

Alnwick Wildlife Group

Northumberland Estates Moorland Bird
Survey Report

2025/26

Acknowledgements

The surveys and this report would not have been possible without the following groups:

- Alnwick Wildlife Group's team of surveyors who carry out the surveys and provide reports on their findings,
- The Northumberland Estates gamekeepers who support the work of the surveyors.

AWG would also like to thank His Grace, the Duke of Northumberland, for his ongoing support of the group's activities.

Ian Hall

On behalf of AWG

Summary

Alnwick Wildlife Group carry out a regular series of bird surveys at the request of Northumberland Estates on selected areas of their lands. This report summarises the results of the surveys carried out across five moorland areas during the period April 2025 to February 2026.

The main conclusion to be drawn from the latest series of survey results is that the populations of a number of moorland ground nesting birds, such as the Red Grouse and the Meadow Pipit, are falling. These results reflect the national situation and the reasons for this could include predators, parasites and changes to habitat.

Northumberland Estates' aim is to increase the population of Red Grouse to a level where some sustainable game shooting can be carried out. Over the past few years, however, we understand that little such shooting has been possible due to the small numbers of birds.

It will be interesting to see the results of any new ideas and initiatives that will be implemented to improve the breeding success of the Red Grouse. We can reasonably anticipate that any increase in Red Grouse numbers will also be reflected in the populations of other moorland birds, which are probably facing the same, or similar, pressures.

For the future, we hope to be able to maintain the existing links with the Estates' gamekeeping team and to continue to provide our survey results and reports.

In addition to the bird surveys, Alnwick Wildlife Group also carries out regular surveys of plants on each of the five moorland areas and maintain a cumulative list of all species identified. The current list is included as appendix 1.

Background to the Survey

The aim of AWG's bird surveys is to assess the effects of Northumberland Estates' gamekeeping and farming management methods on the wild bird populations. Regular surveys are carried out across five moorland areas: Alnwick Moor, Hulne Moor, Post Office Pylon, Black Lough and Kimmer Lough.

Surveys are also carried out across four areas of arable farming; these results are reported separately.

The moorland surveys have been carried out since 2007. The only period when surveys were not completed was during 2020 Covid pandemic. The results for missed surveys within this particular year are based on averages from adjacent years.

The Moorland Survey Areas

The surveys are taking place on five areas where Northumberland Estates are attempting to encourage the population of Red Grouse to a point where sustainable shooting is possible.

All these areas are on the Fell Sandstone ridge, which runs roughly in a semi-circle round the base of the Cheviots. All, except Kimmer Lough, rise to about 250 metres and have a typical upland vegetation of heather on shallow peat but there are some areas of blanket bog with a depth of peat of over 40cm. There are also a variety of other habitats in each of the survey areas which affects the variety of bird species observed.

The area of each of the survey areas is approximately 110 Ha, apart from Post Office Pylon, which is smaller, at about 80 Ha.

In the past few years, the Estates' moorland management has been concentrated on Alnwick Moor, Hulne Moor and, to a lesser extent, Post Office Pylon survey areas. This has mainly involved heather burning and cutting, which improves the feeding value and provides better breeding cover for Red Grouse. Small ponds have been created on Alnwick Moor and Post Office Pylon which provide water during dry periods and create an additional food source. Some control of predators is also carried out.

In contrast, currently, there is little active land management carried out at Black Lough and Kimmer Lough. The shooting at Kimmer Lough is let to a private group, and the plantation woodland adjacent to the Black Lough survey area is also let to a private group by the owners, Forestry England. Some pheasant rearing and release takes place in both these areas.

Kimmer Lough is included in the Bewick and Beanley Moors SSSI.

Survey Methodology

In order to make comparative counts as consistent as possible, surveyors walk a predefined route and spend approximately the same time in each area. Each of the survey areas is visited five times each year; twice in the winter between November and February and three during the breeding season between April and June.

Wherever possible, surveys are carried out on days which are not too windy or wet; adverse conditions make comparative counts more difficult and can disrupt ground nesting birds during the breeding season.

Recording is carried out by visual observation or song and call recognition. Any counts relying solely on call recognition apps, such as Merlin, are not included in the report.

Although all species are recorded, reporting concentrates on particular target species; a set of species which are felt to be representative of the birds which inhabit and breed on moorland areas in our region.

Target species

Canada Goose, Carrion Crow, Common Buzzard, Common Pheasant, Cuckoo, Curlew, Grey Partridge, Lapwing, Linnet, Mallard, Meadow Pipit, Red Grouse, Red Legged Partridge, Reed Bunting, Skylark, Snipe, Song Thrush, Stonechat, Wheatear, Whinchat, Wren.

It is important to be aware that five visits each year produce only a limited amount of data upon which to base any conclusions. There are a large number of variables which affect the counts, including the weather. The surveyors can only count the birds that are there at the particular snapshot in time. We therefore need to be cautious about how much we infer from survey results. Over a period, however, trends do emerge from which we can make reasonable assumptions.

Records of the surveys date back to 2007, but within this report we have concentrated on the last 15 years. The bird count graphs presented are based on the average counts across survey visits during each season. This has some advantages as it smooths out some of the variations, but some detail may be lost.

Survey Routes

The five moorland survey routes vary in difficulty. The ground conditions are generally rough and wet. A significant proportion of the routes are not on well-defined paths, requiring surveyors to find their own way across the moorland. The routes have been reviewed recently and some minor adjustments have been made.

Parking is generally satisfactory, though the space at the start of Post Office Pylon and Alnwick Moor is limited.

No further changes to the survey routes are necessary at this point.

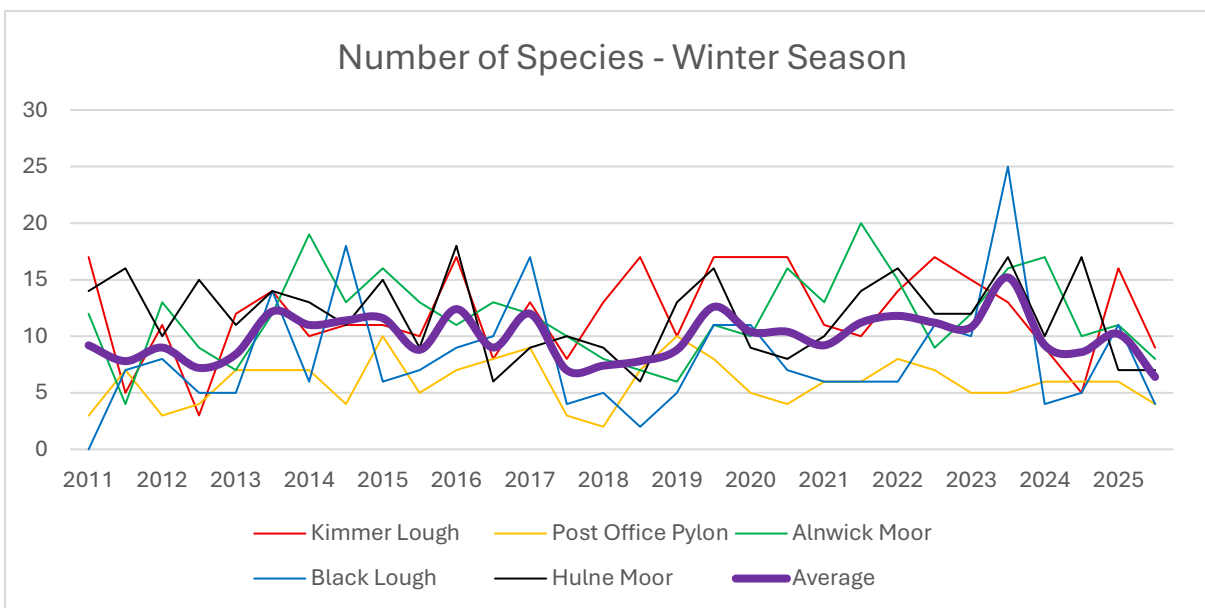
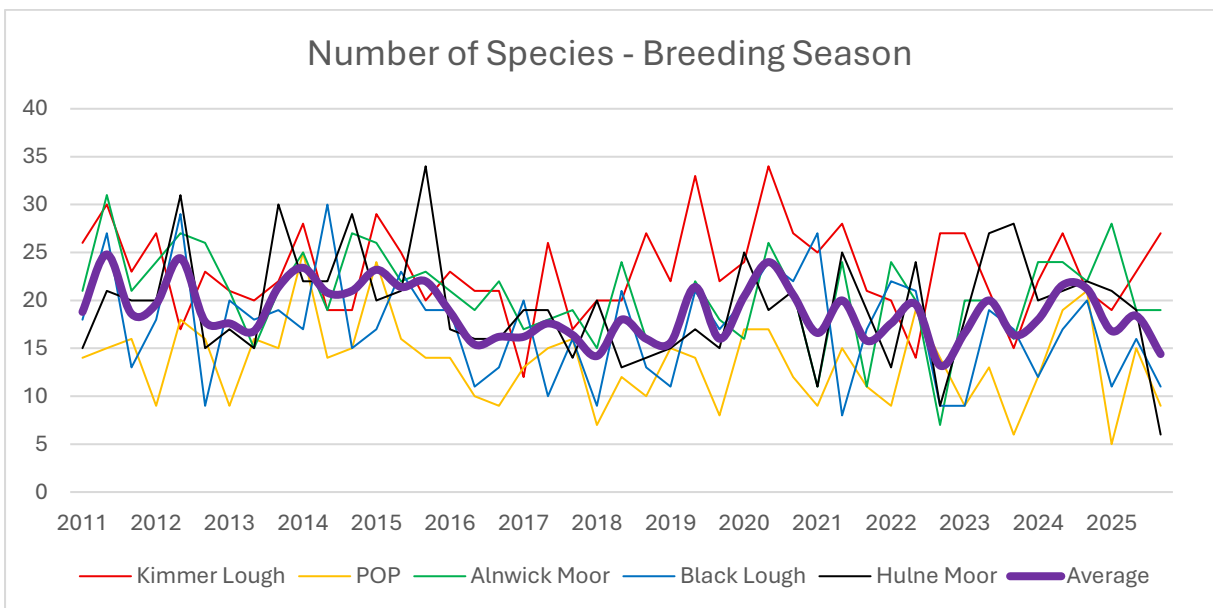
Survey Results

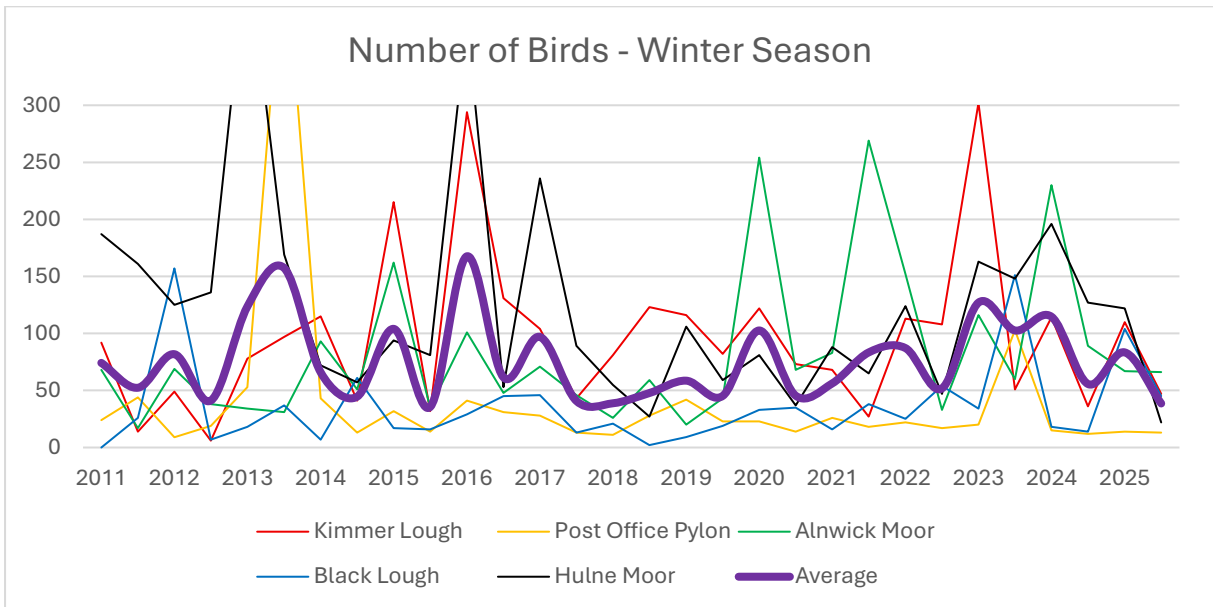
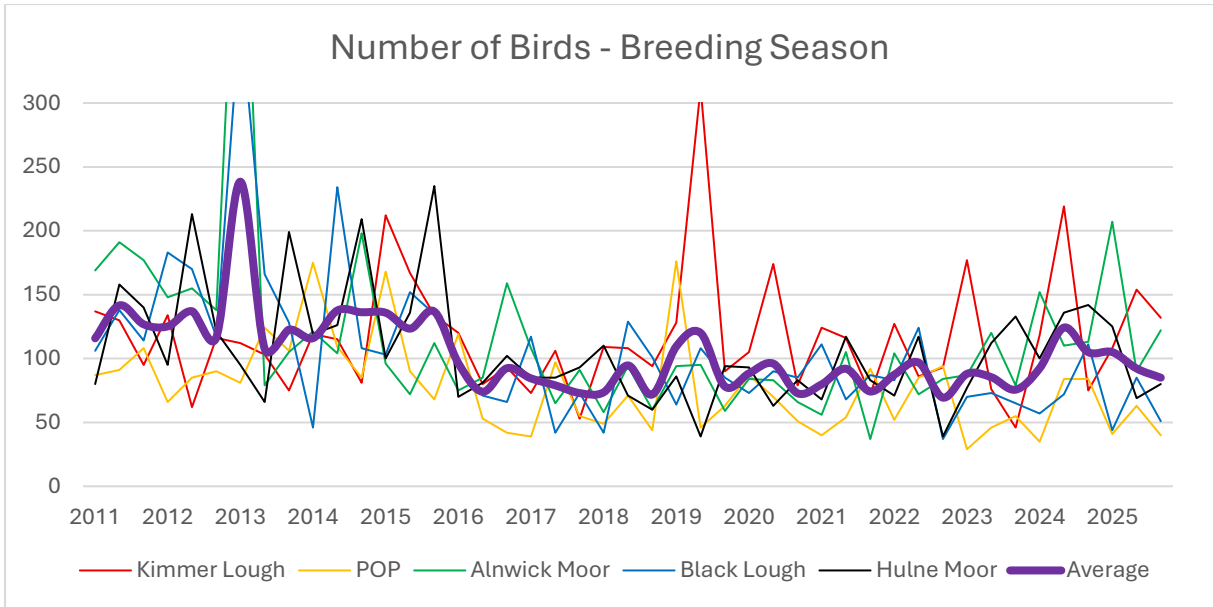
Overview

Looking at the number of different species and the total number of birds seen at each survey site, we see that while there is a lot of variation year to year, the averages are reasonably stable.

- The number of different species we are seeing during each survey visit is about 18 during the breeding season and 10 during the winter.
- The total number of birds seen at each visit is about 100 during the breeding season, and 70 during the winter.

Post Office Pylon and Black Lough are generally below average on all counts, reflecting the anecdotal experience of surveyors.





Species Specific Review

Birds of Prey

The only raptor on our moorland target species list is the Common Buzzard. Nationally, over the past thirty years or so, the population has increased and is now at a level where there are no concerns; it is currently green listed. Within each of the five moorland survey areas, Buzzards are seen occasionally on all sites during the breeding season but are rare in the winter.

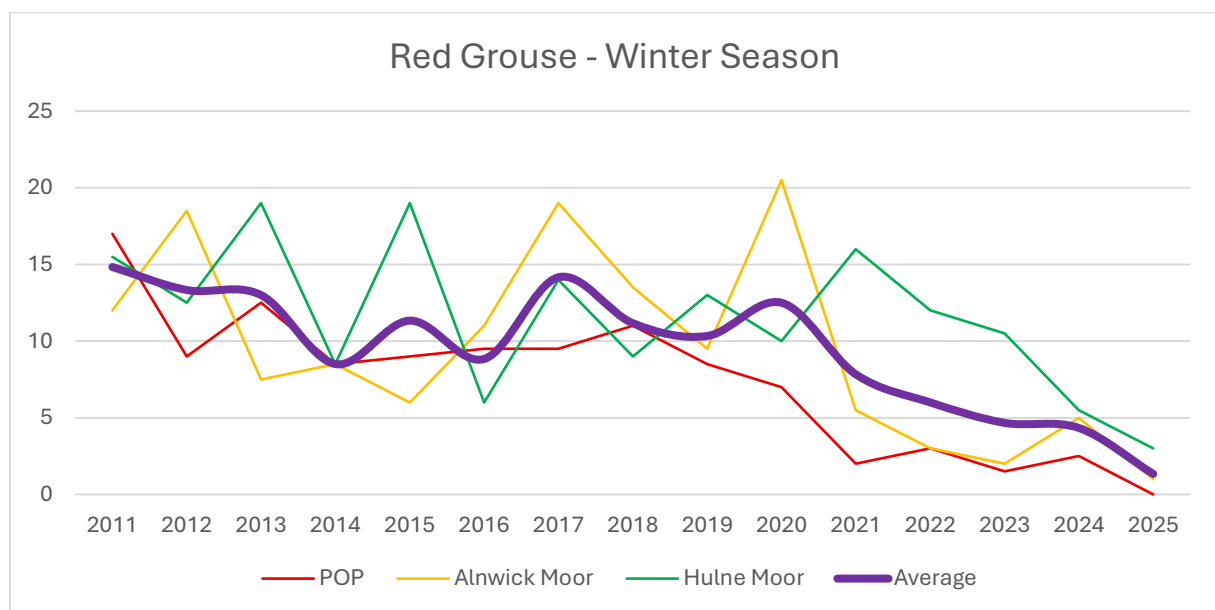
Sightings of other raptors are very low. Sparrowhawks are a rare sighting, while Kestrels are only occasionally seen.

Game Birds

Northumberland Estates' gamekeeping management practices on the moorland sites are concentrated on increasing the numbers of Red Grouse. Currently, the most active management is carried out on Alnwick Moor, Hulne Moor and, to a lesser extent, Post Office Pylon. Little to no management is currently being carried out at Black Lough and Kimmer Lough areas. This emphasis is reflected in the survey records, where Red Grouse are hardly seen at Black Lough and never at Kimmer Lough.

The graph below examines the three managed areas. Of these, Post Office Pylon is the worst performing.

Overall, our data shows a dramatic fall in Red Grouse sightings over the past five years.



The Red Grouse counts in the breeding season are much lower than in the winter, perhaps due to the birds being more cautious.

There are occasional sightings of both Red Legged and Grey Partridge.

Pheasants are seen on most of the moorland survey areas. At Kimmer Lough and Black Lough, private shoots raise birds either adjacent to or within the survey area, so their presence is to be expected, though the numbers at Black Lough are very low. Similarly, some pheasant rearing is

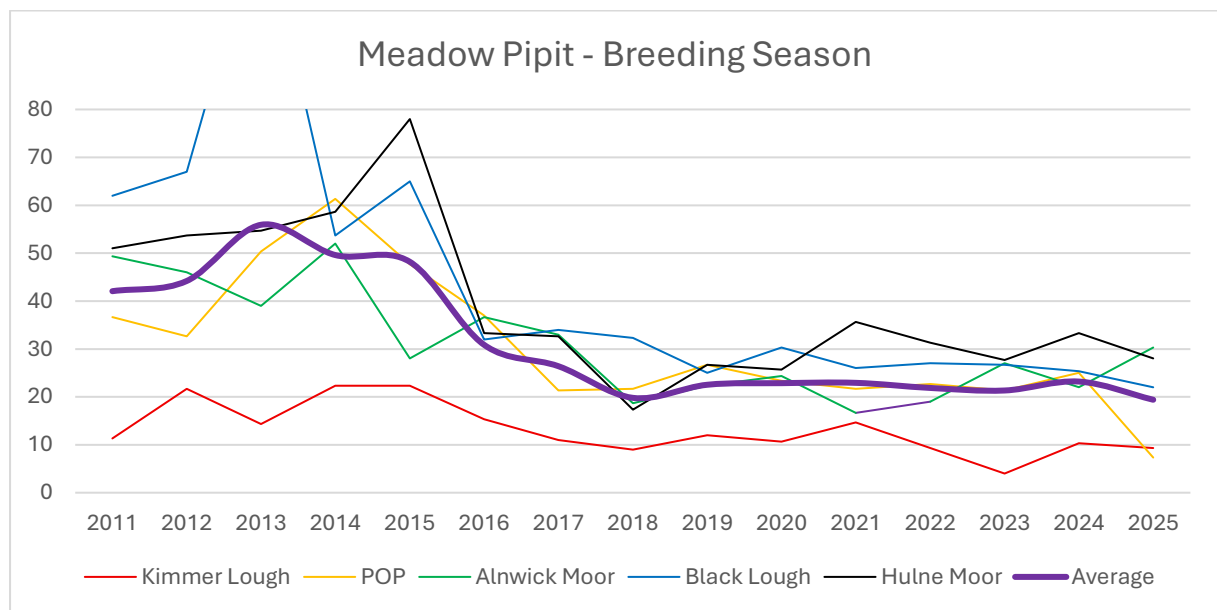
carried out on the lower parts of Alnwick Moor. While there is no rearing specifically on Hulne Moor, large numbers of birds are released into Hulne Park.

Ground Nesting Birds

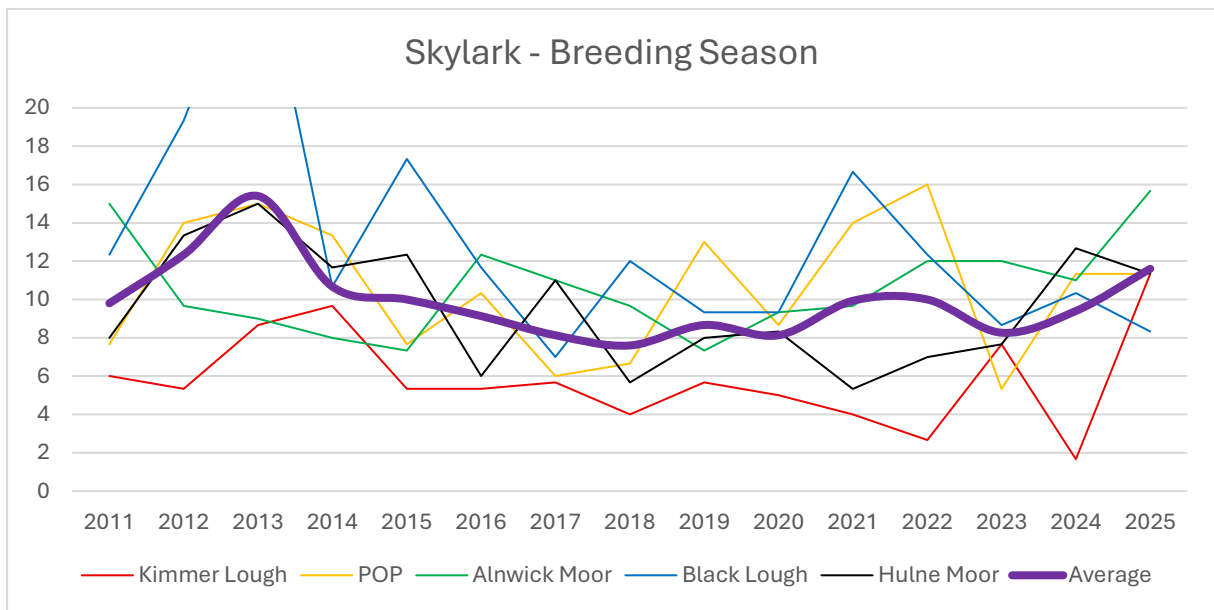
Ground nesting birds require an extended period of stability in order to successfully nest and raise their young. On farmland, they can be particularly affected by changes to agricultural practices. Moorland areas should, in theory, provide better opportunities with much lower levels of human intervention. In practice, however, our counts suggest that other pressures create a challenging environment for these birds. These pressures may include predators, parasites and habitat change.

During the breeding season, we see more Meadow Pipit (amber listed) and the Skylark (red listed) than other species. These two birds can therefore be considered the “bellwether” species for moorland ground nesting bird populations in general, and that any change to their populations can provide some indication of the local conditions for the wider bird populations.

For the Meadow Pipit, the graph below shows how the populations have fallen from previous years, though more recently, the numbers have stabilised, albeit at a lower level.

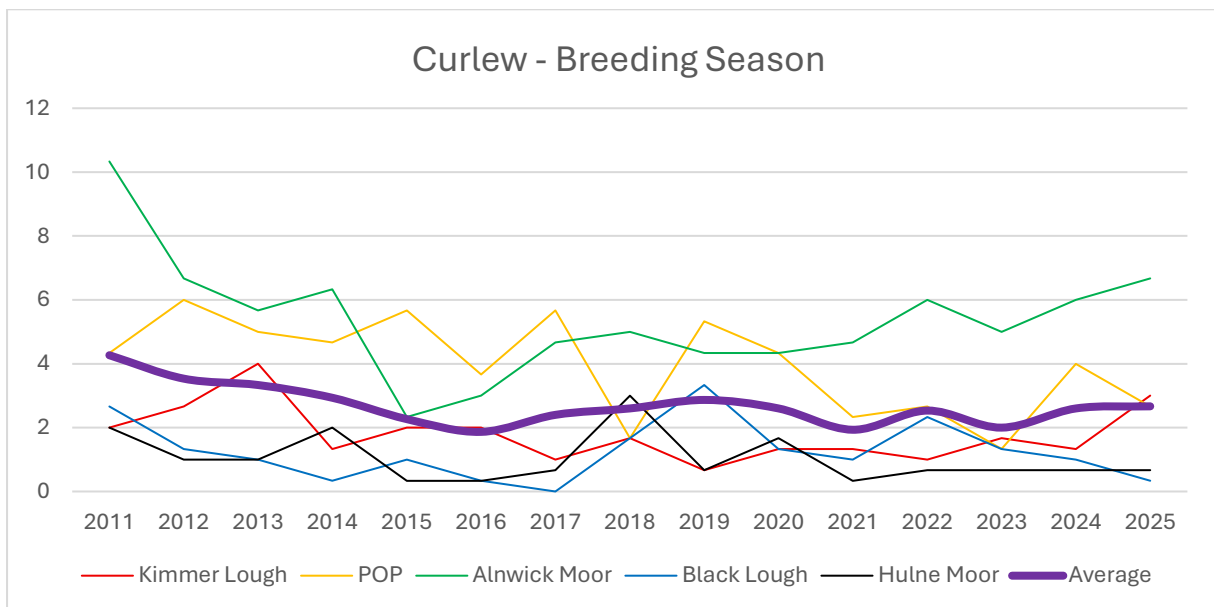


Skylark numbers show more stability.

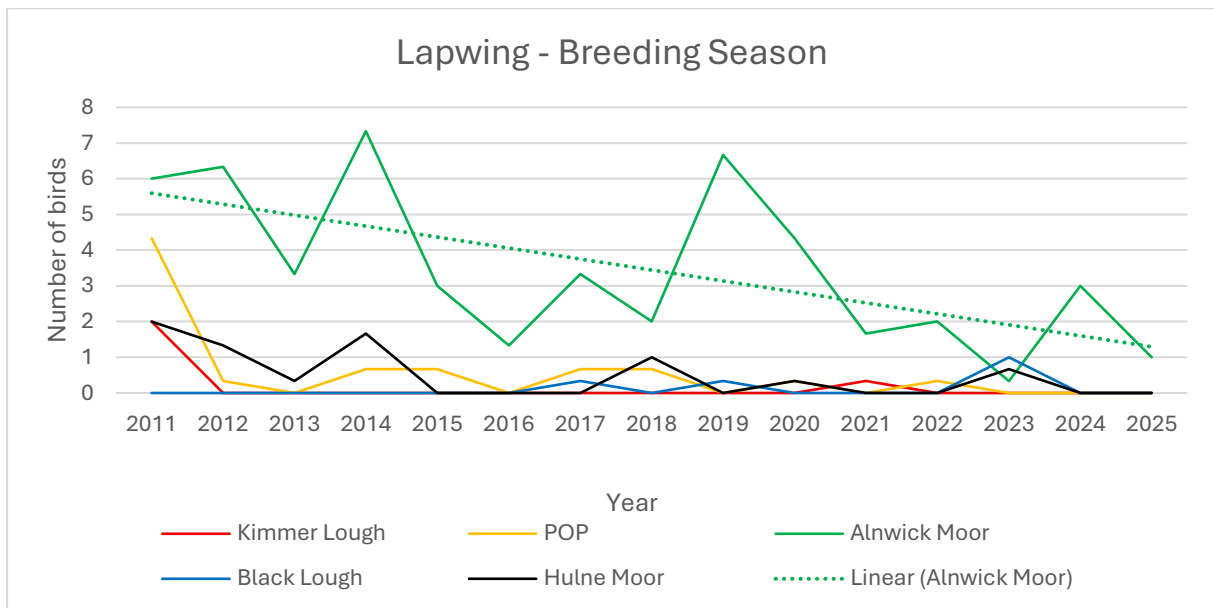


Our five moorland areas are all relatively close to the coast and we can expect a number of wader species to breed here, in particular, the Curlew and Lapwing. Like other ground nesting birds, they require an extended period of stability to successfully raise their chicks.

The sightings of Curlew have been reasonably stable over the period. There is a lot of variation between the five areas, with Alnwick Moor having consistently more sightings. In contrast, there are almost no sightings on the adjacent Hulne Moor. There are no sightings on any sites during the winter season, which is to be expected, with the birds congregating in coastal areas.

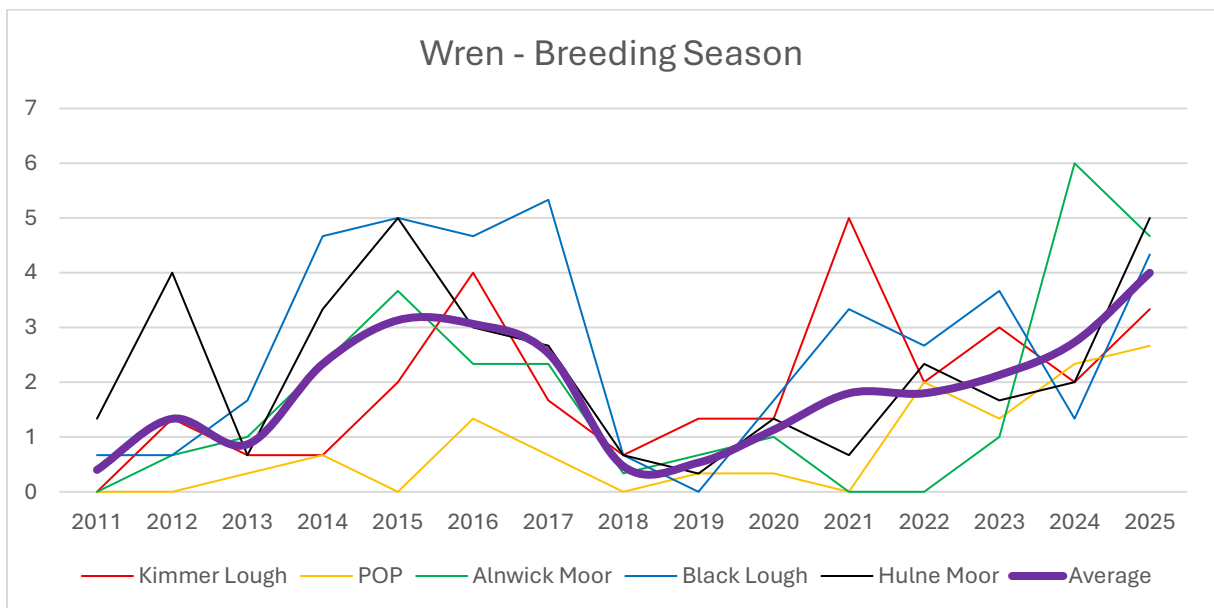


Nationally, the Lapwing is in a perilous state and deemed vulnerable. Across the five moorland sites, sightings are low, often just a single bird. Alnwick Moor has been the one area with higher counts, but even here, we see falling populations. The 'Linear (Alnwick Moor)' line shows the trend for this one site.

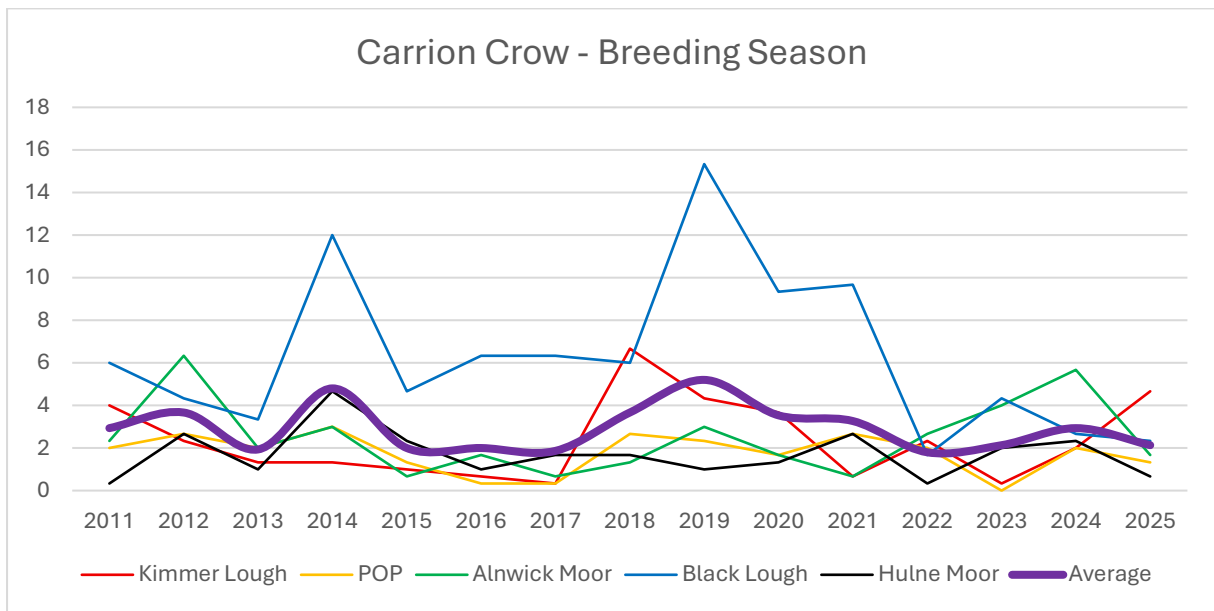


Other Species

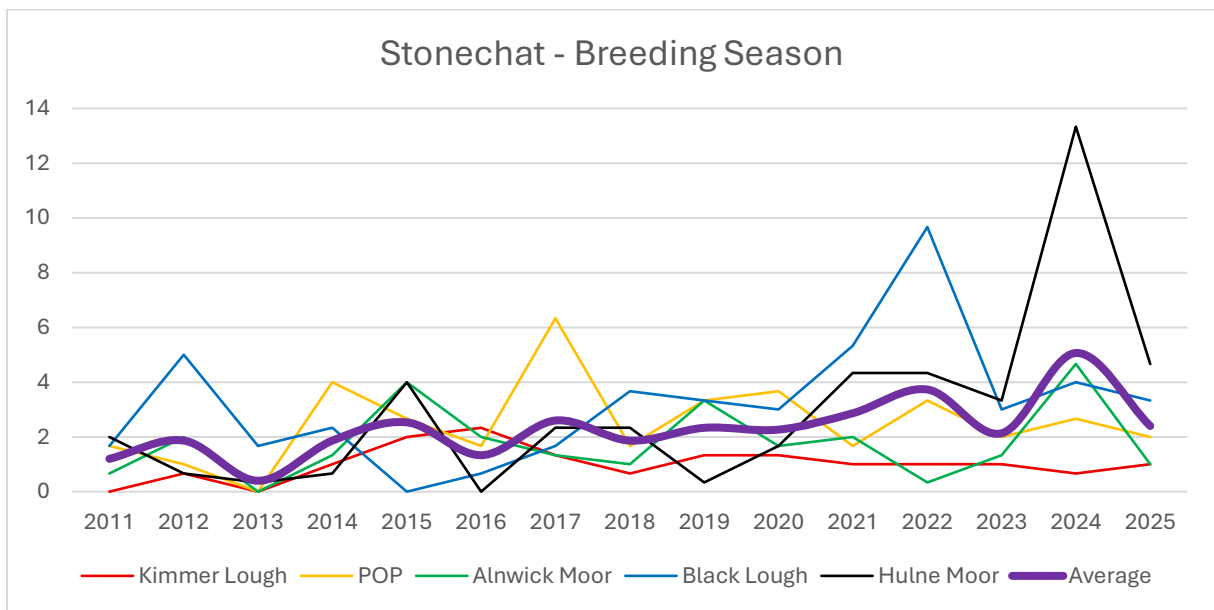
The Wren is a common sight across the country and is seen across all of our moorland survey areas. They prefer thickets and so are perhaps less vulnerable to predation than birds which breed on the open moorland. The numbers do vary, with a significant dip in 2018, likely caused by the “beast from the east” cold period of the February that year. Since then, they are recovering year on year.



The main predator species on our target list is the Carrion Crow. On average, the trends are reasonably level.



The Stonechat is seen across all sites, with Hulne Moor currently home to a good population.



Site Specific Observations

Whereas the four arable survey areas are predominantly similar, comprising of arable fields, generous field margins and plentiful hedgerows, the five moorland areas each have different varieties of habitats in addition to heather moorland. As a result, we see a different range of species in each area.

The data relating to the target species from the current round of surveys are presented below, with the species that have been specifically mentioned in the report highlighted in bold. It can be seen that, in general, the remaining species have low, or zero, counts.

Alnwick Moor

The Alnwick Moor site consists of two separate areas, the lower part which includes the Gull Ponds, and the more open upper part. The Gull Ponds and the surrounding trees provide a distinct habitat, though the ponds themselves do not seem to attract many species, other than the occasional Mallard. The upper section is predominantly open moorland, with some small areas of bushes on the boundaries.

Results 2025/26	Breeding Season			Winter Season	
	April	May	June	December	February
Carrion Crow	1	2	2	0	0
Common Buzzard	1	1	0	0	0
Cuckoo	1	0	0	0	0
Curlew	6	9	5	0	0
Grey Partridge	0	0	0	0	0
Lapwing	2	1	0	0	0
Linnet	3	3	9	0	0
Mallard	2	0	0	0	1
Meadow Pipit	22	21	48	4	6
Pheasant	7	4	0	24	10
Red Grouse	3	6	0	0	2
Red Legged Partridge	6	0	0	10	0
Reed Bunting	4	4	3	0	0
Skylark	14	10	23	0	30
Snipe	3	0	0	3	8
Song Thrush	0	0	2	0	0
Stonechat	1	0	2	1	0
Wheatear	1	0	0	0	0
Whinchat	0	0	0	0	0
Wren	6	3	5	3	5
Yellowhammer	0	2	0	0	0

Hulne Moor

Hulne Moor is a well-defined area within Hulne Park, with the park wall providing a high degree of segregation from the adjacent Alnwick Moor. The Freemans' Gap Pond and the woodland to the north provide two distinct habitats. The pond attracts a number of water fowl. The previous gamekeeper has reported seeing Nightjars in this area.

Results 2025/26	Breeding Season			Winter Season	
	April	May	June	December	February
Carrion Crow	2	0	0	1	0
Common Buzzard	0	1	1	0	0
Cuckoo	3	2	0	0	0
Curlew	2	0	0	0	0
Grey Partridge	0	4	0	0	0
Lapwing	0	0	0	0	0
Linnet	2	0	0	0	0
Mallard	6	1	0	0	0
Meadow Pipit	29	15	40	0	0
Pheasant	21	3	0	15	0
Red Grouse	8	0	1	0	6
Red Legged Partridge	0	0	0	0	0
Reed Bunting	0	0	0	0	0
Skylark	10	4	20	0	0
Snipe	0	1	0	1	0
Song Thrush	2	0	0	0	0
Stonechat	0	2	12	0	0
Wheatear	2	0	0	0	0
Whinchat	0	0	0	0	0
Wren	7	8	0	3	0
Yellowhammer	0	0	0	0	0

Post Office Pylon

Post Office Pylon is producing poor counts both in the winter and breeding season. The adjacent plantation woodland is excluded from the survey area. Other than moorland, the only other habitat is a small area of willows on the eastern boundary where some passerines are usually found.

Results 2025/26	Breeding Season			Winter Season	
	April	May	June	December	February
Carrion Crow	0	4	0	3	1
Common Buzzard	0	2	0	0	0
Cuckoo	0	1	0	0	0
Curlew	6	2	0	0	0
Grey Partridge	0	0	0	0	0
Lapwing	0	0	0	0	0
Linnet	0	0	0	0	0
Mallard	0	0	0	0	0
Meadow Pipit	10	12	0	0	6
Pheasant	0	3	0	0	0
Red Grouse	0	2	0	0	0
Red Legged Partridge	0	0	0	0	0
Reed Bunting	0	0	0	0	2
Skylark	20	14	0	0	0
Snipe	0	3	0	2	0
Song Thrush	0	0	2	0	0
Stonechat	0	6	0	0	0
Wheatear	3	0	0	0	0
Whinchat	0	0	0	0	0
Wren	0	1	7	3	4
Yellowhammer	0	0	0	0	0

Black Lough

The Black Lough survey area is generally unmanaged moorland. The lough itself provides a specific habitat, but it is not well frequented by waterfowl. Signs of otters have been seen around the lough this year.

Results 2025/26	Breeding Season			Winter Season	
	April	May	June	December	February
Carrion Crow	1	4	2	1	0
Common Buzzard	0	1	1	1	0
Cuckoo	0	0	0	0	0
Curlew	1	0	0	0	0
Grey Partridge	0	0	0	0	0
Lapwing	0	0	0	0	0
Linnet	0	2	0	0	0
Mallard	0	0	0	19	40
Meadow Pipit	11	37	18	2	0
Pheasant	7	6	0	0	2
Red Grouse	0	0	0	0	0
Red Legged Partridge	0	0	0	0	0
Reed Bunting	0	2	0	0	0
Skylark	9	8	8	0	0
Snipe	0	0	1	1	0
Song Thrush	0	0	0	0	0
Stonechat	1	9	0	0	0
Wheatear	0	0	0	0	0
Whinchat	0	0	1	0	0
Wren	3	6	4	8	2
Yellowhammer	0	0	0	0	0

Kimmer Lough

The Kimmer Lough survey area is generally unmanaged moorland but the lough and the adjacent woodland do provide a number of habitats which attract a range of species. Waterfowl are usually found on the water, with Wigeon being a common sight. The woodlands host a range of passerines, including Willow Warbler and Chiffchaff.

Results 2025/26	Breeding Season			Winter Season	
	April	May	June	December	February
Carrion Crow	3	7	4	5	0
Common Buzzard	1	2	1	0	3
Cuckoo	0	0	1	0	0
Curlew	2	5	2	0	0
Grey Partridge	0	0	0	0	0
Lapwing	0	0	0	0	0
Linnet	0	0	0	0	0
Mallard	2	0	0	19	7
Meadow Pipit	6	18	4	0	0
Pheasant	14	2	2	28	18
Red Grouse	0	0	0	0	0
Red Legged Partridge	0	0	2	0	0
Reed Bunting	0	8	0	0	0
Skylark	5	20	9	0	0
Snipe	0	0	1	0	0
Song Thrush	0	1	0	0	0
Stonechat	0	3	0	0	0
Wheatear	0	0	0	1	0
Whinchat	0	0	0	0	0
Wren	2	4	4	3	0
Yellowhammer	2	1	0	0	0

Discussion

Overall, the main concern on all of the five moorland areas that we survey is with the ground nesting bird populations. Our survey results show that the trend is a reduction in populations of a number of species over a 15-year period, most notably the Red Grouse, Meadow Pipit and Lapwing. Our findings broadly reflect the national situation.

The main pressures on ground nesting birds on moorland are generally thought to be due predators, parasites and habitat management practices, the three being, to some extent, interrelated.

Predators

Ground nesting birds are vulnerable to predation, particularly from foxes and Carrion Crow. A study carried out near Otterburn in the early 2000s reported that strong control of these two predators led to significant increases in the populations of ground nesting birds, which were reversed when the controls were stopped. At the same time, control of predators does raise concerns within conservation groups.

Parasites

Increasing numbers of ticks are being found on moorlands across the country, and the season when ticks are a problem is both starting earlier and finishing later. This is probably, at least in part, due to climate change. High tick burdens have been shown to be often fatal to ground nesting bird chicks and increase their vulnerability to other parasites, such as the flat fly. Control of ticks has traditionally been done through heather burning and using sheep as 'tick mops' where flocks collect ticks in their fleeces, which are then killed using specific treatments. Heather burning is, however, increasingly being discouraged, and reduced flocks on moorlands makes 'mopping' less effective.

Habitat Management

Moorland areas that have been managed for Red Grouse have traditionally controlled heather growth through burning. The encouragement of young heather growth is thought to provide improved food and cover for ground nesting birds. Control of heather by burning is also claimed to reduce the severity of wildfires which are increasingly causing significant damage to moorlands. Burning of heather does, however, raise concerns of damage to wildlife, biodiversity and to the underlying peat which is a major carbon sink. Increasingly, cutting is being used to control heather and encourage new growth, though this might not reduce the risk of wildfires and does not limit tick numbers.

In summary, the improvement of ground nesting bird populations on moorland is a complex and polarised problem, with many different opinions and no simple solutions.

Appendix 1: Moorland Plant Record

Periodically, the five moorland bird survey areas are surveyed for plant species. The following is an up-to-date cumulative list of all the species that have been seen on each of the survey areas.

Key:

KL – Kimmer Lough

BL – Black Lough

AM – Alnwick Moor

HM – Hulne Moor

PP – Post Office Pylon

Scientific Name	Common Name	KL	BL	AM	HM	PP	Notes
Trees & Shrubs							
<i>Alnus glutinosa</i>	Alder	√		√	√		
<i>Betula pendula</i>	Birch, Silver	√		√	√	√	
<i>Betula pubescens</i>	Birch, Downy	√	√	√	√	√	
<i>Crataegus monogyna</i>	Hawthorn	√	√	√	√		
<i>Cytisus scoparius</i>	Broom		√				
<i>Fagus sylvatica</i>	Beech			√			
<i>Ilex aquifolium</i>	Holly		√				
<i>Larix sp.</i>	Larch		√				
<i>Picea sitchensis</i>	Spruce, Sitka		√	√	√	√	
<i>Pinus contorta</i>	Pine, Lodgepole		√				
<i>Pinus sylvestris</i>	Pine, Scots	√		√	√		
<i>Rhododendron ponticum</i>	Rhododendron	√		√	√		
<i>Salix aurita</i>	Willow, Eared		√	√	√	√	
<i>Salix caprea</i>	Willow, Goat	√	√	√	√	√	
<i>Salix cinerea</i>	Willow, Grey	√	√	√		√	
<i>Sambucus nigra</i>	Elder		√	√			
<i>Sorbus aucuparia</i>	Rowan	√	√	√	√	√	
<i>Ulex europaeus</i>	Gorse	√	√	√	√	√	
Dicotyledonous Herbs							
<i>Acaena nova-zelandii</i>	Pirri-pirri-bur		√				
<i>Achillea millefolium</i>	Yarrow		√	√		√	
<i>Ajuga reptans</i>	Bugle	√			√	√	
<i>Anagallis tenella</i>	Pimpernel, Bog		√			√	
<i>Anemone nemorosa</i>	Wood Anemone	√	√				
<i>Angelica sylvestris</i>	Angelica, Wild					√	
<i>Anthriscus sylvestris</i>	Cow Parsley		√			√	
<i>Aphanes arvensis</i>	Parsley-piert					√	
<i>Arctium minus</i>	Burdock	√	√	√	√		
<i>Bellis perennis</i>	Daisy		√	√	√	√	
<i>Calluna vulgaris</i>	Heather	√	√	√	√	√	
<i>Caltha palustris</i>	Marsh-marigold	√					Near the lough

Scientific Name	Common Name	KL	BL	AM	HM	PP	Notes
<i>Cardamine flexuosa</i>	Bitter-cress, Wavy		√		√		
<i>Cardamine pratensis</i>	Cuckooflower		√	√		√	
<i>Cerastium fontanum</i>	Mouse-ear, Common		√	√	√	√	
<i>Ceratocarpus claviculata</i>	Corydalis, Climbing	√	√	√	√	√	Common here but not in rest of UK
<i>Chamaenerion angustifolium</i>	Willowherb, Rosebay		√	√	√	√	
<i>Chrysosplenium oppositifolium</i>	Golden-saxifrage, Opp-leaved			√			
<i>Cirsium arvense</i>	Thistle, Creeping	√	√	√	√	√	
<i>Cirsium palustre</i>	Thistle, Marsh	√	√	√	√	√	
<i>Cirsium vulgare</i>	Thistle, Spear	√	√	√	√	√	
<i>Conopodium majus</i>	Pignut			√		√	
<i>Crepis capillaris</i>	Smooth Hawk's-beard		√				
<i>Cruciata laevipes</i>	Crosswort			√	√		
<i>Digitalis purpurea</i>	Foxglove	√	√	√	√	√	
<i>Drosera rotundifolia</i>	Sundew, Round-leaved		√	√	√		Insectivorous - in wet peaty ground
<i>Empetrum nigrum</i>	Crowberry		√	√		√	
<i>Epilobium brunnescens</i>	Willowherb, New Zealand		√				On mossy rocks close to a stream
<i>Epilobium montanum</i>	Willowherb, Broad-leaved			√			
<i>Epilobium palustre</i>	Willowherb, Marsh	√	√			√	
<i>Erica cinerea</i>	Heather, Bell	√	√	√	√	√	
<i>Erica tetralix</i>	Heath, Cross-leaved	√	√	√	√	√	
<i>Erophila verna</i>	Whitlowgrass, Common			√			
<i>Euphrasia sp.</i>	Eyebright			√			
<i>Ficaria verna</i>	Celandine, Lesser	√					
<i>Filipendula ulmaria</i>	Meadowsweet	√	√	√	√	√	
<i>Fragaria vesca</i>	Strawberry, Wild			√	√		
<i>Galium aparine</i>	Cleavers		√	√	√		
<i>Galium palustre</i>	Bedstraw, Marsh	√	√			√	
<i>Galium saxatile</i>	Bedstraw, Heath	√	√	√	√	√	
<i>Galium uliginosum</i>	Bedstraw, Fen		√			√	
<i>Genista anglica</i>	Petty-whin	√					Germination encouraged by burning
<i>Geranium molle</i>	Crane's-bill, Dove's-foot					√	
<i>Geum rivale</i>	Avens, Water			√			
<i>Geum urbanum</i>	Herb Bennet				√		
<i>Gnaphalium uliginosum</i>	Cudweed, Marsh				√		
<i>Heracleum sphondylium</i>	Hogweed		√	√	√	√	
<i>Hydrocotyle vulgaris</i>	Pennywort, Marsh		√	√	√	√	
<i>Hypericum perforatum</i>	St John's-wort, Perforate		√				
<i>Hypericum pulchrum</i>	St John's-wort, Slender		√	√			
<i>Hypochaeris radicata</i>	Cat's-ear		√	√		√	

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<i>Jacobaea vulgaris</i>	Ragwort			√	√	√	
<i>Lathyrus linifolius</i>	Bitter-vetch	√					
<i>Lathyrus pratensis</i>	Meadow Vetchling					√	
<i>Linum catharticum</i>	Flax, Fairy		√	√			
<i>Lonicera periclymenum</i>	Honeysuckle		√				
<i>Lotus corniculatus</i>	Bird's-foot-trefoil		√	√	√	√	
<i>Lotus pedunculatus</i>	Bird's-foot-trefoil, Greater		√				
<i>Lysimachia nummularia</i>	Creeping-Jenny		√				
<i>Matricaria discoidea</i>	Pineappleweed		√		√	√	
<i>Medicago lupulina</i>	Black Medick				√		
<i>Melampyrum pratense</i>	Cow-wheat, Common			√	√		
<i>Mentha aquatica</i>	Mint, Water		√	√			
<i>Menyanthes trifoliata</i>	Bogbean			√			
<i>Montia fontana</i>	Blinks				√		
<i>Myosotis arvensis</i>	Forget-me-not, Field		√	√	√	√	
<i>Myosotis discolor</i>	Forget.me.not, Changing		√			√	
<i>Myosotis secunda</i>	Creeping Forget-me-not		√	√			
<i>Myrica gale</i>	Bog Myrtle	√					One of best sites in N'land
<i>Narthecium ossifragum</i>	Bog Asphodel		√	√			
<i>Nuphar lutea</i>	Water-lily, Yellow	√					One of only 4 sites in N N'land
<i>Oenanthe crocata</i>	Water-dropwort, Hemlock	√					In Kimmer outflow ditch by bridge
<i>Oxalis acetosella</i>	Wood-sorrel	√		√	√	√	
<i>Pedicularis palustris</i>	Lousewort, Marsh			√			
<i>Pedicularis sylvatica</i>	Lousewort		√	√		√	
<i>Petasites hybridus</i>	Butterbur	√					
<i>Pilosella officinarum</i>	Hawkweed, Mouse- eared		√	√			
<i>Pinguicula vulgaris</i>	Butterwort, Common			√			
<i>Plantago lanceolata</i>	Plantain, Ribwort	√	√	√	√	√	
<i>Plantago major</i>	Plantain, Greater		√	√	√	√	
<i>Polygala serpyllifolia</i>	Milkwort, Heath		√	√	√	√	
<i>Potentilla anserina</i>	Siverweed		√		√		
<i>Potentilla erecta</i>	Tormentil	√	√	√	√	√	
<i>Potentilla sterilis</i>	Strawberry, Barren		√			√	
<i>Primula vulgaris</i>	Primrose	√		√	√		
<i>Prunella vulgaris</i>	Self-heal		√	√	√		
<i>Ranunculus acris</i>	Buttercup, Meadow			√	√	√	
<i>Ranunculus flammula</i>	Spearwort, Lesser	√	√			√	Common in wet ditches
<i>Ranunculus repens</i>	Buttercup, Creeping		√	√	√	√	
<i>Rhinanthus minor</i>	Yellow-rattle			√		√	
<i>Rubus fruticosus</i>	Bramble, Blackberry	√	√	√	√	√	
<i>Rubus idaeus</i>	Raspberry			√	√		

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<i>Rumex acetosa</i>	Sorrel, Common	√	√	√	√	√	
<i>Rumex acetosella</i>	Sorrel, Sheep's	√	√	√	√	√	Best on hard peat & burnt ground
<i>Rumex hydrolapathum</i>	Dock, Water		√				
<i>Rumex obtusifolius</i>	Dock, Broad-leaved	√	√	√	√	√	
<i>Sagina procumbens</i>	Pearlwort, Procumbent					√	
<i>Sedum acre</i>	Stonecrop, biting			√			
<i>Silene dioica</i>	Campion. Red		√				
<i>Silene flos-cuculi</i>	Ragged-robin			√			
<i>Sonchus asper</i>	Sow-thistle, Prickly		√	√		√	
<i>Stachys sylvatica</i>	Woundwort, Hedge	√					
<i>Stellaria alsine</i>	Stitchwort, Bog	√	√				
<i>Stellaria graminea</i>	Stitchwort, Lesser		√		√		
<i>Stellaria holostea</i>	Stitchwort, Greater	√		√			
<i>Stellaria media</i>	Chickweed, Common	√		√			
<i>Succisa pratensis</i>	Scabious, Devil's-bit	√	√	√	√		
<i>Taraxacum agg.</i>	Dandelion		√	√	√	√	
<i>Teucrium scorodonia</i>	Sage, Wood	√	√	√	√	√	
<i>Trientalis europaea</i>	Wintergreen, Chickweed	√	√	√	√	√	Common here, but not elsewhere
<i>Trifolium dubium</i>	Trefoil, Lesser				√	√	
<i>Trifolium pratense</i>	Clover, Red			√		√	
<i>Trifolium repens</i>	Clover, White		√	√	√	√	
<i>Tussilago farfara</i>	Colt's-foot			√			
<i>Urtica dioica</i>	Nettle, Common	√	√	√	√	√	
<i>Vaccinium myrtillus</i>	Bilberry	√	√	√	√	√	
<i>Vaccinium oxycoccos</i>	Cranberry	√	√				
<i>Vaccinium vitis-idaea</i>	Cowberry	√			√		
<i>Valeriana dioica</i>	Valerian, Marsh			√		√	
<i>Valeriana officinalis</i>	Valerian, Common	√			√		
<i>Veronica arvensis</i>	Speedwell, Wall			√		√	
<i>Veronica beccabunga</i>	Brooklime		√				
<i>Veronica chamaedrys</i>	Speedwell, Germander			√	√		
<i>Veronica officinalis</i>	Speedwell, Heath		√	√		√	
<i>Veronica serpyllifolia</i>	Speedwell, Thyme-leaved		√				
<i>Vicia cracca</i>	Vetch, Tufted					√	
<i>Vicia sativa</i>	Vetch, Common	√	√	√			
<i>Vicia sepium</i>	Vetch, Bush					√	
<i>Viola palustris</i>	Violet, Marsh		√	√			
<i>Viola riviniana</i>	Dog-violet, Common	√	√		√		
Monocotyledonous forbs							
<i>Dactylorhiza fuchsii</i>	Orchid, Common Spotted-	√	√	√		√	
<i>Dactylorhiza maculata</i>	Orchid, Heath Spotted-	√	√	√	√		
<i>Dactylorhiza purpurella</i>	Orchid, Northern Marsh-			√			

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<i>Hyacinthoides non-scripta</i>	Bluebell	√	√	√	√		
<i>Narthecium ossifragum</i>	Asphodel, Bog	√	√	√		√	
<i>Potamogeton natans</i>	Pondweed, Broad-leaved	√	√			√	
<i>Potamogeton polygonifolius</i>	Pondweed, Bog		√	√		√	
Grasses, Sedges & Rushes							
<i>Agrostis capillaris</i>	Bent-grass, Common					√	
<i>Agrostis stolonifera</i>	Bent-grass, Creeping		√	√			
<i>Aira praecox</i>	Hair-grass, Early		√			√	
<i>Anthoxanthum odoratum</i>	Grass, Sweet-vernal	√	√	√	√	√	
<i>Arrhenatherum elatius</i>	False Oat-grass		√			√	
<i>Bromus hordeaceus</i>	Brome, Soft				√		
<i>Carex binervis</i>	Sedge, Green-ribbed	√	√	√	√	√	
<i>Carex canescens</i>	Sedge, White		√				
<i>Carex demissa</i>	Sedge, Common Yellow-			√			
<i>Carex echinata</i>	Sedge, Star		√	√		√	
<i>Carex flacca</i>	Sedge, Glaucous	√		√	√	√	
<i>Carex nigra</i>	Sedge, Common	√	√	√	√	√	
<i>Carex panicea</i>	Sedge, Carnation			√			
<i>Carex pilulifera</i>	Sedge, Pill			√			
<i>Carex rostrata</i>	Sedge, Bottle	√					In outflow ditch from lough
<i>Cynosurus cristatus</i>	Crested Dog's-tail		√	√	√	√	
<i>Dactylis glomerata</i>	Cock's-foot			√		√	
<i>Danthonia decumbens</i>	Heath Grass		√				
<i>Deschampsia cespitosa</i>	Hair-grass, Tufted	√	√	√	√	√	
<i>Deschampsia flexuosa</i>	Hair-grass, Wavy		√	√	√	√	
<i>Eriophorum angustifolium</i>	Cottongrass, Common	√	√	√	√	√	
<i>Eriophorum vaginatum</i>	Cottongrass, Hare's-tail	√	√	√	√	√	
<i>Festuca ovina</i>	Sheep's Fescue	√	√	√		√	
<i>Festuca rubra</i>	Fescue, Red		√	√	√	√	
<i>Holcus lanatus</i>	Yorkshire Fog	√	√	√	√	√	
<i>Holcus mollis</i>	Soft-grass, Creeping	√	√	√	√		
<i>Juncus acutiflorus</i>	Rush, Sharp-flowered	√	√	√		√	
<i>Juncus articulatus</i>	Rush, Jointed	√	√				
<i>Juncus conglomeratus</i>	Rush, Compact	√	√	√	√	√	
<i>Juncus effusus</i>	Rush, Soft	√	√	√	√	√	
<i>Juncus squarrosus</i>	Rush, Heath		√	√	√	√	
<i>Lolium perenne</i>	Rye-grass, Perennial		√		√	√	
<i>Luzula campestris</i>	Wood-rush, Field	√	√	√	√	√	
<i>Luzula multiflora</i>	Wood-rush, Heath	√	√	√	√		Includes ssp. <i>multiflora</i> & <i>congesta</i>
<i>Luzula pilosa</i>	Wood-rush, Hairy	√					
<i>Luzula sylvatica</i>	Wood-rush, Great			√	√		
<i>Molinia caerulea</i>	Moor-grass, Purple	√	√	√	√	√	
<i>Nardus stricta</i>	Mat-grass		√	√	√	√	

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<i>Phragmites australis</i>	Reed, Common	√					Outflow end of lough
<i>Poa annua</i>	Meadow-grass, Annual	√	√	√	√	√	
<i>Poa pratensis</i>	Meadow-grass, Smooth		√	√		√	
<i>Poa trivialis</i>	Meadow-grass, Rough		√	√	√		
<i>Trichophorum germanicum</i>	Deergrass	√	√	√	√	√	
<i>Vulpia bromoides</i>	Fescue, Squirrel-tailed		√				
Ferns, Horsetails & Bryophytes							
<i>Asplenium adiantum-nigrum</i>	Spleenwort, Black			√			North side of Hulne Park wall
<i>Asplenium ruta-muraria</i>	Wall-rue			√	√		Both sides of Hulne Park wall
<i>Asplenium scolopendrium</i>	Hart's-tongue			√			
<i>Asplenium trichomanes</i>	Spleenwort, Maidenhair			√	√		Both sides of Hulne Park wall
<i>Athyrium filix-femina</i>	Lady-fern		√	√		√	
<i>Blechnum spicant</i>	Fern, Hard	√	√	√	√	√	
<i>Cystopteris fragilis</i>	Brittle Bladder Fern				√		Base of wall, south side
<i>Dryopteris affinis agg.</i>	Scaly Male Fern		√	√			
<i>Dryopteris borrieri</i>	Borrer's Male Fern				√	√	
<i>Dryopteris carthusiana</i>	Buckler-fern, Narrow		√	√		√	
<i>Dryopteris dilatata</i>	Buckler-fern, Broad	√	√	√	√	√	
<i>Dryopteris filix-mas</i>	Male Fern		√	√		√	
<i>Equisetum arvense</i>	Horsetail, Field	√		√			
<i>Equisetum fluviatile</i>	Horsetail, Water			√			
<i>Oreopteris limbosperma</i>	Fern, Lemon-scented			√	√		
<i>Polytrichum commune</i>	Moss, Common Haircap	√		√	√	√	
<i>Pteridium aquilinum</i>	Bracken	√	√	√	√	√	
<i>Sphagnum spp.</i>	Bog Moss	√		√	√	√	
TOTAL SPECIES	217	89	137	147	107	114	