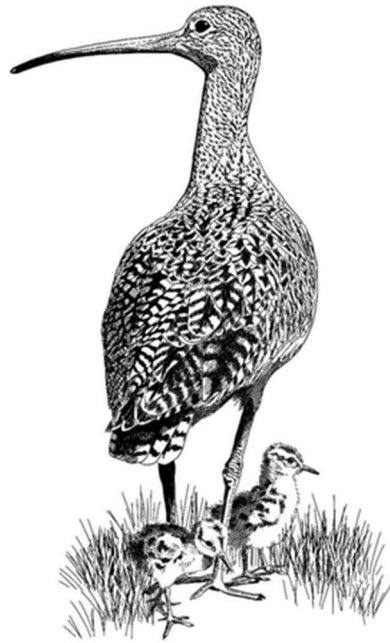


A UK Action Plan for the Eurasian Curlew

An Advice and Options Paper for Government and agencies to consider, published under the auspices of the Curlew LIFE Project.¹



Endorsed by



A Call to Action

The Curlew is an iconic bird of farmland and upland and is loved by many, including farmers, birders, moorland managers and the general public. However, its UK population is plummeting. In the lowlands the Curlew has recently disappeared from many areas and is widely regarded as a top priority for conservation and management action. Across the uplands, remaining sustainable Curlew populations are found on managed moorland and adjacent farmland through the work of gamekeepers and dedicated teams of conservationists. Collaborative work by farmers, landowners, gamekeepers and conservationists is demonstrating that declines can be halted, and population recovery of this much-loved bird is possible.

The Curlew needs a variety of intact habitats across the uplands and lowlands. Dedicated work is required to manage and restore landscapes at scale, and to manage the unsustainable levels of predation which are so impactful on eggs and chicks. Large-scale land management schemes which address both habitat needs and predation pressures are vital to support the Curlew within our working landscapes.* These measures have benefits which would extend to many other declining species and would also enhance vital ecosystem services.² Therefore, there is an urgent need for an Action Plan across the UK which unites people and organisations in an endeavour to save Curlews, the habitats they depend upon and the wildlife that lives alongside them.

Curlews are widely appreciated across society. By building on this affection and promoting shared working, we will go a long way to making this Action Plan work. It is now essential that we secure support from governments and agencies to enact this Plan and to save the Curlew.

* This document uses the term 'land management scheme' as a catch-all term to refer to government-funded schemes also known as agri-environment, sustainable farming and environmental farming schemes.

Actions required to halt the decline of Eurasian Curlew across the UK

1. Urgent, co-ordinated action is needed across the UK. A Curlew Recovery Task Force, supported by governments and agencies, must be formed to galvanise action, identify UK-wide funding streams, raise awareness and encourage opportunities for coordination and collaboration. This will support country and regional approaches.
2. An extended network of effectively managed areas is needed, including ‘Wader Recovery Areas/’Important Curlew Areas’’ resourced for habitat and predator management.
3. Well-designed, adaptive, effective and enduring land management schemes are essential to underpin these priority areas, with funding through government support and private finance mechanisms. Measures will need to be suited to the disparate habitats and contexts in which Curlew breed.
4. The landscape-scale processes that are driving Curlew declines must be addressed. While low density native woodland creation brings a range of ecological benefits, in wader priority areas large-scale afforestation must be contained to prevent habitat loss and increased predation pressure on Curlew and other ground-nesting birds.
5. Collaboration across conservation and land management sectors is essential to improve our understanding of the causes of high densities of generalist predators in the UK – and act on these. We should ensure that evidence-based predation management is supported alongside habitat improvements as part of a conservation toolkit. Where unsustainable rates of nest and chick predation drive low productivity, predator control must be delivered alongside measures such as improvements in habitat quality, and potential alterations to agricultural operations and livestock management.
6. Funding for evidence-based monitoring, adaptive management, innovative techniques and research all focused on Curlew recovery are essential to improve our understanding of what is needed to sustain populations of Curlew across the UK

These actions would not only benefit Curlew but also many other ground-nesting bird species, and increase biodiversity across areas of intervention.

Context

Status and Concerns

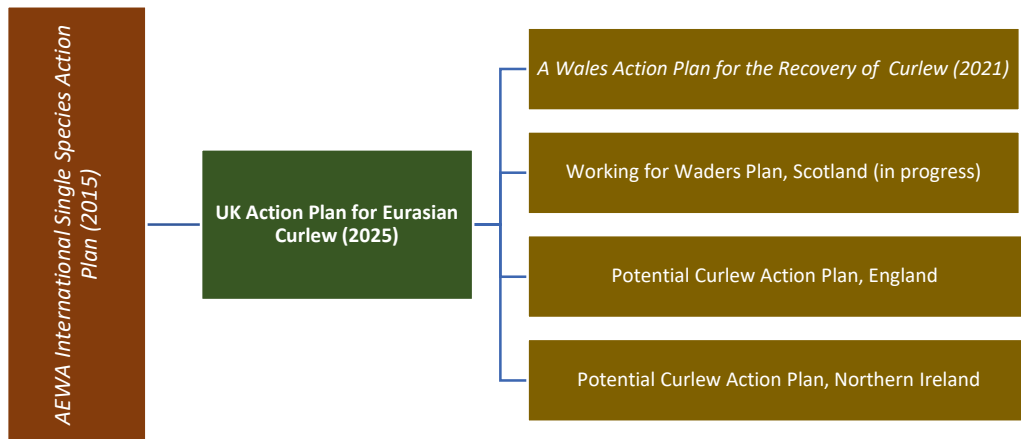
The plight of the Eurasian Curlew *Numenius arquata* is arguably the single most pressing bird conservation priority in the UK.³ A review paper, published in 2015, outlined the rationale for the following statement: ‘A co-ordinated UK recovery programme is urgently required to help ensure that this species does not suffer the same fate as that of other *Numenius* species.’⁴ Red Listed, and rapidly declining, a quarter of Europe’s population of Curlew breed in the UK. Hence, the UK’s stewardship of the landscape which hosts this emblematic bird is of critical importance.⁵ Since the mid-1990s, the Curlew population has halved in England and Scotland, declined by more than 80% in Wales, and declined in Northern Ireland by 80% during 1987-2013.⁶

To date, urgent and effective bird species recovery programmes in the UK have successfully supported species that are isolated or rare; they have not proven as effective for more widespread, declining species such as Curlew. For Curlew, effective recovery is a challenge due to the birds being widespread across multiple landscapes and requiring some intensive interventions. The remaining strongholds of breeding Curlew in England and mainland Scotland are on areas managed as or adjacent to grouse moors where predator control is practised. Its rapid decline elsewhere is alarming, and if this is not halted and reversed, an internationally important species will be lost from yet more of the UK extent. Urgent intervention is needed to prevent the Curlew going the way of the Corncrake *Crex crex*, which now only hangs on in isolated areas, having been lost completely from vast farmland areas formerly occupied. Supporting farmers at a landscape scale is critical to the survival of both species.

The Curlew is culturally important, popular, and indeed totemic for many people and interest groups. **It is a flagship species** not just for other ground-nesting birds, but for many farmland, grassland and upland specialist species. Significant conservation gains from management for Curlew would effectively apply to other ground-nesting birds, including other declining waders such as Lapwing *Vanellus vanellus*, Redshank *Tringa totanus*, Golden Plover *Pluvialis apricaria*, Common Snipe *Gallinago gallinago*, Dunlin *Calidris alpina* and Whimbrel *Numenius phaeopus*.⁷ Conservation management for Curlew supports key ecosystems such as peatland, floodplain grassland, mudflats and saltmarsh, which provide habitat for many other declining plant and animal species, carbon sequestration, water supplies, agricultural productivity and outstanding recreational and health benefits. **Effective conservation action for Curlew can be transformational in sustaining ecosystem services on a large-scale.**

This UK Action Plan is intended to support government and its agencies to meet national and international targets and obligations, including those set out in the AEWA Action Plan (2015).⁸ It offers a framework to support and unify the needs of the individual countries, seeking government and agency support, and maintaining connection across borders. The Welsh Action Plan published in 2021 and led by Glyfinir Cymru is an excellent example of national endeavour.⁹ The implementation of the UK Plan would directly support and facilitate such plans, meeting our national and international targets and obligations. This UK Plan has been developed under the auspices of the Curlew LIFE Project.¹⁰

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Drivers of Decline

The decline of breeding Curlew populations is a consequence of their failing to produce sufficient fledged young to sustain numbers. Whilst this is now primarily due to widespread and high levels of predation on eggs and chicks, correlating with increases in generalist meso-predator populations, the drivers of adverse changes date back to land use changes from at least the 1970s.

Across much of the upland range the population decline is a consequence of large-scale habitat loss and fragmentation due to afforestation, high levels of sheep stocking, and intensification of in-bye pasture, resulting in losses of breeding habitat and elevated predation of eggs and chicks.¹¹ In the lowlands, farmland has become much more mono-cultural, creating large and intensively managed fields (e.g. switch from hay to silage production, expansion of intensive arable, and increased stocking levels), with drainage reducing the extent of wetland habitats proving unfavourable in many areas for nesting Curlew and other wading birds.¹²

Populations of generalist meso-predators (such as foxes *Vulpes vulpes* and crows *Corvus* spp.) have increased in tandem with these landscape changes, and predation on nests and chicks has grown.¹³ Additionally, there is some evidence that large-scale gamebird releases may boost generalist avian predators, and food waste (sometimes put out deliberately for foxes and badgers *Meles meles*) has subsidised fox populations, increasing their numbers in surrounding landscapes.¹⁴

Against this backdrop, with growing government investment in land use measures to tackle climate change, we will see a shift towards more afforestation and renewable energy developments, which may further adversely impact Curlew breeding areas.¹⁵

Milestones for Recovery

The Kunming-Montreal Global Biodiversity Framework (GBF) aims to halt and reverse biodiversity loss by 2030.¹⁶ For Curlew, this is a challenging timeline. Hence, to meet the broad aim of the GBF for this species, the following milestones are proposed:

2025

- A Curlew Recovery Task Force is formed to support and coordinate conservation and recovery work. Wader Recovery Areas (WRAs) are identified as core areas for Curlew and other wader species recovery.¹⁷ There are already Important Curlew Areas (ICAs) in Wales. Existing conservation and management toolkits are shared widely across countries and developed in line with new evidence on applicability and impact.¹⁸

2028

- An overhaul of wader-relevant land management scheme options has been completed, with schemes in place to fund essential short-, medium- and long-term interventions (e.g. habitat management, predator exclusion fencing, evidence-led lethal and non-lethal predator management, delayed/sacrificed crop management, stock management). Local advisers support work, developing management plans in partnership with collaborating farmers at a landscape scale, with space for adaptive management.
- The Special Protection Areas (SPA) advice and options for breeding Curlew as outlined in the third *UK SPA Review: Phase 2* report are implemented. In addition, where appropriate, breeding Curlew should be added as a feature to existing SPAs, and to 'Other Effective area-based Conservation Measures' (OECMs) sites.¹⁹
- Wader-friendly forestry practice is established, with a strategic approach to tree planting and site mitigation to protect areas with populations susceptible to habitat loss and edge effects.²⁰ There is reference to this in the UK Forestry Standard 5th Edition.²¹ Similar approaches should be developed for renewable energy developments.²²
- A strategic approach to headstarting has been agreed, with Founder Population (FP)²³ areas and sites suitable for translocation identified where relevant.²⁴

2030

- A target of population productivity across all regions, including monitored WRAs and FPs, of at least 0.6 fledged young per pair per annum (this level being necessary to prevent further population decline). Indices of productivity may be a sufficient proxy at regional scales for this and are under development.²⁵
- Key drivers of population decline are greatly reduced. This will require a landscape-scale approach to reducing levels of predation with an improved understanding of the drivers of high densities of generalist predators in the UK. This is highly ambitious, and may not be uniformly feasible in the timeframe, but has been achieved in some managed areas.²⁶

2045

- Curlew populations have been consistently increasing across landscapes in all four UK countries.

Action Plan

Actions are ordered according to scale, immediacy of need, and likely impact. All are deemed as Essential in terms of their priority.

These Actions contribute to meeting the following Global Biodiversity Framework targets for 2030, which the UK Government adopted at CBD COP15:

- *Target 1: Plan and Manage all Areas to Reduce Biodiversity Loss*
- *Target 3: Conserve 30% of Land, Waters and Seas*
- *Target 4: Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts*
- *Target 8: Minimize the Impacts of Climate Change on Biodiversity and Build Resilience*
- *Target 10: Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry*
- *Target 20: Strengthen Capacity-Building, Technology Transfer, and Scientific and Technical Cooperation for Biodiversity*

Objective 1: Form a UK-Level Curlew Recovery Taskforce (CRT)

Result	Actions	Priority	Timescale	Proposed Owners
Urgency of necessary action supported by government and conservation bodies. A Curlew Recovery Taskforce (CRT) formed to lead on development and implementation of UK Plan, embracing and building on work across the countries and energising public engagement. Collaboration across conservation and land management sectors.	<p>1a. Form Curlew Recovery Taskforce (CRT) with emphasis on government leadership and linked to country-level organisations. The CRT should recognise the importance of co-design and delivery of work with farming and game management sectors. It should work at pace, emphasising the vital importance of action to avert further major declines, and imaginatively appeal to the wider public.</p> <p>1b. Collate existing Conservation Tool Kits available for survey, monitoring and management measures. The 'Curlew Fieldworker Toolkit' (1st edition) to be updated and extended to cover all aspects of</p>	Essential	<p>1a. 2025</p> <p>1b. 2025</p> <p>1c. Begins in 2025</p> <p>1d. 2025</p> <p>1e. 2025</p>	<p>1a. Governments, agencies and conservation management bodies, independently chaired, with representatives from RSPB, BTO, GWCT, WWT, farming and moorland management organisations, and country-level organisations (e.g. Gylfinir Cymru, Working for Waders, Curlew Recovery Partnership).</p> <p>1b. A CRT Task and Finish Group (in collaboration with other countries' partnerships).</p>

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	<p>fieldwork and management measures to support conservation and management for Curlew.²⁷</p> <p>1c. Lead input to development of revised AEWA Curlew Plan (JNCC lead).</p> <p>1d. Co-ordinate communications and engagement activities at a national level, supporting country and regional teams.</p> <p>1e. Galvanise governments, agencies and wider public support for curlew recovery, working with schools, communities and businesses. Engage with local communities through energising support for volunteer practical action and monitoring.</p>			<p>1c. JNCC in collaboration with AEWA.</p> <p>1d. CRT</p> <p>1e. CRT, country and regional organisations and NGOs.</p>
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Objective 2: Secure sufficient habitat and sites for breeding Curlew

Result	Actions	Priority	Timescale	Proposed Owners
An adequate suite of protected areas and Wader Recovery Areas/Important Curlew Areas holding at least 50% of current Curlew population.	<p>2a. Classify already identified SPAs. Commitment for adequately funded management for Curlew within these designations.</p> <p>2b. Identify WRAs using best-known data available, with ability to adapt to new data. Gylfinir Cymru's ICA designations are a useful model. These are potential SPAs for Curlew if they meet the criteria.</p> <p>2c. Support the 2027-31 Bird Atlas to provide updated estimates of relative densities. Update WRAs where necessary.</p> <p>2d. Focus monitoring efforts within WRAs and share results, learning, best practice and estimates of productivity figures between organisations, shared through country-level groups and CRT.</p>	Essential	<p>2a. 2026</p> <p>2b. 2026</p> <p>2c. 2027-31</p> <p>2d. 2026</p>	<p>2a. Governments and Agencies, subject to Ministerial announcements.</p> <p>2b. CRT</p> <p>2c. BTO and CRT</p> <p>2d. Organisations working at fieldwork level, shared via country groups.</p>

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<p>Policy shifts to secure large-scale WRAs in the uplands which are free from commercial forestry and wind farm developments that threaten important Curlew populations in WRAs.</p>	<p>2e. Development and publication of guidance on woodland creation and breeding grassland waders by each country agency.</p> <p>2f. Revise UKFS5 (Oct '24) to ensure non-native forests are not established within broadly 1 km of WRA.²⁸</p> <p>2g. Revise wind farm guidance to ensure edge of wind farm 'footprint' is at least 700m from edge of WRAs.²⁹</p>	<p>Essential</p>	<p>2e. 2026</p> <p>2f. 2026</p> <p>2g. 2026</p>	<p>Governments and agencies working with country-level forestry bodies; completed for forestry in Wales.</p>
<p>Policy shifts to manage the high densities (in comparison to elsewhere in Europe) of predators of ground-nesting birds in UK.</p>	<p>2h. Publish key research supporting the findings on high densities of predator populations in UK, and drivers of this. Commission further research where required.</p> <p>2i. Activate discussions with Governments to address high generalist predator densities across UK wader habitats.</p>	<p>Essential</p>	<p>2h. 2026</p> <p>2i. 2026</p>	<p>2h. RSPB Conservation Science, peer reviewed (led by D. Douglas, RSPB) and CRT.</p> <p>2i. Governments and agencies with support from CRT.</p>

Objective 3: Provide expertise and financial support for conservation actions to increase Curlew productivity

Result	Actions	Priority	Timescale	Proposed Owners
<p>Land management schemes tailored to supporting Curlew at landscape scale.</p>	<p>3a. With stakeholders draw-up future land management schemes, to support landscape scale WRAs and farm groups, supported by a facilitator/advisor.</p> <p>3b. Provide financial support for wader-friendly and biodiversity-enhancing habitat interventions (e.g. late silage cutting, rush cutting, creation of wet features, rewetting, removal of non-native conifer blocks).</p> <p>3c. Provide financial support for measures to actively manage predation of eggs and chicks in</p>	<p>Essential</p>	<p>ASAP</p>	<p>Governments and agencies at country level with support from CRT and country groups. Noted as ASAP given each country difference in approach to land management/agri-environment schemes.</p>

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	<p>group tiers e.g. nest fencing, permanent predator exclusion fencing, and where justified due to densities of Curlew, lethal control to high ethical standards of foxes and crows, monitored by the facilitator. Where undertaken, control of foxes and crows should be in combination with measures to reduce the underlying drivers of high predation pressure, or at the very least not contribute to those.³⁰</p>			
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Objective 4: Monitor and Innovate

Result	Actions	Priority	Timescale	Proposed Owners
<p>Interventions are monitored and novel interventions are tested to ensure we have access to the best possible toolkit to recover Curlew populations.</p>	<p>4a. Implement open-source mapping and reporting on WRAs in order to publicly report on changes in population size and productivity to consistent standards (where feasible).</p> <p>4b. Utilise well-monitored adaptive management techniques to enable a refinement of interventions as the evidence-based is developed.</p> <p>4c. Review effectiveness of existing headstarting programmes (and lessons learnt) and devise a strategy for use of this tool including identifying regions where its use would be impactful, and identifying resilient Founder Populations if deemed appropriate.</p> <p>4d. Devise and implement a programme of business/private finance to restore Curlew populations, using funds for biodiversity offset.</p>	<p>Essential</p>	<p>4a. 2026</p> <p>4b. 2025</p> <p>4c. 2026</p> <p>4d. 2026</p>	<p>4a. BTO with support from eNGOs, country-level organisations and the CRT</p> <p>4b. CRT and partners</p> <p>4c. CRT with WWT support</p> <p>4d. CRT and eNGOs</p>

Acknowledgements and References

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² Goodall, M., Hoodless, A., Evans, S., Grayshon, L. and Perkins, A. (2023), Review of the wider societal, biodiversity and ecosystem benefits of curlew recovery in Wales. *Natural Resources Wales Evidence Report Series*. No. 629. https://www.gwct.org.uk/media/1391772/NRW-Evidence-Report-629_multiple-benefits-of-breeding-curlew.pdf

³ Brown, D., Wilson, J., Douglas, D. *et al* (2015), The Eurasian Curlew – the most pressing bird conservation priority in the UK? *British Birds*. 108: 660-668. <https://britishbirds.co.uk/journal/article/eurasian-curlew-most-pressing-bird-conservation-priority-uk>

⁴ The reported extinction of the Slender-billed Curlew *N. tenuirostris* – joining two known Western Palearctic bird species extinctions (Great Auk *Pinguinus impennis* and the Canarian Oystercatcher *Haematopus meadewaldoi*) - has highlighted the exceptional vulnerability of the Numeniini Tribe. Five of the eight (62.5%) *Numenius* species are currently considered of conservation concern, compared with 21.8% of all bird species globally.

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⁷ Wading birds feature more than any other group of birds in the 'red' and 'amber' lists of conservation concern: 11 are red-listed, and 17 are amber-listed.

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⁸ Brown, D.J. (2015) International Single Species Action Plan for the Conservation of the Eurasian Curlew *Numenius arquata arquata*, *N. a. orientalis* and *N. a. suschkini*. AEWA Technical Series No. 58.

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⁹ Gylfinir Cymru / Curlew Wales (2021) A Wales Action Plan for the Recovery of Curlew.

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¹³ Baines, D. (2025) Ten years on from a predator removal experiment in the English uplands: Changes in numbers of ground-nesting birds and predators. *Journal for Nature Conservation*. 84.

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¹⁴ Pringle H, Wilson M, Calladine J, *et al* (2019) Associations between gamebird releases and generalist predators. *Journal of Applied Ecology*. 56: 2102–2113. <https://doi.org/10.1111/1365-2664.13451>; Williams,

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¹⁵ Examples of recent UK Government press releases on afforestation both in the UK and globally:

<https://www.gov.uk/government/news/government-launches-treeplantingtaskforce-to-oversee-planting-of-millions-of-trees-across-our-four-nations>; <https://www.great.gov.uk/international/investment/clean-growth-in-the-uk/>; <https://www.gov.uk/government/news/uk-unveils-funding-boost-to-help-forest-nations-fight-climate-change>. All accessed 19/08/2025.

¹⁶ UN Environment Programme, Conference of the Parties to the Convention on Biological Diversity, Fifteenth Meeting Part – II (2022) 15/4 Kunming-Montreal Global Biodiversity Framework.

<https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf>

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Recent UK Government advice in relation to tree planting from Defra, Forestry Commission and Natural England: <https://www.gov.uk/government/publications/guidance-for-afforestation-proposed-on-or-near-nationally-important-upland-breeding-wader-areas/guidance-to-help-inform-when-an-upland-breeding-wader-survey-is-needed-and-when-woodland-creation-is-likely-to-be-appropriate>

Similar work is underway in Scotland: Newey, S., Fielding, D., Wilson, M. (2021) Mapping farmland wader distributions and population change to identify wader priority areas for conservation and management action. https://www.hutton.ac.uk/sites/default/files/files/Newey_etal_IdentifyingWaderPriorityAreas_InternallyReviewed%26%20Signedoff_FINAL.pdf, accessed 19/08/2025.

¹⁸ A range of existing toolkits have been developed by the Curlew Recovery Partnership, <https://www.curlewrecovery.org/resources>, the BTO Wader Hub <https://www.bto.org/our-science/projects/wader-hub>, Working for Waders, <https://www.workingforwaders.com/resources>, Gylfinir Cymru, <https://www.curlewwales.org/resources>, and advice published by Curlew LIFE <https://curlewlife.org/farming/>, all accessed 19/08/2025.

¹⁹ The Third Network Review on UK Special Protection Areas for birds was published in May 2025, following designation of SPAs for Curlew being recommended to Ministers in the 2016 JNCC SPA Review. There are currently no SPAs for breeding Curlew (13 for non-breeding). The review included recommendations for adding Curlew to specific current SPAs, extending some of these SAPs, and indicated where new SPAs could be considered. Grady, S., Anthony, S., Cohen, S., *et al* (eds) – on behalf of the UK SPA & Ramsar Scientific Working Group (2025) The status of UK SPAs in the 2000s: the Third Network Review summary of advice and options. JNCC. <https://hub.jncc.gov.uk/assets/5b816ab9-4268-4c48-bdc5-5241e4464d4b>

It should be noted that there are concerns expressed by the Office for Environmental Protection and others regarding the need for more action on SPAs.

There are several SSSI and ASSI which include breeding Curlew as a designated feature.

OECMs are 'a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ* conservation of biodiversity, with associated ecosystem functions and services and, where applicable, cultural, spiritual, socioeconomic, and other locally relevant values.' The * refers to: 'the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties'. They were adopted by the CBD COP14 (CBD/COP/DEC/14/8), see <https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-08-en.pdf> For an update on their implementation, see: <https://www.gov.uk/government/publications/criteria-for-30by30-on-land-in-england/30by30-on-land-in-england-confirmed-criteria-and-next-steps#confirmed-criteria-for-30by30-on-land-in-england>, both access 19/08/2025.

²⁰ Wilson, J.D., Anderson, R., Bailey, S. *et al* (2014) Modelling edge effects of mature forest plantations on peatland waders informs landscape-scale conservation. *Journal of Applied Ecology*. 51: 204-213.

<https://doi.org/10.1111/1365-2664.12173>; Pálsdóttir, A. E., Gill, J. A., Alves, J. *et al* (2022) Subarctic afforestation: Effects of forest plantations on ground-nesting birds in lowland Iceland. *Journal of Applied Ecology*. 59: 2456–2467. <https://doi.org/10.1111/1365-2664.14238>; Minter, M., Baker, S., Bowditch, E., *et al* (2025) Using participatory scenario planning to explore the synergies and trade-offs from upland treescape expansion. *People and Nature*. 00:1–15. <https://doi.org/10.1002/pan3.70025>; McGrory, R.E., Briers, R.A., Tomlin, C. *et al* (2024) Impacts of forest extent, configuration and landscape context on presence of declining breeding Eurasian curlew *Numenius arquata* and implications for planning new woodland. *Forest Ecology and Management*. 572. <https://doi.org/10.1016/j.foreco.2024.122281>; 4. Sheard, E.J., Park, K. Thompson, D.B.A. and Wilson, J.D. (2025). Woodland proximity limits benefits of conservation land management for farmland breeding waders. *Journal of Applied Ecology* <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2664.70220>

²¹ Forestry Commission, Scottish Forestry, Natural Resources Wales and Forest Service (2023) The UK Forestry Standard: The governments' approach to sustainable forestry. Fifth Edition. Available:

<https://www.forestry.gov.scot/publications/1522-the-uk-forestry-standard-the-governments-approach-to-sustainable-forestry-5th-edition/viewdocument/1522>, accessed 19/08/2025. Natural Resources Wales have also recently completed their Woodland Creation and Breeding Grassland Guidance to Forestry Agents.

²² For example, <https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/renewable-energy/onshore-wind-energy/wind-farm-impacts-birds>, accessed 19/08/2025.

²³ Founder Populations are populations established in formerly occupied or now clearly suitable areas in terms of habitat and predation risk.

²⁴ Headstarting is a conservation technique usually applied to endangered species, in which young animals are taken from one area, raised artificially and subsequently released into the wild (in the donor or other suitable areas). Examples for waders can be found at: <https://www.waderquest.net/conservation/headstarting/>, <https://projectgodwit.org.uk/category/headstarting/>, <https://www.wwt.org.uk/news-and-stories/news/curlews-fly-free-on-dartmoor-as-part-of-project-to-save-iconic-species-1>, all accessed 19/08/2025, and Donaldson, L., Hughes, R., Smart, J. (2025) Headstarting boosts population of a threatened wader, the black-tailed godwit. *Animal Conservation*. 28: 315-327. <https://doi.org/10.1111/acv.12984>

²⁵ Jarrett, D., Lehtikoinen, A. and Willis, S.G. (2024) Monitoring wader breeding productivity. *Ibis*. 166: 780-800. <https://doi.org/10.1111/ibi.13298>

²⁶ For example, in the Antrim Hills, Northern Ireland, <https://www.rspb.org.uk/whats-happening/news/record-success-for-breeding-curlews-in-northern-ireland>, accessed 19/08/2025. In England, the recently announced Land Use Consultation has a bearing on this. <https://www.gov.uk/government/consultations/land-use-in-england>, accessed 19/08/25.

²⁷ An example from Northern Ireland, where wader density increased following the provision of targeted advice and habitat management: Hunt, C.L., Colhoun, K., Mason, L.R., *et al* (2023) Positive responses of breeding waders to targeted conservation advice and habitat management used to enhance existing wader conservation initiatives in Northern Ireland. *Journal for Nature Conservation*. 75. <https://doi.org/10.1016/j.jnc.2023.126465>

²⁸ Pálsdóttir, A. E., Gill, J. A., Alves, J. A., *et al* (2022). Subarctic afforestation: Effects of forest plantations on ground-nesting birds in lowland Iceland. *Journal of Applied Ecology*. 59: 2456–2467. <https://doi.org/10.1111/1365-2664.14238>

²⁹ For example, see <https://www.gov.uk/guidance/wild-birds-surveys-and-monitoring-for-onshore-wind-farms>, and <https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/renewable-energy/onshore-wind-energy/wind-farm-impacts-birds>, both accessed 19/08/2025.

³⁰ Wording from Gylfinir Cymru's agreed approach to lethal predator control. See <https://www.curlewwales.org/post/gylfinir-cymru-note-curlew-predator-control-workshop-15th-december-2022>, accessed 19/08/2025.