

RESTORING ACTIVE BLANKET BOG IN IRELAND

Project reference: LIFE02NAT/IRL/8490

A REPORT ON THE RESTORATION OF PROJECT SITE No. 4.
POLLAGOONA, CO. CLARE



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Project Sites No. 4 and 4a – Pollagoona, Co. Clare

1. Introduction

Grid reference R 643 961	Elevation (m) 50	Bedrock geology Old red sandstone
SAC Name and number Pollagoona Bog (2126)	Original site area (ha) 25.7 Extension site area (ha) 34.9	Main restoration methods Fell to waste of conifer crop and drain-blocking
Original area of conifer cover felled (ha) = 11.6 Extension area of conifer cover felled (ha) = 28.7	Original area of open bog/heath (ha) = 14.1 Extension area of open bog/heath (ha) = 6.2	
Noteworthy plant/animal species occurring <i>Rhynchospora fusca</i> , <i>Vaccinium oxycoccus</i> , <i>Andromeda polifolia</i> .		

Pollagoona bog is a small area of high quality blanket bog located in the Slieve Aughty uplands of County Clare, some 20km southeast of the town of Gort. A large oligotrophic lake, Lough Atorick, lies just to the northwest of the site. The bog is completely surrounded by coniferous plantation, dominated by Sitka spruce, most of which is more than 15 years old. The bog is of particular interest as it displays vegetation and morphological features transitional between blanket and raised bog systems.

In general, the bog is of high ecological value, being soft, wet and quaking over most of its surface. *Sphagnum* cover is high, with some well developed hummock areas, while wet lawn areas, dominated by white-beaked sedge (*Rhynchospora alba*), are also frequent. In the more central parts of the bog, plant species such as bog asphodel (*Narthecium ossifragum*) and cross-leaved heath (*Erica tetralix*) dominate, along with *Cladonia portentosa* and *Sphagnum capillifolium*. A feature of the bog vegetation is the presence of bog rosemary (*Andromeda polifolia*) and cranberry (*Vaccinium oxycoccus*), species that are more typical of raised bog habitats. Pool complexes occur in the eastern half of the site which are colonised by bog-bean (*Menyanthes trifoliata*), mud sedge (*Carex limosa*), brown-beaked sedge (*Rhynchospora fusca*) and the aquatic mosses *Sphagnum cuspidatum* and *S. auriculatum*. The conifer crop which has been planted along the margins of this bog has grown poorly in places with a modified blanket bog flora, dominated by *Molinia caerulea*, locally dominant.

At this site the main restoration measures undertaken were the manual felling of the young/low-yielding conifer crop and the blocking of any significant artificial drains. The first phase of the restoration at this site involved the felling of 11.6 hectares of poorly productive conifers adjoining the intact bog core. In the extension phase of the project a further 34.9 hectares of ground were subsumed into the restoration area, 28.7 hectares of which were afforested with a further 6.2 of

largely intact blanket bog also included. The extension areas were felled in order to re-connect the core bog area with the extensive area of open blanket bog to the west.

2. Methods

Prior to the start of restoration activities at the site the habitats and vegetation occurring were surveyed and described. Habitats occurring were mapped with the aid of a vertical aerial photograph of the site taken in the year 2000 by the Ordnance Survey of Ireland. At the end of the project the habitats present were mapped with the aid of a vertical aerial photograph of the site taken in 2006. The vegetation occurring at the site was described using the Zurich-Montpellier approach (Mueller-Dombois and Ellenberg, 1979), where the percentage cover of the various vegetation layers and plant species in a defined area is estimated visually. The cover of plant species in relevés was estimated in accordance with the Domin scale which is outlined in the table below.

Table 1. The Domin scale of cover/abundance.

1 = <4% cover with few individuals
2 = <4% cover with several individuals
3 = <4% cover with many individuals
4 = Cover between 4 and 10%
5 = Cover between 11 and 25%
6 = Cover between 26 and 33%
7 = Cover between 34 and 50%
8 = Cover between 51 and 75%
9 = Cover between 76 and 90%
10 = Cover between 91 and 100%

In addition to plant species presence and cover, the following parameters were noted for each relevé:

- (1) Size
- (2) Percentage cover of vegetation, bare soil, water and rock.
- (3) Percentage cover and height of the different vegetation layers, e.g. shrub, dwarf shrub, herb and bryophyte.
- (4) Soil type and depth.
- (5) Slope and aspect.
- (6) Additional details, such as the composition of the surrounding vegetation, degree of grazing and disturbance.

During the initial fieldwork a number of colour photographs of the site and vegetation encountered were taken with a digital camera and a selection of these are presented in this report in order to illustrate the vegetation descriptions and changes in the habitats/vegetation present over time. Mosses, liverworts and higher plants not readily identified in the field were collected and keyed out at a later date using keys in the appropriate publications (see below). During the field survey, particular attention was paid to the possible occurrence of plant and animal species which are considered to be

rare in both a national and local context with particular emphasis on animal species listed in Annex II of the E.U. Habitats Directive and plant species listed in the Irish Red Data Book for vascular plants (Curtis and McGough, 1988), the 1999 Flora Protection Order and Annex II of the E.U. Habitats Directive.

Plant species nomenclature in this report follows Stace (1997) for vascular plant, Smith (2004) for mosses, Smith (1991) for liverworts and Dahl (1968) for lichens.

3. Site Photographs

In order to illustrate the restoration activities which have taken place at this site a number of photographs are presented in the following pages. These include both aerial photographs, supplied by the Ordnance Survey of Ireland, and a selection of ground photographs taken by the author.



The unplanted bog at Pollagoona supports good examples of blanket bog pool habitat and wet bog with a high Sphagnum cover.



A view of poor conifers along the margins of the intact bog at the site. The ground flora is dominated by *Molinia caerulea*. Photograph taken in August 2002.



A long-distance view of the same area in June 2006, approximately 3 years after tree felling.



A view of conifers felled to waste in the west of the site as part of the project extension. Photograph taken in November 2006.



The project extension area also contains areas where a substantial conifer crop was removed for sale. Photograph taken in September 2007.



An aerial photograph of the Pollagoona site prior to restoration work taking place. Aerial photograph taken in the year 2000.



An aerial photograph of the Pollagoona site during restoration work. Aerial photograph taken in the year 2006. The outline of the entire site, including the extension area is outlined in red. Not all of the conifer-dominated areas included in the extension phase of the project were felled at the time the photograph was taken.

4. Vegetation of the site

The areas of intact bog at the core of the site tend to be dominated by *Erica tetralix* and *Narthecium ossifragum* with *Trichophorum cespitosum* and *Rhynchospora alba* locally frequent (Table 2). Other common species of the open bog include *Andromeda polifolia*, *Eriophorum angustifolium*, *Sphagnum capillifolium* and *Hypnum cupressiforme*. The pool areas contain a typical bog flora dominated by *Sphagnum cuspidatum*, *Eriophorum angustifolium*, *Menyanthes trifoliata* and *Carex limosa* with the locally rare *Vaccinium oxycoccus* occasional. An important component of the bog pool flora at this site is *Rhynchospora fusca* which is relatively rare in Ireland. Along the margins of the deep bog areas the vegetation grades into wet heath on relatively shallow peat (<1.5 metres) where *Molinia caerulea* is the dominant plant species.

The open bog core of this site is surrounded by conifers of varying productivity. In the first phase of this project 11.6 hectares of poorly productive conifers (mainly Sitka spruce) were felled to waste. In these areas there was a high cover of *Molinia caerulea* which was accompanied by a species-poor flora including *Sphagnum palustre*, *Hypnum cupressiforme* and *Sphagnum capillifolium* (Table 3). Under a developed conifer canopy mosses such as *Sphagnum capillifolium*, *Hypnum cupressiforme*, *Dicranum scoparium* and *Rhytidiadelphus loreus* tended to dominate.

Table 2. Vegetation table for unplanted bog at Pollagoona.

Vegetation type	A	A	B	B	B	B	B	C	C	C	C	C	C	C
Quadrat code	P15	P13	P7	P6	P10	P14	P1	P4	P12	P16	P5	P9	P11	P2
GPS Grid letter	R	R	R	R	R	R	R	R	R	R	R	R	R	R
GPS easting co-ordinate	6444	6432	6405	6404	6424	6439	6418	6412	6425	6446	6410	6397	6424	6416
GPS northing co-ordinate	9618	9602	9605	9606	9605	9605	9667	9619	9593	9626	9621	9669	9596	9628
Quadrat size (m ²)	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Slope (degrees)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vegetation cover (%)	50	98	70	85	98	98	100	100	100	100	100	100	100	100
Bare soil (%)	0	0	5	15	2	2	0	0	0	0	0	0	0	0
Open water (%)	70	5	25	0	0	0	0	0	0	0	0	0	0	0
Dwarf shrub cover (%)	0	0	10	60	40	20	20	15	10	25	1	3	30	5
Herb cover (%)	50	30	60	50	70	80	70	80	70	80	95	95	50	90
Bryophyte cover (%)	20	90	50	30	50	35	85	75	80	85	70	50	90	80
Ht. of vegetation (cm)	10	10	15	25	15	15	15	30	30	40	50	50	30	50
No. of species	5	5	14	20	13	13	19	13	15	11	11	7	11	11
<i>Menyanthes trifoliata</i>	5	5	3	1										
<i>Sphagnum cuspidatum</i>	5	6		3				3	3					
<i>Carex limosa</i>	5		1						3					
<i>Sphagnum auriculatum</i>		8	5	4										
<i>Rhynchospora fusca</i>	6													
<i>Narthecium ossifragum</i>		3	5	5	7	8	3	3					6	
<i>Calluna vulgaris</i>			1	1	2		4		4			1		
<i>Drosera rotundifolia</i>			3	1	1		1		1					
<i>Odontoschisma sphagni</i>			4	3		3	4	4						3
<i>Sphagnum magellanicum</i>			6	5					4					
<i>Rhynchospora alba</i>	3		6	4	4									
<i>Trichophorum cespitosum</i>			3		4	5	4							
<i>Cladonia portentosa</i>					5	5	4	5						
<i>Polygala serpyllifolia</i>				3			1							
<i>Cladonia uncialis</i>							3	3						
<i>Molinia caerulea</i>				5			7	9	8	9	10	10	7	9
<i>Potentilla erecta</i>							3	1		3	3	2		3
<i>Sphagnum palustre</i>										3	5		8	
<i>Polytrichum commune</i>										5			5	1
<i>Erica tetralix</i>			5	5	7	5	5	5	4	4	1	2	1	4
<i>Sphagnum capillifolium</i>				3	5	5	8	8	5	7	7	8	6	8
<i>Sphagnum papillosum</i>			6	4	4	4	4	4	8	6	5			4
<i>Andromeda polifolia</i>			1	3	3	4	1	3	3	3		1	3	2
<i>Hypnum cupressiforme</i>				3	4	4	5	4	4			3	4	
<i>Eriophorum angustifolium</i>		5		4	5	3	1	3	1					
<i>Sphagnum tenellum</i>				4	6	4	5	5		1				
<i>Eriophorum vaginatum</i>							3		4	4			3	3
<i>Vaccinium oxycoccus</i>				1						5				
<i>Rhytidadelphus loreus</i>											5		3	
<i>Liverwort species</i>									4		1			
<i>Pseudoscleropodium purum</i>											4			
<i>Drosera anglica</i>			1											
<i>Campylopus atrovirens</i>							3							
<i>Myrica gale</i>				7										
<i>Racomitrium lanuginosum</i>							4							
<i>Picea sitchensis</i>										3				

<i>Hylocomium splendens</i>	5		
<i>Carex nigra</i>	1		
<i>Dicranum scoparium</i>		3	
<i>Sphagnum recurvum</i>			4
<i>Pinus contorta</i>			3

A = *Sphagnum cuspidatum*-*Menyanthes trifoliata* bog pools

B = Raised bog dominated by *Narthecium ossifragum* and *Erica tetralix*.

C = *Molinia caerulea* wet heath.

Table 3. Vegetation table for planted bog at Pollagoona

Vegetation type	A	A	A	B	C	C	C
Quadrat code	PW4	PW10	PW5	P8	PW3	P3	PW11
GPS Grid letter	R	R	R	R	R	R	R
GPS easting co-ordinate	6409	6423	6410	6396	6407	6414	6413
GPS northing co-ordinate	9620	9592	9622	9596	9617	9627	9625
Quadrat size (m ²)	4	4	4	4	4	4	4
Slope (degrees)	0	0	0	<3	0	0	0
Vegetation cover (%)	100	100	98	75	90	95	100
Conifer needle litter	0	0	0	60	0	0	40
Bare soil (%)	0	0	2	0	10	5	5
Open water (%)	0	0	0	0	0	0	0
Tree cover (%)	0	0	0	0	0	0	80
Dwarf shrub cover (%)	5	20	0	2	0	0	1
Herb cover (%)	90	70	90	5	2	15	10
Bryophyte cover (%)	15	70	50	75	90	95	50
Ht. of vegetation (cm)	35	40	40	<5	5	10	<5
No. of species	6	8	8	10	8	12	9
<i>Molinia caerulea</i>	9	8	8	4	2	5	4
<i>Dicranum scoparium</i>				3	4	3	4
<i>Plagiothecium undulatum</i>					6	1	4
<i>Rhytidiadelphus loreus</i>					5	1	3
Liverwort species			3			4	4
<i>Thuidium tamariscinum</i>					1	4	
<i>Sphagnum capillifolium</i>	5	7	6	5	5	6	4
<i>Hypnum cupressiforme</i>		4	5	6		7	7
<i>Sphagnum palustre</i>	2	5	1			5	
<i>Erica tetralix</i>	4			1			
<i>Potentilla erecta</i>	3		1				
<i>Eurhynchium praelongum</i>				5	2		
<i>Calluna vulgaris</i>				1			1
<i>Polytrichum commune</i>		4				3	
<i>Aulacomium palustris</i>		2				3	
<i>Vaccinium oxycoccus</i>	1						
<i>Lophocolea cuspidata</i>				5			
<i>Polygala serpyllifolia</i>				1			
<i>Dryopteris dilatata</i>				1			
<i>Myrica gale</i>		5					
<i>Andromeda polifolia</i>		2					
<i>Pleurozium schreberi</i>			5				
<i>Eriophorum vaginatum</i>			5				
<i>Campylopus atrovirens</i>						3	
<i>Picea sitchensis</i> Trees							9
<i>Hylocomium splendens</i>							3

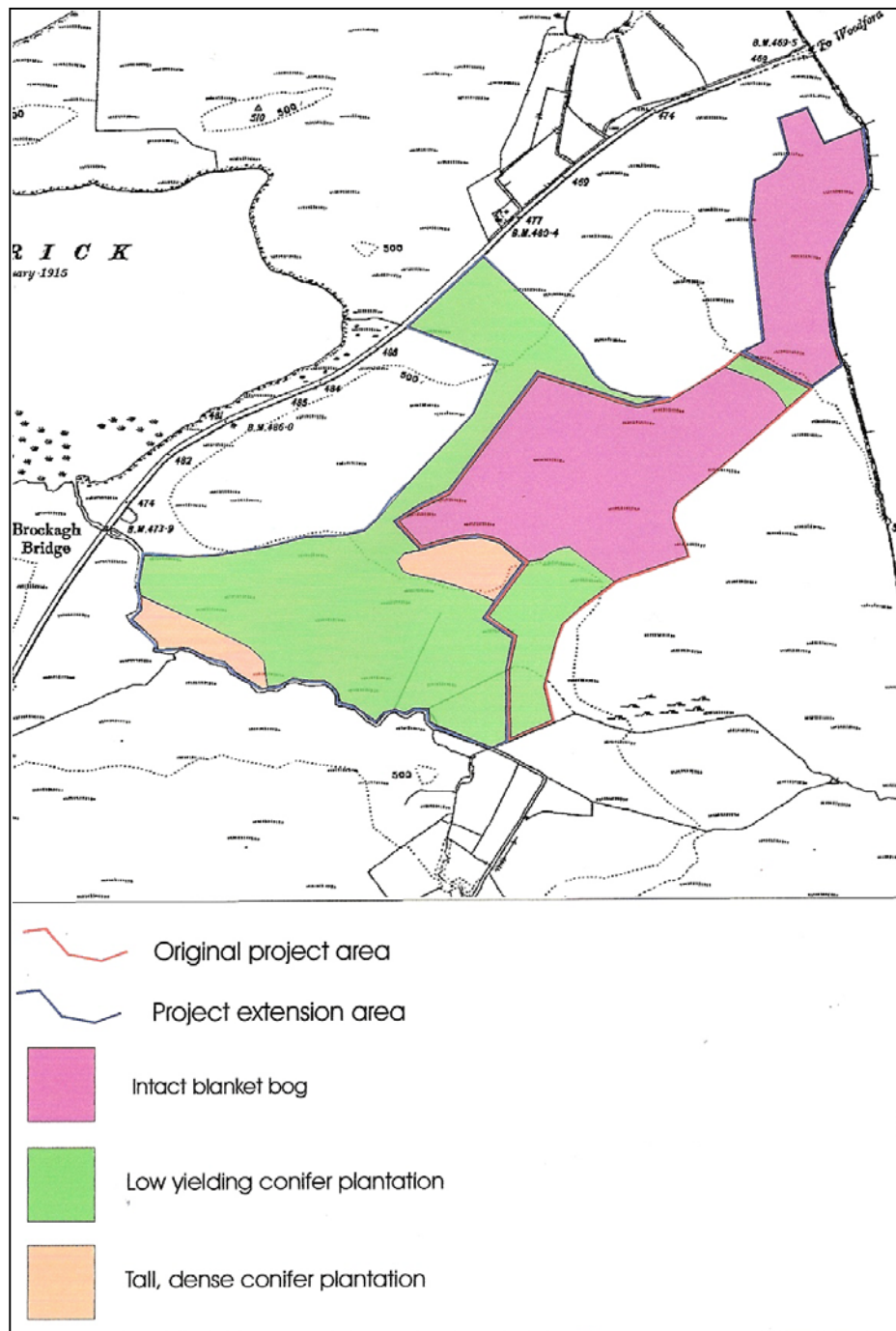
A = Drained bog dominated by *Molinia caerulea*

B = Transition between A and B

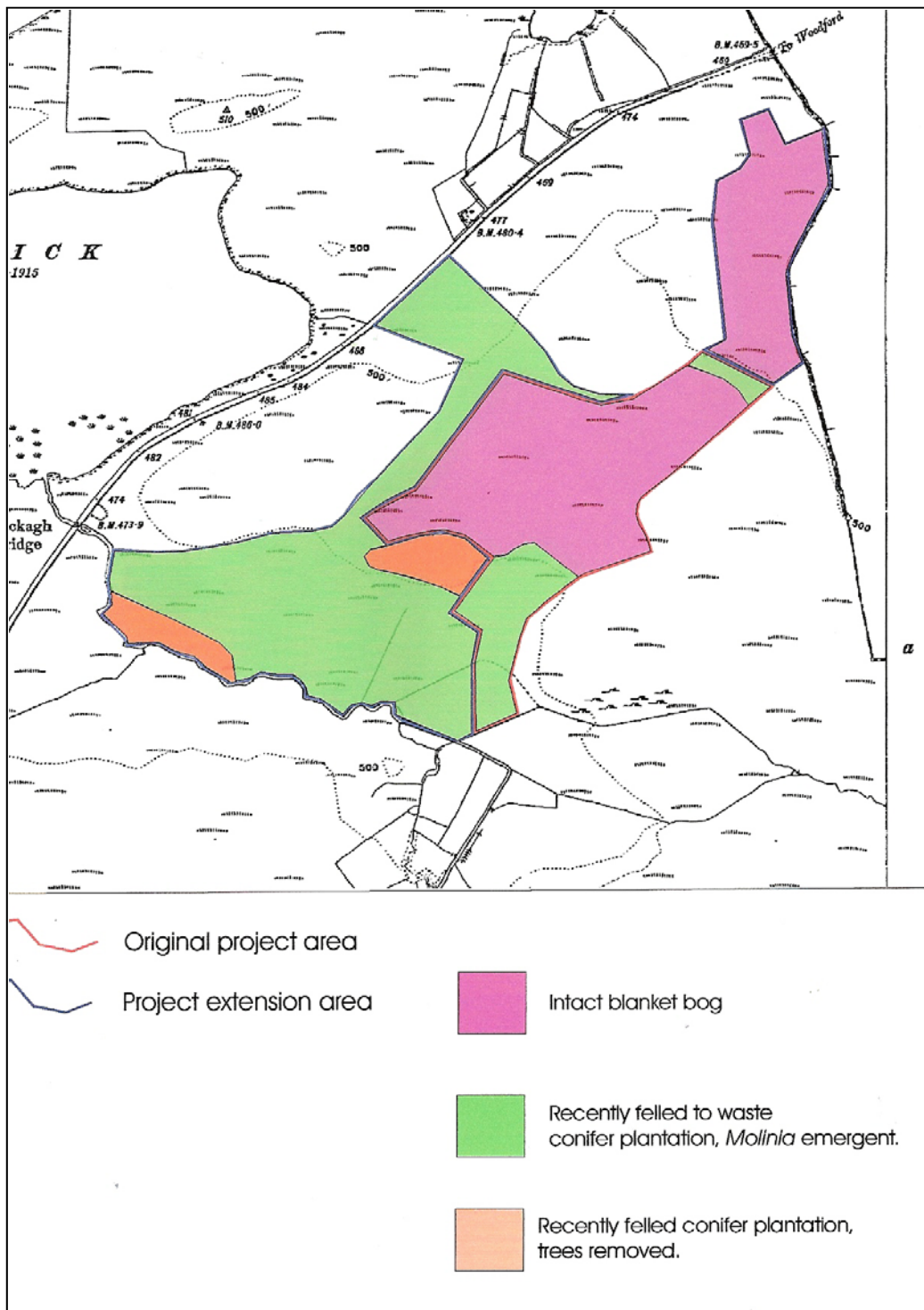
C = Drained bog vegetation rich in mosses

5. Changes in overall vegetation/habitat cover

The main vegetation change in areas where poorly grown Sitka spruce trees have been felled is the rapid increase in the cover of *Molinia caerulea*. In the areas where a crop of taller trees were removed for sale the recovery of vegetation has been much slower due to the lack of vegetation cover generally under tall conifer canopies.



A map of habitat/vegetation cover at Pollagoona prior to the start of restoration.



A map of habitat/vegetation cover at Pollagoona following restoration.

6. Monitoring quadrats

In the following pages the vegetation changes which have taken place within the site over the period of the restoration project are shown by means of observed changes in permanent quadrats. A total of 8 permanent quadrats were described and photographed. In order to ensure the future relocation of quadrats the corners have been marked with short sticks and a 10-figure GPS reading was also recorded. In the case of each quadrat photographs and vegetation tables are presented. The cover of plant species within the quadrats is presented in accordance with the scale outlined in the following table.

Cover of species in quadrat	Cover in presented quadrat tables
<1%	1
1 to 5%	2
5 to 10%	3
10 to 25%	4
25% to 50%	5
50 to 75%	6
75% to 100%	7

The vegetation of areas where low-yielding spruce trees have been felled have a high cover of the grass *Molinia caerulea*. Other frequent species include *Hypnum cupressiforme*, *Sphagnum palustre*, *Erica tetralix* and *Myrica gale*. In areas where a commercial-sized crop was removed the vegetation recovery appears to be recovering much more slowly and moss species such as *Hypnum cupressiforme* and *Sphagnum capillifolium* are the main initial recolonizing species.



Quadrat 1 – July 2006

Site - Pollagoona	
Code - PQ1	
GPS – R 64181 95949	
Size (m) – 6x6	
Slope (Degrees) – 3-5	
Vegetation cover (%)	90
Spruce brash cover (%)	25
Bare ground (%)	0
Vegetation height (cm)	30 to 50
Dwarf shrub cover (%)	10
Herb cover (%)	80
Bryophyte cover (%)	80
No of species present	10
Date of survey	19/7/2006
<i>Molinia caerulea</i>	7
<i>Hypnum cupressiforme</i>	6
<i>Sphagnum palustre</i>	4
<i>Erica tetralix</i>	3
<i>Myrica gale</i>	3
<i>Sphagnum capillifolium</i>	3
<i>Eriophorum vaginatum</i>	2
Liverwort species	2
<i>Epilobium angustifolium</i>	1
<i>Picea sitchensis</i> (saplings)	1
<p>History – Previously dominated by a young Sitka spruce plantation planted in the early 1980's. Trees were generally between 4 and 7 metres tall. Ground vegetation was dominated by a sparse growth of purple moor grass and scattered mosses (mainly <i>Hypnum cupressiforme</i>). Trees felled to waste in 2004.</p>	



Quadrat 2 – July 2006

Site - Pollagoona	
Code – PQ2	
GPS – R 64214 95955	
Size (m) – 6x6	
Slope (Degrees) – 0	
Vegetation cover (%)	100
Spruce brash cover (%)	5
Bare ground (%)	0
Vegetation height (cm)	30 to 40
Dwarf shrub cover (%)	25
Herb cover (%)	80
Bryophyte cover (%)	85
No of species present	15
Date of survey	19/7/2006
<i>Molinia caerulea</i>	6
<i>Sphagnum capillifolium</i>	6
<i>Erica tetralix</i>	4
<i>Eriophorum vaginatum</i>	4
<i>Hypnum cupressiforme</i>	4
<i>Myrica gale</i>	4
<i>Sphagnum papillosum</i>	4
<i>Odontoschisma sphagni</i>	3
<i>Narthecium ossifragum</i>	3
<i>Andromeda polifolia</i>	2
<i>Calluna vulgaris</i>	2
<i>Potentilla erecta</i>	2
<i>Picea sitchensis</i> (saplings)	2
<i>Sphagnum cuspidatum</i>	2
<i>Drosera rotundifolia</i>	1
<p>History – Previously dominated a young Sitka spruce plantation planted in the early 1980's. The trees failed to grow & did not exceed 2m. Ground vegetation was dominated by a high cover of purple moor grass. Trees felled to waste in 2004.</p>	



Quadrat 3 – July 2006

Site - Pollagoona	
Code – PQ3	
GPS – R 64232 95908	
Size (m) – 6x6	
Slope (Degrees) – 0	
Vegetation cover (%)	98
Spruce brash cover (%)	30
Bare ground (%)	0
Vegetation height (cm)	30 to 50
Dwarf shrub cover (%)	10
Herb cover (%)	80
Bryophyte cover (%)	90
No of species present	14
Date of survey	19/7/2006
<i>Molinia caerulea</i>	6
<i>Hypnum cupressiforme</i>	5
<i>Sphagnum capillifolium</i>	5
<i>Sphagnum papillosum</i>	5
<i>Polytrichum commune</i>	4
<i>Eriophorum vaginatum</i>	3
<i>Sphagnum palustre</i>	3
<i>Erica tetralix</i>	2
<i>Eurhynchium praelongum</i>	2
<i>Andromeda polifolia</i>	1
<i>Myrica gale</i>	1
<i>Rhytidadelphus squarrosus</i>	1
<i>Juncus effusus</i>	1
<i>Salix aurita</i>	1
History – Previously dominated a young Sitka spruce plantation planted in the early 1980's. Ground vegetation was dominated by a sparse growth of purple moor grass and scattered mosses (mainly <i>Hypnum cupressiforme</i>). Trees felled to waste in 2004.	



Quadrat 4 – July 2006

Site - Pollagoona	
Code – PQ 4	
GPS – R 64247 95853	
Size (m) – 6x6	
Slope (Degrees) – 0	
Vegetation cover (%)	10
Spruce brash cover (%)	90
Bare ground (%)	0
Vegetation height (cm)	Up to 50
Dwarf shrub cover (%)	0
Herb cover (%)	3
Bryophyte cover (%)	10
No of species present	4
Date of survey	19/7/2006
<i>Hypnum cupressiforme</i>	3
<i>Sphagnum capillifolium</i>	3
<i>Molinia caerulea</i>	2
<i>Dryopteris dilatata</i>	1
History – Previously dominated a young Sitka spruce plantation planted in the early 1980's. Area dominated by a heavy cover of felled Sitka spruce. Trees felled to waste in 2004.	



Quadrat 6 – September 2007

Site - Pollagoona	
Code – PQ6	
GPS – R 63520 95865	
Size (m) – 8 x 8	
Slope (Degrees) – 0	
Vegetation cover (%)	90
Brush cover (%)	5
Bare ground (%)	20
Vegetation height (cm)	<10
Dwarf shrub cover (%)	3
Herb cover (%)	10
Bryophyte cover (%)	75
No of species present	18
Date of survey	7/9/2007
<i>Hypnum cupressiforme</i>	6
<i>Sphagnum capillifolium</i>	4
<i>Campylopus</i> sp.	3
<i>Dicranum scoparium</i>	3
<i>Molinia caerulea</i>	3
<i>Calluna vulgaris</i>	2
<i>Polytrichum commune</i>	2
<i>Plagiothecium undulatum</i>	2
<i>Sphagnum cuspidatum</i>	2
<i>Sphagnum papillosum</i>	2
<i>Agrostis</i> sp.	1
<i>Eriophorum vaginatum</i>	1
<i>Dryopteris</i> sp.	1
<i>Galium saxatile</i>	1
<i>Epilobium angustifolium</i>	1
<i>Potentilla erecta</i>	1
<i>Leucobryum glaucum</i>	1
<i>Rhytidiadelphus loreus</i>	1
History – Previously dominated a tall Sitka spruce plantation planted in the early 1980's and felled in early 2007. Ground vegetation was dominated by a sparse growth of mosses (mainly <i>Hypnum cupressiforme</i>).	



Quadrat 7 – September 2007

Site - Pollagoona	
Code – PQ7	
GPS – R 63621 95834	
Size (m) – 8 x 8	
Slope (Degrees) – 0	
Vegetation cover (%)	95
Brash cover (%)	3
Bare ground (%)	5
Vegetation height (cm)	40 to 60
Dwarf shrub cover (%)	3
Herb cover (%)	75
Bryophyte cover (%)	80
No of species present	18
Date of survey	7/9/2007
<i>Molinia caerulea</i>	6
<i>Hypnum cupressiforme</i>	5
<i>Sphagnum capillifolium</i>	5
<i>Sphagnum papillosum</i>	4
<i>Campylopus introflexus</i>	3
<i>Sphagnum palustre</i>	3
<i>Agrostis</i> sp.	2
<i>Calluna vulgaris</i>	2
<i>Dryopteris</i> sp.	2
Liverwort sp.	2
<i>Plagiothecium undulatum</i>	2
<i>Polytrichum commune</i>	2
<i>Erica tetralix</i>	1
<i>Blechnum spicant</i>	1
<i>Epilobium</i> sp.	1
<i>Myrica gale</i>	1
<i>Potentilla erecta</i>	1
<i>Rhytidiadelphus loreus</i>	1
History – Previously dominated a tall Sitka spruce plantation planted in the early 1980's and felled in early 2007. Ground vegetation was dominated by a sparse growth of mosses (mainly <i>Hypnum cupressiforme</i>).	



Quadrat 8 – September 2007

Site - Pollagoona	
Code - PQ8	
GPS - R 63970 56024	
Size (m) - 8 x 8	
Slope (Degrees) - 5 to 10	
Vegetation cover (%)	60
Brush cover (%)	25
Bare ground (%)	25
Vegetation height (cm)	<15
Dwarf shrub cover (%)	2
Herb cover (%)	10
Bryophyte cover (%)	60
No of species present	18
Date of survey	7/9/2007
<i>Hypnum cupressiforme</i>	5
<i>Campylopus atrovirens</i>	4
<i>Polytrichum commune</i>	3
<i>Juncus effusus</i>	2
<i>Juncus bulbosus</i>	2
<i>Molinia caerulea</i>	2
<i>Plagiothecium undulatum</i>	2
<i>Sphagnum capillifolium</i>	2
<i>Sphagnum palustre</i>	2
<i>Agrostis</i> sp.	1
<i>Blechnum spicant</i>	1
<i>Carex echinata</i>	1
<i>Luzula multiflora</i>	1
<i>Epilobium angustifolium</i>	1
<i>Erica tetralix</i>	1
<i>Potentilla erecta</i>	1
<i>Salix</i> saplings	1
<i>Sphagnum cuspidatum</i>	1
History - Previously dominated a tall Sitka spruce plantation planted in the early 1980's and felled in early 2007. Ground vegetation was dominated by a sparse growth of mosses (mainly <i>Hypnum cupressiforme</i>).	



Quadrat 9 – September 2007

Site - Pollagoona	
Code - PQ9	
GPS - R 63961 95955	
Size (m) - 7 x 7	
Slope (Degrees) - 0 to 3	
Vegetation cover (%)	35
Brush cover (%)	50
Bare ground (%)	30
Vegetation height (cm)	<10
Dwarf shrub cover (%)	5
Herb cover (%)	5
Bryophyte cover (%)	25
No of species present	10
Date of survey	7/9/2007
<i>Hypnum cupressiforme</i>	5
<i>Calluna vulgaris</i>	3
<i>Campylopus</i> sp.	3
<i>Molinia caerulea</i>	2
<i>Agrostis</i> sp.	1
<i>Carex echinata</i>	1
<i>Epilobium angustifolium</i>	1
<i>Dryopteris</i> sp.	1
<i>Polytrichum commune</i>	1
<i>Potentilla erecta</i>	1
<p>History - Previously dominated a tall Lodgepole pine plantation planted in the early 1980's and felled in early 2007. Ground vegetation was dominated by a very sparse growth of mosses (mainly <i>Hypnum cupressiforme</i>). Peat depth in this area is generally <50cm.</p>	

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