Ballydangan Bog Red Grouse Project

2018 Annual Report

Ministerial visit - October 2017

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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. During the survey work in 2018, the project saw an increase in the Red Grouse population on Ballydangan Bog.

Building on the original project Management Plan (2010-2015), the project team is now working under a revised Conservation Plan (2016-2020). This plan 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 a positive response from breeding Curlew on the project site. In 2018, a Curlew survey undertaken by Birdwatch Ireland under contract by Bord na Mona on the project site found 1/2 pairs of breeding Curlew. Additional and more intensive monitoring by the CE scheme staff detected up to 7 breeding pairs using the project site, with evidence of breeding productivity in July 2018. With the Irish breeding Curlew population estimated at around 150 pairs, this highlights the importance of the project site for this threatened species.

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

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, Department of Social Protection, the Heritage Council, the National Parks and Wildlife Service, and Roscommon County Council. The project has been also supported by the Local Agenda 21 (Environmental Partnership) Grant Scheme.

See www.ballydanganbog.com for more information

Acknowledgements

The project team would like to acknowledge the grant aid from the Heritage Council of €6,000 to the project in 2010, 2011, 2012; €5,000 in 2014, €4,000 in 2015, €8000 in 2016, €5,500 in 2017 and €7,000 in 2018. This significant financial support is greatly appreciated.

Through Moore Community Council, the Department of Social Protection (DSP) has annually 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).

The project would like to acknowledge the financial support of €4,000 per year (from 2010-2015) from the National Association of Regional Game Councils through their Irish Habitat Trust Fund.

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 for several actions and ongoing technical support towards the project's management practices. In particular, the project would like to acknowledge the contribution from David Fallon, Dr. Catherine Farrell and Dr. Mark McCorry.

The project team would like to acknowledge the ongoing support and grant aid from National Parks and Wildlife Service (NPWS) of €3,000 in 2011 and €1,500 in 2017 and €4450.00 in 2018/2019 under the NPWS Curlew Conservation Partnership. The project team would also like to acknowledge the assistance from NPWS during the translocation exercise (2014) 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 management plan (2010-2015) 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)

That plan recommended actively consulting with relevant 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 aim 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 site 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.

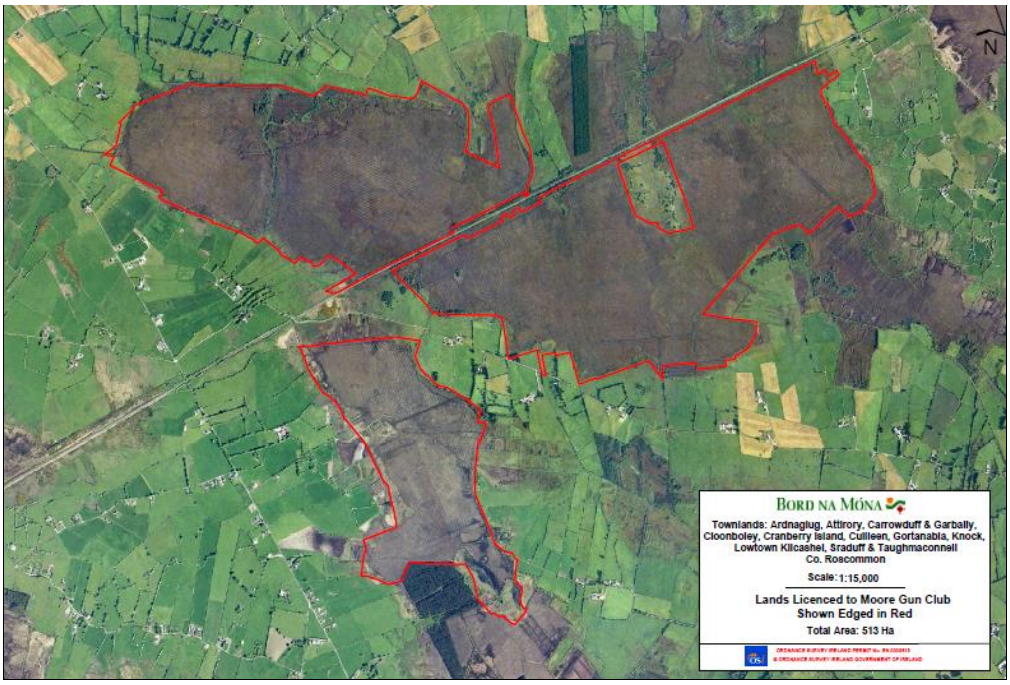
Monitoring and evaluation are an important part of this plan, and adjustments to the goals, objectives and conservation actions will be made considering the best available data.

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 10 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 part-time on the project. The CE scheme is managed by Mr. Pat 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 establish the number of breeding pairs in the area and autumn counts 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.

Grouse counting with setters

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. However, during the 2018 spring dog count (March), three adult Red Grouse (probably females) with one (probably male) bird were flushed on Ballydangan. In September 2018, the autumn count produced one pair with one juvenile bird indicating some breeding success. Two other adult (probably male) grouse were flushed on another part of the bog.

Red Grouse in 2018:

- Spring survey 2018:
    - 3 hens (near high bridge) and 1 cock Red Grouse (on following day 18 March 2018) were observed.
- Autumn survey 2018:
    - Survey work in September 2018 showed 1 pair with 1 juvenile on the first survey and 2 single cocks when covering the remainder of the project site.

Red Grouse on adjacent/nearby bogs:

Increasing evidence suggests that Red Grouse have been observed on adjacent bogs. For example, 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/setting dogs) is required to get a better understanding of the situation. Our understanding of the presence of Red Grouse on Irish raised bogs should be improved. Some information of Red Grouse presence on SAC raised bogs has already been collated (see pg. 10 of this report).

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. During summer 2017, 3 pairs of breeding Curlew were observed on Ballydangan south (see Birdwatch Ireland survey report); one pair was observed on Cranberry. No breeding productivity was observed. In 2018, a survey was undertaken by Birdwatch Ireland under contract from Bord na Móna where 1-2 breeding pairs were observed with no breeding productivity. This survey followed the standard survey criteria.

Description of a 'standard' survey method for breeding Curlew:

A standard method to survey breeding Curlew follows the recommendations by Brown and Shepherd (1993). In brief, this technique recommends that two visits should be made in areas of suitable habitat before the end of June. Separate visits to the same areas should be at least seven days apart. Even if no Curlew are recorded during the first visit to a site, a second visit should be still carried out if suitable habitat was present. Brown and Shepherd (1993) recommend a third visit to survey sites in July, but this is to detect breeding productivity. Survey visits are divided into the following periods:

- Visit 1: 15th April – 31st May
- Visit 2: 1st – 30th June
- Visit 3: July (to detect breeding productivity)

CE Scheme Curlew Survey 2018:

More intensive survey work was undertaken by Ryan Nixon of the DSP scheme which showed additional breeding Curlew activity with breeding productivity on the site, noted by typical Curlew defence behaviour and chick calling. His work assumed the presence of up to 7 breeding Curlew on Ballydangan Bog.

Monitoring of Red Grouse and breeding Curlew (2010-2018)

Year	Grouse - Spring	Grouse - Autumn	Curlew pairs	Curlew productivity
2009	No survey	3	0	Not assessed
2010	No survey	1	0	Not assessed
2011	2	3	0	Not assessed
2012	1 (tape-lure survey)	2	2 pairs	Not assessed
2013	0	0	2 pairs	Not assessed
2014	0	1	1 pair	Not assessed
2015	2	1	3 pairs	Not assessed
2016	1-2	2	7 pairs	Not assessed
2017	2 (i.e. 1 pair)	3	3-4 pairs	0
2018	3 hens, 1 cock	1 pair + juv. & 2 cocks*	1/2 – 7 pairs	Juveniles heard/observed

*Two counts were conducted in September 2018 covering different parts of the project site.

Curlew Breeding productivity in 2018:

During June 2018, two video recordings were taken of Curlew mobbing (i.e. defence behaviour) on two intruders during different dates; i.e. a Grey Herron and a Buzzard. From the footage, it would appear that the bird mobbing the Grey Heron was an adult protecting juveniles on the ground and (based on other calls in the same video); another bird heard in the background was another adult (chick calling) to the juveniles.

Several pictures and videos from 2018 also show mixed flocks (with adults and juveniles, which were noted by their smaller size, slightly different plumage, shorter bill) of Curlew on and adjacent to Balllydangan Bog. The origin of these birds could not be confirmed e.g. whether they were from Ballydangan and/or wider areas, possibility of early arriving migrants, etc. The project team agreed

on the need to improve our understanding of Curlew breeding activity and of these mixed flocks at the project meeting on 08/08/2018.

Future research:
The project team agreed that it would be useful to engage in colour ringing Curlew (via catching through the use of a mist net on identified feeding sites next to the bog, but due to the openness of sites this may not be possible). This research would improve our understanding of breeding Curlew on Ballydangan Bog. This is to be further explored with NPWS and relevant experts. It would also be valuable to engage in research via radio-tagging Curlew chicks to gain an understanding of their survival and ecology.

In general, the presence of breeding Curlew on Ballydangan Bog supports 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.

Other species:
Breeding (and wintering) Common Snipe are present in healthy numbers on Ballydangan Bog. Lapwing are present and should be monitored in the future. Additionally, it has been noted and commented by many local residents that other bird species (e.g. passerines that use hedgerows as well as wild pheasants) have seen a steady increase in numbers. Hare are also very common throughout the project site. Mallard use the site annually for breeding. Lapwing (potentially breeding) were observed adjacent to the site in May/June during 2014, 2015, 2016 and 2017. 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, Whimbrel and wintering Lapwing. The site is also used by Grey Herron, Kestrel, Merlin, Sparrow hawk, Cuckoo, Magpie, Raven, Sedge Warbler, Hooded Crow, Magpie and Reed Bunting. Since 2012, the project site has been occasionally used in winter by a male Hen Harrier.

Red Grouse translocation:
Red Grouse breeding productivity is still poor on Ballydangan Bog, which may be due to poor genetic diversity. During spring 2014 and autumn/winter 2015, the project team attempted to undertake a Red Grouse translocation from a 'healthy' population (i.e. Boleybrack Mountain SAC, Co. Leitrim) into Ballydangan Bog to improve the genetic vigour of the Ballydangan Bog red grouse population. At the time, no Red Grouse were caught using the lamp and net method but there were several close encounters. The project team agreed at its meeting on 08/08/2018 that there is scope for a possible future translocation and team members should continue to explore what potential options exist (e.g. whether a suitable site exists with a healthy Red Grouse population). The project team has also discussed the concept of reintroducing Irish Red Grouse to the site using other methods. One option could be to try to locate the nest of a Red Grouse in spring (on a site with healthy numbers in Ireland), take some eggs (depending on clutch size), and attempt to breed them in captivity for eventual release. This concept would need further exploration with NPWS.

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.

- Bord na Móna previously undertook bog restoration works on the site, which should improve the conditions for breeding Curlew and Red Grouse. The initial draining (ditching) of the site in the 1970s (likely) negatively affected chick survival.


Heather strimming

Some scrub removal works has taken place in accordance with the legal framework. Other scrub areas were identified in the recent (2017) report by Dr. Alex Copland. Additional heather management work and some scrub removal was carried out in October 2018 under the appropriate legal framework (i.e. the Wildlife Acts 1976 and 2012). The purpose of the scrub removal is to make certain parts of the site less attractive to nest predators. This also allows more light on the raised bog habitat, which is positive for the habitat conservation interests of the site.




Scrub removal during October 2018

3. Predator and Pest Control

Research has shown that predation is, and has always been, a major cause of Red Grouse and breeding Curlew mortality. Predation during nesting and early brood-rearing has the greatest influence on Red Grouse populations. Nest predators on Ballydangan include fox, Grey Crow, Magpie, rat and mink. Reducing predation rates can lead to increases in Red Grouse productivity. The following predator management actions are put in place on Ballydangan Bog:

FEBRUARY TO SEPTEMBER Set/Check Large Crow Traps: • Feed\water call birds • Remove captured birds • Maintain traps as required	FEBRUARY TO SEPTEMBER Set/Check Larsen Traps: • Feed\water call birds • Remove captured birds • Maintain traps as required	ALL YEAR Set/Check Mink Traps: • Remove captured mink • Bait traps as required • Maintain trap as required
ONLY COLD WINTER WEATHER Set/Check Fox Traps: • Remove captured foxes • Bait traps as required • Maintain traps as required	ALL YEAR Fox control - Lamping; Set/Check Snare Lines: • Remove captured foxes • Reset snares as required	ONLY COLD WINTER WEATHER Set/Check fox middens: • Use only in cold weather • Check snares daily • Refresh bait frequently

Larsen traps are used for grey crows

North American Mink are trapped on the site

Numbers of predators removed from the Ballydangan project site - 2018

Month	Fox	Mink	Grey Crow	Magpie	Rat
Jan-18	2	1	0	0	1
Feb-18	5	1	5	14	2
Mar-18	48	4	141	110	3
Apr-18	28	2	86	80	2
May-18	14	1	48	79	1
Jun-18	9	1	42	70	5
Jul-18	12	0	20	69	4
Aug-18	10	0	11	32	3
Sep-18	10	0	0	6	1
Oct-18	17	0	0	0	7
Nov-18	5	0	0	0	3
Dec-18	7	2	0	0	1

Numbers of predators removed by Moore Gun Club from the wider parish area - 2018

Fox	Mink	Grey Crow	Magpie	Rat
68	13	80	230	25

There was a notable increase in the area now being covered hence the rise in predator management numbers this year on Ballydangan bog project site (i.e. Ballydangan south, north and Cranberry). An increase in hare numbers was observed on the site this year.

4. Public Relations

As Red Grouse are mostly threatened by human influences, education is an important accompanying measure in 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.

Activity in 2018:

- 19/01/18 – Athlone IT students visit
- 02/03/18 – Local national school visit
- 13/03/18 – Derek Mooney (RTE) site visit
- 22/03/18 – GMIT (Galway) site visit
- 27/03/18 – Active age (Ballydangan) site visit
- 06/05/18 – Roscommon Lamb festival
- 14/05/18 – Bord na Mona (BnM) Biodiversity event (attended by project members)
- 17/05/18 – Visit from potential grouse project in Cork
- 03/07/18 – NUI Galway site visit
- 08/08/18 – Project meeting, Moore Hall
- 22/08/18 – Marian Harkin MEP visit
- 16/09/18 – CE staff participated in grouse course run by Game and Wildlife Conservation Trust
- 10/10/18 – Site visit by new CEO of BnM with their biodiversity team
- 13/11/18 – site visit by Irish Times Journalist Paddy Woodworth
- Primary and Secondary School Educational Resource Packs distributed to local schools

Media/promotion:

- New website launched (2017): www.ballydanganbog.com
- Article in Irish Country Sports and Country Life, spring 2018
- Moore News magazine article (December 2018).

Active age visit March 2018

Athlone IT visit 2018

Derek Mooney visit, March 2018

Bord na Mona CEO visits, Oct 2018

Roscommon Lamb festival

Marian Harkin MEP

Gun Club In Red Grouse Conservation Project

The Moore Gun Club from Roscommon approached Bord na Móna 8 years ago to talk about a potential collaborative project on Ballydangan Bog, between Athlone and Ballinasloe in South Roscommon, with the aim of conserving the Red Grouse, whose numbers were at a worryingly low level on the bog and throughout Ireland. Subsequently, 234 hectares of the bog was leased from the company to the Gun Club in 2011 and a conservation project started, which has proved very successful.

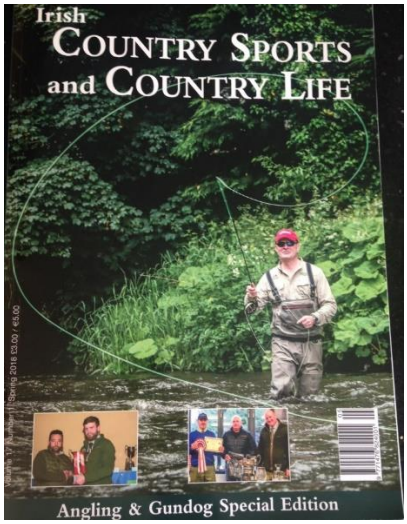
Bord na Móna began bog restoration works in 2013. This meant rewetting the bog which would lead to the development of Sphagnum-rich plant communities and the long-term restoration of raised bog habitat function. The Department of Social Protection is employing four full-time local staff whose jobs include predator control, heather cutting and habitat management. Since the project began, three pairs of Eurasian Curlew (Numenius arquata) have successfully bred on the site.

Derek Fannon reports that Minister Denis Naughten, in October, said the Red Grouse Conservation Project was an "exemplary model" of the success that can be brought about when State companies and local communities come together. Minister Heather Humphreys said Raised Bogs like Ballydangan Bog are important natural eco-systems and host a wonderful array of native species. "Bord Na Móna's work in rehabilitating this bog," she said, "and other raised bogs in Ireland is critical for the retention and diversity of Ireland's unique habitats and species."

Moore Gun Club and Roscommon Regional Game Council have been influential in involving a range of stakeholders in this project (e.g. local employment through FAS and Moore Community Council, Bord na Móna, the NPWS, the NARGC Habitat Trust, the Heritage Council and NUI Galway). These unique alliances have recently led to the initiation of a number of new red grouse projects throughout Ireland.

After the end of British rule, when the great estates were restored to the Irish people, and tenants became owners of their properties, gamekeeper numbers declined rapidly and this affected the grouse population because without gamekeepers the populations of foxes, grey crows and other predators of ground nesting birds grew. There are currently about 4,000 grouse in Ireland.

Article in Irish Country Sports and Country Life, spring 2018



<u>Local schools:</u>

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. In 2016, the project team engaged Ecoenvolve (Environmental Training and Consultancy) to develop educational materials for primary schools based on the Ballydangan Bog Red Grouse Project.

Project educational poster

Project educational poster designed Wildlife Artist, Michael O'Cleary

5. Provision of Grit

Coarse/angular grit is 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 is 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

Actions:

- Grit stations have been erected throughout the project site (August – November 2018).
- Grit stations have been maintained.

6. Disturbance Control

The project team has maintained a rigorous system of territory management on the site in 2018. Members of the project team 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 (and maintains) 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 in 2016 and 2017, maintained in 2018