



**Position paper on the Nitrates Action Programme Green Cover Requirement  
and implications for farmland birds that use Winter Stubbles.**



Foraging Hen Harrier (photo Neil O'Reilly)

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## 1.0 Context

BirdWatch Ireland sets out in this paper our concerns relating to the proposed legal requirement in Article 21 of Statutory Instrument 113 for arable farmers to cultivate green cover on 100% of arable land at the expense of winter stubble. The recent proposal to reduce the amount to 85-90% green cover is not based on any solid scientific rationale. **We call for the green cover requirement measure in Article 21 of the Statutory Instrument to be disapplied until research is undertaken and findings are determined of the impacts of this measure on farmland birds and in particular on species listed on Annex 1 of the Birds Directive (ie Hen Harrier, Golden Plover).**

## 2.0 Conservation Status of Farmland Birds

The Irish farmed landscape supports some of our most threatened and declining species. Farmland birds are the group of birds worsening fastest in Ireland. Between 1998-2021 there has been a 45% increase in the number of farmland birds on the Red List of Birds of Conservation Concern in Ireland (Gilbert et al 2021), most of these species were common and widespread once. Figure 1 shows the catastrophic declines in farmland birds.

Four breeding species associated with arable land are on the Red list. These are Barn Owl, Kestrel, Yellowhammer and Stock Dove. Several other species associated with arable land are Amber-listed (ie..Skylark, Hen Harrier) but many other species use arable land over winter as we will describe below.

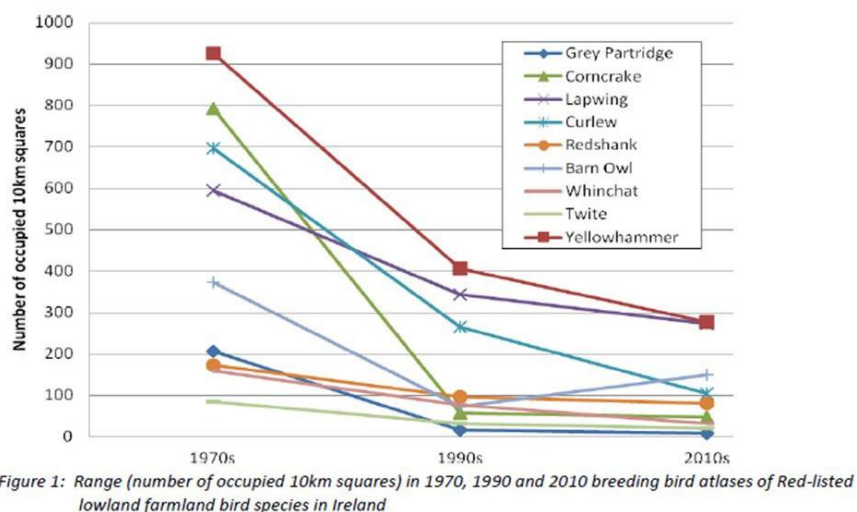


Figure 1 Range of Lowland farmland bird species in Ireland (BirdWatch Ireland, Unpublished presentation of data taken from Bird Atlas (Balmer et al, 2013))

The main reason for the declines in farmland birds is habitat loss from the widespread drainage of wetlands and damp pastures and the more intensive management of agricultural grasslands through reseeded and increased fertiliser use. Other factors include industrial scale extraction of peat bogs and afforestation of habitats. Remaining populations of many farmland species, particularly ground nesting birds, are now much more fragmented and isolated, and are impacted by predation. Loss of mixed and arable farming has impacted species such as the Yellowhammer and Skylark and resulted in the extinction of the Corn Bunting in Ireland in 1991.

Successive iterations of agri-environment schemes have not delivered protection and restoration of farmland birds in the wider countryside due to lack of targeting and the absence of important ecological advice to support farmers. The new Cooperative Project in the CAP 2023-2017, building on the experience of the European Innovation Partnerships, is very promising as it scales up a results-based and locally-led targeted approach though it is limited in geographical scope and doesn't cover the predominant arable areas. Other aspects of CAP measures –land eligibility rules, failure to enforce Statutory Management Requirements and the conditionality (GAECs), production supports, TAMS are all driving further biodiversity loss. Production led supports are leading to ongoing loss of multiple small areas of biodiversity rich habitat.

### **3.0 The importance of winter stubbles for farmland birds**

Winter stubbles are the remnants of a crop harvested in autumn (having been sown in spring). Prior to the 1970s and 1980s, most crops were planted in spring, and seed-rich stubble fields were left undisturbed over winter (Gillings et al., 2005). Prior to the widespread uptake of winter-sowing of crops in the 1980s (Mullins et al., 2009; Feehan, 2003) winter stubble, winter set-aside and spring-sown cereals were common in the Irish agricultural landscape (Mullins et al., 2009; Feehan, 2003). Advances in harvesting technology, weed management and more resilient autumn cereals resulted in a decline in winter stubble in recent decades (Moorcroft et al., 2002). Additionally, as a result of improved weed control and intensification, stubble habitat supports fewer weeds and seed-banks are reduced (Gillings et al., 2005).

This reduction in winter stubble within arable farming as well as the reduction in arable land has had detrimental effects upon a variety of species in Ireland (see Mullins et al., 2009). Winter stubble provides food for farmland birds over winter, while spring-sown cereals provide nesting opportunities for birds such as Skylark, which have undergone significant declines in recent years (Mullins et al., 2009; McMahon et al., 2003; Taylor and O'Halloran, 2002). Winter stubbles are a more favoured foraging habitat for birds during the winter compared to winter cereals (Wilson et al. 1996; Newton 2004; McMahon et al., 2003). McMahon et al. (2003) demonstrated that winter stubble supported the greatest species richness and diversity and the highest numbers of Yellowhammer and Skylark when compared with set-aside, winter cereals and improved grassland. Seed-eating species, including Skylark and Yellowhammer were particularly strongly associated with winter stubble, and seed-feeding birds generally were observed to avoid the improved grassland site due to a lack of feeding opportunities. Copland (2009) recorded 30 species using stubbles and bare earth associated with arable crops in the winter, with these habitats being particularly important for Skylark, European Golden Plover(Annex 1), Northern Lapwing, Linnet, Common Snipe, Pied Wagtail, Rook and Meadow Pipit. An increase in winter sowing of cereals at the expense of spring-sown crops has been a significant determinant in the decline of some species of farmland birds such as Yellowhammer and Skylark (McMahon et al., 2003). The decline in winter stubble has negatively impacted seed-feeding birds (McMahon et al., 2003; Moorcroft et al., 2002) such as Yellowhammer and Skylark, with declines in numbers of these birds are related to reduced winter survival (Gillings et al., 2005). A loss of winter stubble is considered to be a factor which contributed to the extinction of the Corn Bunting in Ireland (Taylor and O'Halloran, 2002).

The provision and appropriate management of winter stubbles is an important measure to provide benefits to farmland birds. Yellowhammer populations have responded positively to appropriately targeted conservation measures through agri-environment schemes. In Northern Ireland the successful implementation of the Environmental Farming Scheme led to a 78% increase in Yellowhammer in the study areas. The main features of this AES identified as contributing to this increase were the provision of winter stubble fields, wild bird cover and arable margins tailored

towards birds and pollinators. In Britain the provision of upwards of 10-20ha of winter stubble per km<sup>2</sup> reversed local declines of Yellowhammer and other farmland birds (Gillings et al., 2005). The presence of winter stubble is linked to the breeding distribution of Yellowhammer (Whittingham et al., 2005) and a lack of suitable winter feeding has been attributed to Yellowhammer declines in otherwise suitable habitat (Siriwardena et al., 2008). Gillings et al. (2005) determined that agri-environment schemes which promote winter stubble retention could greatly assist the conservation of farmland bird species in the UK. Stubbles which support natural regeneration of weeds (Moorcroft et al., 2002; Gillings et al., 2005) and contain patches of bare ground (Moorcroft et al., 2002) would provide the best over-wintering habitat for seed-eating birds (eg. Skylark), in addition to other wildlife.

Winter stubble can support a variety of seed types (see O'Connor and Shrubbs, 1986 in McMahon et al., 2003) and has been shown to support species diversity over winter (McMahon et al., 2003).

Most small mammals in Ireland are thought to forage predominantly on weeds and insects within margins and hedgerows alongside arable fields (Holland, 2004). Common small mammal species in croplands include Bank Voles and Wood Mice (Boatman et al., 2007 and Clapham, 2011). Bank Voles prefer dense undergrowth habitat (O'Flynn and Duffy, 2013). Wood Mice have been observed seeking cover amongst crops (Clapham, 2011), and creating burrows in winter stubble (Wilson et al., 2014). Studies concerning species present in Ireland focussed predominantly on the Wood Mouse (Clapham, 2011; Montgomery and Dowie, 1993; McDonald et al., 2007) and/or Bank Vole (Wilson et al., 2014; see Brown (1999) cited in McDonald et al., 2007). Fields under no-tillage management minimises disturbance to small mammals and have been associated with greater small mammal species diversity (Prieur and Swihart, 2020) and allowing winter stubbles to remain in situ has been shown to have positive implications for small mammals (Dicks et al., 2011).

Winter stubbles are also thought to be an important foraging habitat for predatory birds, including Barn Owl, Long-eared Owl, Kestrel, Hen Harrier and Buzzard. It has been shown that satellite-tagged Hen Harriers have higher survival in arable areas during the juvenile dispersal period, and it is likely that winter stubbles are important foraging habitats in these areas (McCarthy, A., 2022).

Although there remain knowledge gaps in the importance of winter stubbles for farmland birds and biodiversity in the Irish context, the information that is available shows that this is a valuable habitat and that further reduction in their availability would negatively impact a range of farmland birds, many of which are under severe pressure and are Red and Amber-listed Birds of Conservation Concern in Ireland (Gilbert et al 2021).

**There is currently no Irish data available for the optimal proportion of winter stubbles in the landscape for individual farmland bird species and we strongly urge that research to better understand the importance of winter stubbles and its appropriate management on a field and landscape scale is prioritised in order to provide the evidence based for any changes to the availability of this vital habitat in the Irish countryside.**

The selective use of the data from the Gillings 2005 paper to justify a 80-95% cut in winter stubble is not appropriate. This data is from the UK where there is a significant higher amount of arable land. Considering the low hectareage of arable land in Ireland compared to other land uses, it is extremely risky to number 1, introduce this measure without assessment of effects, 2) use data from the UK (and cherry picked data at that) to justify this change in Ireland.

In this section we have clearly laid out the importance of winter stubble for wild birds during the winter period. Loss of winter stubble would have significant consequences for farmland birds that use it. No data or assessment has been presented of the effects of the green cover mandate on farmland birds. Research is needed in advance of implementing the requirement to determine the effects of the change.

#### **4.0 Implications of NAP Green Cover mandate on State’s response to the Birds Case (European Court of Justice Ruling against Ireland C-418/04)**

All wild birds are protected under national and the European Union Birds Directive and national legislation.

The ninth recital in the preamble to the Birds Directive says :

The preservation, maintenance or restoration of a sufficient diversity and area of habitats is essential to the conservation of all species of birds. Certain species of birds should be the subject of special conservation measures concerning their habitats in order to ensure their survival and reproduction in their area of distribution. Such measures must also take account of migratory species and be coordinated with a view to setting up a coherent whole.

In 2007 the European Court of Justice in C-418-04<sup>1</sup> ruled against Ireland on 5 complaints brought by the European Commission including for failing to transpose and apply certain articles of the Birds Directive and to protect wild birds. This case is still open as Ireland must still prove that it is complying with the ruling.

The fourth complaint highlighted Ireland’s failure to apply the second sentence of Article 4(4) of the Birds Directive<sup>2</sup>. The Court ruling stated “In the fourth complaint the European Commission “complains that Ireland has failed to transpose and apply fully and correctly the second sentence of Article 4(4) of the Birds Directive relating to appropriate steps to be taken by the Member States to avoid pollution or deterioration of habitats outside SPAs”. In particular the court ruled that legal instruments presented by the state as examples at the time of the court ruling and applied by the state had failed to include ornithological considerations.

The Court ruled that member states ‘must endeavour to take suitable steps to avoid pollution or disturbances of the habitats’ and it said ‘**serious endeavours, namely the taking of all reasonable measures to achieve the success being sought, require targeted action**’.

The Irish government has been submitting Programmes of Measures<sup>3</sup> to the European Commission address the judgement. These measures include a range of state activities that endeavour to recover farmland bird populations.

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<sup>1</sup> ECLI:EU:C:2007:780 available here <https://curia.europa.eu/juris/liste.jsf?language=en&num=C-418/04>

<sup>2</sup> Article 4(4) of the [Birds Directive](#) states the following: *In respect of the protection areas referred to in paragraphs 1 and 2, Member States shall take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds, in so far as these would be significant having regard to the objectives of this Article. Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats.*

<sup>3</sup> Jan 2022 Programme of Measures <https://www.npws.ie/sites/default/files/files/birds-case-pom-feb-2022.pdf>

**The green cover mandate is a legal requirement for a significant land use change which has not been adequately considered for its effects on birds in the wider countryside. It flies against Ireland's endeavours to comply with the ECJ judgement.**

The Court found that 'the measures taken by Ireland are partial, isolated measures, only some of which promote conservation of the bird populations concerned, but which do not constitute a coherent whole'. This was supported by the fact that several farmland bird species were in decline. Since 2007 the number of farmland birds in worsening conservation status has increased. **Ireland has not learned from this Court ruling.**

#### **Nitrates Action Programme Natura Impact Statement**

The fifth complaint against Ireland was based on the State's failure to transpose and implement properly Article 6.3 of the Habitats Directive.

**The Natura Impact Statement of the Nitrates Action Programme does not contain any reference to, or assessment of, the effects of the green cover mandate on Annex 1 bird species. The Department of Housing, Local Government, and Heritage has failed to consider the requirement to protect wild birds both inside Natura sites and in the wider countryside, and has not assessed the implications of the green cover mandate on wild birds.**

As stated above, over 30 bird species are known to forage on winter stubble. Data shows that Hen Harrier forages on arable land and that juveniles are known to have a higher survival rate on arable leading to suggestions that winter stubble is important for their survival. This leads to concerns that the green cover mandate also threatens the State's Hen Harrier Threat Response Plan to halt the loss of this Annex 1 and Amber listed Bird of Conservation Concern. **The State is required to halt the losses of this species and restore populations.**

The NIS cannot conclude without reasonable scientific doubt that there will be no impact on Annex 1 bird species that use arable land. This puts the conclusions of no significant adverse effects on very shaky legal grounds.

#### **Addressing Fertiliser Overloading in Ireland**

BirdWatch Ireland fully supports the maximum efforts to cut organic and chemical fertiliser use. We are members of the Sustainable Water Network (SWAN) and support their submissions to cut pollution to water ways. We are keenly aware of the threats of pollution to waterbirds in lakes, estuaries and coastal areas. We are worried about the threat of pollution to riverine birds such as Annex 1 Kingfisher which is now Amber-listed, Grey Wagtail and Dipper. The state is not doing enough to target measures at catchment and at farm level. This is what is needed if we are going to turn the tide on water pollution. We are also concerned about ammonia emissions and degradation of habitats as a result of excess emissions. This in turn impacts habitats for important bird species like Hen Harrier and others that use heathlands. The example given in the NAP of severe pollution in the Barrow and Slaney catchments is eye opening. While 27% of the pollution is derived from arable, 73% is still derived from livestock production. Clearly bespoke measures are required in these catchments and at farm level to address pollution of these waterways. Every farming sector must play its part but the blanket removal of winter stubble without any research or assessment could have a disproportionate effect on farmland birds that use stubble habitats. There is a lot of ground to cut pollution from livestock farms and this is where the focus should be until we have research on green cover effects on wild birds.



## Conclusion

The green cover mandate is a rushed, national blunt instrument that could have serious implications for farmland birds that overwinter on stubbles. The Natura Impact Statement does not assess the effects of this new legal requirement on Annex 1 bird species Hen Harrier and Golden Plover and this is concerning. Bespoke farm level and at catchment level is required to reverse the trends on water pollution from agriculture. This seems to be missing from the Nitrates Action Programme which is regrettable. We call on government to disapply the sections in Article 21 of SI 113 until the research is undertaken and findings are published on the effects of such a change on farmland birds that use winter stubbles.

## References

Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. & Fuller, R.J. (2013) *Bird Atlas 2007-11: the breeding and wintering birds of Britain and Ireland*. BTO Books, Thetford available here <https://www.bto.org/our-science/projects/birdatlas> accessed July 7th 2022

Birds Directive, Council Directive on the conservation of wild birds 79/409/EEC available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0147> accessed July 7<sup>th</sup> 2022

Boatman, N.D., Parry, H.R., Bishop, J.D. and Cuthbertson, A.G. (2007) "Impacts of agricultural change on farmland biodiversity in the UK". *Issues in Environmental Science and Technology*. No. 25. *Biodiversity under Threat*, pp.1-32. Available at [https://d1wqtxts1xzle7.cloudfront.net/3436445/BK9780854042517-00001.pdf?response-content-disposition=inline%3B+filename%3DImpacts\\_of\\_Agricultural\\_Change\\_on\\_Farmla.pdf&Expires=1595522039&Signature=XQzOOUgQCKB1m9MqEDdIPsZzAlmPXoYS~306cfOB6~NyQsJ9aZwO6Wu~06qjpi1-b2bXM9X4dnrsOghF2nKGUWKZv0678H6ZO6f6LA-XAQWQLnrtGqIhGUTIEISuVX0xK~zdweFqBRIncaY5KH~O1HtMd08vBBNii~uXA6RkanRRQHTYsJQOVNjmRivLPWZ3b3JoeSASXsK36ZZhKZiyT6ExVor1CIQpjCeZq6uDyzKQPni2cxfsT5gUPY4T8la2GLQLe6lu0EZ7EkvU4lwS0ap6XgWubotfxgTQrA4HIg3o7QdNUdyUbefho9M6mvOpjFfkJ02S1bqPFR-n6sYbrLw &Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA](https://d1wqtxts1xzle7.cloudfront.net/3436445/BK9780854042517-00001.pdf?response-content-disposition=inline%3B+filename%3DImpacts_of_Agricultural_Change_on_Farmla.pdf&Expires=1595522039&Signature=XQzOOUgQCKB1m9MqEDdIPsZzAlmPXoYS~306cfOB6~NyQsJ9aZwO6Wu~06qjpi1-b2bXM9X4dnrsOghF2nKGUWKZv0678H6ZO6f6LA-XAQWQLnrtGqIhGUTIEISuVX0xK~zdweFqBRIncaY5KH~O1HtMd08vBBNii~uXA6RkanRRQHTYsJQOVNjmRivLPWZ3b3JoeSASXsK36ZZhKZiyT6ExVor1CIQpjCeZq6uDyzKQPni2cxfsT5gUPY4T8la2GLQLe6lu0EZ7EkvU4lwS0ap6XgWubotfxgTQrA4HIg3o7QdNUdyUbefho9M6mvOpjFfkJ02S1bqPFR-n6sYbrLw &Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA) First accessed on 23/07/20

Clapham, S.J. (2011) "The abundance and diversity of small mammals and birds in mature crops of the perennial grasses *Miscanthus x giganteus* and *Phalaris arundinacea* grown for biomass energy". Doctoral dissertation, Cardiff University. Available at <http://orca.cf.ac.uk/15629/1/2011ClaphamSJPhD.pdf>

Copland, A.S. (2009). Bird populations of lowland Irish farmland (with special reference to agri-environment measures). Unpublished P.h.D Thesis to University College Cork.

Dicks, L. V., Ashpole, J.E., Dänhardt, J., James, K., Jönsson, A., Randall, N., Showler, D. A., Smith, R. K., Turpie, S., Williams, D. & Sutherland, W. J. (2011) "Farmland Conservation: Evidence for the effects of interventions in northern and western Europe." *Synopses of Conservation Evidence* (3), Pelagic Publishing. Available at [http://doc.ukdataservice.ac.uk/doc/7100/mrdoc/pdf/7100\\_farmland\\_synopsis\\_compiled3.pdf](http://doc.ukdataservice.ac.uk/doc/7100/mrdoc/pdf/7100_farmland_synopsis_compiled3.pdf)

Feehan, J. (2003) *Farming in Ireland: history, heritage and environment*. Dublin. Faculty of Agriculture, University College Dublin.

Gilbert, G, Stanbury, A., Lewis, L., (2021) Birds of Conservation Concern in Ireland 4: 2020–2026 *Irish Birds* 43: 1–22, available here <https://birdwatchireland.ie/birds-of-conservation-concern-in-ireland/> accessed July 7<sup>th</sup> 2022.

Gillings, S., Newson, S.E., Noble, D.G. & Vickery, J.A. (2005). Winter availability of cereal stubbles attracts declining farmland birds and positively influences breeding population trends. *Proc. R. Soc. B.* 272, 733–739.

Habitats Directive Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora, available here <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043> accessed July 7<sup>th</sup> 2022.

Holland, J.M., 2004. The environmental consequences of adopting conservation tillage in Europe: reviewing the evidence. *Agriculture, ecosystems & environment*, 103(1), pp.1-25.

Macdonald, D. W., Tattersall, F. H., Service, K. M., Firbank, L. G. and Feber, R. E. 2007. Mammals, agri-environment schemes and set-aside - what are the putative benefits? *Mammal Review*. 37 (4), pp. 259-277. [https://doi.org/10.1046/j.1440-1770.2002.00172\\_37\\_4.x](https://doi.org/10.1046/j.1440-1770.2002.00172_37_4.x)

Mahon, B.J., Whelan, J., Bracken, F. and Kavanagh, B. (2003) “The impact of farming on over-wintering bird populations”. *Tearmann-the Irish Journal of Agri-Environmental Research*, 3, pp.67-76.

McCarthy, A (2022) Seasonal Ecology and the Conservation of Hen Harriers (*Circus cyaneus*) in Ireland. Unpublished P.h.D Thesis to University College Cork.

Montgomery, W.I. and Dowie, M. (1993) “The distribution and population regulation of the wood mouse *Apodemus sylvaticus* on field boundaries of pastoral farmland”. *Journal of Applied Ecology* (30)4, pp.783-791.

Moorcroft, D., Whittingham, M. J., Bradbury, R. B. & Wilson, J. D. 2002 The selection of stubble fields by wintering granivorous birds reflects vegetation cover and food abundance. *Journal of Applied Ecology* 39, 535–547.

Mullins, E., Collier, M.J., O’Brien, M., Meade, C. and Spillane, C. (2009) “Predicting the Impact of Coexistence-Guided, Genetically Modified Cropping on Irish Biodiversity”. Environmental Protection Agency STRIVE Programme.

Newton, I. (2004) The recent declines of farmland bird populations in Britain: an appraisal of causal factors and conservation actions, *Ibis*, Vol. 146, 4, pgs. 579-600

O’Flynn, C. and Duffy, O. (2013) “Bank vole (*Myodes glareolus*).” Available at <https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Bank-Vole.pdf> First accessed on [24/07/20](https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Bank-Vole.pdf)

Prieur, A.-G. A., & Swihart, R. K. (2020). Field attributes and farming practices associated with vole (*Microtus*) damage in cover-cropped fields. *Agriculture, Ecosystems & Environment*, 300, 106950. <https://doi.org/10.1016/j.agee.2020.106950>



Taylor, A.J. and O'Halloran, J. (2002) "The decline of the corn bunting, *Miliaria calandra*, in the Republic of Ireland". In *Biology and Environment: Proceedings of the Royal Irish Academy* (pp. 165-175). Royal Irish Academy.

Wilson, J. D., Taylor, R. & Muirhead, L. B. 1996 Field use by farmland birds in winter: an analysis of field type preferences using resampling methods. *Bird Study*. 43, 320–332.