup> June, 2007, Coillte Managers, Forest workers, NPWS and Forest Service staff attended an indoor session – The project team gave a powerpoint presentation, and a hand-out was prepared and distributed to all who attended. The group visited site No. 8 Cloonshanville Bog – demonstration site in the afternoon.

**(Appendix No. 2) - Handout and List of attendees**

**E2: Project Website**

**Completed in Year 3**

The website has received a number of update since last year, in terms of links, news and events. (Some events were placed in the PR Section rather than the Events Section).

Emphasis was placed on producing the DVD this year, and the major update planned for the website did not take place. We have received prices for this work and plan to undertake it as a matter of some urgency.

**E3: Project Information Brochure**

**Completed to end of Year 3**

**(Appendix No. 3) - See attached updated distribution list :**

**Comments :**

Distribution will continue both nationally and internationally for the last year of the project. 17,000 copies of the 20,000 brochures have been distributed to the end of the 3<sup>rd</sup> year.

**E4: Project results booklet**

This action is not scheduled until the end of Year 4.

**E5: Annual Bog Walk**

**Completed in Year 3**

**A Bog Walk took place at both demonstration sites in 2007.**

Carn Park Bog Walk – site No. 11 took place on Sunday 29<sup>th</sup> July to coincide with International Bog Day. The walk was advertised in the local press, in local shops, even in the local Church. The weather was beautiful and the walk was well attended, mostly locals attended, but we did have some visitors from the UK, and Jamaica !!

Cloonshanville Bog Walk – site No. 8, took place on Monday 30<sup>th</sup> July. This walk was advertised extensively – local press, newsletters, etc. The walk was well attended, mostly locals attended, but we did have some visitors from Germany.

**(Appendix No. 4) - Handout, Attendance list, and Photograph**

**E6: Media Publicity Campaign**

**Completed in Year 3**

Communication of the objectives, actions and expected results of the project through the use of the media has taken place throughout Year 3 of the project. The main tasks completed were as follows:

- **Internal Publicity Campaign**

**Coillte Magazine – Coillte Contact – Volume 19 / 2006**

Updating staff on the progress to date on the raised bog LIFE project sites. This article also advises staff on the progress at the demonstration sites

**(See Appendix No. 5)**

**Raising Awareness of Project Among Coillte Staff working close to and on project sites**

Coillte managers and workers in Districts W2 and N3 were invited to the Land Managers Training / Information day held in Boyle, Co. Roscommon on the 18<sup>th</sup> June, 2007. **(See Action E1)**

## **Coillte Annual Report and Accounts 2006**

Printed mid 2007, informing staff, and others of Coillte's 3 LIFE projects

**(Appendix No.6)**

## **Coillte's e-Newsletter – Issue 14 March 2007**

This newsletter updates staff and stakeholders of the progress to date on the 14 project sites, and in particular on the 2 demonstration sites for the project at Cloonshanville and Carn Park Bogs

**(Appendix No. 7)**

- **External Publicity Campaign**

**Media Publicity :**

### **National Press**

**Irish Examiner dated** – turbary issues raised in this article, and restoration efforts made by Irish and Dutch organisations this article also contains information about the Coillte LIFE Raised bog restoration project, demonstration sites, etc.

**Irish Examiner dated** – this article informs readers of the rare goat moth find on Coolrain Bog, and of the LIFE funded raised bog restoration project  
**(Appendix No. 8)**

### **Regional and Local Newspapers**

**Roscommon Herald dated 24.07.2007** – advertising a bog walk at Cloonshanville Bog on July 30<sup>th</sup>

**Leinster Express dated 15.08.2007** – giving information about the LIFE project and advertising a bog walk at Coolrain Bog in conjunction with Heritage Week

**Leinster Express dated 22.08.2007** – Advertising events in Co. Laois – including bog walk at Coolrain Bog, site No. 14.

**Laois Nationalist dated 24.08.2007** – Giving information about the project website, and advertising the bog walk to take place at Coolrain Bog

**Laois Voice dated 07.09.2007** – giving information about the LIFE project, and informing readers about the rare goat moth which was found by 2 participants on the walk

**Laois Nationalist dated 19.09.2007** – informing readers about the rare goat moth which was found at Coolrain Bog, also gives information about the LIFE Raised Bog Restoration Project - (**Appendix No. 9**)

**Irish Peat Society AGM - The Irish Peat Society brings together organisations (inc Government bodies, academic institutions, NGO's and forest, peat and energy companies) and individuals with an interest in peatlands and peat.**

The PR Manager attended the 1<sup>st</sup> Annual General Meeting of the Irish Peat Society on the 10<sup>th</sup> October, 2006, she circulated copies of the Raised Bog Restoration Project to all 60 delegated who attended the meeting.

### **Direct Contact with Stakeholders**

The PR Manager met on 1<sup>st</sup> November, 2006 at Cloonshanville Bog with members of Frenchpark Tidy Towns Association to inform them of the project objectives, actions and expected results. They were very excited to hear that 'their' bog was to be one of the demonstration sites for the project. Members of the Tidy Town Committee have taken a keen interest in this site, and patrol the area regularly to prevent dumping at the site. An informal meeting was held at Frenchpark School to inform the children and their teachers who live in the locality about the project.

**(Appendix No. 10(i)) Photograph**

The PR Manager contacted the principal at Baylin National school, the school closest to Carn Park Bog, the 2<sup>nd</sup> demonstration site – Site No 11, and informed them of the project. She offered to take the children on a bog walk and invited them to write a poem about the bog, advising the children that the winning entry would be displayed at the end of the boardwalk at Carn Park Bog.

**(Appendix No. 10(ii)) Photographs and Poem**

### **Agricultural Exhibition**

The project was represented at this National event - Ploughing Championships, held at Tullamore, County Offaly on 28<sup>th</sup> and 29<sup>th</sup> September. Coillte's Manager, EU Affairs, was pleased to participate in workshops in the European Commission's tent at the National Ploughing Championships where he made a presentation on Coillte's three LIFE-nature projects. The PR Manager was given a pitch at the ENFO stand. (Environmental Information section of the Dept. of the Environment). Project brochures and information were distributed at the event. Backdrop panels used to display information to members of the public. In excess of 100,000 attended the event.

### **Project DVD**

The core project team together with our colleagues working on the Blanket Bog Project (LIFE02 NAT/IRL/8490) spent some time throughout the summer

months working on a DVD to promote both bog restoration projects. We have recently received 400 copies of the DVD which we have begun to distribute. We consider the DVD to be a fantastic way of 'telling' people about our restoration project. We hope to distribute the DVD both nationally and internationally, and we will distribute it at our end of project conference, next May.

**(Appendix No. 11) Photograph of DVD being shot at Cloonshanville (Copies of DVD enclosed) DVD Distribution list to date**

**International Association of Landscape Ecology, held in Wageningen, Holland 8<sup>th</sup> – 12<sup>th</sup> July, 2007**

The Raised Bog Restoration Project was represented and a poster displayed at this World Congress which was attend by 750 delegates worldwide.

**(Appendix No. 12) Photograph of Project Poster, and List of posters displayed at the Congress**

**Local Radio Interview with Midlands 103**

**Bernie Guest - The Heritage Officer working with Westmeath County Council and Midlands 103 were recording a 50 minute programme on Peatlands invited the PR Manager onto the programme to inform their listeners about the LIFE funded Raised Bog Restoration Project. This 15 minute interview was recorded on 29th November, 2006 and broadcast on 5<sup>th</sup> December, 2006.**

**Visits from other LIFE Projects**

On the 17<sup>th</sup> of September, 2007 our project had a visit from 60 personnel from the Danish Forest and Nature Agency who themselves are involved in restoring Raised Bog (LIFE05 NAT/DK/000150). We visited Carn Park Bog – demonstration site. This visit proved very advantageous for both projects – with a very useful exchange of ideas.

**(Appendix No. 13) - Handout and Photographs**

**Visit by International Steering of Bogland Project - University College Dublin, to Cloonshanville Bog**

This project is funded by the Environmental Protection Agency, which aims to provide a protocol for the sustainable management of peatlands in Ireland. This site visit took place on 5<sup>th</sup> September, 2007

**(Appendix No. 14) - Photographs**

### **Other Bog Walks**

A Bog Walk was held at Coolrain Bog site No. 14 in conjunction with the Heritage Officer in Co. Laois for Heritage Week – on the 27<sup>th</sup> August, 2007. The walk was well attended by local people. During the course of the walk, two young participants found the very rare - Goat Moth (Advertised on the Heritage Outlook website)

**(Appendix No. 15) - Picture of goat moth, and list of attendees**

### **The Heritage Council Newsletter / website**

An article appeared in Sept about the discovery of the rare Goat Moth discovered on a heritage Week Walk at Coolrain Bog, project site  
**(Appendix No. 16)**

### **Flyers / Posters**

Information notices posted locally providing information on public bog walks on LIFE sites.

**(Appendix No. 17)**

### **Liaising with other Groups – Lawrencetown Community Group**

Ecologist (Nick Marchant) working with Lawrencetown Community Enterprise Group, Co Galway who have purchased a section of Raised Bog from Bord na Mona, and are preparing a management plan for the restoration of this area, have liaised with us on various aspects of the work proposed for their site, and plan to visit Carn Park Bog, demo site in the near future.

## **E7: Interpretative Displays and boardwalks**

### **Completed in Year 3**

Boardwalks and Interpretative signage is now complete on the 2 demonstration sites at Cloonshanville and Carn Park Bogs.

Members of our PMG and PAP Groups, along with visitors from other LIFE Projects, Universities, our External Monitoring Team, and local stakeholders were some of the visitors to the demonstration sites during Year 3

**(Appendix No. 18) Photographs of Interpretative signage and boardwalks**

## **“F” Actions – Overall project operation and monitoring**

### **F1: Project Management**

#### **Completed in Year 3**

Four successful Project Management Group (PMG) meetings were held in Year 3.

### **F2: Project Advisory Panel**

#### **Completed in Year 3**

Meeting of Project Advisory Panel was held on the 20<sup>th</sup> September, 2007 with powerpoint presentation and discussion in the morning and a site visit to Site No 8 (Cloonshanville Bog) in the afternoon.

### **F3: Project Reporting**

#### **Completed in Year 3**

Progress Report for Year 3 to be submitted by 30<sup>th</sup> November, 2007. Issues raised in response to the Interim Financial Report, or arising from Monitoring Missions will be dealt with in the Final Report if not already addressed.

### **F4: Procurement of Expert Advice**

This Action was complete in Year 1.

### **F5: Hydrology monitoring**

#### **Completed in Year 3**

The Walrag measurements are recorded monthly by field staff on all project sites, which enables the investigation of water-level fluctuations in the upper levels of the peat throughout the year. It has been noted that the intact areas of high bog have higher water-levels and less fluctuation throughout the year. However due to the very wet summer of 2007, water-levels on all 14 sites remained high throughout the summer months. Drain-blocking will re-wet the damaged areas and over time water-levels will rise to similar levels as the intact bog. This rise in water-levels can be quite dramatic as can be seen in the Hydrological Monitoring Graphs for Carn Park (See Table 4 - Appendix No. 19).



## **F6: Vegetation monitoring**

### **Completed in Year 3**

During the summer of 2007, the 70 permanent quadrats were re-surveyed and the species and vegetation cover present in each quadrat was recorded. This vegetation monitoring allows a comparison of the vegetation communities present on each site and an assessment of the change in these communities over the timescale of the project.

There is a marked difference in vegetation cover between the intact high bog and the conifer plantations. The main species to re-colonise following conifer clearance are Ling Heather, Willow-herb and Bramble (**See Table 2 – Appendix No. 19**). Over time it is hoped that more bog species will colonise the clearfell areas and that bog vegetation can be encouraged, by re-wetting the bog through drain blocking. As the peat gets progressively more waterlogged, it is anticipated that plant species indicative of wetter bog conditions such as *Sphagnum* spp., White-beaked Sedge (*Rhynchospora alba*) and Sundews (*Drosera* spp.) will gradually re-colonise. At a number of the sites regeneration of deciduous scrub is occurring and in addition to the natural regeneration of pine this could be a significant problem. (**Table 3 – Appendix No. 19**) outlines the restoration progress to date on all 14 sites.

Overall the restoration work is progressing satisfactorily on all sites. All of the conifers have been removed and drain-blocking has been completed on some sites resulting in a significant increase in water-levels. The remaining drain-blocking is scheduled to be completed in spring/early summer 2008.

With the removal of the conifers and blocking of drains, water-levels have risen significantly on all project sites and the restoration of raised bog habitat should improve over time.

## **F7: Mid-point and end of project Mapping**

Mid-point mapping was completed in Year 2 and reported in the Interim Report. End of project mapping is not scheduled until the end of Year 4.

## **5. PROBLEMS ENCOUNTERED**

Detailed accounts of the following issues are given in Chapter 4 under each relevant action.

### **A-Actions**

The only significant problems encountered relate to action A5 where the original schedule was over ambitious as this operation can only take place on sites after Actions C1 and C2 have been completed.

### **C-Actions**

The only significant problems encountered relate to Action C3 – drain blocking – due to the extremely wet summer - (**Appendix No. 20**), and Action C4 – Fencing which could not be completed until all tree removal was completed.

### **(Appendix No. 20) Photographs showing ‘bogged machine**

### **D-Actions**

The only significant problems encountered relate to Action D4 - installation of Firelines, and Action D6 - the re-invasion of lagg area by predominantly birch and other herbaceous woodland growth may persist and may have to be accepted as constituting an appropriate buffer zone to the raised bog. There are currently indications of this threat at several sites, and this issue is being closely monitored. Work will continue against this threat under Action D6 until the end of the project. Natural regeneration of conifers may also be of concern on some sites.

### **E-Actions**

No significant problems encountered.

### **F-Actions**

No significant problems encountered. Issues raised in response to the Interim Financial Report, or arising from Monitoring Missions will be dealt with in the Final Report if not already addressed in this report.

## 6. FINANCIAL ISSUES

Project costs incurred to the end of Year 3 (30<sup>th</sup> September, 2007) :

Cost category	Total cost according to Commission's decision	Total costs incurred from the start date to 30.09.2007	%
Personnel	891,494	848,007	95.1%
Expenses	135,461	94,385	69.7%
External assistance	767,417	509,838	66.4%
Durables: total cost	508,426	168,653	33.2%
Land purchase	Nil	Nil	N/A
Consumables	41,650	29,666	71.2%
Other costs	19,830	668	3.4%
Overheads	135,722	17,957	13.2%
<b>SUM TOTAL</b>	<b>€2,500,000</b>	<b>€1,669,174</b>	<b>66.8%</b>

- Personnel and expenses: Planned expenditure on personnel to the end of the project in September 2008 will be around €80,000 or 109.9%. Planned expenditure on expenses will be €126,000 (93%).
- External assistance: The losses expected on harvesting (Action C2) did not materialise, on most sites. Where losses occurred, financial analysis will be included in the final report.  
However, there will be additional expenditure than originally programmed under external assistance to cover remaining actions on project sites.
- Durables: Planned expenditure to end of project on durable goods (infrastructure and equipment) will be around €225,000 or 44% of budget (€508,426). There was a considerable reduction in the purchase of plastic for damming drains as there was more use of peat dams than programmed.
- Other costs: The remainder of this budget has been allocated to cover end of year external audit costs.
- Overheads: The current figure for overheads for office accommodation and utilities (phone, mobile phone, electricity) only relates to the Project Administrator/Public Relations manager, Angela Wallace who is fully costed to the project. The expenditure on offices and utilities for other managers who have recorded time against the project will be included in the final financial report.

## 7. PLANNED PROJECT PROGRESS

Planned activities until the next reporting date (30<sup>th</sup> September, 2008) are summarised as follows:

- Preparatory A-Actions will continue as necessary.
- C-Actions - C1 and C2, are now complete, targets originally set for Year 1 and Year 2.
- Actions C3 – behind, hope to finish May 2008
- C4 will continue.
- Action C5 and Action C6 – complete, road into Cloonshanville demonstration site will require some repairs – sinking into the bog.
- Action D6 will continue as necessary.
- D2 – no trespass experienced to date, will remove same if necessary
- D3 – water quality monitoring will continue at site No. 8 until the end of the project on 30<sup>th</sup> September, 2008
- Actions D4 – some firelines yet to be done, planned for March 2008
- D5 – refuse removal from the 2 demonstration sites will be carried out if required
- All E-Actions, except E7, will continue as scheduled.
- Actions F1, F2, F3, F5, F6 and F7 will continue as appropriate.

## 8. ANNEXES

Annex 1:	Action A2 – Site Action Plans
Annex 2:	Action E1 – Land Managers Training Course – Handout and List of Attendees
Annex 3:	Action E3 – Project Brochure distribution list
Annex 4:	Action E5 – Bog Walk at Carn Park Bog – Handout, Photographs and attendee list
Annex 5:	Action E6 – Internal – Coillte Contact In-house magazine
Annex 6:	Action E6 – Internal – Coillte Annual Report 2006
Annex 7:	Action E6 – Internal – Coillte e-Newsletter
Annex 8:	Action E6 – Media and Publicity – National Press coverage
Annex 9:	Action E6 – Media and Publicity – Regional and Local Newspapers
Annex 10:	Action E6 – Direct Contact with stakeholders – demo sites
Annex 11:	Action E6 – Making the DVD, and Distribution List
Annex 12:	Action E6 – Attendance at the International Association of Landscape Ecology, Wageningen, Holland / Copy of Poster, list of other posters displayed at the Conference
Annex 13:	Action E6 - Visit by Danish LIFE Project to Carn Park Bog, Handout and Photographs
Annex 14:	Action E6 – Visit by UCD (University College Dublin) International Steering Group of its Bogland Project to Cloonshanville Bog
Annex 15	Action E6 – Bog Walk at Coolrain during Heritage Week. Rare Goat Moth found, Photographs and attendee list
Annex 16	Action E6 – The Heritage Council Newsletter / website Re. Rare Goat Moth find
Annex 17	Action E6 – Flyers advertising various bog walks during Year 3
Annex 18	Action E7 – Photographs of Interpretative signage at the demonstration sites (2), and photograph of boardwalk at Cloonshanville Bog
Annex 19	Action F5 & F6 – Project ecologist water and vegetation monitoring report for Year 3
Annex 20	Photograph showing 'bogged' machine – hence the delay in completing Action C3 – Drain Blocking