



# Curlew Conservation Programme

Annual Report 2017



An Roinn  
Cultúir, Oidhreachta agus Gaeltachta  

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Department of  
Culture, Heritage and the Gaeltacht

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## Summary

- The real possibility of Curlews becoming extinct as a native breeding species in Ireland has become apparent through the Breeding Bird Atlas (Balmer et al., 2013) and the first national breeding Curlew survey (O'Donoghue et al., in prep.).
- In November 2016, a conference entitled "Curlews in Crisis" was led by Mary Colwell, an individual who had walked 500 miles across Ireland and Britain to raise awareness and support for breeding Curlews. The unanimous call from this conference was that a Curlew Task Force should be established as a matter of urgency, to address the serious declines.
- A Curlew Task Force was duly established by Minister Heather Humphreys TD, with all major stakeholders represented, with a view to progressing policies and action for Curlew conservation.
- Given population viability analysis showed Curlew would become extinct within 10 years without direct action; the National Parks & Wildlife Service of the Department of Culture, Heritage & the Gaeltacht designed the Curlew Conservation Programme.
- Doing nothing or waiting for further research before acting was not considered an option, if the free-fall of the Curlew population is to be halted. The Curlew Conservation Programme has two main pillars: 'Doing' and 'Learning by Doing'.
- The Curlew and the landowners, land managers and local communities that still hold Curlew locally, are placed at the centre of all efforts and considerations.
- A locally-led approach is taken, whereby the six most important locations for breeding Curlew in Ireland each have a locally-based team, working with local people and adapting techniques, efforts and priorities to what works best locally.
- Local teams, known as Curlew Action Teams (CATs), were comprised of three main roles:
  - A Curlew Conservation Officer
  - A Nest Protection Officer
  - A Curlew Champion.

The role of the Curlew Champion is novel, in that it is the first time that a 'liaison officer' role has been formally recognised as an integral part of a conservation programme.

- Parallel to the efforts on the ground, a research programme has been designed to critically analyse the conservation action, assess its efficacy and to recommend improvements where necessary. In addition, this research will explore further, the ecological requirements of what has been to date an under-studied species in Ireland.

- The first year of the Curlew Conservation Programme saw direct efforts in the following areas:
  - Stack's Mountains (County Kerry)
  - Lough Corrib
  - Lough Ree
  - North Roscommon/Leitrim
  - North Monaghan
  - Donegal
- The Curlew Conservation Programme was well received on the ground, where the local teams liaised closely with landowners and local communities, in the search and protection of breeding Curlew.
- Surveys undertaken in these areas in 2015 and 2016 found a total of 68 pairs of breeding Curlew, representing 55% of the total number of breeding pairs found across Ireland in those years (excluding the Shannon Callows area, which was surveyed in 2017). Efforts in 2017 confirmed just 60 pairs remaining in these same areas. Of these 60 pairs, the breeding success of 44 pairs was determined; with just 14 pairs believed to have reared chicks. The total number of juveniles recorded to have fledged was 16, representing a breeding productivity of 0.38 fledglings/breeding pair, which is below the threshold required for a stable population.
- It is clear that one of the greatest conservation challenges for Ireland lies ahead. On the positive front however, the Curlew Conservation Programme has built skillsets, experience and momentum in its inaugural year. The programme is widely supported. There are examples of local efforts, including through this programme, that offer promise and hope that the drastic declines can be halted locally and even turned around.
- The Curlew Conservation Programme will continue into the future, acting for Curlew conservation with local people and continuously learning valuable lessons along the way in what is essentially a pioneering project to support a species that is a very well respected part of the Irish avifauna, landscape, culture and heritage.

# Background and the Curlew Task Force

The Eurasian Curlew is protected under Irish and EU law. It is Ireland's only Red Listed bird species on the IUCN list of threatened species. A national survey commissioned by NPWS in 2015 and 2016 found drastic declines of the national breeding population of Curlews. Whereas 3750-4000 pairs are estimated to have bred in the Republic of Ireland in the late 1980s, there now remains no more than 150 pairs (O'Donoghue et al., in prep.). This represents a 96% decline. Breeding productivity is so low that population viability analysis predicts that in the absence of any action, the Curlew will go extinct as a breeding species in Ireland within 5-10 years (O'Donoghue et al., in prep.).

A Curlew Task Force, called by Minister Heather Humphreys TD, was established in February 2017. A wide but very relevant range of stakeholder groups (Table 1) and key individuals are party to the Task Force, representing farming, turf cutting, predator control, nature conservation, agri-environmental planning, Government officials, etc. Members were selected and invited on the basis that they were directly involved with the policy and management of existing habitat and other activities in Curlew territories and can effect positive change for the birds. In total, 30 people typically attend the Curlew Task Force meetings, of which there were three in 2017. The Curlew Task Force, independently chaired by Alan Lauder, adopts a collaborative approach. The Task Force has been divided into sub-groups (Figure 1) to concentrate on particular areas, with those having greatest experience in or relevance to particular areas assigned to those sub-groups.

A synthesis group convenes to collate recommendations from the sub-groups (as well as provide guidance where necessary), with a view to informing conservation policies and action.

To run in parallel to the Task Force, the discussion groups and the policy considerations; the National Parks & Wildlife Service of the Department of Culture, Heritage and the Gaeltacht designed and financed the Curlew Conservation Programme. This programme was established in 2017, and focussed on six core Curlew breeding areas, with a view to informing robust and effective measures that can be rolled out at a national level in future years and that could act as a sounding board or test bed for the discussions that ensue at the Curlew Task Force. In the process, of course, it is also an objective of the Curlew Conservation Programme to make real and telling differences to the outcomes of Curlew breeding attempts in the areas where it operates.

This report presents the main points of the Curlew Conservation Programme in 2017.

Table 1. Stakeholder Groups involved on Curlew Task Force. Nominated individuals with experience in Curlew conservation are also involved.

National Parks & Wildlife Service of the Department of Culture, Heritage, and the Gaeltacht
Department of Agriculture, Food & the Marine (including agriculture sections and Forest Service)
Office of Public Works
Teagasc
Bord na Móna
BirdWatch Ireland
Royal Society for the Protection of Birds, Northern Ireland
Golden Eagle Trust
Irish Peatlands Conservation Council
Turf Cutters and Contractors Association
Irish Creamery and Milk Suppliers Association
Irish Cattle and Sheep Association
Irish Natura and Hill Farmers Association
Irish Farmers Association
Michael Martyn Agricultural Consultants
National Association of Regional Game Councils
National University of Ireland, Dublin (UCD)

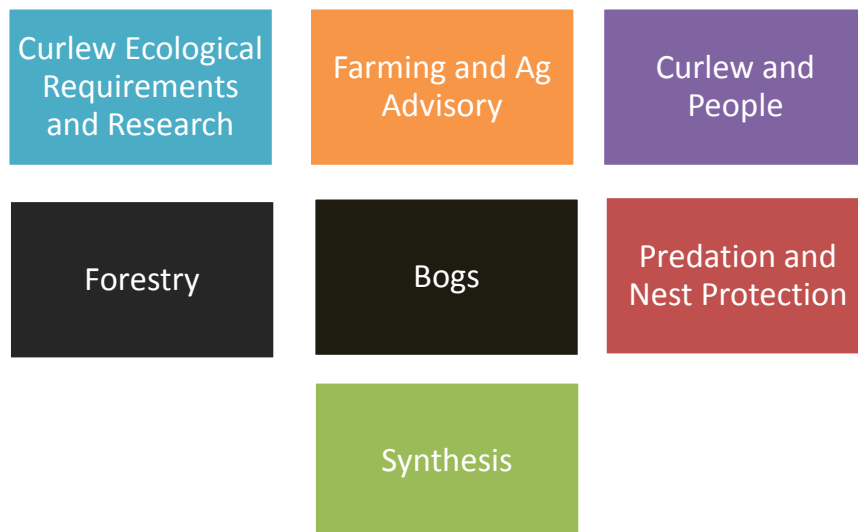


Figure 1. Sub-groups of the Curlew Task Force

# Introduction

The Curlew Conservation Programme has been designed to deliver action on the ground, at a local level, empowering local people to take ownership and involvement. Dr. Barry O'Donoghue, Head of Agri-Ecology Unit with NPWS manages this programme. Inaugural efforts in 2017 allowed the project and its local teams to gain a presence in six core areas (Figure 2), which accounted for 55% of pairs confirmed in the national breeding survey in 2015 and 2016. Action was implemented in the form of field surveys, working with landowners to protect nests from predation (seen as the greatest constraint to breeding success) and limited habitat enhancement. Each area had a locally based team (primarily consisting of local people) to carry out this action. The efficacy of the efforts will ultimately be determined by a research project, undertaken through University College Dublin. In total, 16 people were enlisted on the local teams between April and August 2017.

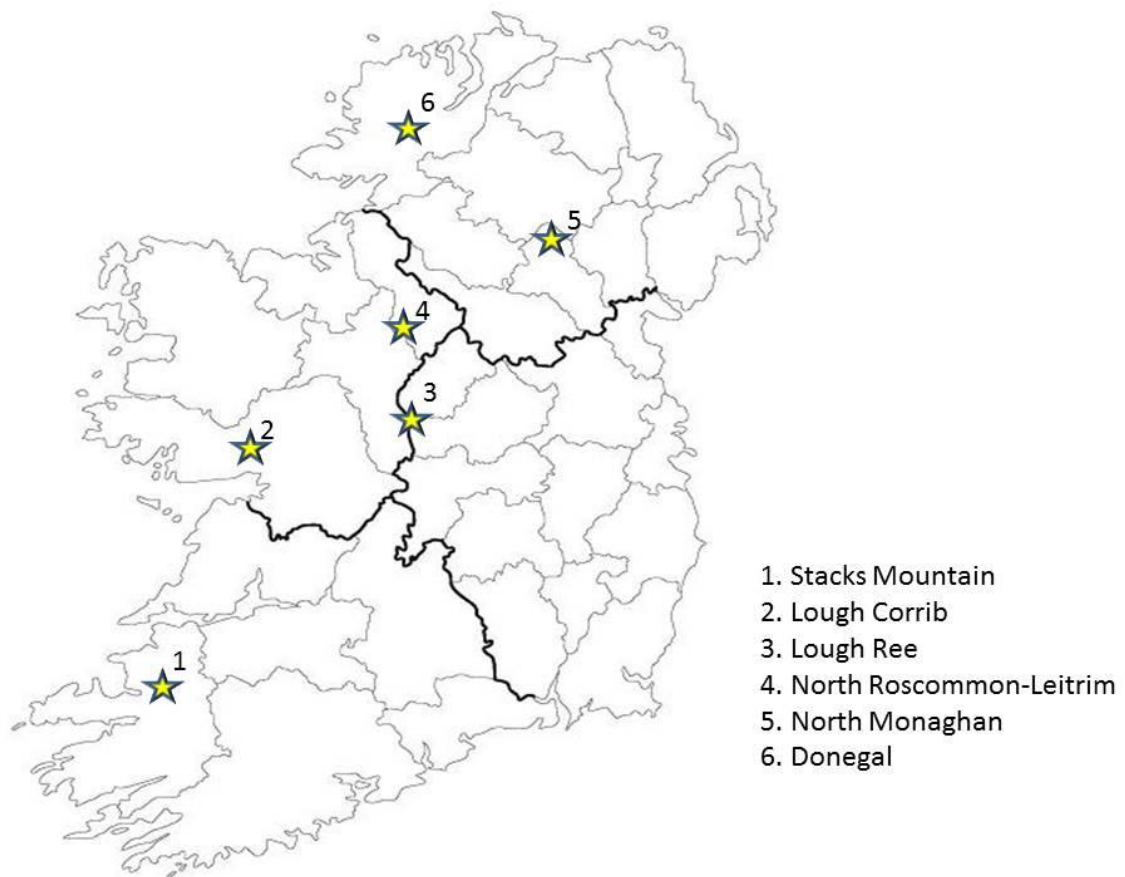


Figure 2. The six Curlew Conservation Action Areas: Stacks Mountains, Lough Corrib, Lough Ree, North Roscommon/Leitrim, Monaghan and Donegal.

# Local Action – the Curlew Conservation Team and the Curlew Conservation Partnership

## Curlew Advisory Officer

This was the lead role locally. The Curlew Advisory Officer (CAO) was the primary link between their local project team, the local community and the Curlew Conservation Programme manager. The CAO was tasked with nest finding, nest protection, liaising with and providing advice to landowners and team members on curlew conservation, local administration, ecological recording.

## Local Curlew Champion

This was a pivotal role and was the key to fostering positive relations between the project and the community. The difference between an agri-environment scheme and an agri-environment scheme that achieves real 'buy in' and vision, is respect and understanding by the landowners and local community. This is best achieved by local people hearing positive soundings from local people. The Curlew Champion was tasked with encouraging close working relationships between project personnel and landowners, forming a local Curlew discussion group, organising meetings, building a positive profile for Curlew and the NPWS Curlew Conservation Project among landowners and local community, highlighting issues and proposing solutions for landowners and the project.

## Curlew Nest Protection Officer

One of the key constraints for breeding Curlew is the difficulties they are experiencing in hatching eggs and rearing young (Franks et al., 2017). Predation is believed to be a main cause of breeding failure (Ainsworth et al., 2016). In effort to address the issue of predation, a two-pronged approach was designed – nest protection fences and predator control. The role of the Nest Protection Officer was to be to humanely and legally cull Fox, Mink, Hooded Crow and Magpie solely in the vicinity of Curlew breeding territories (within 1km of nest sites). The Nest Protection Officer was also to assist in efforts to find breeding Curlew, and indeed in assembling and maintaining nest protection fences. The presence of Nest Protection Officers proved to be largely welcomed by locals, particularly livestock farmers. The efficacy of the predator control efforts employed shall be critically analysed by the Curlew Research Officer.

## Curlew Research Officer

The measures undertaken as part of the Curlew Conservation Programme to be rolled out over the coming years are accompanied by a research element. This is to be undertaken at University College Dublin, primarily by a Post-Doctoral researcher, allied with one or two MSc students. The research will also consider the human element of this conservation story, including what landowners and

conservationists require in terms of a successful conservation framework. This is a vital role to inform how well the conservation efforts are working, in order to ensure further efforts are well targeted and informed.

#### **Local Curlew Action Teams – working together with NPWS and landowners to help Curlew**



Figure 3. Curlew Action Teams

#### Curlew Conservation Partnership

In order to engage proactively with those who own and manage lands where Curlew breed, the Curlew Conservation Partnership has been designed to allow payments for landowners (primarily farmers, but also others as appropriate) for their time and efforts with the Curlew Conservation Programme. Payments are operated under the auspices of the National Parks & Wildlife Service Farm Plan Scheme (NPWS, 2017) and any double-funding/contradiction for works planned under the Green Low-carbon Agri-environment Scheme (GLAS) are avoided. Plans are designed and agreed with landowners/land managers to deliver a better environment for breeding Curlew. Payments can be made for various aspects of creating and improving habitats and for a participant's time investment in liaising with the local CAT. The partnership element is a very important consideration and over time, it is envisaged that strong and positive relationships will be built between the local landowners/land managers and the local CAT.



# Local Action in 2017

## Areas and Personnel

As already stated, the first year of the Curlew Conservation Programme saw direct efforts in the following Curlew areas:

- Stack's Mountains (County Kerry)
- Lough Corrib
- Lough Ree
- North Roscommon/Leitrim
- North Monaghan
- Donegal

In all of these areas apart from Lough Corrib, the Curlew Action Teams were comprised of a Curlew Advisory Officer, a Nest Protection Officer and a local Curlew Champion. In Lough Corrib, regional staff of the National Parks & Wildlife Service carried out survey work, liaised with local landowners and engaged a nest protection officer employed on contract for various projects in the NPWS Western Region. Indeed, NPWS regional staff were central to the efforts of the Curlew Conservation Partnership in the North Midlands Region also, which incorporates the Lough Ree, North Roscommon/Leitrim and North Monaghan areas. In Donegal, the Curlew Conservation Programme and the INTERREG Va programme entitled Cooperation Across Borders for Biodiversity or 'CABB' (carried out by the Royal Society for the Protection of Birds, BirdWatch Ireland, Northern Ireland Water, Butterfly Conservation and Moors for the Future) aimed to realise synergies, by virtue of close working relationships between the National Parks & Wildlife Service and BirdWatch Ireland. Support was also present in Donegal from Regional NPWS there.

## Surveys

Surveys were largely focussed within 3km of Curlew territories known from the 2015 and 2016 surveys, but were not limited to these areas and a wide net was cast by the Curlew Action Teams where they sought and received reports of Curlews from elsewhere in their regions. Posters at strategic locations (e.g. livestock marts), word of mouth and local media including newspapers and radio were used to seek reports of Curlew during the breeding season. Curlew Action Teams and/or NPWS staff in each area adopted survey techniques to suit their landscape, terrain and individual circumstances. A combination of walkover surveys, vantage point surveys, use of tape lures and discussions with local landowners were used. For the lake areas (Lough Corrib and Lough Ree), logistics included the use of boats to access islands and this brought its own intricacies (in terms of avoiding disturbance of birds as boats approached the islands). Even though each CAT had the flexibility to adopt the survey techniques that best suited their local requirements, data collection was standardised and collated centrally.

Some of the core objectives of the survey work were to determine as closely as possible, where the Curlew were nesting, where they were feeding and the outcomes of the breeding efforts. Determining nest and feeding locations was imperative to directing nest protection efforts and

informing habitat maintenance, creation and enhancement works. These data and data pertaining to breeding results would also be central to the research project that follows the action on the ground, in order to determine the efficacy of measures carried out, to learn more about Curlew ecology in Ireland and to monitor location population trends over the coming years.

### Nest Protection

Predation of Curlew nests (eggs and chicks) has been identified as excessive and population viability analysis shows that in the absence of action, Curlew will no longer exist as a native Irish breeding bird after 2025. Nest Protection efforts in 2017 primarily focussed on the targeted removal of American Mink (*Neovison vison*), Red Fox (*Vulpes vulpes*), Magpie (*Pica pica*) and Hooded Crow (*Corvus corone*). Nest protection fences, though available, were not deployed in 2017, mainly due to the fact that CATs were not definite on nest locations for a number of reasons, which are hoped to be overcome in future years.



Figure 4. Curlew nest in County Kildare, with broken egg shells. © Tom McCormack

### Habitat Enhancement

Habitat enhancement works were planned at with just 3 landowners in 2017, all in the Lough Ree area. These works entailed the removal of gorse and blackthorn scrub that had encroached on what was previously species rich grassland and open terrain that would have been favoured by a range of breeding waders, including Curlew. The scrub not only directly subsumed habitat, but also had the impact of harbouring predators and deterring Curlew from using the general area. The locations where the works were planned were strategically located to provide habitat to birds breeding on

nearby islands on the lake and it is hoped to record Curlew feeding and even breeding on the newly created and enhanced habitats in future years.

There were various other locations across the country where habitat enhancement works were proposed by the CATs, but were not carried out, in order to avoid double-funding or contradiction with GLAS. For example, in the Stack's Mountains, Curlew territories exist entirely within a Special Protection Area for Hen Harriers and the landowners that the local CAT engaged with were all in GLAS, being paid to manage habitats for Hen Harrier (with associated benefits for various other species). This management included the control of rush where it became excessive for Hen Harrier.



Figure 5. Areas demarcated for scrub clearance under the Curlew Conservation Partnership. Note, hedgerows remain undisturbed.

## Populations (numbers and breeding outcomes)

From survey efforts undertaken in 2015 and 2016 (O'Donoghue et al., in prep), the six areas concentrated on for the inaugural year of the Curlew Conservation Programme were found to have a total of 68 breeding pairs of Curlew. This accounted for 55% of the 124 breeding pairs found in the first National Breeding Curlew Survey in 2015 and 2016 (excluding the Shannon Callows, where an additional 14 pairs were found in 2017).

Of the 68 pairs that were previously confirmed in 2015 and 2016, just 44 were confirmed to be still present in 2017. This represents a staggering 35% loss within 1-2 years and resonates with what some experts fear could be an aging population of Curlew in Ireland, which would make population recovery all the more difficult. A total of 16 new breeding territories were located across the six areas in 2017. At least 9 of these were on Lough Ree, where there have been systematic predator control efforts for a variety of threatened bird species for the past 8 years and where these efforts are appearing to pay dividends (see also breeding productivity for Lough Ree). A further two 'new' sites were discovered by the North Roscommon/Leitrim CAT, outside of the original survey areas. The increase presence of a dedicated Curlew Action Team in each of the areas as well as a strong media presence and the opportunity for landowners to partake in the Curlew Conservation Partnership would have been instrumental in discovering a handful of other new sites across the action areas. Overall, in 2017 there 60 pairs confirmed; representing 12% less breeding Curlew pairs known in these areas than was accounted for in 2015 and 2016. This however masks what is a dramatic free-fall in territories that were known in 2015 and 2016; a free-fall that is readily apparent when considered nationally, with a decline of 97% since the late 1980s. Given the sensitive nature of the species, the locations of the pairs are held by the National Parks & Wildlife Service and may be made available upon request, subject to a data sharing agreement.

Of the 60 pairs confirmed breeding, the breeding outcomes of at least 44 were determined with confidence (results from some sites were inconclusive). Just 14 (32%) of the confirmed pairs these pairs were believed to have reared chicks. In other words, 30 (68%) of these pairs were unsuccessful in their attempts to rear chicks, with predation noted as the primary cause of failure. From the 14 territories that were successful in rearing young, 16 chicks were recorded to have fledged. Overall, the breeding productivity across the six areas is calculated at 0.38 fledglings per pair, which is below the threshold of 0.48-0.62 fledglings per pair required for a sustainable population (Grant et al., 2009).

Table 2 summarises the survey results for each of the six areas associated with the inaugural year of the Curlew Conservation Programme.

Table 2. Survey results for breeding Curlew in Stack's Mountains (County Kerry), Lough Corrib, Lough Ree, North Roscommon/Leitrim, North Monaghan and Donegal

Area	Pairs Previously Known (2015/16)	Of Which Active in 2017	New Sites 2017	Breeding Attempts 2017	Other Sites 2017 (e.g. singles)	Successful Sites	Unsuccessful Sites	Young Hatched	Young Reared	Productivity
Stacks	13	5	2	6	1	2	4	6	4	0.666667
Lough Ree	4	4	10	13	1	6	7	12	8	0.615385
North Roscommon-Leitrim*	21	12	5	17	0	4	13	4	2	0.117647
Monaghan	4	4	0	4	0	1	3	1	1	0.25
Donegal	8	4	1	5	0	1	4	2	2	0.4
Lough Corrib	18	15	0	15	0					
All	68	44	18	60	2	14	31	25	17	0.377778

\*The CAT for North Roscommon-Leitrim also discovered some sites outside of the original survey area in neighbouring counties Cavan and Mayo.

Lough Ree stood out in terms of population growth and had a favourable breeding productivity rate. Lough Ree has had a relatively long-standing (8 years) predator control effort, organised by regional National Parks & Wildlife Service management. It is hoped that this breeding productivity and population growth can be sustained and indeed improved in future years; particularly now that there is a dedicated programme for Curlew and that the Curlew Conservation Partnership offers the opportunity for improving habitat in the area.

The Stack's Mountains in Kerry also had a favourable breeding productivity in 2017, but of great concern is the decline in known breeding pairs, from 13 when surveyed in 2015 to 6 in 2017.

Lough Corrib saw survey effort by regional NPWS staff. A population decrease on previous years was noted, but not to the extent of elsewhere. The Curlews on Lough Corrib predominantly nest on islands and it is believed that predators will not infiltrate islands as readily as they will on mainland



sites. There was no breeding success or breeding productivity data for Curlew available for Lough Corrib in 2017.

Monaghan's relatively small, yet important population remained stable since it was originally surveyed in 2015, with 4 pairs. However, with just one chick fledged successfully in 2017, it is clear that breeding productivity will have to improve if the population is to be sustained.

North Roscommon/Leitrim had the lowest breeding productivity. This area had the greatest number of sites to cover in terms of survey effort and nest protection and this is likely to have had a bearing on the confidence of survey results and the efficacy of predator control effort.

In Donegal, the Curlew Action Team, allied with operatives of BirdWatch Ireland on the CABB programme found just half of the pairs that were present in 2015. This is of great concern, particularly given the efforts of BirdWatch Ireland in previous years through the Halting Environmental Loss Project (HELP) which ran between 2011 and 2014, focussing solely on habitat works. It is clear that a combination of habitat works and nest protection efforts are required going forward.



Figure 6. A young Curlew chick in Monaghan © Joe Shannon, Curlew Conservation Programme 2017

## Research

A programme of research has been finalised and agreed between the National Parks & Wildlife Service of the Department of Culture, Heritage & the Gaeltacht and University College Dublin. This will incorporate data from the 2017 season and forthcoming seasons, with the primary objectives of furthering knowledge of Curlew ecological requirements and the examining in greater detail the issues affecting their conservation; as well as critically analysing the impact of the Curlew Conservation Programme so that conservation action on the ground can continue to evolve and improve.

## Recommendations

The first year of any programme is always going to be a learning process. The Management of the Curlew Conservation Programme continuously sought feedback from national and international experts, the Curlew Action Teams, regional NPWS staff, landowners and land managers in order to progress and evolve the methods and overall approach taken. The Curlew Task Force will provide further guidance in this regard and it is fair to say that the Curlew Conservation Programme has certainly provided a very valuable test bed for trialling, enacting and learning from conservation measures on the ground. This will in turn, progress the discussions of the Curlew Task Force itself. The Curlew Conservation Programme is also providing very valuable data and opening up avenues to progress knowledge of Curlew ecology and indeed individual breeding territories across Ireland. Above all, this inaugural year of the programme has provided the first steps in arresting what are by any consideration, massive declines, for one of Ireland's most loved yet threatened parts of our natural heritage. The programme will continue to 'do' and 'learn by doing'. The following are just some of the recommendations arising from the first year of the Curlew Conservation Programme:

- Synergies can be realised between the Curlew Conservation Programme and the national agri-environment scheme, GLAS. Curlew Action Teams could provide added value to plans aimed at benefitting Curlew and their habitats by advising GLAS participants, while with advice; simple, complementary measures or minor amendments (e.g. in timing and intensity of rush cutting) could be undertaken by GLAS participants that are not undertaking measures for Curlew.
- It would be beneficial to start survey efforts earlier; from 01 April. This will be possible from 2018 onwards, now that the Curlew Conservation Programme has been established. Due to budgets, Personnel were not awarded contracts in 2017 until 06 April and in reality, it was 10 April before survey work was underway.
- Now that the Curlew Conservation Programme has established a presence in core breeding areas, it is envisaged that nest finding will become a more central and prevalent feature in future years, given less time will have to be spent by the project Personnel familiarising themselves with logistics, land ownership, terrain, local people, etc.

- Advice has been received from international experts on Curlew nest finding and should be taken into account by CATs hoping to find Curlew nests to effect conservation action.
- There will be a greater emphasis by Nest Protection Officers on liaising with local gun clubs.
- It would be useful to identify responsible and reliable volunteers to enlist early on, to help with survey efforts. This will not only benefit the project, but provide useful experience for those aspiring to work in conservation and build knowledge of Curlew ecology in Ireland.
- A lead Nest Protection Officer role is to be considered to provide strategic overview and leadership on nest protection efforts.
- An inventory of required resources for nest protection would be useful.
- Nest protection efforts and survey efforts on Lough Corrib could be increased. Given the positive experiences of breeding wader programmes on islands on the River Erne and River Shannon systems, including now on Lough Ree, Lough Corrib holds great potential for securing and indeed expanding the significant breeding Curlew population there.
- Nest protection fences need to be trialled “off season”. Different types of fences need to be trialled.
- The Curlew Champion role could be expanded to formally include nest finding (assisting the Curlew Advisory Officer) and school visits, local events and greater local media presence.



Figure 7. Soft Rush (*Juncus effusus*) cover at an excessive level for Curlew. © Patrick McGurn 2017





Figure 8. An example of capital works (scrub clearance, scrape creation and predator proof fencing) undertaken for breeding waders, in partnership between the farmer, the National Parks & Wildlife Service and BirdWatch Ireland.

## Conclusion

It is clear that one of the greatest conservation challenges for Ireland lies ahead. On the positive front however, the Curlew Conservation Programme has built skillsets, experience and momentum in its inaugural year. The programme is widely supported. There are examples of local efforts, including through this programme, that offer promise and hope that the drastic declines can be halted locally and even turned around.

The Curlew Conservation Programme will continue into the future, acting for Curlew conservation with local people and continuously learning valuable lessons along the way in what is essentially a pioneering project to support a species that is a very well respected part of the Irish avifauna, landscape, culture and heritage.

# Acknowledgements

All who attended the Curlews in Crisis conference in Higginstown in November 2016.

Minister Heather Humphreys for establishing the Curlew Task Force. Katherine Licken and Niall Ó Donnchú for their interest in and support of the Curlew Conservation Programme.

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There are other local efforts underway for Curlew across Ireland, including by Robert and Helen Birtwistle Patrick Dunning, Mick O'Hehir, David Fallon, Paddy Sheridan, Tom McCormack, Nuala Madigan, Katie Geraghty and Michael Bell.

Finally, Mary Colwell for her inspiration. Our first steps have now been taken.

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