A Framework for Corncrake Conservation to 2022

National Parks & Wildlife Service,

Department of Arts, Heritage & the Gaeltacht.

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An Roinn
Ealaíon, Oidhreachta agus Gaeltachta
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Contents

Front cover photograph: Corncrake calling in nettles on Tory Island.

Current status

The Corncrake (*Crex crex*) is the most terrestrial member of the Rallidae family whose breeding grounds extend from Ireland to Asiatic Russia in the northern hemisphere. The Corncrake winters in southern and eastern Africa, migrating northwards to arrive on its breeding grounds from early April onwards and departing again in August and September.

The Corncrake is listed on Annex I of the Birds Directive (2009/147/EC); is classed as 'Least Concern' by the IUCN Red List criteria. However, in Ireland, on account of the large decreases in both numbers and range, it is on the Red List of Conservation Concern. The most recent assessment of Corncrakes in Ireland, submitted in Ireland's report to the EU under Article 12 of the Birds Directive, notes an 85% decrease in population since 1978 and a 92% decrease in range[1].

Throughout their range in Northwest Europe, Corncrakes depend on people to provide and manage habitat in a way that provides suitable cover throughout the breeding season. At all times, corncrakes require the cover of tall vegetation (>20cm) and are strongly associated with meadows which are harvested annually, where they nest and feed. Annual cutting creates a sward with an open structure, which is easy for the birds to move through, but harvesting means they must find alternative cover adjacent to meadows late in the season. Farming therefore plays a key role in the establishment, maintenance and conservation of Corncrake habitat.

In Ireland, adults arrive on the breeding grounds usually before meadow grass is tall enough to conceal them and so they seek cover in stands of early growing tall vegetation, such as nettles, umbellifers and reed canary grass. Depending on the prevailing climate and grassland management regime of the area, first nests may be located in this vegetation, as meadow grass may still be too short in early May. Alternatively, as soon as meadow grass is tall enough (c. 20cm in height), they can move into meadows to breed. Corncrakes are double brooded, with a peak of first hatching in early June and of second hatching in late July. The young are led away from the nest within 24 hours and are independent after about 2 weeks, but do not fledge until they are five weeks old. The consequence of this breeding schedule is that nests and females accompanying broods are present in meadows from early

[1] Department of Arts, Heritage & the Gaeltacht (2014). Article 12 Assessment Reports to European Commission.

May until mid-August and some flightless young are still present until mid-September or later.

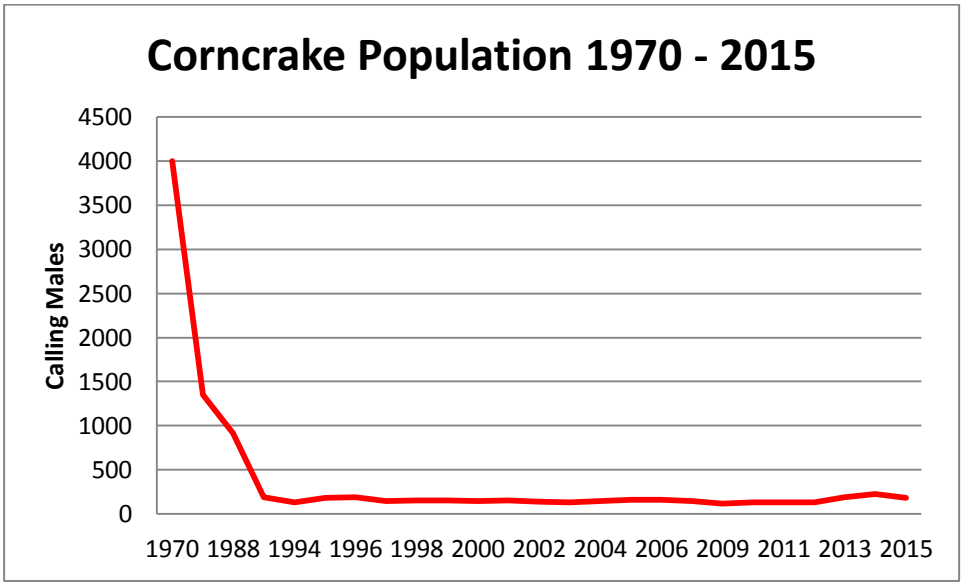


Figure 1. Irish Conrcrake Population 1970 - 2015.

The traditional type of farming that existed from the 18th century through to the outset of the Common Agricultural Policy (CAP) era suited Corncrakes. Farms were not as 'specialised' in enterprise as they are today; but were rather mixed, whereby a single farm could have had cows, sheep, pigs, poultry, tillage and vegetables. The mixed approach to farming provided a mosaic of habitats from oats to meadows to gardens and pastures. Oats were generally planted in the Autumn and provided cover for Corncrakes upon their arrival from Africa in late Spring and early Summer, along with other patches of cover that included Yellow Iris and Nettles. Following the harvest of the oats, meadows that were relatively light in yield would have provided cover for breeding Corncrakes and these meadows would not have been cut for hay until late in the summer, by which time the Corncrakes could have reared one or two broods. The advent of more specialised and intensive agriculture saw increased stock numbers, increased mechanisation, greater fertilisation, a change from natural and semi-natural grassland to high yielding and thick rye-grass swards and earlier and more frequent harvesting. The resulting implications on the Corncrake population speak for themselves. While the Corncrake is known to have been very common and widespread across Ireland up to the latter half of the 20th century, it was not until the 1969-1972 Atlas of

Breeding birds in Britain and Ireland[2] that a national population estimate of 4000 pairs of Corncrakes was produced. A survey by the Irish Wildbird Conservancy (IWC) in 1978 produced an estimate of 1200-1500 pairs[3]. Just a decade later, by 1988, the population was estimated to be between 903-929 pairs[4]. When systematic annual national survey and conservation effort began in 1993, it was clear that the Corncrake population has declined massively, with just 189 calling males recorded in the Republic of Ireland. The population at this stage was confined to four geographical regions – Donegal, West Connacht, the Shannon Callows and the Moy catchment.

While the population appears to have at least stabilised from a previous plummet towards a nadir (Figure 1), both the Moy Catchment (1999) and the Shannon Callows (2015) are now extinct as breeding sites for Corncrake (Figure 2). The fact that Corncrakes are now effectively confined to Donegal and West Connacht is a serious cause of concern and the importance of supporting Corncrake populations in these remaining strongholds cannot be underestimated.

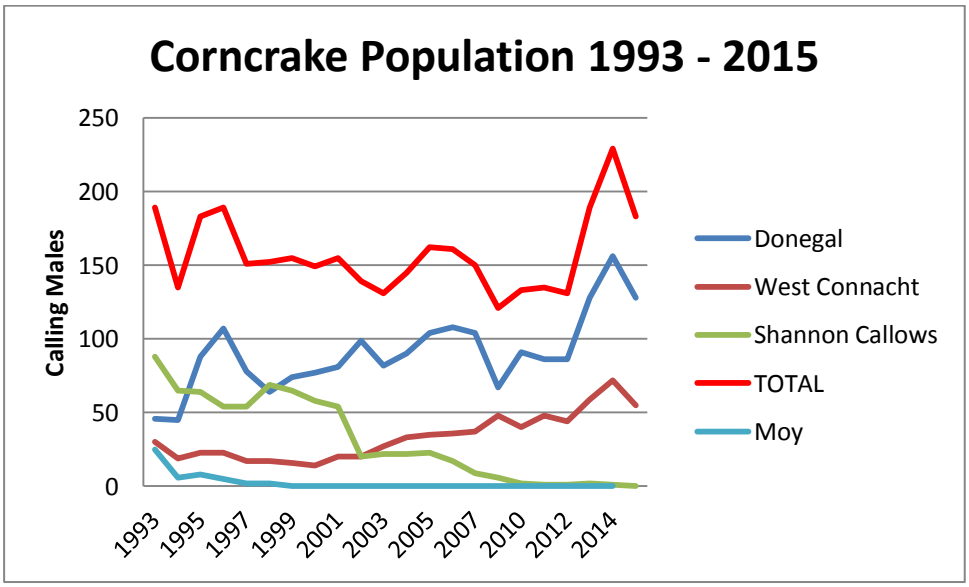


Figure 2. Corncrake population in Ireland 1993-2015.

Despite the significant changes in landscape, farming enterprise and habitats, one feature remains constant; that the needs of the Corncrake are very much dependent on people. This is a key acknowledgement and theme of this strategy for Corncrake conservation in Ireland.

[2] Sharrock, J.T.R. (1967). *The Atlas of breeding birds in Britain and Ireland. Poyser*, Berkhamsted.
[3] O'Meara, M. (1979). Distribution and numbers of Corncrakes in Ireland in 1978. *Irish Birds* 1: 382-405
[4] Mayes, E. & Stowe, T.J. (1989) The status and distribution of the Corncrake in Ireland. *Irish Birds* 4: 1-12.

Current factors causing loss or decline

The move from hay-making to silage, homogenisation of agricultural enterprise, drainage of damp ground, increased fertiliser applications, reseeding with more productive grasses and the use of bigger, more efficient machinery, have all led to earlier average mowing dates and a shorter harvest period across much of the Corncrake's range. Silage production spread into the west of Ireland in the 1980s and rapidly became the preferred method of grass harvesting.

A mean first mowing date of 10 August, i.e., after the peak of hatching of second broods, is now known to be essential for Corncrake conservation, together with an extended mowing season, which leaves at least some cover into September. In countries which have experienced rapid declines, these conditions are rare. For example, in Ireland, first cuts of silage usually take place in May or June and hay is normally harvested in June or July. Multiple cuts are a feature of grassland management on many farms. As mowing machinery has become more advanced, the harvest is also now completed over a shorter period of time.

The conventional practice of mowing fields, from the outer edge towards the middle, traps birds in an ever-decreasing patch of cover. As they are reluctant to leave this cover, such mowing inevitably leads to mortality.

More intensive grassland management has also led to habitat fragmentation. Corncrakes prefer species rich, unimproved or semi-improved meadows, as improved grasses become too dense for birds to penetrate easily. It has been suggested that 150ha of relatively contiguous suitable meadow in sympathetic management is ideally required to sustain a viable population. Such blocks of habitat are rare in Ireland outside the core Corncrake areas.

In addition to lack of cover in meadows at the start of the season, Corncrakes are also often faced with a similar lack of cover after harvesting. Second brood chicks and females, who are the last to leave the breeding grounds in September, may therefore be vulnerable to predation at this time, if the cover available to them is inadequate or fragmented.

In some areas, other factors such as development pressure, abandonment of farmland or changes in grassland management regimes may have reduced the amount of suitable grassland available and this in turn may have affected Corncrake populations. Summer flooding in the Shannon Callows has been a major factor in the decline there since 2000.

The All-Ireland Species Action Plan

The All-Ireland Species Action Plan was published jointly in 2005 by Environment and Heritage Service, Department of the Environment, Northern Ireland and NPWS, Department of the Environment, Heritage and Local Government, Ireland. This plan sets out five targets:

1. Maintain the existing number and range of Corncrakes in Ireland.
2. Maintain Corncrake population in the three core areas in the Republic of Ireland at or above 2003 levels (131 calling males).
3. By 2010, increase the populations of the three core areas to 150 in Donegal, 50 in West Connacht and 60 in the Shannon Callows.
4. By 2010, establish a population of 7 singing males on Rathlin Island.
5. By 2015, re-establish breeding populations in other parts of its former range, in suitable areas in both Northern Ireland and the Republic of Ireland.

It is unlikely that Target 5 will be met unless agri-environmental Schemes for Corncrake are expanded beyond the Corncrake SPA network.

Targets 1, 2, 3 and 4 have not been met, though it could be argued that only for increased summer flooding intensity in the Shannon Callows, Targets 1, 2 and 3 would in fact have been met and surpassed (i.e. conservation efforts that were not dictated by climatic

incidents have been shown to work in the Republic of Ireland). It is unlikely that Target 5 will be met unless agri-environmental Schemes for Corncrake are expanded beyond the Corncrake SPA network or unless re-introduction schemes are considered viable and appropriate. The immediate focus of work will continue to be in the main breeding areas of Donegal and West Connacht.

The implementation of Corncrake conservation measures

Corncrake conservation work is composed of the following primary elements:

- Continued monitoring
- Continuation and expansion of a range of schemes to protect birds and to provide adequate habitat
- Predator control in areas where it may prove effective
- Management of the Corncrake SPA network

The formulation and implementation of this strategy is overseen by a Steering Committee comprising staff of the National Parks and Wildlife Service of the Department of Arts, Heritage and the Gaeltacht and BirdWatch Ireland. The Steering Committee may also consult with other relevant Departments including Department of Agriculture, Food & the Marine, other State bodies, landowner representative groups and Non-Governmental Organisations.

A set of Corncrake Conservation tasks has been developed and agreed by Steering Committee. Responsibility for the management of the delivery of the compensation schemes and habitat enhancement measures rests with a project manager appointed by NPWS.

Monitoring

Ireland has had a comprehensive monitoring scheme covering all core Corncrake areas since 1993 and has a dataset which can describe Corncrake population and distribution trends. This annual monitoring will continue.

Mowing watches will continue to be used to ensure adherence to the legal requirements concerning activities requiring consent (ARCs) within SPAs and contractual and legal compliance within and outside of sites.

Corncrake Conservation Schemes

There are four established management schemes currently in existence:

1. NPWS Corncrake Grant Scheme (CGS)
2. NPWS Corncrake Farm Plan Scheme (CFPS)
3. Agri-Environment Options Scheme (AEOS) closed to new applicants, though existing plans may remain in operation
4. Green Low-carbon Agri-environment Scheme (GLAS)

As well as these schemes, further conservation efforts of note are the ongoing habitat creation and management works undertaken by BirdWatch Ireland and others in Corncrake areas. NPWS has purchased some land in key Corncrake areas in order to secure long term management initiatives in these areas into the future. Further works are carried out on other lands and are described in the Annual Corncrake Reports published by the National Parks & Wildlife Service.

1. NPWS Corncrake Grant Scheme (CGS)

The CGS is a voluntary, short-term management agreement with farmers or landowners designed to protect nesting Corncrakes. It has been offered in the Shannon Callows, West Connacht and Donegal since 1994. The principal elements are payments to landowners for the delay of mowing or grazing, and centre-out mowing. For further details including payment rate structure see Appendix I.

2. NPWS Corncrake Farm Plan Scheme (CFPS)

The aim of this scheme is to sign up farmers to a five year plan for creation and maintenance of early and late cover and delayed mowing of adjacent meadows. Key to this 5-year CFPS is that the farmer will delay mowing until 15 July. However if a calling male is recorded in or within 250m of his land then the farmer is obliged to delay mowing until 20 August or 01 September and to mow in a Corncrake Friendly Method i.e. slow and centre-out. The 5-year farm plan scheme also allows the farmer to plan to farm in such a manner that the occurrence of Corncrake on his land will not seriously disrupt his year to year practices.

Early cover is an essential requirement, currently limiting populations in Donegal and West Connacht. Its creation takes 2-3 years, therefore a 5-year plan period is necessary for effective delivery. Cover is needed from first arrival in late April, so tillage crops like potatoes or cereals are not an adequate alternative. Meadows dominated by soft grasses tend to lodge overwinter and become impenetrable, which is why early cover prescriptions focus on rigid or stiff-stemmed but sparsely-growing species such as cow parsley and nettles.

In Donegal and West Connacht, early cover is provided through a five-year agreement, in blocks of at least 0.10 ha, to account for at least 5% of the overall land managed for Corncrake. See Appendix II for further details of the Farm Plan Scheme. For more information consult the NPWS website[5].

To date ten farms have been entered into the Corncrake Farm Plan Scheme. This five year agreement covers a combined area of 59.24ha in the Mullet Peninsula SPA, the Fanad Head SPA and the Malin Head SPA. Roughly 5% (2.98ha) of the total area under agreement is targeted for the creation of Early Cover Plots and their maintenance throughout the five year tenure of the agreements (see Appendix II for further details). NPWS intend to invest in more plans in future years, as budgets allow. The preferred approach is to target areas

[5] http://www.npws.ie/farmerslandowners/schemes/pilotcorncrakefarmplanscheme

contiguous to existing plans, to form a larger land management unit, which can attract and support Corncrakes.

In addition to the direct creation of Corncrake habitat and the securing of uncut tall hay meadow and pasture until the end of the breeding season, further conservation benefits can be realised from these agreements:

- They can be used as examples to show other members of the farming community within the Corncrake SPAs that effective Corncrake conservation management can be undertaken in a manner that does not impact negatively on farm income or enterprise.
- Outside of some smaller scale management initiatives the CFPS is the first scheme to support the creation of ELC plots on a large scale. The logistics of creating these plots in terms of sourcing and applying sufficient farm yard manure, sourcing and planting sufficient numbers of nettle and iris rhizomes and promoting the growth of other early cover plant species (e.g. cow parsley, hogweed) are still a work in progress. These particular farms are also using complementary methods for the establishment of such plots (i.e. the rotting down of round bales as a partial substitute to the application of FYM).
- It is intended that these farm agreements (and associated administrative procedures) will be used as a training resource for future NPWS appointed Farm Planners to promote and support the creation of new NPWS Corncrake Farm Plans.

3. *Agri-Environment Options Scheme (AEOS)*

AEOS was administered by the Department of Agriculture, Food and the Marine and was open to farmers throughout the state. Plans under AEOS had Corncrake measures but are currently closed to new entrants, although existing plans may still be in operation.

4. *Green Low-carbon Agri-environment Scheme (GLAS).*

Under the Rural Development Programme 2014 – 2020, Corncrake has been identified as a priority for targeting agri-environment payments for conservation. The National Parks &

Wildlife Service of the Department of Arts, Heritage & the Gaeltacht and the Department of Agriculture, Food & the Marine worked together to produce a prescription (see Appendix IV) for Corncrake and identified the most important areas for targeting. The first plans commenced in October 2015 (2016 will be the first breeding season for the GLAS Corncrake prescription). The GLAS corncrake measure is applied in Corncrake SPAs, with the exception of the Middle Shannon Callows SPA.

Management of land for Corncrakes outside Corncrake SPAs

Landowners sometimes agree to the creation of ELC patches on their land on a voluntary basis. However many landowners view the introduction of the targeted plant species on their land as undesirable. Another method used to create early cover is the fertilisation and exclusion of stock from marginal plots of land. This allows the natural vegetation to grow faster than in surrounding fields and can provide early cover in time for the arrival of breeding corncrakes. A €5,000 budget was allocated for the cost of habitat management work in 2014.

Table 1 summarises the area and distribution of habitat managed in this manner in 2014 and the number of calling males confirmed in this habitat. The figures for ELC in this table refer to that created outside of SPA boundaries only. Land was fertilised both inside and outside of SPAs in Co. Mayo and Co. Galway, and solely within SPA boundaries in Co. Donegal. The number of calling birds refers to males recorded in land fertilised both inside and outside of SPAs and in ELC outside of SPAs only.

Table 1: Breakdown of habitat management and calling males recorded in NPWS managed land.

Area	ELC Created	Land Fertilised (ha)	No. of calling males
Donegal	0.2	26.6	4
West Connacht	7.91	47.3	18
Total	**8.11**	**83.5**	**22**

Predator control actions for Corncrake conservation

The impact of predators on breeding Corncrake is regarded as a potential threat particularly in areas of where the suitable habitat is fragmented, or on islands that are subject to a high degree of grazing pressure and/or where cover is in short supply, or where numbers of Corncrake are very low. Targeted predator control has been carried out in the three core Corncrake areas since 2010. The recent increases in Corncrake numbers in areas where predator control has taken place may be a reflection of this control, though it is difficult to identify the impact of predator control in isolation from other initiatives. This predator control is also likely to be of benefit to other species of conservation concern.

The Corncrake SPA Network

Almost 10,000ha are included in SPAs selected for Corncrake (Table). It should also be noted SPAs designated for features other than Corncrake (e.g. Ardboline and Horse Island SPA; and Inishshark, High Island and Davillaun SPA) also have records of breeding Corncrake.

Historical Corncrake distribution data (1994–2007 inclusive) were used to define the boundaries of the newly proposed Corncrake SPAs. Using a five-year dataset within the period 2003-2007, the existing and proposed Corncrake SPA network accounted for approximately 66% of the national population of calling male Corncrakes. In 2014, 58% of the national Corncrake population occurred within Corncrake SPAs.

Further details on Corncrake sites and sub-sites selection for SPA designation can be found in Appendix III.

Table 2. The proposed Corncrake SPA Network

SPA code and site name		Area	Numbers of calling males 2003 – 2014											
			03	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**	**13**	**14**
4073	TORY ISLAND SPA	573	34	32	20	22	18	12	9	10	10	7	11	15
4083	INISHBOFIN, INISHDOOEY AND INISHBEG SPA	601	10	15	11	14	13	15	8	19	22	23	33	45
4146	MALIN HEAD SPA	286	4	8	8	8	6	6	5	9	0	6	4	11
4148	FANAD HEAD SPA	136	2	3	5	3	5	1	2	2	0	0	1	7
4149	FALCARRAGH TO MEENLARAGH SPA	315	9	6	13	10	5	3	1	1	0	3	2	2
4227	MULLET PENINSULA SPA (including Termoncarragh SPA)	733	4	6	3	5	6	13	14	14	13	10	10	13
4230	WEST DONEGAL ISLANDS SPA	1129	4	5	20	17	18	12	5	11	15	11	24	29
4231	INISHBOFIN, OMEY ISLAND AND TURBOT ISLAND SPA	183	7	6	9	13	13	11	7	8	14	12	14	16
4096	MIDDLE SHANNON CALLOWS SPA	5818	22	22	23	17	9	4	6	2	1	1	2	1
Total proposed area		9,774												
Total number of calling males associated with the Corncrake SPA Network*			96	103	108	106	88	70	53	73	76	58	101	134
Total number of calling males in Ireland			131	145	162	162	149	146	128	133	135	132	189	230
% Calling males associated with Corncrake SPA network*			73	71	67	65	59	48	41	55	56	44	53	58

*inside or within 250m of SPA boundary

Activities Requiring Consent in Corncrake SPAs

In order to safeguard the nationally/internationally important bird populations that occur within SPA sites, and the habitats that they utilise, a list of Activities Requiring Consent (ARCs) has been produced for each SPA site. A number of ARCs are selected for Corncrake SPAs, including one ARC which is unique to this species and included to protect breeding Corncrake and their nests from the potentially destructive impacts of hay/silage mowing at a critical period during their breeding cycle:

Mowing of grass crops [Consent is not required unless notice has been given that mowing on specified lands is likely to interfere with the breeding and reproduction of corncrakes during the period specified in the said notice.]

Middle Shannon Callows SPA

A great deal of effort has gone into the conservation of the Corncrake in the Middle Shannon Callows SPA. NPWS administered and funded agri-environment schemes (including Corncrake Grant Scheme, the Corncrake Farm Plan Scheme and additional top-up payments/emergency measures) have been paid to farmers on the Callows since 1994. Over €2.3m was spent on Shannon Callows farm plan schemes between 2008 and 2014. In addition to this, Department of Agriculture, Food and the Marine administered schemes such as REPS and AEOS.

However, in 2002, 2003, 2006, 2007, 2008 and 2012 heavy rainfall led to flooding events during the Corncrake breeding season. This contributed to an acute level of breeding failure, and led to severe declines in Corncrake numbers; from 23 in 2005 to just one in 2011 and 2012. While 2013 saw an increase in the number of calling males to 2 (during the census period), just one calling male was recorded in 2014 and finally in 2015, for the first time no Corncrake was heard on the Shannon Callows.

Given the fact that only one calling male was recorded in 2014 and none in 2015, following years with similarly low numbers, farmers throughout the Shannon Callows SPA are not prioritised for Corncrake measures in GLAS. The site will continue to be monitored on an annual basis and the NPWS Corncrake Grant Scheme will be used if birds are suspected to be breeding on the Callows.

Moy Valley IBA

In 2000, BirdLife International produced an updated list of Important Bird Areas (IBAs) in Europe[6]. Of the 140 Republic of Ireland IBAs, seven were listed for Corncrake (Table 3). The Moy Valley was not included in this list, although the IBA known as *Lough Conn and Lough Cullin (including Moy valley)* (IBA no. 047) is identified as an IBA for Whooper Swan. The publication also states that the Moy Valley was notable for breeding Corncrake with five pairs recorded in 1996. The European Court of Justice in Case C-418/04 found that Ireland ought to have classified the Moy Valley on the grounds that this area "had numerous Corncrakes in the 1980s until the mid-1990s… it follows that that site was one of the most suitable areas for conservation of the Corncrake… [which is] in line with the case-law cited in paragraph 37 of this judgement [Case C-3/96]."

Ireland does not propose to designate the Moy Valley on the grounds that such a designation would not be feasible for the following reasons:

- The long term absence of Corncrakes in the general area of the Moy Valley
- The disappearance of the Corncrake notwithstanding substantial suitable areas of habitat
- The distance from the Moy Valley to potential source stocks
- The reputational risk to the EU and Ireland

[6] Heath, M.F., and M.I. Evans, editors. 2000. Important bird areas in Europe: Priority sites for conservation. 2 vols. BirdLife International, Cambridge, UK.

Table 3. Corncrake IBAs

IBA Code	Site name
002	Malin Head
007	Fanad Head Peninsula
012	Tory Island
013	Inishbofin, Inishdooey and Inishbeg
014	Falcarragh to Min an Chladaigh
041	Broadhaven, Blacksod and Tullaghan Bays and parts of the Mullet peninsula
131	River Shannon Callows: Portumna – Athlone

Long term absence

Calling males have not been recorded in the Moy Valley since 1998. Although Corncrake conservation work was established in this region in 1993, the population of calling males declined steadily from 25 recorded calling males in 1993 to two in 1998 and to zero in 1999 (Table 4). [7]

Table 4. Number of calling males recorded in the Moy Valley 1993 - 2003

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Cmales	25	6	8	5	2	2	0	0	0	0	0

The disappearance of the Corncrake notwithstanding substantial suitable areas of habitat

[7] Gordon, T. (2003). Corncrake Fieldwork in Mayo and West Connacht, 2003 BirdWatch Ireland Conservation Report No. 03/8

A study of the extent and type of Corncrake habitat present in the Moy Valley around Foxford was undertaken in 2008[8]. The area surveyed in 2008 had been previously described in 1994 and 1999. The report describes ten distinct areas of the Moy Valley in terms of extant Corncrake habitat:

- Area 1

  Parts of Corlummin, Derrygaury and Cloongee townlands: This area was considered to hold good Corncrake habitat with good potential for improvement;
- Area 2

  Pollagh townland: An increase in agricultural improvement since 1999 has resulted in this area being poor Corncrake habitat, with poor potential for improvement;
- Area 3

  Part of Derrygaury townland and part of Foxford townland: The eastern section of this area is largely improved grassland, whilst the western section is considered to constitute excellent Corncrake habitat;
- Area 4

  Clongee and Leckee townlands: Although there has probably been some ongoing agricultural improvement, there remains approximate 20ha of good Corncrake habitat;
- Area 5

  Curragh townland (in the north): The meadows in the northern section of this area represents good Corncrake habitat and the potential exists to bring currently neglected fields back into suitable habitat;
- Area 6

  Sraheen townland: Little seems to have changed compared to the 1999 survey, with the northern half of the area constituting good Corncrake habitat, with the potential for further improvement of the intact meadows which bordered extant early cover habitats;

- Area 7

  Srah townland and Bellas townland: In the townland of Srah, there exists a significant amount of good unimproved meadow, which constitutes good Corncrake habitat with a potential of increasing the adjacent areas for Corncrake;
- Area 8

[8] Heery S 2008 Corncrake habitat in the Moy Valley. Unpublished report to NPWS.

Moorebrook townland and part of Rinnanny townland: No significant changes in habitat since 1999 was noted, with the central meadows of this area still considered to be good Corncrake habitat provided its early cover potential was enhanced;

- Area 9

  Foxford townland (northern part): There appears to have been significant agricultural improvement in this section reducing its value as Corncrake habitat. However three limited areas of potentially good Corncrake habitat still persist;

- Area 10

  Drumscoba towland and Corradrishy townland: A similar situation exists to the 1999 survey where five hectares of unimproved meadow could be enhanced in order to provide good Corncrake habitat.

In summary there have been varying degrees of agricultural improvement when compared to the situation noted in 1999. This explains some decline in the numbers. However, although significant areas of suitable Corncrake habitat have remained, the species has disappeared. The reason for the complete disappearance of the Corncrake is not fully understood.

<u>The distance from the Moy Valley to potential source stocks</u>

Table 5 presents approximate distances between the Moy Valley and each of proposed Corncrake SPAs. It is readily apparent that the Moy Valley is now isolated from the Corncrake SPA network, which can be taken as a proxy for areas of high Corncrake concentrations.

Table 5. Approximate Distances (km) between the Corncrake SPAs (the Moy Valley is highlighted)

	TORY ISLAND SPA	INISHBOFIN, INISHDOOEY AND INISHBEG SPA	MALIN HEAD SPA	FANAD HEAD SPA	FALCARRAGH TO MEENLARAGH SPA	MULLET PENINSULA SPA	WEST DONEGAL ISLANDS SPA	INISHBOFIN, OMEY ISLAND AND TURBOT ISLAND SPA	MIDDLE SHANNON CALLOWS SPA
INISHBOFIN, INISHDOOEY AND INISHBEG SPA	6								
MALIN HEAD SPA	52	54							
FANAD HEAD SPA	32	31	20						
FALCARRAGH TO MEENLARAGH SPA	12	2	53	29					
MULLET PENINSULA SPA	161	158	213	189	156				
WEST DONEGAL ISLANDS SPA	16	11	68	45	10	142			
INISHBOFIN, OMEY ISLAND AND TURBOT ISLAND SPA	221	216	267	244	214	53	202		
MIDDLE SHANNON CALLOWS SPA	206	196	219	205	194	162	188	147	
MOY VALLEY IBA	153	146	191	169	142	65	132	81	100

The nearest SPAs are Mullet Peninsula SPA and Inishbofin, Omey Island and Turbot Island SPA which respectively lie 65km and 81km away.

Although the Moy Valley has suitable Corncrake habitat (albeit at a somewhat reduced level), no calling male has been recorded here since 1998. Meanwhile breeding Corncrake has been continuously recorded on the Mullet Peninsula and the islands of West Connacht since 1998. The fact that this site is isolated from the known core areas means it is unlikely that habitat improvement/enhancement works at the Moy Valley site alone would result in a re-colonisation of the area by Corncrake in the short to medium term.

Experience in Ireland and elsewhere indicates that Corncrake range expansion does not occur across a large area over a short period. Rather successful range expansion is largely driven by intensive habitat management of the existing core areas to build up numbers of successfully breeding birds, with further management of adjacent areas so that birds would have suitable habitat to expand into. As the nearest Corncrake SPA is over 60km away, the Moy Valley could not be considered as an 'adjacent area'. Furthermore the current population estimates both at the national or regional levels are not showing strong enough growth patterns to suggest that birds are likely to colonise inland from its current range in West Connacht.

<u>The possibility of re-introduction</u>

The option of re-introduction of Corncrakes at the Moy Valley has been considered, bearing in mind that a project at the Nene Washes, which commenced in 2002, is now successfully producing young birds that return to the Washes to breed. However, at this time, re-introduction is not considered possible, mainly because the reasons the birds were lost from the Moy may still be present and because there is presently no long-term sustainable solution in terms of agri-environment schemes to ensure private land will be managed in a way that benefits Corncrakes.

Although reintroduction is not seen as a preferred option at this time, NPWS has supported work in partnership with the Irish Grey Partridge Trust and Fota Wildlife Park, towards increasing skills in captive Corncrake rearing and husbandry, to develop a national capacity for reintroduction if essential. In 2013, this initiative resulted in the first captive breeding of Corncrakes in Ireland.

An alternative approach to meeting the spirit of the Court's ruling in regard to the Moy Valley was devised. The approach is a combination of classifying sites not listed for Corncrake in IBA 2000 but which routinely hold breeding numbers in recent years, and undertaking targeted and measured conservation efforts over and above which would routinely be considered for Corncrake conservation in Ireland. It is considered that this will address the court's concerns that Ireland would not derive any advantage from its failure to classify and protect the Moy Valley site. The Moy Valley pNHA boundary, which was defined exclusively for Corncrake, is circa 815ha. This figure is considered to be the actual Corncrake area within the larger IBA.

An island feasibility study[9] was undertaken on a range of islands off the coasts of counties Galway, Mayo, Sligo and Donegal in 2001. The study noted that due to the relative inaccessibility of many islands, they have been somewhat insulated from development pressures and agricultural intensification. Former hay meadows continue to provide suitable Corncrake habitat but a lack of active management in the longer term is likely to have a detrimental effect on the suitability of vegetation for Corncrakes on these islands.

As well as identifying the conservation value of Tory Island SPA and Inishbofin, Inishdooey and Inishbeg SPA, the study identified four islands in the north and west as offering good opportunities for Corncrake conservation, namely Inishmeane and Gola in Co Donegal, and Inishbofin and Omey Island in West Connacht. Several other islands were considered to have potential in the medium to longer term, after management prescriptions had first been introduced on the four priority islands. The study was repeated for the counties Galway,

[9] Barron, C (2001) "Island Feasibility Study". Unpublished report to Dúchas/BWI.

Mayo and Sligo in 2007. The updated report identified Inishturbot as being of particular value.

In addition to the relevant areas included in the seven IBAs listed in IBA 2000 for Corncrake (see Table 3), the SPA network now includes the following sites:

- West Donegal Islands SPA (Inishsirrer, Inishmeane and Gola Island); and
- Inishbofin, Omey Island and Inishturbot Island SPA

Note that Inishsirrer, Inishmeane, Gola and Inishbofin were listed in IBA 2000 for several species including Manx Shearwater, Barnacle Goose and Chough but not for Corncrake. Therefore the addition of these two proposed SPAs (West Donegal Island SPA and Inishbofin, Omey Island and Inishturbot Island SPA) which consists of approximately 262ha of actual or potential Corncrake habitat can be regarded as additional to the Corncrake SPA Network that was assessed though the ECJ proceedings of Case C418-04. This is the equivalent of 32% of the core Corncrake area contained with Lough Conn and Lough Cullin (including Moy valley) IBA.

25 calling males were recorded from the Moy Valley in 1993, before the serious decline set in. In order to counterbalance the 'deficit' from the Moy Valley, a combined target greatly exceeding 25 calling males has been set for these two SPAs. Such targets are part of an overall strategy to stabilise and increase the Corncrake populations both within the Corncrake SPA network and in the adjacent areas of the wider countryside (see next sections).

Targets for SPA population growth and habitat management

Using the most recent data available (2015), the SPA network accounts for 62% of the calling male records in the country. It is evident that while the population has increased, this

proportion can fluctuate from year to year. The proportion of Corncrakes associated with the SPA network has decreased since 2003 when the SPA network accounted for 73% of breeding Corncrakes (Table 2). This highlights the fact that the distribution of Corncrake changes over time. The decline in the Shannon Callows, as well as a resurgence of breeding outside of the SPA network, are the primary reasons for this shift. Pro-active measures such as the Corncrake Grant Scheme are available to protect Corncrakes that exist outside of the SPA network.

In order for the Ireland to meet its national and regional targets, as well restoring or maintaining favourable conservation condition of each Corncrake SPA, individual site-based targets have to be set. The setting of targets outlined below has to be both achievable as well as proportionate to the requirements of SPA designation on these sites.

In order to set these requirements, NPWS commissioned BirdWatch Ireland to estimate the carrying capacity of each of the SPAs based on a comparison of similar Corncrake sites in Scotland and based on reported territory size[10]. Table 6 summarises the findings of this report.

Table 6. Estimated Corncrake carrying capacity for new mainland SPAs

Site Code	Site name	Estimates of carrying capacity (calling males)	
		Based on an average of selected Scottish sites	Based on an estimate of home range size*
4146	MALIN HEAD SPA	23	17
4148	FANAD HEAD SPA	11	8
4149	FALCARRAGH TO MEENLARAGH SPA	25	19
4227	MULLET PENINSULA SPA	26	19

[10] Donaghy A (2014 *in prep.)* New Corncrake SPAs on the Donegal & Mayo mainland - assessment of existing early cover areas and setting targets for Corncrake numbers 2012-2017. BirdWatch Ireland report to NPWS.

* Note that the estimate of home range size (17ha) is based on two sites one in Scotland and the Middle Shannon Callows SPA. The actual home range size of mainland Donegal and Mayo sites may be significantly smaller.

10-year targets for population re-establishment and growth

The estimated carrying capacity of these sites informed the target setting for the entire Corncrake SPA network (Table 7). A ten year timeframe (2012 – 2022) was chosen to frame these targets but these will need to be reviewed at mid-term 2017. In some cases, these site by site targets represent a balance between the existing population and the upper estimates for carrying capacity (i.e. 'long term trends'). This sets an ambitious overall target of 129 calling males recorded in or associating with the Corncrake SPA network to be reached by 2022. In order to reach this target, the total Corncrake SPA population will have to increase by some 86% beyond 2012 levels.

Fundamental to the realisation of these targets is an acknowledgement that population growth can only be achieved and sustained if suitable habitat is created and maintained in these areas. Therefore targets for the amount of recorded calling male Corncrakes per site need to be based on targets for the creation and maintenance of suitable Corncrake habitat. Numbers of Corncrakes on the Middle Shannon Callows are critically low. As a result of this, the target set for this site is, on an interim basis, to have Corncrake still breeding at this site in 2022. It is widely accepted that suitable habitat exists in this SPA for numerous Corncrakes during the early and middle parts of the breeding season. NPWS commits to the protection of relevant areas of this habitat for the latter part of the breeding season, where Corncrakes are confirmed, in order to achieve population growth where possible.

Table 7. Calling male targets for SPAs and immediate environs

SPA code and site name		2012 (baseline)	2015 (current)	2022 (target)	Long term (target)
4073	TORY ISLAND SPA	7	17	20	> 20
4083	INISHBOFIN, INISHDOOEY AND INISHBEG SPA	23	43	>20	> 20
4146	MALIN HEAD SPA	6	8	15	> 20

4148	FANAD HEAD SPA	0	2	7	> 10
4149	FALCARRAGH TO MEENLARAGH SPA	3	5	12	> 25
4227	MULLET PENINSULA SPA (including Termoncarrgah SPA)	10	15	20	> 26
4230	WEST DONEGAL ISLANDS SPA	11	14	20	> 20
4231	INISHBOFIN, OMEY ISLAND AND TURBOT ISLAND SPA	12	10	15	> 15
4096	MIDDLE SHANNON CALLOWS SPA	1	0	present	present
	Total	73	114	129	> 136

Habitat creation targets for mainland SPAs

As mentioned previously there are a number of methods that are to be employed both for the creation and maintenance of suitable Corncrake habitat of both ELC (early and late cover) plots and suitable meadow/pasture.

In some cases, the Corncrake field workers are able to establish small plots of early cover without the landowner being formally recruited to any scheme. This voluntary conservation cooperation by landowners is growing in importance.

Targets for the creation of suitable habitat on mainland Corncrake SPAs via the NPWS Farm Plan Scheme are set out in Table 7. This is based on an assumption that each calling male requires at least 0.1ha of good quality ELC habitat which could be delivered through the Farm Plan Scheme.

The creation, maintenance and enhancement of areas of early and late cover are an integral part of Corncrake habitat management. The Corncrake Farm Plan Scheme sets a target of 5% of the total area entered into individual farm plans for such cover. As the minimum amount

of ELC to be created per farm plan is 0.1ha, it can be inferred from Table 8 that for example up to approximately 15 individual farm plans will have to be established and maintained for Malin Head SPA to meet its habitat targets.

Table 8. Targets for the creation and/or maintenance of early and late cover habitat for mainland SPAs for 2022

SPA code and site name		2015 ELC (ha)	2022 target for early and late cover (ha)
4146	MALIN HEAD SPA	0.54	1.5
4148	FANAD HEAD SPA	1.61	0.7
4149	FALCARRAGH TO MEENLARAGH SPA	0	1.2
4227	MULLET PENINSULA SPA (including Termoncarrgah SPA)	1.68	2.0
	TOTAL	**3.8**	**5.4**

The fact that the SPAs have only recently been established in these areas means the number of Corncrake NPWS farm plans is currently low (n=11), but it is proposed to increase this number in the coming years, or encourage more farms into the agri-environment scheme operated under the Rural Development Programme (GLAS). An indicative timetable is set out for farm plan uptake (Table 9).

Table 9. Indicative timelines for setting up and delivery of farm plans per mainland SPA

SPA code and site name		2015 (target)	2015 (actual)	2022
4146	MALIN HEAD SPA	10	3	15
4148	FANAD HEAD SPA	8	5	8

4149	FALCARRAGH TO MEENLARAGH SPA	8	0	12
4227	MULLET PENINSULA SPA (including Termoncarrgah SPA)	18	3	20

In order to meet these targets, NPWS appointed a professional farm planner to promote the scheme to prospective farmers with the SPAs of Mayo and Donegal, as well as preparing and updating the individual farms plans. The number of farm plans currently in existence (11 plans as of end 2015) falls short of the targets set, but when GLAS plans under the new Rural Development Programme are considered (21 plans started in October 2015), it is significantly exceeded.

As advised by the Department of Arts, Heritage & the Gaeltacht, the Department of Agriculture, Food & the Marine have prioritised Corncrake under the new Green Low-Carbon Agri-Environment Scheme (GLAS). Farmers within Corncrake SPAs who wish to enter GLAS will be afforded entry and will manage their land for Corncrake in accordance with a prescription (see Appendix IV). This will ensure greater budget availability and therefore the potential for a greater area of land managed specifically for Corncrake. It is important to ensure that participation data in relation to GLAS uptake is made available by the Department of Agriculture, Food & the Marine, including the precise areas of ELC creation and maintenance.

Habitat creation targets for offshore island SPAs

Significant proportions of the Irish Corncrake population occur in SPAs situated on offshore islands off the coast of counties Donegal to Galway. Targets for the maintenance, creation and management of Corncrake habitat on island SPAs are also set out in this strategy document.

However different pressures are known to be impacting on the suitability of these island SPAs. These pressures range from intensive sheep grazing (which can reduce the availability

of suitable Corncrake habitat) to land abandonment, which can initially result in high densities of calling males but ultimately become less useful as areas become rank.

Addressing different pressures often require different approaches in terms of habitat management for Corncrake including;

- the creation of ELC plots
- the erection of fences around in-bye land to exclude grazing stock during the summer months t
- reclaiming abandoned land by way of mechanical scrub removal or
- targeted prescriptions.

The targets for Corncrake habitat management set out in Table 10 are therefore of a generic nature but still are compatible with the targets for population increases as set out in Table 7.

Table 10. Targets for the creation and management of high quality Corncrake habitat on offshore island SPAs for 2016 and 2022

SPA code and site name		Actual or potential Corncrake habitat (ha)	2016 target (ha)	2022 target (ha)
4073	TORY ISLAND SPA	85	20	30
4083	INISHBOFIN, INISHDOOEY AND INISHBEG SPA	43	5	10
4230	WEST DONEGAL ISLANDS SPA	79	4	8
4231	INISHBOFIN, OMEY ISLAND AND TURBOT ISLAND SPA	183	8	18

Corncrake Conservation at the national scale

Even though the Corncrake SPA Network was defined using a comprehensive dataset on numbers and historical distribution (see Appendix III), a significant amount of the national resource of breeding Corncrake currently occurs outside the SPA network. Just as the extent and quality of Corncrake habitat varies over time, the distribution of the Corncrake population also varies.

In order to achieve favourable conservation status of the species, any Corncrake Conservation Strategy needs to consider not just those birds or habitat within SPAs, but the entire national resource and indeed the potential to expand in areas where Corncrakes have been lost. It is envisaged that undesignated islands that currently hold Corncrake populations and those lands that are adjacent to Corncrake SPAs will be targeted for additional conservation work. However, there is a risk that land owners will resist such work, driven by the fear that if they allow conservation work to be undertaken on their land and if successful in increasing in Corncrake numbers, that their land may be designated. In order to maximise landowner co-operation with existing and proposed Corncrake conservation initiatives, it is proposed to give assurances to those landowners that the Corncrake SPA designation programme is now complete and that increases in Corncrake numbers on undesignated islands will not result in further designations.

Table 11 lists other sites which have recent records of calling Corncrake, and which will be periodically assessed and considered for enhancement measures.

Table 11. Further areas with potential for Corncrake habitat management

	CALLING MALES 2013	2013 HABITAT COMMENT
Owey Island, Co Donegal	5	No grazing animals, becoming rank. Needs management
Aranmore Island, Co Donegal	13	Good habitat, feral cats present.

Inishfree Upper, Co Donegal	0	Good grassland, Foxes may be present
Areas around Malin	2	
Dunaff to Ballyliffen	5	Including 3 on the Isle of Doagh
Fanad area, outside of SPA	5	
Falcarragh area, outside of SPA	3	
Oyster Island, Co Sligo	0	Habitat management has not succeeded
Coney Island, Co Sligo	0	
Ardbolin Island, Co Sligo	0	
Areas east of Falmore (Gweesalia)	0	
Louisburgh	5	
Inishturk South, Co Galway	0	
Renvyle, Co. Galway	0	
Cleggan, Co Galway	0	
Crohy Peninsula	6	

Appendix I Corncrake Grant Scheme

• A basic grant rate of €250 per hectare is offered for the delay of mowing or grazing until 05 August.

• Two higher payments of €325 per hectare for delayed mowing or grazing to 20 August and €375 per hectare to 01 September.

• Applications are normally completed by 01 July and mowing or grazing must be delayed until 05 August. Later delay dates (until 20 August and 01 September) may be agreed on a case by case basis. (This is to ensure the provision of late cover, important for second brood chicks prior to migration).

• Where two cuts of silage are usually taken, a discretionary top up of €150/ha is available.

• A grant of €45/ha is payable to the farmer for Corncrake friendly mowing. This is a compulsory element to the scheme. It may also be a requirement to retain field margins from mowing.

• All fields with suitable habitat (defined as meadow or pasture with sufficient grass cover) which are usually cut or grazed and which fall wholly or partially within a 250m radius of a singing male Corncrake, are eligible for entry into the scheme. (This is because 90% of nests are within that area).

Appendix II NPWS Farm Plan Scheme of Mainland Corncrake SPAs in Donegal and Mayo

Summary

The NPWS Corncrake Farm Plan Scheme (CFPS) is currently available in the following Special Protection Areas (SPAs)

- Malin Head SPA (no. 4146)
- Fanad Head SPA (no. 4148)
- Falcaragh to Meenlaragh SPA (no. 4149)
- Mullet Peninsula SPA (no. 4227)

The primary aim of the CFPS is to sign up farmers to a five year plan of Early and Late Cover (ELC) creation, its maintenance and delayed mowing of adjacent meadows. Key to the 5-year plan is that the farmer would delay mowing only until 15 July on nominated plots. However if a calling male is recorded in or within 250m of these lands then the farmer is obliged to delay mowing until 20 August or 01 September and to mow in a Corncrake Friendly Manner (CFM) i.e. slow and centre-out.

Delayed mowing of nominated fields with Corncrakes is mandatory if participating in CFPS. The 5-year CFPS also allows the farmer to plan to farm in a manner that the occurrence of Corncrake on his land will not seriously disrupt his/her year to year practices.

Suitable cover (in particular early cover) is an essential requirement, currently limiting Corncrake populations on mainland sites in Donegal and Mayo. Satisfactory Early and Late Cover (ELC) creation may take 2-3 years to establish, so requires a 5-year period for effective delivery. ELC is needed from first arrival in late April. Meadows dominated by soft grasses tend to lodge overwinter and become impenetrable, which is why early cover prescriptions focus on rigid or stiff-stemmed but sparsely-growing species like cow parsley, iris and nettles.

If opting to apply to join CFPS, the farmer will nominate fields/areas within the designated SPA where he must take up measure 1 and/or 2 in combination with measure 3 and/or 4. The farmer must also allow for access by NPWS or their agents to carry out predator control if required.

Measure 1 to create and maintain a suitable area of Early and Late Cover Plots
Measure 2 to maintain and enhance existing areas as ELC
Measure 3 to establish a Corncrake friendly mown grassland management regime
Measure 4 to establish a Corncrake friendly grazed grassland management regime

Please note on entry into the Corncrake Farm Plan Scheme the farmer may be required to undertake management measures on his non-nominated lands, which are contiguous to those areas nominated in the particular plan:

1. 'Centre-out' mowing of meadow/silage fields contiguous with the nominated fields but outside of the SPA is required if a calling male Corncrake is recorded within 250 m of the field in question.
2. For those fields within the SPA, contiguous with the fields nominated in the FPS and within 250m of a recorded calling Corncrake, entry into the Corncrake Grant Scheme (CGS) may be a requirement – this may involve delayed harvesting of the crop and mowing in a 'centre-out' manner

Payment Rates under the CFPS

Measure 1

Measure 1a Spread over the five year plan payment will be available to successfully create an ELC plot(s) at the following rates:

- €1.75 per m^2 for the first 0.1 ha
- €1.50 per m^2 is payable for areas greater than 0.1ha (noting that the maximum area payable under this Measure is 0.5ha)

Measure 1b this is a yearly payment to cover the costs of maintaining the newly created ELC plot. It is payable at Measure 2 rates (see below). Once created, the ELC must remain in place for the full five year duration of the plan.

Measure 2

A per hectare rate is payable annually for the maintenance and enhancement of existing ELC plots - provided the required cover is present throughout the breeding season of each year (i.e. Late April to Late September). The rates are as follows:

Up to 0.1ha	@ €880 per ha
0.11 – 0.25ha	@ €440 per ha
Greater than 0.26ha	@ €275 per ha

Measure 3

A per hectare rate is payable annually for the delayed mowing of the nominated fields

- Post 15 July meadow mowing: €275 per hectare
- Post 20 August meadow mowing: €450 per hectare
- Post 01 September meadow mowing: €510 per hectare

Measure 4

A per hectare rate is payable annually for the delayed grazing of the nominated fields

- post 15 July pasture grazing: €275 per hectare
- post 20 August pasture grazing: €450 per hectare

Background to NPWS Corncrake Farm Plan Scheme for Farmers

Corncrakes once bred throughout Ireland but with intensification in farming practices their numbers and distribution declined. Corncrakes are now found only in County Donegal and parts of West Connacht, particularly the western seaboards of counties Mayo and Galway and on the Shannon Callows.

In recent years, farmers in these areas have entered into the Corncrake Grant Scheme and/or other small-scale one-off payments for habitat management.. These measures have been successful in preventing the population from becoming extinct and have led to recovery in some areas. Five-year management agreements have been established in the Shannon Callows SPA through REPS SM1 and the NPWS Farm Plan Scheme.

NPWS are now rolling out a Corncrake Farm Plan Scheme starting in 2011 and targeting mainland Corncrake areas in Donegal and Mayo. The Scheme provides financial incentives to help safeguard populations of breeding Corncrakes within Corncrake Special Protection Areas (SPAs) by encouraging and supporting the sympathetic management of agricultural land. Each farm plan is to run for a period of five years and will consist of a set of management prescriptions which are designed to help maintain or restore the favourable conservation condition of Corncrake breeding in these areas.

<u>Locations of lands where the NPWS Corncrake FPS will be run</u>

For an initial period the Corncrake FPS will be restricted to farms occurring either wholly or in part of the following SPAs:

- Malin Head SPA (no. 4146)
- Fanad Head SPA (no. 4148)
- Falcarragh to Meenlaragh SPA (no. 4149)
- Mullet Peninsula (including Termoncarragh SPA) SPA (no. 4227)

Funding for the scheme

The overall budget for this scheme is limited and therefore acceptance of these 5-year farm plans in is not automatic and therefore will be on a competitive basis. All nominated meadow and pasture fields and ELC plots must be within the SPA. Individual plans may be allowed to proceed to plan phase following an initial selection exercise undertaken by NPWS. The selection will be based on various characteristics including specific location, nature and extent of the proposed plan.

Subject to funding and to changes in the population and distribution of Corncrake in these areas the CFPS may then be extended to other SPAs as well as further areas identified as Secondary Corncrake Areas.

It should be noted that a range of other alternative schemes and management initiatives exist including the Corncrake Grant Scheme and the Short-term Leasing Scheme.

What will this package achieve?

This package will help to maintain or increase the Corncrake population within its current range and to encourage Corncrakes to expand their range into suitable areas nearby. It offers a range of prescriptions for managing land to benefit Corncrakes.

As Corncrakes require tall vegetation (greater than 20cm in height) from when they arrive in late April until they depart in September. Meadows which are not cut or grazed provide this tall vegetation during the main part of the Corncrake breeding season and the timing of removal of this cover (through cutting or grazing) is key to survival, as is the manner of cutting if the fields are mowed.

In areas where cover for Corncrakes may be lacking early in the season (April/May), due either to exposed conditions or late grazing, provision is also made for the creation and subsequent management of areas of suitable vegetation (nettles, umbelifers, iris etc). These

areas, known as Early and Late Cover (ELC) can also act as cover later in the year (August to September) after meadows have been cut.

The FPS requires that the farmer create and maintain a suitable area of ELC (Measure 1) and or maintain and promote existing areas as ELC (Measure 2). In combination with this each applicant to the scheme must opt for at least one of the following measures:

- a mown grassland management regime (Measure 3)
- a grazed grassland management regime (Measure 4)

MEASURE 1:

CREATION OF EARLY AND LATE COVER PLOTS

The aim of this Measure is to create and maintain areas which will provide vegetation cover for the protection of Corncrakes early and late in the season.

What this will achieve

This measure, carried out adjacent to the nominated fields selected for Corncrake-friendly mown or grazed grassland management, will provide cover for Corncrakes arriving back from wintering grounds in April and May and also will provide shelter late in the season when most of the surrounding grassland has been cut and/or grazed. This is because Corncrakes require vegetation which is at least 20cm (8 inches) high for the entire breeding season.

The creation of the ELC plot(s) is to be undertaken in Year 1 of the 5 year agreement. In exceptional circumstances and dependent upon specific agreement with NPWS an ELC plot can be created in Year 2 of the plan.

Requirements

1. This measure must be carried out adjacent to lands nominated for Measures 3 and / or 4.
2. Existing areas of suitable vegetation which meets the required standard in the required location can be extended to create the minimum patch size required
3. Ideally each individual ELC plot should be at least 0.1ha (e.g. a 15m wide strip along the length of a 67m field).
4. Approximately 5% total area entered into the CFPS should be under ELC management. This should be undertaken in one discreet area. However this may not be possible on some farms and other arrangements may be accommodated.
5. For all new ELC areas created in year 1 of the five year plan the following requirements apply:

(a) No grazing is permitted from 01 March until 30 September inclusive, except with the prior written agreement.

(b) At other times (i.e. 01 October – 28 February inclusive) grazing must not exceed 0.5 farm LU/ha. Deviations from this may be required but is subject to agreement between the farmer and NPWS.

(c) Cutting of the area may only be undertaken with the prior written agreement of NPWS or an agent acting on their behalf.

6. The ELC plot must be adequately fenced off to a standard sufficient to ensure that the prescribed grazing levels will be adhered to (to be detailed in plan).
7. The combined maximum area per application for ELC creation is 0.5ha.

ELC creation

New early cover areas can be created during autumn/winter months or in early spring when Corncrakes are not present on their breeding grounds. Depending on local soil conditions and what type of tall vegetation is available locally, farmers should aim to create patches of tall vegetation, using the appropriate method below

Nettles

Dig up and collect rhizomes from existing areas. Mix the rhizomes with farmyard manure, ideally in at equal proportions by volume and spread the mixture over the site to a depth of approximately 15cm, but generally not less than 12 cm.

Umbellifers

Collect seeds of cow parsley or hogweed and establish through planting seeds in a prepared area in the autumn. Animal dung or farmyard manure will provide important nutrients.

Reed canary grass

Stands of reed canary grass can be created by transporting soil containing rhizomes riverbanks and other wet areas to prepared areas in autumn. This species does best in damp areas, but competition from grasses should be kept to a minimum.

Iris

Dig up and collect iris from existing beds. Mix the iris rhizomes with farmyard manure, ideally in equal proportions by volume and spread the mixture over the site to a depth of approximately 15cm, but generally not less than 12 cm. To aid the establishment of the iris, the site should normally be in a damp condition for a significant proportion of the year.

Rate of support

Measure 1a relates to the cost of creating the ELC - payment will be available to successfully create an ELC plot(s) at the following rates:

- €1.75 per m^2 for the first 0.1 ha
- €1.50 per m^2 is payable for areas greater than 0.1 ha (noting that the maximum area payable under this Measure is 0.5ha)

Ideally the proportion of ELC as a percentage of the total adjacent managed grassland regimes should be at least 5%. The maximum area that can be entered under this Measure is 0.5ha. The location extent and fencing requirements of the ELC plot is subject to agreement between the farmer and NPWS.

After initial payment all subsequent payments are to be made on foot of an inspection carried out by an NPWS official or an agent acting on their behalf ensuring that the ELC plot is in a satisfactory condition (following successful application of FYM and seeds/rhizomes along with the appropriate fencing).

Measure 1b this is a yearly payment to cover the costs of maintaining the newly created ELC plot. It is payable at Measure 2 rates (see below).

MEASURE 2:

MAINTENANCE AND PROMOTION OF EXISTING EARLY AND LATE COVER PLOTS

The aim of this measure is to manage areas which will provide vegetation cover for the protection of Corncrakes, their eggs and fledglings, throughout the breeding season, in particular the early and late stages when available cover is scarce. This will only apply to areas which meet the requirements outlined below on entry into the CFPS.

What this will achieve?

This measure carried out adjacent to lands under Corncrake-friendly management, will help to maintain the conditions for Corncrakes to breed successfully. It will benefit Corncrakes arriving back from wintering grounds in April and May and also provide shelter late in the season when most of the surrounding grassland has been cut and/or grazed.

Requirements

1 This measure must be carried out adjacent to lands nominated for Measures 3 and / or 4.
2 Each individual area must be at least 0.1 hectares
3 Approximately 50% (but not less than 30%) of the area must comprise suitable early cover vegetation (to include nettles, hogweed, cow parsley, reed canary grass, iris). This may require application of farmyard manure and seeds/rhizomes in some years to encourage growth of required species early in the year. Advice will be available from NPWS during the farm plan formulation stage.
4 Rush must be at densities of no more than 30% and any encroaching scrub (e.g. briars) should be controlled on an annual basis as per plan.
5 Grazing is not permitted from 01 March until 30 September inclusive except with the prior written agreement. Grazing in October may be required to prevent the area becoming too rank and to provide additional nutrients to stimulate growth of early

cover vegetation. Grazing levels and timings are subject to agreement between the farmer and NPWS.

6 Cutting of the area may only be undertaken with the prior written agreement from the NPWS official or an authorised agent of NPWS

7 The combined area of existing and created early and late cover for Corncrakes managed under a single agreement cannot exceed 5 hectares.

8 A maximum of 5 ha of suitable land will be allowed into this option.

Rate of annual support

A stepped per hectare rate is payable annually for the maintenance and enhancement of existing ELC plots - provided the required cover is present throughout the breeding season of each year. The rates are as follows:

Up to 0.1 ha	@ €880 per ha
0.11 – 0.25 ha	@ €440 per ha
Greater than 0.26 ha	@ €275 per ha (noting that the maximum area payable under this Measure is 5ha)

MEASURE 3:

MOWN GRASSLAND

The aim of this measure is to provide protection for Corncrakes during the main part of the breeding season.

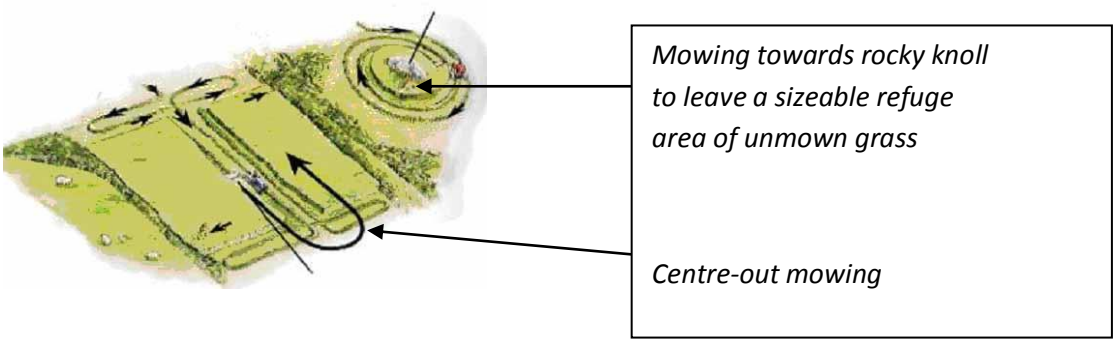
What this will achieve?

This measure will create or maintain the conditions necessary for Corncrakes to nest and raise broods, including the provision of tall vegetation cover throughout the summer.

Requirements

1. This measure must be carried out in combination with the creation and maintenance of at least one ELC plot (Measure 1) and/or in combination with the maintenance and promotion of existing ELC plots (Measure 2).
2. Provide meadows with tall vegetation (>20 cm, 8 inches) suitable for Corncrakes to nest and raise broods (approximately 50% or more of the meadow should meet this requirement by early May). Stock shall be excluded from these areas from the 15 March onwards. The meadow shall not be cut or topped before the dates shown below.
3. Other field operations requiring the use of tractor machinery (fertilising, rolling, spraying, etc.) shall not permitted from the 20 April until the prescribed date of mowing. Field operations that do not require the use of tractor machinery (such as hand spraying) are permitted.
4. If you are informed by an NPWS official or an agent acting on behalf of NPWS that a Corncrake has been recorded in or within 250m of a nominated meadow that is entered into the CFPS, the meadow is deemed to be *active* for that particular breeding season. This meadow must not be cut until at least 20 August. A further measure of delaying the mowing date until 01 September can be opted for instead. However this option should be agreed at the plan stage and not during the breeding season.

5. Generally these meadows should be cut / topped every year with the crop removed by 01 October.
6. A 1.8m/6ft margin must be left along each of the two long sides of the field. This is to provide an escape refuge during mowing. The margin can be grazed or mown after 15 September. Generally margins should be cut / topped or grazed down at least one year in three (as detailed in the farm plan). A contiguous of ELC can replace the need for such a margin.
7. To minimise the risk of injury to young birds, all active fields must be cut in a Corncrake friendly manner: The aim should be to prevent the creation of islands of uncut hay or silage and the line of cutting from the middle outwards should leave an escape route through the uncut margins. Note that in some circumstances the ELC if appropriately sited (i.e. along the edge of the meadow) may reduce the need for leaving an uncut margin.



Rate of annual support

- 15 July meadow mowing: €275 per hectare
- 20 August meadow mowing: €450 per hectare
- 01 September meadow mowing: €510 per hectare

MEASURE 4:

GRAZED GRASSLAND

Where it is not possible (or desirable) to mow meadows, this measure will support the management of grazed grasslands to encourage suitable conditions for the benefit of breeding Corncrake.

What this will achieve?

By limiting and managing grazing, the grazed grassland measure will promote the growth of vegetation of suitable structure and species composition to provide sufficient tall vegetation which will provide cover throughout the summer to allow Corncrakes to nest and raise broods successfully.

Requirements

1. This measure must be carried out in combination with the creation and maintenance of at least one ELC plot (Measure 1) and/or in combination with the maintenance and promotion of existing ELC plots (Measure 2).
2. The pasture field should be contiguous with the ELC plot. The pasture should contain a high proportion (approximately 50%, but not less than 30%) of vegetation that is both likely to be taller than 20 cm (8 inches) by early May and be suitable for Corncrakes if left ungrazed (e.g. iris, nettles, cow parsley or reed canary grass). Areas with rush could be selected where it occurs as patches and where the density is not above 30%. Areas of ungrazed grass or rush matted with dead vegetation remaining from previous seasons will not qualify as suitable tall vegetation
3. Minimum area to be included is 0.5 ha. Farm livestock must be removed from areas entered under this measure before 15 March.
4. Other field operations requiring the use of tractor machinery (fertilising, rolling, spraying, etc.) shall not permitted from 20 April until the prescribed date of grazing. Field operations that do not require the use of tractor machinery (such as hand spraying) are permitted.
5. If the pasture is deemed to be active (i.e. Corncrake recorded calling from within the field or within 250m) by an NPWS official or an agent acting on behalf of NPWS, then livestock are not permitted to graze until 20 August. Farm livestock may be returned

after this date, although livestock density must be no more than 1.4 LU per ha until 15 September.

Rate of annual support

- post 15 July pasture grazing: €275 per hectare
- post 20 August pasture grazing: €450 per hectare

Appendix III Corncrake SPA network site and sub-site identification and designation procedure

Background

The Judgement of the European Court of Justice of 13 December 2007 (ECJ Case C- 418/04) identified various shortcomings in the Irish SPA Network. The Court found that Ireland has failed to fulfil its obligations under Articles 4(1), (2) and (4), and 10 of Directive 79/409, as amended by Directive 97/49, and Article 6(2) to (4) of Directive 92/43.

With regard to Corncrake, the Court stated that the then current SPA Network was weak. Prior to the judgement the extant Corncrake SPA Network consisted of the following sites:

Middle Shannon Callows SPA 4096 - S.I. 305 of 1996,

Tory Island SPA 4073 - S.I. 287 of 1995 and

Inishbofin, Inishdooey and Inishbeg SPA 4083 - S.I. 269 of 1996

The Court specifically mentioned the IBAs known as Falcarragh to Min an Chladaigh, Malin Head and the Fanad Head Peninsula as areas of significant importance, noting that there has been a sufficiently stable presence of Corncrake recorded at these sites to merit designation. The Court found that the area under SPA designation for Corncrake was not adequate on the Mullet Peninsula.

With regard to the Moy Valley, the judgement outlines the Commission's opinion that there was evidence to justify classification of the Moy Valley as an SPA for a long period after the Birds Directive came into force and that Ireland ought not to derive any advantage from its failure to classify and protect this site. The Court found that Ireland ought to have classified this site as an SPA.

Following the European Court Judgement in relation to Case C418/04 a review of all SPA sites was instigated by NPWS which subsequently involved the public re-notification of the majority of SPA sites.

The Middle Shannon Callows SPA was notified in 2002 and has been considered by Designated Areas & Legislation Section of NPWS as not requiring re-notification. However no such record of relevant public notification is available for Tory Island SPA and Inishbofin, Inishdooey and Inishbeg SPA; therefore these sites were advertised along with the newly identified SPAs. Termoncarragh Lake and Annagh Machair SPA also has Corncrake listed as a special conservation interest and as this site was advertised in 2006 it also does not require re-notification. Inishsirrer and Inishmeane SPA 4131 was advertised in 2002 but did not have Corncrake listed as a special conservation interest – this SPA has now been subsumed into a larger SPA (West Donegal Islands SPA 4230) which is selected for the conservation of Corncrake.

Site and Sub-site Identification

The identification of additional sites that are to be classified as SPAs for Corncrake was based on data collected through the Corncrake Conservation Programme. At the time of the Corncrake SPA review all available data was used to assess individual sites. This consisted of primary records of calling male Corncrakes (Primary Calling Records or PCRs) during the breeding seasons of 1994 to 2007 inclusive. The following process was used to identify appropriate areas for designation:

Primary records of calling male Corncrakes (PCRs) were plotted on geo-referenced 2005 aerial photographs. A 250m radius disc was constructed around each record. Where different discs overlapped the cumulative footprint was plotted and given a sub-site code. This process led to the creation of 48 sub-sites (also referred to as polygons during the mapping process) with two or more PCRs. The sub-sites were located at six different locations in Donegal, Mayo and Galway - Malin Head, Fanad Head, Falcarragh, West Donegal Islands, The Mullet and the North Galway Islands. These sub-sites ranged in size from 9ha to 325ha.

Sub-sites at any of the six sites which were isolated from the main concentrations of Corncrake records and held less than five PCRs, during the period 1994 to 2007, were not considered any further for SPA designation. For all the other sub-sites draft boundaries were plotted encompassing all suitable areas for Corncrake conservation that fell within the 250m discs. In general, areas of heath/bog, built environment and associated lands, foreshore and permanent water bodies, expansive areas of rocky outcrops, woodland/plantations and sand dunes were excluded from the preliminary boundaries of the sub-sites. In general, inclusions into the sub-sites were on a field unit basis i.e. if the edge of the 250m disc included part of a field (generally >10%) then the entire field was included within the boundary.

A process of selecting the most suitable sub-sites for designation was then developed. The process ensured that the most important polygons, based on overall abundance of Corncrake records, were chosen as sub-sites. As Corncrake distribution has changed over the years a weighting system, which gave a greater weighting to more recent records, was employed when calculating the overall abundance scores. This ensured that the most important elements of the existing species distribution were included within the SPA network. Overall abundance scores for all of the sub-sites were calculated and were subsequently ranked for each of the six sites.

The sub-sites at each of the six sites were then assessed, using the ranked overall abundance scores in combination with the criteria outlined below, to identify those most suitable for designation.

Criterion 1 - Each **sub-site** must contain at least five PCRs for the period 1994 to 2007.

Criterion 2 - Each **site** should contain a sufficient number of sub-sites to encompass 55% of the relevant records contained within those polygons that meet Criterion 1 at that site.

Criterion 3 - The SPA network of Corncrake sites should include a sufficient number of sites to contain 60% of the national resource during the period 2003 to 2007.

Using the guidelines outlined above, 15 sub-sites at six locations were identified (Table 12).

- When assessing the sub-sites at Falcarragh it became apparent that a significant proportion of sub-site FM004 was unsuitable for Concrake conservation – the habitat at the western extremity of this sub-site was largely unsuitable and very fragmented. To compensate for the loss of habitat/area in FM004 an additional sub-site (FM009) was included within this site.

- At Fanad Head the sub-sites selected (FM009 and FM003) account for 34% of the PCRs that meet Criterion 1 at this site. This is less than the 55% target so additional sub-sites at Fanad Head were also assessed. The next highest ranking sub-site (FM002f) was assessed for inclusion within the site but was found to contain unsuitable habitat (machair). Although the Fanad Head site does not meet the 55% target, as outlined in Criterion 2, the overall network of Corncrake SPA sites still meets the 60% target as outlined in Criterion 3.

Ground surveys of the 15 sub-sites and the existing boundaries of Tory Island SPA and Inishbofin, Inishdooey and Inishbeg SPA were undertaken in 2010 by the SPA Designations Team. Boundary amendments were made to exclude houses and gardens not visible on the 2005 aerial photographs, and changes to correct any mapping errors which had occurred in the preliminary boundary mapping exercise.

Boundary maps for the six proposed new SPA sites plus Tory Island SPA and Inishbofin, Inishdooey and Inishbeg SPA were distributed to NPWS Regional Management staff, the Corncrake Steering Committee and BirdWatch Ireland for comment. Boundary amendments were made to some sites based on the recommendations received.

In June 2011 eight SPA selected for the conservation of Corncrake were publicly notified (Table 12).

Table 12. Corncrake SPAs notified in June 2011

Site Code	Site Name
4073	Tory Island SPA
4083	Inishbofin, Inishdooey and Inishbeg SPA
4146	Malin Head SPA
4148	Fanad Head SPA
4149	Falcarragh to Meenlaragh SPA
4227	Mullet Peninsula SPA
4230	West Donegal Islands SPA
4231	Inishbofin, Omey Island and Turbot Island SPA

The complete network of Corncrake SPAs (Table 1) contained approximately 66% of the total Corncrake resource in Ireland during the period 2003 to 2007 (Table 13).

Table 13. Sub-sites selected for inclusion in the Corncrake SPA network and the numbers of PCRs recorded 1994 to 2007

Site Code	Site	Sub-site	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
4146	Malin Head	MH004	6	5	6	3	5	4	2	3	2	4	8	8	8	6
4148	Fanad Head	FH009	0	0	0	1	0	0	1	0	0	1	2	2	2	3
4148	Fanad Head	FH003	0	0	0	0	0	0	0	0	2	1	1	3	1	2
4149	Falcarragh to Meenlaragh	FM004	3	8	13	8	2	2	4	5	5	4	4	7	5	3
4149	Falcarragh to Meenlaragh	FM008	0	5	4	5	3	1	2	1	0	4	2	3	3	2
4149	Falcarragh to Meenlaragh	FM009	1	0	4	5	2	1	1	0	3	1	1	4	3	0
4227	Mullet Peninsula	MU004	1	1	3	1	0	8	1	1	1	2	3	0	0	3
4227	Mullet Peninsula	MU014	0	0	2	0	2	1	1	1	1	2	2	2	4	0
4227	Mullet Peninsula	MU001	0	2	1	0	0	0	1	0	0	0	1	0	0	3
4230	West Donegal Islands	WD002	0	2	2	0	0	1	6	4	5	1	2	14	12	12
4230	West Donegal Islands	WD003	0	0	0	0	0	0	0	4	3	3	2	3	4	5
4230	West Donegal Islands	WD001	0	0	0	0	0	0	0	0	0	0	1	3	1	1
4231	Inishboffin, Omey Island and Turbot Island	NG003	0	0	1	2	3	1	1	2	2	3	5	4	5	4
4231	Inishboffin, Omey Island and Turbot Island	NG008	0	0	0	0	0	1	0	2	1	4	1	3	3	2
4231	Inishboffin, Omey Island and Turbot Island	NG009	0	0	0	0	0	0	0	0	0	0	0	2	5	7

* The footprint of the two sub-sites MU014 and MU016 overlap and therefore should have been mapped as a single sub-site. Although incorrectly mapped as two separate sub-sites in the preliminary mapping exercise, all assessments of this site treated MU014 and MU016 as a single sub-site.

Designation procedure

Where lands are being proposed for designation, or are being designated on foot of earlier proposals, the individual farmer/landowner/user is notified in writing and is sent an information pack on the relevant site. The scientific reasons for the designation are explained to the farmer as well as the prescribed farming conditions and any applicable restrictions. Boundaries of sites (site maps) are also sent to landowners so they can determine whether their land is located within a conservation area.

It is often not possible to identify every landowner/occupier. So, as well as notifying individuals, proposals for SPAs are advertised in the local newspapers and on local radio. Relevant maps are also displayed for public viewing in the local offices of the National Parks and Wildlife Service, the local offices of the Department of Social Protection, Teagasc / Farm Development Service local offices. Maps are also available for consultation in the local county library as well as local Garda Stations. Sites are legally protected once they are publicly advertised.

A freephone number (1800 40 5000) is available if further clarification is required.

A list of activities that might damage the wildlife interests of the site, and for which the consent of the Minister is required before they can be undertaken, is also provided.

Appeals to designation

A 3-month period is allowed by law for lodging of objections to a proposal to designate a site for nature conservation.

Objections to a proposal to include land in a site ***may be made by those with a legal interest in the site (i.e. an owner or legal user). An objection may also be made by a person with an interest in land outside the site which could potentially be affected by the designation***. Any objection will only be assessed on scientific grounds, i.e. it is shown that the relevant habitats/species/geological features were not present in such a condition as to warrant designation. A case can also be made for the inclusion of an additional area in a proposed nature conservation site. In both cases a covering letter accompanied by a map with the relevant area clearly outlined must be lodged within 3 months of publication of the Ministers proposal.

There are two stages to the process:

1st stage: Internal Review

To initiate an internal review of proposals to include a section of land, write to:

NPWS - Site Designation and Plans Unit

Department of Arts, Heritage and the Gaeltacht,

7 Ely Place

Dublin 2

Tel: [01] 888.3265 **e-mail:** objections@ahg.gov.ie

All objections must be made in writing ***and, where there is a wish to have land excluded***, be accompanied by a good quality map with the boundary of the area relating to the objection clearly outlined. Verbal requests will not constitute registration of an objection. Most objections are dealt with at internal review stage. At internal review, the local Conservation Ranger may arrange to meet the appellant onsite to examine the relevant area. Adjustments to boundaries can only be made on scientific grounds. The outcome of the internal review is issued to the appellant by letter.

Where the outcome of the internal review is not to the satisfaction of the appellant, he/she may choose to avail of the option to have the case referred to the Designated Areas Appeals Advisory Board for consideration.

2nd stage: Designated Areas Appeals Advisory Board

This option is available only where an objection is **unsuccessful at internal review**. The landowner will be informed of the outcome of the internal review and if relevant will be given the option of having the objection referred to the Designated Areas Appeals Advisory Board. The Board is comprised of an independent chairperson and equal representation of landowners/users groups and environmental conservationists.

If the appellant opts to have their appeal sent to the Board then both the appellant and the Department are required to produce scientific reports for submission to the Board. Some grant assistance is available for the appellant to engage the services of an ecologist in the production of a scientific report. A list of some independent ecologists who can assist in the production of a scientific report will be provided although the appellant is free to engage the services of an expert other than those listed on the panel. When assessing each appeal the Board must confine itself to consideration of the scientific arguments relating to the specific lands under appeal. The Board carries out oral hearings for each objection which comes before it. These hearings are arranged usually for locations adjacent to the site being designated. Apart from providing a scientific report, each objector or their agent is given an opportunity to address the Board at the hearing. The Board usually visit the site and examine the area under appeal at the time of the hearing.

Following assessment of the scientific reports from both the Department and the appellant, and the hearing the Board makes a recommendation to the Minister who makes the final decision in each case.

Appendix IV –GLAS prescription

Objective:
Create and maintain cover and nesting shelter for Corncrake birds when they arrive from Africa throughout their breeding season (April to September).

Background:
The Corncrakes once bred throughout Ireland but because of the intensification of agriculture their distribution and numbers declined. Corncrakes are now mainly found in County Donegal and parts of West Connaught, particularly the western seaboards of counties Mayo and Galway. Corncrakes require vegetation which is at least 20cm (8 inches) high for the breeding season.

Requirements:

1. Produce a suitable cover of tall herbaceous vegetation when the meadow is closed off.

2. The action can be delivered on full or split LPIS parcel(s). Where the action is on a split parcel, it must be digitised out and marked on the map submitted. Parcels must be fenced and stock-proof from the commencement date of the GLAS contract**.**

3. Grazing, mowing, topping and/or other field operations requiring the use of machinery are not permitted from 10th March to 10th August annually.