

Ballydangan Bog Red Grouse Project

Final Report 2016



Report prepared by
Dr. David Scallan

November 2016

BORD NA MÓNA

LOCAL
LAND OWNERS

Roscommon
Regional Game Council

MOORE
COMMUNITY COUNCIL

Moore
Game and
Conservation Club

An Chomhairle Oidhreachta
The Heritage Council



An Roinn Coimircí Sóisialaí
Department of Social Protection
www.welfare.ie



An Roinn
Ealaíon, Oidhreachta agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

Roscommon
County
Council

Contents

	Page
Contents	2
Summary	3
Acknowledgements	4
Introduction	5
Aims of Project: 2016-2020	5
Management	7
1. Population Assessment	7
2. Preservation of Habitat	10
3. Predator and Pest Control	10
4. Public Relations	11
5. Provision of Grit	13
6. Disturbance Control	14
7. Other Management Works	15

Summary

Established in 2009, the Ballydangan Bog Red Grouse Project aims to prevent the decline and, in the long-term, increase the numbers of red grouse and other birds of conservation concern on Ballydangan Bog, Co. Roscommon.

Building on the original project Management Plan (2010-2015), the project team is now working under a new Conservation Plan (2016-2020). This provides detailed guidance on how to improve the ecological conditions of the site in a manner that supports a diversity of wildlife species and existing conservation priorities. The management is achieved through a range of strategies, including habitat improvement, predator control, monitoring, disturbance control, public awareness and education.

An unintended consequence of the project has been the arrival of breeding curlew to the project site. **This year, the project boasts hosting at least 7 breeding pairs of curlew. With the Irish population estimated at around 150 breeding pairs, this means that the site holds almost 5% of the national population.**

As a community-based venture, the project also aims to engage with the local community to create awareness about the importance of red grouse conservation on raised bogs. Some of the public awareness activities include the development of educational material, hosting school visits and disseminating the project's outcomes through site visits and local press.

This management plan is intended to be dynamic and will be reviewed annually. It recommends actively consulting with stakeholders and encouraging participation and involvement from the local community in the management programme. Monitoring, evaluation and active dissemination of the results and lessons learned will remain integral parts of the project and its aftermath.

This project is managed by Moore Gun Club, Moore Community Council and Roscommon Regional Game Council in conjunction with Bord na Móna, the National Association of Regional Game Councils, FÁS/Department of Social Protection, the Heritage Council, the National Parks and Wildlife Service, Roscommon County Council. The project has been also supported by the Local Agenda 21 (Environmental Partnership) Grant Scheme and the Heritage Council (2010-2016).

Acknowledgements

The project team would like to acknowledge the annual grant of €4,000 from the National Association of Regional Game Councils (2010-2015) through the Irish Habitat Trust Fund.

The Heritage Council allocated €6,000 to the project in 2010, 2011, 2012; €5,000 in 2014, €4,000 in 2015 and €8000 in 2016. This financial support is greatly appreciated.

Through Moore Community Council, FÁS/DSP allocated four personnel to work on the project site for the duration of the project. This contribution from FÁS/DSP is estimated to be in the region of €250,000 (2010-2020).

Bord na Móna has generously agreed to provide the use of Ballydangan Bog for the red grouse project. The project would not be possible without this support. Bord na Móna has also provided funding and ongoing technical advice towards the project's management practices. In particular, Moore Gun Club and Roscommon RGC would like to acknowledge the contribution from David Fallon, Dr. Catherine Farrell, Tom Egan and Dr. Mark McCorry.

The project team would like to acknowledge the ongoing support and grant of €3,000 which was provided by the National Parks and Wildlife Service (NPWS) in 2011. The project team would also like to acknowledge the assistance from NPWS during the translocation exercise and the donation of one tonne of grit supplied in December 2013.

Moore Gun Club and Roscommon Regional Game Council would like to acknowledge the grant of €500 provided by Roscommon County Council under the Community Heritage Bursary 2013.

The project team would also like to acknowledge the grant of €1,500 from Roscommon County Council under biodiversity Action 1.16 of the County Roscommon Heritage Plan to: "Promote and encourage participation wildlife projects and surveys, which gather information on habitats and species throughout the county" (2013-2014).

Finally, the project team would like to acknowledge the Local Agenda 21 (Environmental Partnership) Grant Scheme (2013-2014) for a grant of €1,000; and in 2015 for a grant of €500 towards the development of environmental and awareness resources for primary and secondary schools.

Introduction

For a number of decades, members of Moore Gun Club and Roscommon Regional Game Council expressed concern about declining red grouse populations on raised bogs throughout County Roscommon. Many Gun Club members recall numerous populations of red grouse in the past, however, there has been a continuous decline with several local extinctions. This is primarily due to habitat loss via commercial peat extraction.

In late 2009, Moore Gun Club and Roscommon Regional Game Council undertook an effort to initiate a conservation project to address the declining red grouse population on Ballydangan bog, Co. Roscommon.

The original project conservation plan (2010-2015), which was produced by Scallan (2009), established a framework to achieve community-based conservation actions on Ballydangan Bog in a manner that supports red grouse, a healthy diversity and abundance of wildlife species and human uses.



Initial meeting between project team and Bord na Móna (2009)

The plan recommended actively consulting with red grouse stakeholders and encouraged participation and involvement from the local community in the management programme. At the time, it was decided that the plan's working time-frame shall be five-year intervals. In 2015, a decision was taken to develop a new conservation plan from 2016-2020.

Aims of Project: 2016-2020

The main purpose of this project is to limit the specific factors affecting red grouse and breeding curlew on Ballydangan Bog while supporting existing conservation priorities for the site. More specifically, the Ballydangan Bog Red Grouse Conservation Project (2016-2020) aims to:

- provide best-practice management strategies aimed at increasing the red grouse and breeding curlew population on Ballydangan Bog;
- implement management strategies in a manner that supports wider biodiversity goals, particularly for the conservation of raised bog habitat other red-listed bird species;
- promote community involvement in planning and decision-making;

- maintain an atmosphere of cooperation, participation and commitment among conservation rangers, landowners, land managers and other stakeholders in the development and implementation of red grouse management strategies;
- encourage the long-term funding necessary to ensure the survival of Ballydangan's red grouse population and to facilitate the collection and analysis of data during the course of the project.

Monitoring and evaluation are an important part of this plan, and adjustments to the goals, objectives and conservation actions will be made considering the best available data.



Red Grouse. Photo: Fiona Wheeldon



Red Grouse

Project Location

Ballydangan Bog is located approximately 8km north-east of Ballinasloe in the townlands of Thomastown, Clonbuila and Ballydangan. The entire bog is about 1,100 hectares and is divided in the centre by the main Dublin/Galway railway line.



Ballydangan Bog, Co. Roscommon

Management Strategies

Moore Gun Club and Roscommon RGC have been developing their conservation project for the past five years. The involvement of Moore Community Council through the DSP staff was a major boost for the project. This agreement between Moore Gun Club, Roscommon Regional Game Council and Moore Community Council (via the Department of Social Protection, DSP) has provided four Community Employment (CE) staff to work on the project.

The CE aspect of the project is managed by Mr. Paddy Feehily of Moore Community Council. An initial Health and Safety assessment was carried out by Mr. John Henson of HB Safety Services Ltd. Moore Gun Club and Roscommon RGC assist DSP staff with the management activities.

The following sections set out the specific management actions required for this project.

1. Population Assessment

Annual monitoring of red grouse and breeding curlew on the project site will be essential to assess the impact of the proposed management practices. Spring counts will establish the number of breeding pairs in the area and autumn counts will establish how well (or not) the same pairs have produced. The autumn counts will therefore establish a ratio of young–old birds for that year. Early morning (i.e. dawn chorus) surveys are also useful to monitor (i.e. by listening to) the red grouse population.

Actions:

- Spring Dog Count:
 - 17/04/2016 – Spring count took place using pointing dogs. 1-2 birds flushed.
- Autumn Dog Count:
 - 15/10/2016 – Spring count took place using pointing dogs. 2 birds flushed.
- Summer breeding curlew survey by BirdWatch Ireland.
 - 7 pairs of breeding curlew. Conducted by Dr. Alex Copland (report enclosed).



Curlew benefit from grouse management



Breeding curlew on Ballydangan

Red grouse:

Although the project is succeeding in preventing a local extinction of red grouse, the monitoring indicates that red grouse are present on the site at a very low density. During the 2016 spring dog count (17th April 2016), only one/two adult red grouse was/were flushed on Ballydangan¹. In October 2016, the autumn count produced 2 birds. The low population of red grouse is likely due to weak genetic diversity within the remaining population, a issue which is discussed further in the Conservation Plan (2016-2020).

¹ It is possible that the same bird was flushed twice.

Red grouse on adjacent/nearby bogs:

Anecdotal evidence suggests that red grouse have been observed on adjacent bogs. Reports from Bord na Móna and NPWS indicate that red grouse are present on Goats Lough bog and Lough Gore bog. Red grouse were also observed on Cuckoo Hill bog in recent years also. It is probable that birds from Ballydangan Bog are dispersing to adjacent bogs. Additional survey work (using pointing dogs) is required to get a better understanding of the situation.

Breeding curlew:

The Eurasian curlew has recently been added to the IUCN Red List of globally threatened species, and is on the Red List of Birds of Conservation Concern in Ireland, due to significant population and range contractions over the last 50 years.



Breeding curlew – 3 pairs on Ballydangan south and 4 pairs on Ballydangan north. Map by David Fallon, Bord na Mona (2016).

In 2016, the project commissioned Dr. Alex Copland, BirdWatch Ireland, to undertake a breeding curlew survey on the project site. The report states: “The occurrence of at least seven pairs of breeding Curlew in the wider Ballydangan Bog area (comprising Ballydangan South, Knock and Cranberry) is very significant at a national level. With the Irish population estimated at around 150 breeding pairs (Kelly & Donaghy, 2015), these sites hold almost 5% of the national population”.

Monitoring of Red Grouse and Curlew 2010-2015

Year	Grouse – Spring	Grouse - Autumn	Breeding curlew
2009	No survey	3	0
2010	No survey	1	0
2011	2	3	0

2012	0 (tape-lure) ²	2	2 pairs
2013	0	0	2 pairs
2014	0	1	1 pair
2015	2	1	3 pairs
2016	1-2	2	7 pairs

The presence of breeding curlew on Ballydangan bog may support existing evidence, which recognises that red grouse management can help to maintain the numbers and range of some breeding waders. This evidence should be used to form an even stronger argument for funding and support to be directed into red grouse projects being managed by local community groups in Ireland.

Hen harrier:

Since 2012, the project site has been used as winter roost for a male hen harrier.

Other species:

The site supports a large population of breeding and wintering common snipe. Hare are also now very common throughout the project site. Mallard use the site annually for breeding. Lapwing (potentially breeding) were observed in May/June during 2014 and 2015. There is a need for a dedicated survey of breeding lapwing on the site. Other important bird species that use the site include a barn owl, wintering golden plover, whimbrels and wintering lapwings.

Occurrence of other bird species of interest at Ballydangan South and Knock Bog (June 2016)

Species	Site	Ballydangan 2015	Ballydangan 2016	Knock
Mallard		X	X	
Grey Heron		X	X	
Kestrel		X	X	X
Lesser Black-backed Gull				X
Cuckoo		X	X	X
Magpie		X		
Hooded Crow		X	X	X
Raven		X		
Sedge Warbler		X	X	X
Reed Bunting		X	X	X

Note: Colour denotes status in the Birds of Conservation Concern in Ireland (BoCCI) lists (**Amber** or **Green**). Source: Dr. Alex. Copland (2016)

Red Grouse Translocation:

During spring 2014 and autumn/winter 2015, the project team attempted to undertake a red grouse translocation from a 'healthy' population into Ballydangan to improve the genetic vigour of the Ballydangan Bog red grouse population. The project team is currently discussing the idea of attempting another translocation exercise (for autumn 2016), however, they need to wait on the results of the autumn monitoring on the Boleybrack Project, North Leitrim.

² After tape-lure survey a male red grouse was heard on the 14th March 2012

2. Preservation of Habitat

Red grouse require a broad age-range of heather to allow for cover, shelter, nesting and feeding. Hens usually nest in mature heather adjacent to freshly cut/burnt or second year cut/burnt heather, where fresh shoots will be available for chicks. This improved micro-climate is beneficial to the reproduction of invertebrates which are a vital food source for chicks. A patchwork of old and new heather is widely considered as the best management practise for red grouse.

Progress:

- An estimated 50 acres of heather have been cut in the past five years, which is substantial.



Heather strimming September/October 2016

Additional heather management work was carried out from September – November 2016 under the appropriate legal framework (i.e. the Wildlife Acts 1976 and 2010). This will continue until the end of February 2017, depending on weather conditions.



Curlew. Photo: John Carey/BirdWatch Ireland



Heather management on Ballydangan Bog

3. Predator and Pest Control

Research has shown that predation is, and has always been, a major cause of red grouse mortality. Predation during nesting and early brood-rearing has the greatest influence on red grouse populations. Nest predators include fox, grey crow, magpie and mink. Reducing predation rates can lead to increases in red grouse productivity. The following predator actions are put in place on Ballydangan Bog:

<u>FEBRUARY TO SEPTEMBER</u>	<u>FEBRUARY TO SEPTEMBER</u>	<u>ALL (EXCEPT MAY TO AUGUST)</u>
Set/Check Large Crow Traps:	Set/Check Larsen Traps:	Set/Check Mink Traps:
• Feed\water call birds • Remove captured birds • Maintain traps as required	• Feed\water call birds • Remove captured birds • Maintain traps as required	• Remove captured mink • Bait traps as required • Maintain trap as required

<u>ONLY COLD WINTER WEATHER</u> Set/Check Fox Traps: - Remove captured foxes - Bait traps as required - Maintain traps as required	<u>ALL YEAR</u> Lamping; Set/Check Snare Lines: - Remove captured foxes - Reset snares as required	<u>ONLY COLD WINTER WEATHER</u> Set/Check fox middens: - Use only in cold weather - Check snares daily - Refresh bait frequently
--	--	--



Larsen traps are used for grey crows



The North American Mink is trapped on the site

Numbers of predators removed from the Ballydangan project site - 2016

Month	Fox	Mink	Grey Crow	Magpie	Rat
Jan-16	16	0	0	0	1
Feb-16	15	1	0	1	1
Mar-16	10	0	0	13	0
Apr-16	5	0	6	34	0
May-16	4	1	14	13	2
Jun-16	9	0	23	17	3
Jul-16	6	0	5	1	2
Aug-16	7	1	0	3	2
Sep-16	6	0	0	0	3
Oct-16	9	1	1	3	1

Numbers of predators removed by Moore Gun Club from the wider parish area - 2016

Month	Fox	Mink	Grey Crow	Magpie	Rat
Nov 15-Jul 16	61	21	94	234	35
Jul 16-Nov 16	11	0	9	31	9

4. Public Relations

As red grouse are mostly threatened by human influences, education is an important accompanying measure in red grouse conservation programmes. Public awareness and education can greatly improve the success of conservation efforts. In general, farmers, the general public and decision-makers require better education on habitat requirements, threats and ecology of the species on their land and under their responsibility.

As a community-based venture, the Ballydangan Red Grouse Project should aim to engage with the local community and create awareness within the wider general public about the importance of red grouse conservation. Some of the educational and public awareness activities could include the development of educational material, hosting school visits and disseminating the project's outcomes

through local media. Increased community awareness about this project has already been put in place via the erection of several signs.

Actions:

- Primary School Resource Pack distributed to local schools.
- Secondary School Resource Pack distributed to local schools.
- Site visit: NPWS site visit 13rd June 2016.
- Site visit: German University Student site visit 23rd June 2016.
- Curlew conference 4th November 2016. Co Westmeath. This was attended by project team members. A presentation was delivered by David Fallon, Bord na Mona, on curlew with reference to the project.
- From 8-10 November 2016, Dr. David Scallan participated in the [EUROSAP](#) workshop to develop a multispecies action plan for wet grassland breeding Waders in Tönning, Germany. He had an opportunity to present the Ballydangan project.
- RTE's Eco Eye conducted interviews and filmed on the project site on 19th August 2016.
- Discussions have been ongoing to ensure that all landowners are aware of the red grouse conservation project by promoting and disseminating to them the significance and conservation value of the project.
- Links have been put in place with other organisations involved in managing red grouse projects in Ireland.
- The project is promoting this year's (breeding curlew) success in magazines (e.g the GameShot magazine 2016 to 26,000 Gun Club members and in the Moore News 2016).
- Minister Heather Humphreys and Minister Denis Naughten have expressed an interest in visiting the project site. An informal meeting with Minister Naughten took place on 19th November. He stated his interest in visiting the site in early 2017.

Local school interest:

Schools see the Red Grouse Restoration Project as a useful way to learn more about wildlife management and community-based conservation. The project was previously awarded funding from Local Agenda 21 (Roscommon County Council) towards the development of resource material for primary schools. Last year, the project team engaged Ecoenvolve (Environmental Training and Consultancy) to develop educational materials for primary schools based on the Ballydangan Bog Red Grouse Project.



Student on placement Nov. 2016



NUIG MSc Natural Resource students site visit Oct 2016



23rd June 2016 – German University student site visit.



13th June 2016 – NPWS staff visit the site



Project educational poster designed Wildlife Artist, Michael O'Cleary

5. Provision of Grit

Coarse/angular grit should be placed in multiple locations on the project site to allow easy access to an essential dietary requirement as well as offering suitable high points. Each grit station should be recorded by GPS to allow the project team to regularly monitor their use. In summary:

- Grouse require grit in their diet and will travel considerable distances to source it;
- The angular grit or small stone is eaten and acts as a pestle and mortar in the birds' gizzard to help digest the fibrous, low nutrient value heather that forms almost 90% of their diet;
- Natural grit is often found on road sides or where exposed stone is found;
- Providing grit for red grouse may encourage birds to establish territories. It should be placed on a high point that can be used as a vantage point for red grouse to look out for predators and for the cock bird to survey his territory.



Maintaining the network of grit stations (2016)

Actions:

- Additional grit stations have been erected throughout the project site (August – November 2016).
- Grit stations have been maintained.

6. Disturbance Control

Moore Gun Club has maintained a rigorous system of territory management on the site in 2016. Disturbance avoidance during the breeding season in 2016 was successful and there were no reports of any unauthorised access or disturbance to the site. Members of the project team also kept a close eye out for fires on the project site over the summer months. Having a constant monitoring system in place is crucial to the success of the project.

Increased awareness about the project is also obtained by placing signs at access points to inform people about the project. In addition to erecting small project signs, two large information signs for the project were developed to provide information about the various stakeholders involved in the project. Other signs were erected to satisfy public liability/insurance concerns relating to the project site. Public liability insurance for the project site is organised annually through the NARGC Compensation Fund Scheme. Two large project signs (purchased in 2014) have been erected along the Galway-Dublin rail line to promote the project to rail passengers.



Project Signs used to highlight the project work



Signs used to highlight/promote the project



Educational sign



Sign for dog walkers

7. Other Site Management Works

The project team has put in place new access bridges on the site to facilitate site visits, public safety and better management access. The site access road was regularly maintained with strimming and several gaps in fencing were repaired.



Access bridges built – June/July and Sept. 2016

Some scrub removal works has taken place from September 2016 onwards in accordance with the legal framework. Scrub areas were identified in the recent (2016) report by Dr. Alex Copland.