

ALNWICK WILDLIFE GROUP.

NORTHUMBERLAND ESTATES BIRD SURVEY.

REPORT FOR APRIL 2015 – FEBRUARY 2016.

Introduction.

Aims of the Survey. The basic aim is to attempt to measure the effects of Northumberland Estates management on the wild bird population in the area of the survey, also to record any other points of interest which the survey may reveal about the local wildlife.

Areas of the Survey. The survey is taking place on four areas, where Northumberland Estates are attempting to increase the population of Red Grouse to a point where sustainable shooting is possible. The Kimmer Lough is leased for private shooting and is under different management.

These areas are :-
Post Office Pylon.
Black Lough.
Alnwick Moor.
Hulne Moor.
Kimmer Lough.

All these areas are on the Fell Sandstone ridge. All except the Kimmer Lough rise to about 250 metres and have a typical upland vegetation of heather on shallow peat but also a wide variety of other habitats. The average size of each area is approx 120 hectares. The Estates management is mainly heather burning to improve its feeding value for Red Grouse and suitability for breeding cover. More intensive control of some predators is carried out, improved water availability for dry periods and provision of limestone grit etc. Hulne and Alnwick Moors form the area of highest Grouse population, followed by the Post Office Pylon, which is approx. one mile away, and the Black Lough at two miles. Here there are only one or two pairs of breeding Red Grouse but the number is increasing. Kimmer Lough is more distant and at a lower level. The shooting here is let and the management of the moor is less intensive. No Red Grouse have yet been recorded as having bred at the Kimmer Lough.

Methodology of the Survey. The five sites are visited five times annually, three during the breeding season and two in the winter. All birds are recorded but a small number have been selected as the “target species” which are more commonly found in these areas and are most likely to be affected by the Estate management. In an attempt to produce comparable results specific routes are used at each visit and approx. the same time spent there. Visits are made when weather is reasonable since recording is impossible in extreme weather.

Analysis of Data. The counts of the target species from each area are totalled and graphs produced from these results. To achieve the aims of the survey a comparison with population counts over the larger area must be made. An attempt is made to compare our figures with national averages produced by BTO, the presentation of which has been changed in the latest BTO report and now not as useful to this report. National figures can often be misleading when used as a direct comparison in any one local area and these facts have to be taken into consideration when reviewing the results. The recently published “Bird Atlas” from the British Trust for Ornithology, also gives very useful information when comparing local trends in population over the last ten year period, when the previous Atlas was produced. The more recent “Northumbria Bird Atlas” from the Northumbria and Tyneside Bird Club, also provides much useful information.

There are many factors affecting bird populations, weather is easily shown to be the most important. Periods of severe winters, late and wet breeding seasons have had a devastating effect on some species in the period 2009/11 and it is interesting to see how these have changed with the conditions that have been experienced since then. The number of Wrens and some

other species, can vary up or down so much during the ten year periods between National surveys that the results can be very misleading.

Breeding Period Results of Target Species. 2007-2014.

Falling populations of many British birds in recent years have resulted in the grouping of species into three bands:- **Green.** For those not endangered.

Amber. Those for which there is some concern.

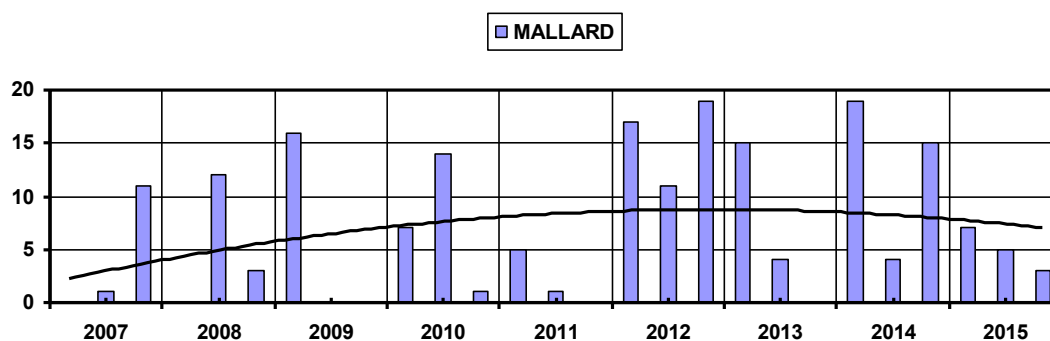
Red. For those at greatest risk.

BTO. National figures give:- **(A)** A long term trend as a % rise or fall over the period 1970 – 2012

(B) A Breeding Bird Survey trend as an average % rise or fall over the period 1995 -2012

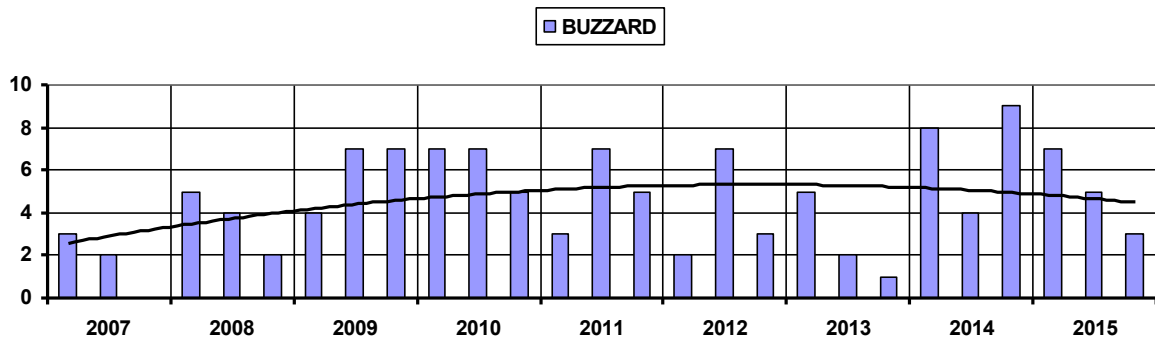
Information taken from the BTO National Bird Atlas is shown as **(BA)** and from the Northumbria Bird Atlas as **(NBA)**

These figures and the colour classification are given with the graph of each of the target species.



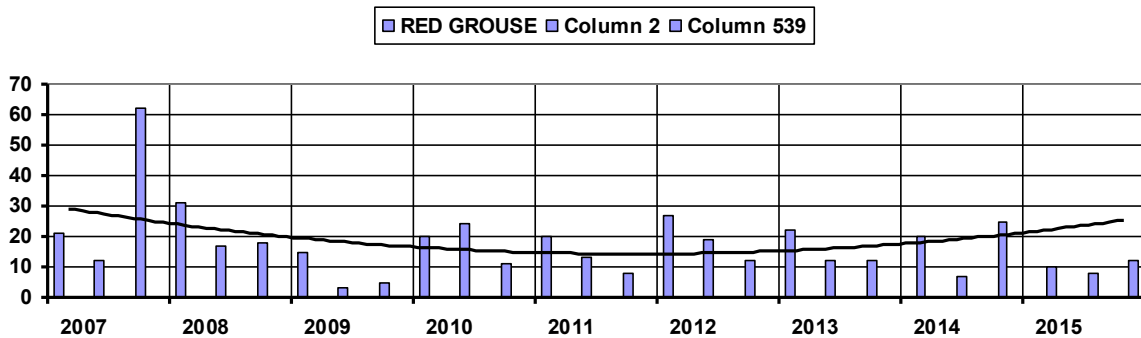
Mallards have been recorded in very irregular numbers, which may include young birds at some counts and therefore may not give a true picture of their breeding status but it would seem that there has been a gradual increase in counts during the survey period. Both the (BA) and (NBA) indicate a gradual increase in numbers over a long period. It seems surprising that Mallards are still Amber listed.

Amber listed. (A) +97% (B) +17%



The vast spread of Common Buzzard into the eastern counties in the last 25 years is reflected in the long term trend figures shown below. A reduction in local counts during 2011/13 was attributed to a levelling off due to pressure on available breeding territories. The very cold and prolonged spring in 2013 also affected breeding results but counts have increased again in 2014/15.

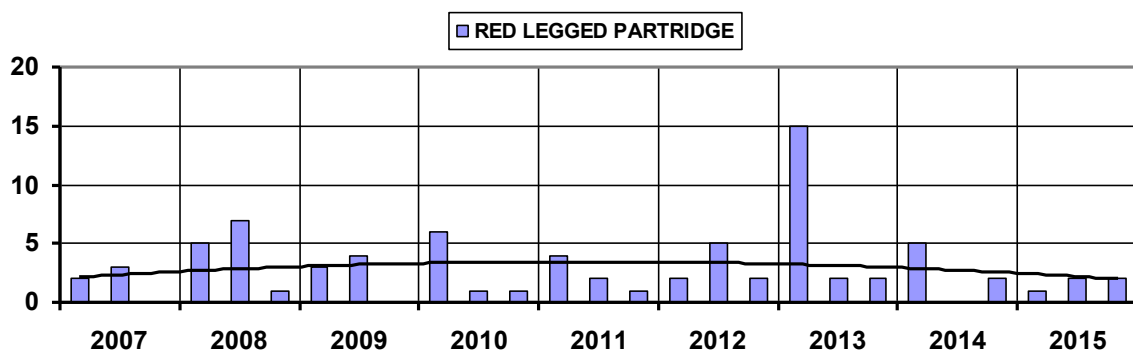
Green listed. (A) +438% (B) - 12%



There is little change in the Red Grouse population in the period of the survey. The low level of shooting during that period will probably have been sufficient to control any increase in numbers. One or two pairs have bred successfully in recent years at the Black Lough but it is thought that they may have moved to other areas of higher population once on the wing.

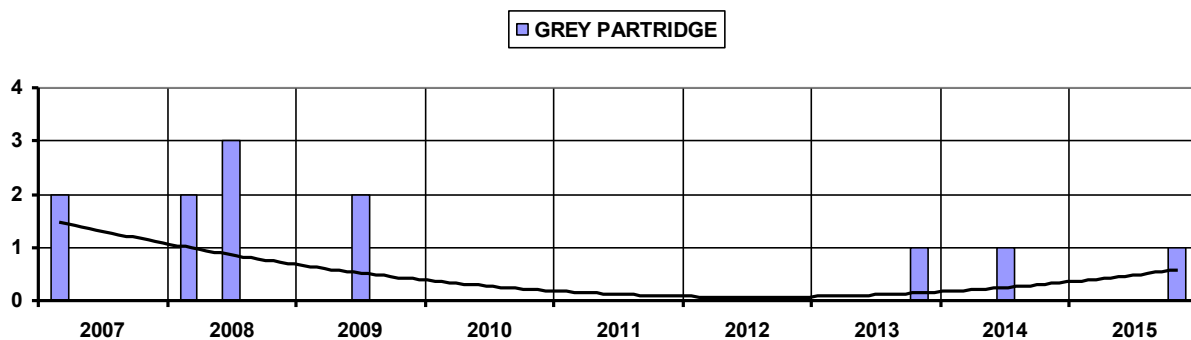
(NBA) shows major gains in the area of the Cheviots. (BA) indicates little change in the national population during the last twenty years.

Amber listed. (A) n/a (B) + 13%



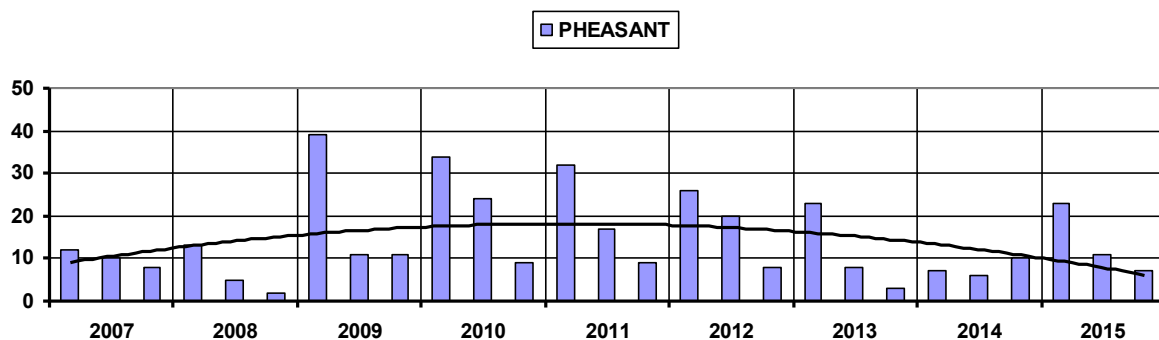
Red Legged Partridge in the survey areas are probably the remnants of birds released here in previous years or from releases on neighbouring estates. Hand reared birds released for shooting do not make good breeding stock in the wild. The increase in national figures (BA) is largely attributed to hand reared birds released for shooting. The survey area is not the natural habitat for Red Legged Partridge.

Green listed. (A) -19% (B) +19%



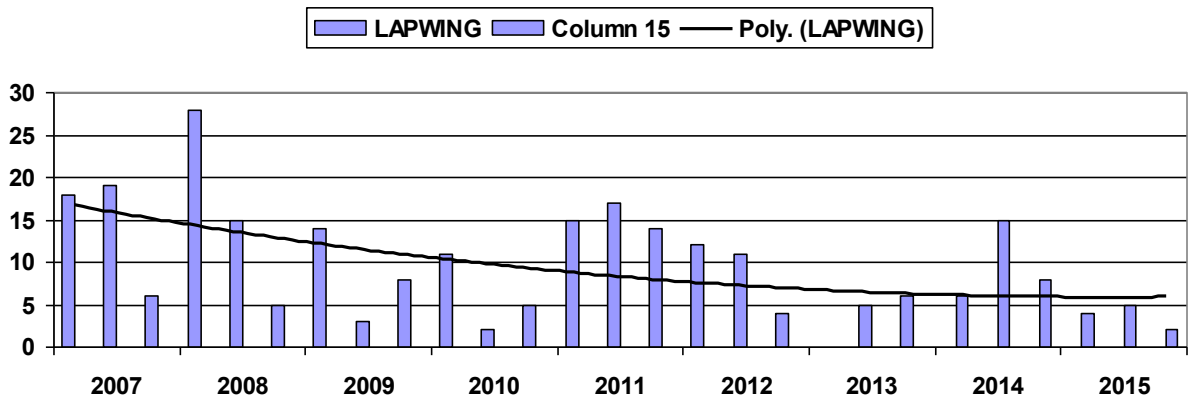
The areas covered by the survey are not natural habitat for Grey Partridge, it is therefore not surprising that the population has more or less disappeared.

Red listed. (A)-91% (B)-56%



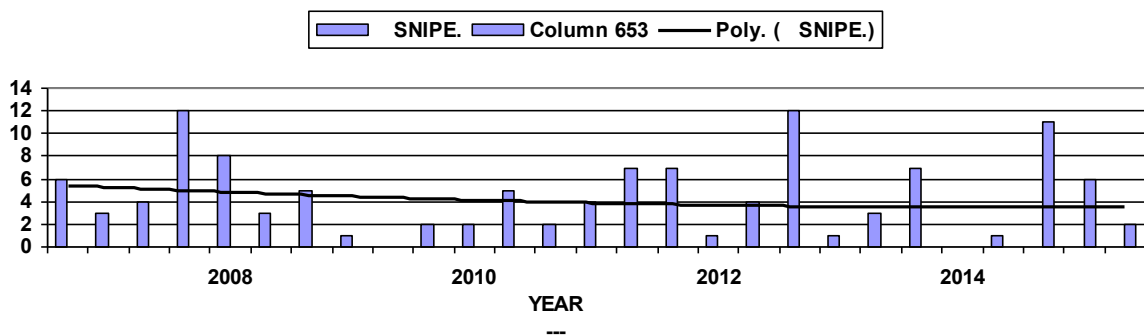
Counts of Pheasant will always vary where they have been released for shooting. There are only two release pens affecting the survey which are on the border of Hulne Moor and at the Kimmer Lough. (NBA) & (BA) both show little change in either local or national figures.

Green listed (A) +72% (B) +32%



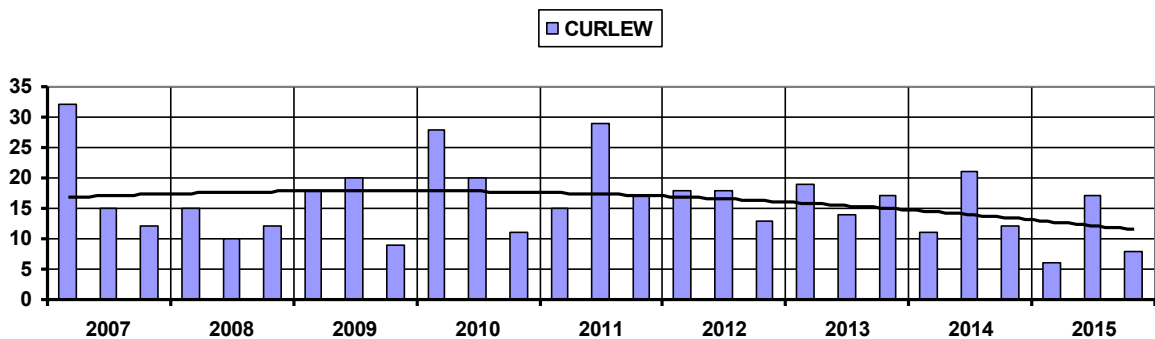
The apparent slow decline shown in this graph would seem to be following the general trend both nationally and locally. (BA) shows the highest losses are from the western side of the country. (NBA) indicates a rise in population in our area but this is more likely to be on marginal grassland more suited to their requirements.

Red listed. (A) -64% (B) -42%



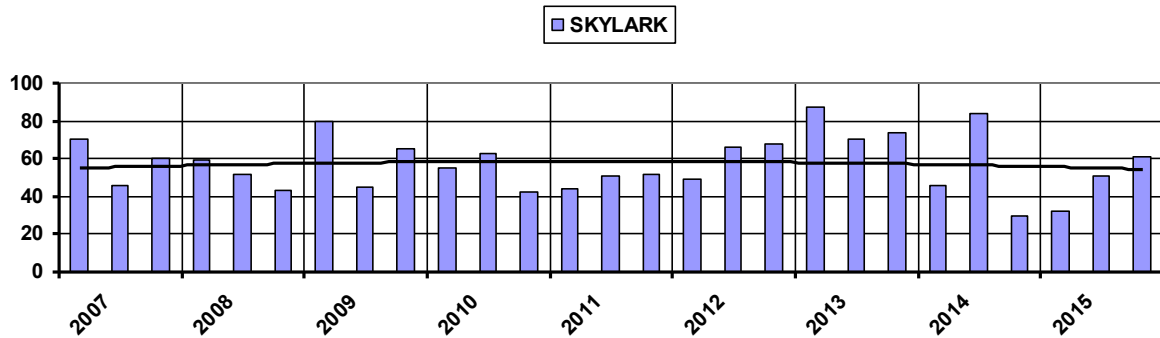
The higher counts in the earlier part of most seasons may be because some birds were still on passage. Counts made later in the season would indicate a small but regular population of breeding birds. (BA) results indicate that there has been a reduction in their lowland breeding habitat. (NBA) results show a more stable population

Amber listed. (A) n/a (B) +11%



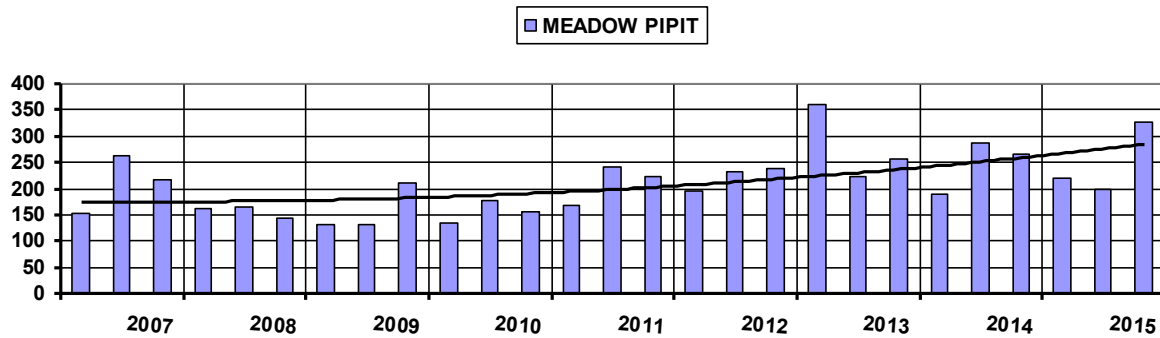
Curlew are managing to maintain a very level population in the survey area. This would appear to be a better result than the national average where most losses have been from the North West and from Ireland (BA) with a more stable population in the east.(NBA)

Amber listed. (A) -62% (B) -43%



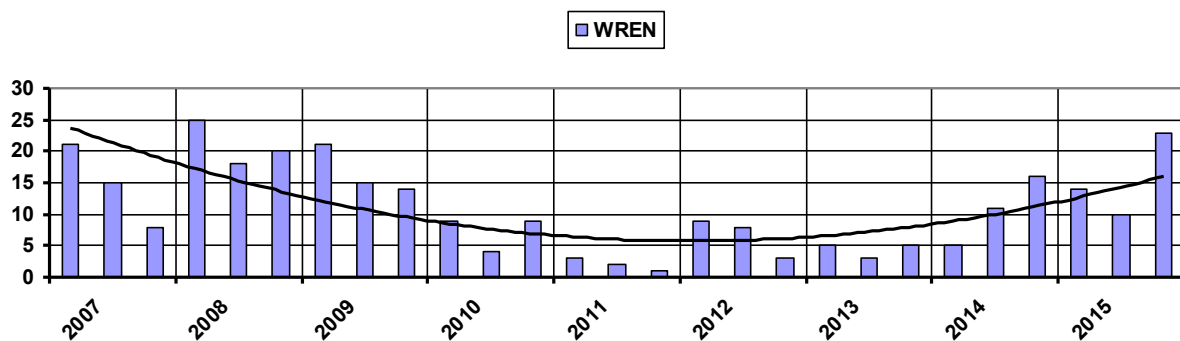
Skylarks in our area appear to have increased slightly over the last three years, a better result than national averages. One of the commoner species in the survey area, they are therefore more likely to show the results of local management. The biggest losses have been in Ireland. (BA) Losses in England are mainly associated with more intensification in arable farming areas with the change from spring sown to winter sown crops. Population in the North East appears to be stable. (NBA)

Amber listed. (A) -61% (B) -24%



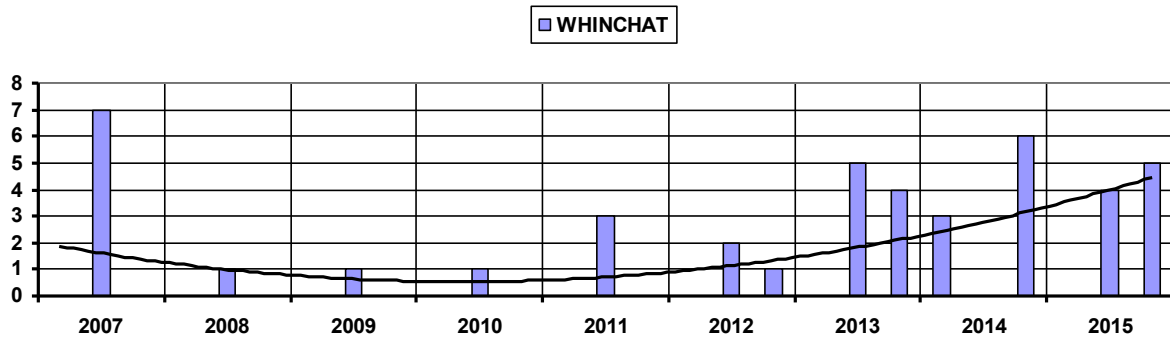
Meadow Pipits are the commonest species in the survey area and are therefore most likely to indicate any movement in population trends. In this area they would appear to have followed the national trend with a fall in the early years of the survey but a better than average rise in the last five. In the British Isles there has been a loss of numbers mainly in Ireland and the west coast of the UK. (BA). In the North East numbers are more or less stable.(NBA)

Amber listed. (A) -44% (B) -17%



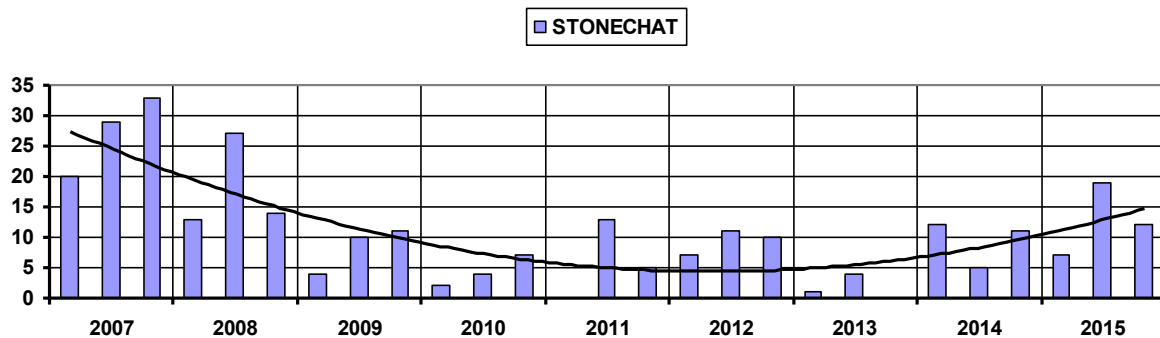
After the catastrophic fall in Wren numbers due to weather conditions in 2010 to 2012, it would appear that counts are now showing a dramatic improvement. This is typical of their ability to bounce back with large numbers of young produced when conditions allow.

Green listed. (A) +17% (B) -3%



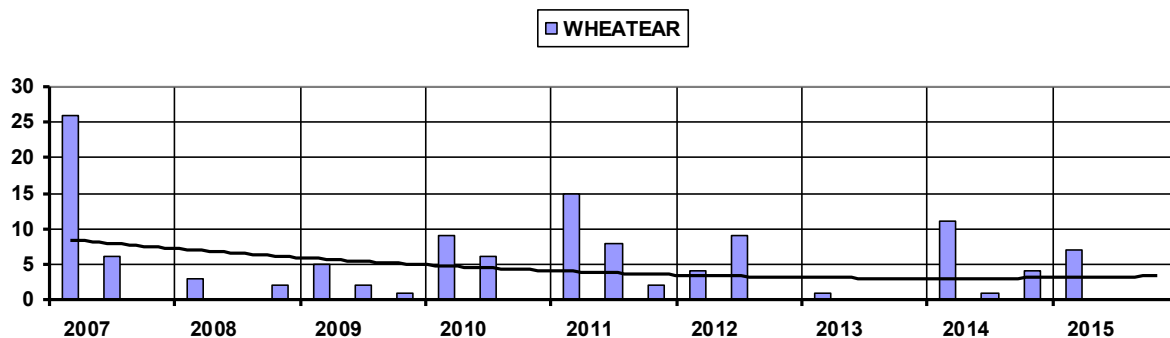
Whinchats have had three better years in this area, with sightings of successful family groups on several occasions. National losses have been general throughout the British Isles over a long period, losing breeding habitat in England more than in Scotland or Wales. (BA) This trend appears to have been reversed in the survey areas. As a migrant species Whinchats are not affected by our winter weather but will be subject to conditions in their winter quarters.

Amber listed. (A) n/a (B) -55%



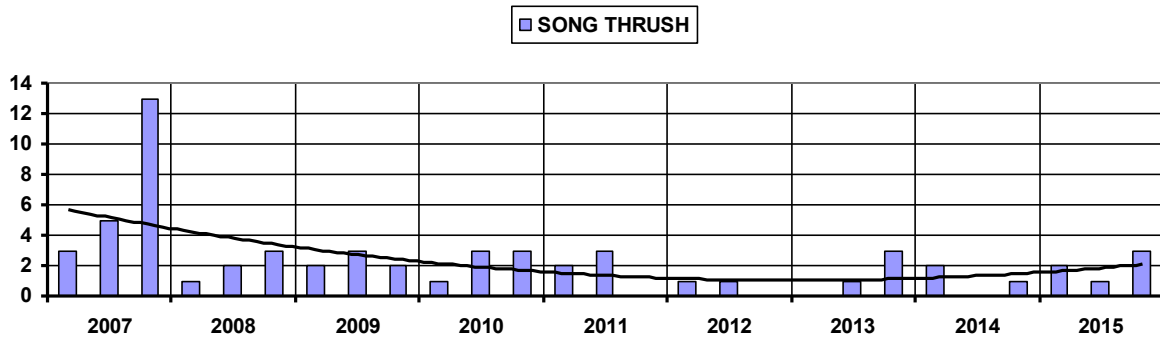
Stonechats in the survey area show some signs of recovery after the bad years. In the twenty years up to 2008 there had been a steady increase in numbers moving into the North East of England and eastern Scotland. (BA) This increase in numbers was halted by the following period of bad weather but is now on the rise again.

Green listed. (A) n/a (B) -3%



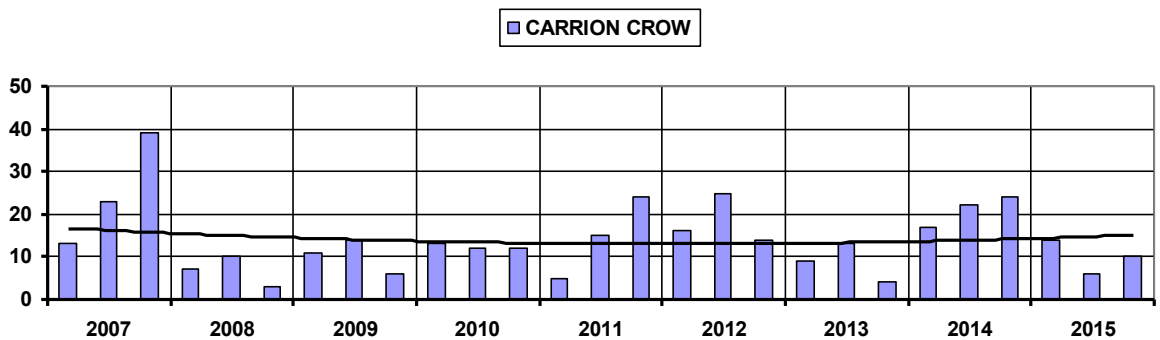
There would appear to be only a very small population of Wheatears breeding in the survey area, most records being of birds in passage, early in the season. It is estimated that there are only 700 pairs nesting in the county. (NBA) Nationally there has been a very gradual reduction in numbers over a long period. (BA) This is another migrant species.

Amber listed. (A) -18% (B) -10%



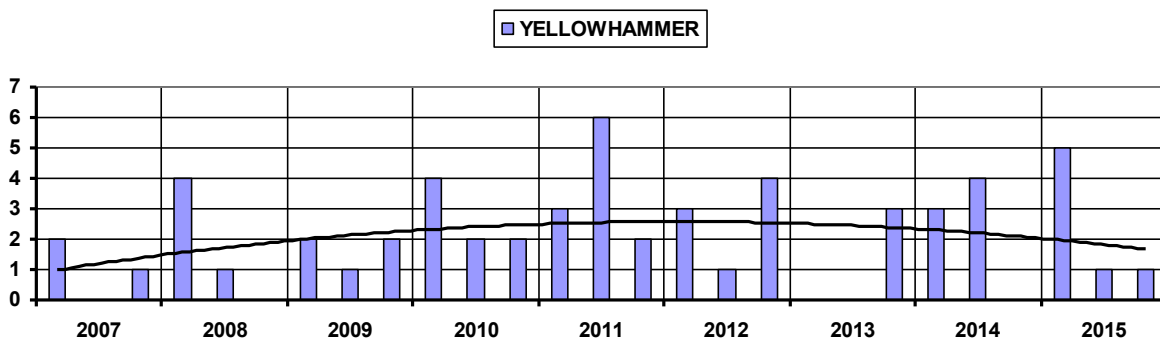
Song Thrush continue to be seen in very small numbers. Most records are made at the edges of the survey areas where forestry plantations form the boundary. More of these trees have now been removed, which will obviously have an effect on numbers recorded. Nationally there is a small increase in numbers, after a long period of decline. (BA)

Red listed. (A) -58% (B) +5%



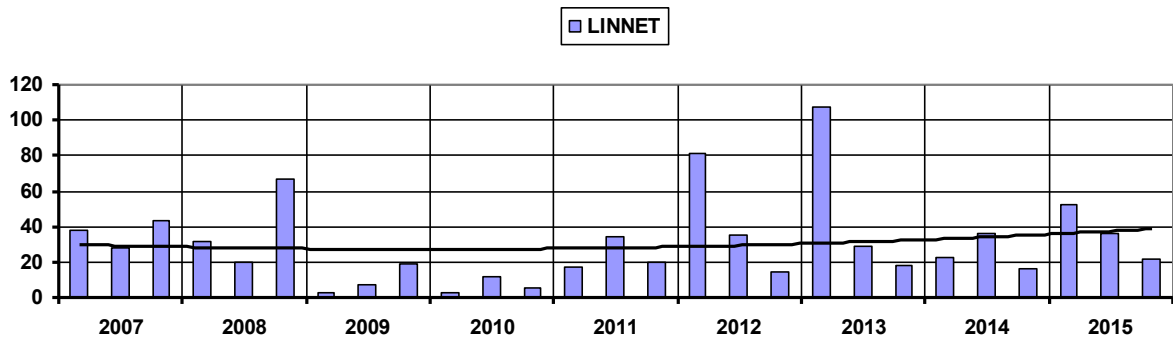
Despite gamekeeper control, numbers remain very constant as vacant territories are constantly recolonized from outside the area. The national and local population remains very constant(BA).

Green listed. (A) +95% (B) +17%



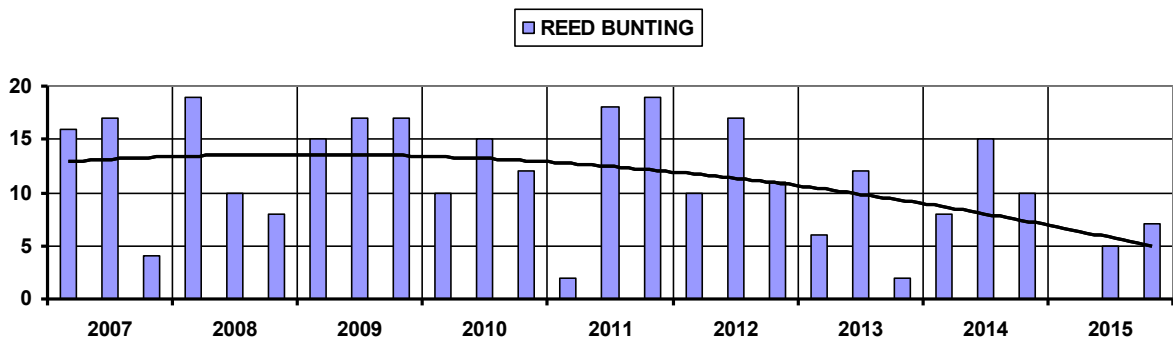
In the survey areas Yellowhammers are only recorded in small numbers during the breeding season as, except for a few places, this is not suitable habitat for them. Over the British Isles, continued losses seem to have happened on the edges of its recognized breeding areas and on high land mainly in the north west and in Ireland. (BA) Locally the population is fairly steady. (NBA).

Red listed. (A) -55% (B) -14%



The higher counts made in the early or late breeding period when Linnets are either still in flocks prior to breeding or are already beginning to gather together after fledging, should be discounted. The breeding population would then appear to be fairly constant. Nationally, Linnets have suffered losses in their northern breeding areas (BA) but appear to have a stable population here in the North East.(NBA)

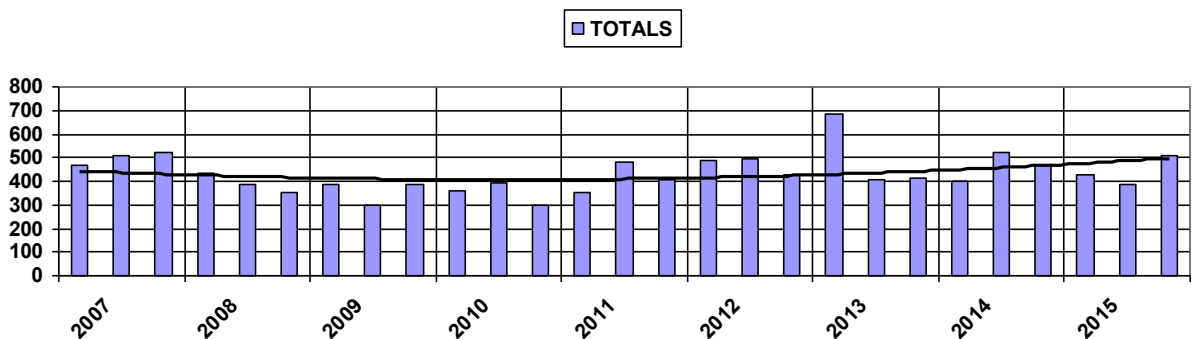
Red listed. (A) -57% (B) -25%



2015 is the lowest count of Reed Buntings in the survey so far. Only a relatively small part of the area is suitable breeding habitat. Nationally the population is stable. (BA) Locally there has been an increase at suitable habitats. (NBA)

Amber listed. (A) -41% (B) +14%

Total of all Breeding Period Counts. (Target Species.)



Total counts of numbers recorded are maintaining a fairly level pattern.

The following list of birds, which were originally included with the target species, have not been recorded in sufficient numbers to enable any useful graphs to be produced for them. They have therefore been excluded from the list, although any sightings are still recorded.

Merlin.
Golden Plover.
Jack Snipe.
Woodcock.
Nightjar.
Raven.

Conclusions.

Despite the relatively small amount of data gathered by the survey, an attempt to compare these with National averages appears to be the only way to achieve the aims of the survey.

Taking into account the nine years of the survey, the following table is a comparison which should be viewed critically.

Species with higher counts of breeding population than National averages.

Buzzard.
Red Grouse.(Taking into account numbers shot)
Skylark. (Red listed.)
Meadow Pipit. (Amber listed)
Whinchat. (Based on very small counts. Amber listed.)
Linnet. (Red listed.)
Wren. (Weather related. Green listed.)
Curlew. (Amber listed.)

Species with lower counts than the National averages.

Song Thrush.(Loss of local habitat. Red listed.)
Grey Partridge.(Unsuitable habitat. Red listed.)
Reed Bunting. (Small area of suitable habitat. Amber listed.)

Species with little variation from the National averages.

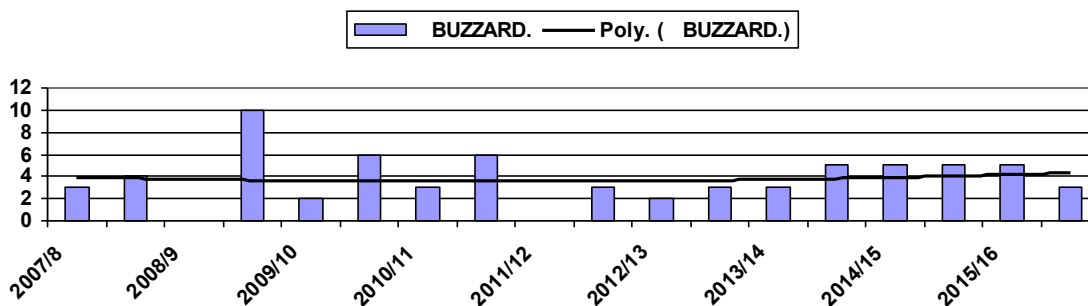
Mallard. (Amber listed.)
Red Legged Partridge.
Pheasant. (Affected by birds released for shooting.)
Lapwing. (Red listed)
Snipe. (Amber listed.)
Wheatear. (Based on small numbers. Amber listed.)
Carrion Crow,
Yellowhammer (Based on small numbers. Red listed.)
Stonechat. (Black listed.)

It is interesting to note that most of the species with higher counts than the National average are ground nesting and may have benefited most from the control of predators.

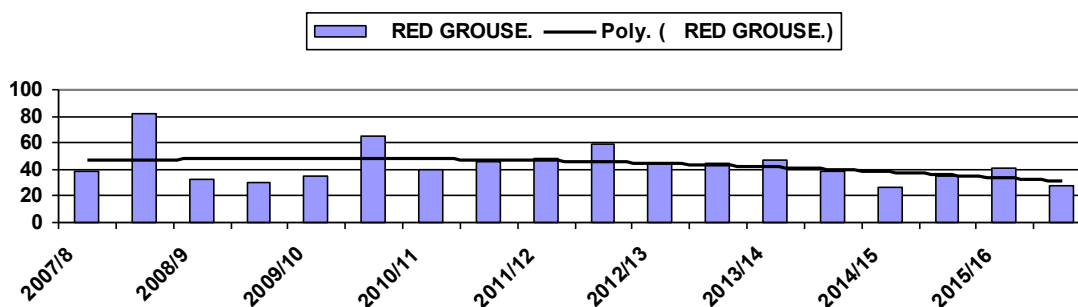
Winter Period Results.

The winter period of 2015/16 has been the wettest and windiest on record for many years, but also the warmest. You might imagine that it has not been a good winter for our resident birds but this does not seem to have been the case. The counts made during the 2016 breeding period will show whether this is true or not.

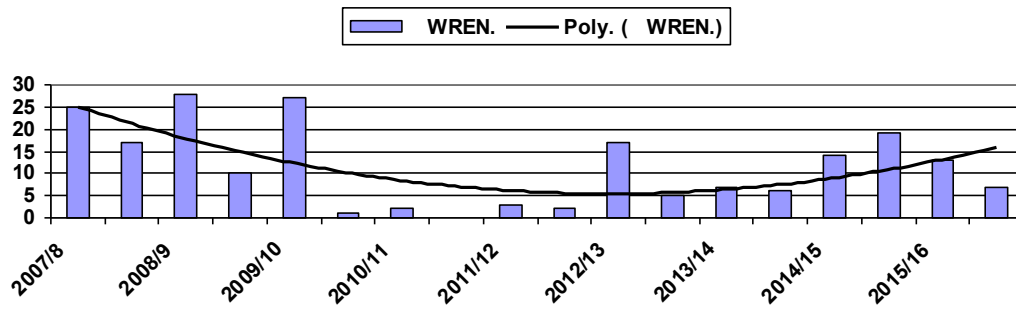
All species are recorded through the winter period, but sightings can be very irregular and numbers are usually quite low. Most species which breed on our moorlands are semi migratory, not leaving the country but moving to the nearby coastal area or to places where food or shelter is more readily available. The areas of moorland covered by the survey are usually quite barren in the winter and total counts can be very small. Nothing would be achieved by creating graphs of most of the Target species but the following three species are of interest although there are no figures produced which can be used as a comparison to national records.



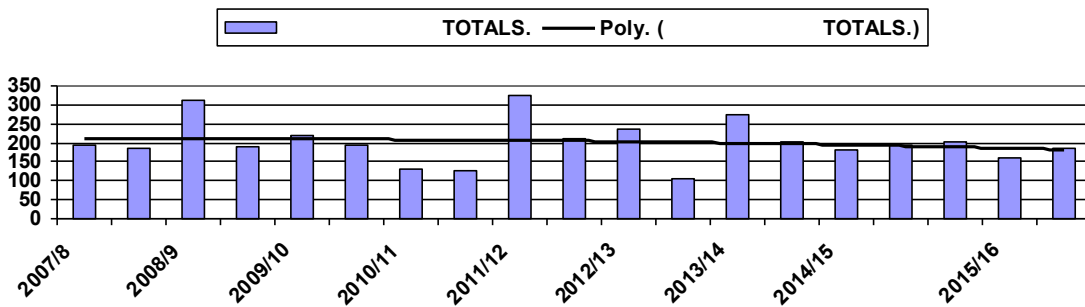
The trend line indicates that there has been a very level population of Buzzards in the winter over the last eight years. This would suggest that the huge movement to the eastern side of the country is now at a maximum sustainable level.



Regardless of the effects of shooting, there remain a very healthy number of birds to form the next breeding population.



The graph for Wrens appears to show a drop in numbers during the last winter. It can be presumed that they move from the moorland to the shelter of nearby woodland. This spring (2016) Wrens appear to be in abundance and counts for this breeding season will be of interest.



Although individual total counts vary considerably the trend line shows little change over the survey period.

Roundup of the five areas.

Kimmer Lough.(Winter)

Both counts were made in reasonable weather. The December visit was in the afternoon, while the February one was from 8.45 to 10.40, but timing isn't significant for winter counts.

BIRDS.

15 species were seen which is in line with the general pattern over the last eight years.

The numbers of the December count were boosted by good numbers of Mallard and Wigeon on the Lough, while in February most of the Lough surface was lightly iced over. Other than the duck no species was seen in more than single figures at either count.

In December there were plenty of Rooks, but they were on adjacent grazing fields rather than in the survey area, so they have not been included.

R.P. 16/2/16

Black Lough. (Winter)

After a dry and mild November. December became very wet, This wet weather continued into January. The bird counts for Black Lough reflect this weather pattern with low numbers and few species recorded. Two Canada Geese recorded in February were probably a pair prospecting for nest sites. One Red Grouse and one Snipe were recorded in December but not in February. It would be fascinating to know if there is any movement of Red Grouse between the smaller areas of moorland in winter. Small numbers of Meadow Pipits and Skylarks maintained a foothold at Black Lough, presumably these birds would move to lower ground if weather conditions became too tough. All other birds are those associated with neighbouring woodland. It is interesting to note the Brown Hares in February. This is a species that is not mentioned too often during summer or winter surveys on Black Lough.

G.D. (7/3/16)

Post Office Pylon.

There is a very regular, but small population of Curlew, probably four pairs. Red Grouse also have a good presence, even with occasional shooting. It is believed that the few pairs which breed at the Black Lough move to this area in the autumn. Stonechat numbers are up, as they are in most of the survey areas, which is good to see, since they also suffered badly in the 2010/11 period and have taken time to return. Bullfinches are a regular winter visitor to this area where they can be seen feeding on heather seed. Tree Pipit has also been recorded and two Twite.

Alnwick Moor.

Greylag Geese and Moorhens are seen regularly on the Gull Ponds but never any Gulls. The only sighting of a Red Kite this year was here in April of 2015. Alnwick Moor has a small but regular number of Lapwing, Curlew and Snipe breeding. As with other survey areas there have been higher counts of Wrens this year, a build up of numbers until the next severe winter hits them. This is true also of Stonechats. During the winter period, two Short Eared Owls were recorded and one Raven.

Hulne Moor

Sightings at Freeman's Gap Pool include Little Grebe, Moorhen, Greylag Geese and Mallard during the breeding season and a group of thirty five Teal in the winter. More unusual records were of a Quail heard calling and the sighting of one Nightjar. Only one Curlew was seen but Wren and Stonechat numbers were up. In winter Bullfinches are a very regular visitor to the golf ball area and are also seen feeding here on the heather seed. Several sightings of Fallow and Roe deer but no Red Deer this year.

Jim Clark.(22/4/16)

Included with this report.

An updated list of plant records for the five areas of the report. There have been very few additions to the list this year. Following the same route at each visit limits the number of habitats seen.

A complete list of bird species recorded during this survey.

**VEGETATION LIST FOR
NEBS.**

Feb. 2013

KL. - KIMMER LOUGH.
BC. - BLACK CLOUGH.

COMMON NAME.	SPECIFIC NAME.	DISRIBUTION	COMMENTS.
DICOTYLEDONS.			
Lesser Spearwort.	Ranunculus flammula.	KL.BC.PP.	Common in wet ditches etc.
Marsh Marigold.	Caltha palustris.	KL.	Near the Lough it'self.
Wood Anemone.	Anemone nemorosa.	BC.KL.	
Yellow Water-lily.	Nuphar lutea.	KL.	One of only four sites in North Northumberland.
Climbing Corydalis.	Corydalis claviculata.	PP.	Very common in our area but not in many parts of UK.
Wavy Bitter-cress.	Cardamine flexuosa.	BC.	
Lady's Smock.	Cardamine pratensis.	AM.	
Common Whitlowgrass.	Erophila verna.	AM.	
Milkwort spp.	Polygala spp.	PP. AM.HM.	Several different species.
Heath Milkwort.	Polygala serpyllifolia	AM.	
Fairy Flax.	Linum catharticum.	AM.	
Perforate St. John's-wort.	Hypericum perforatum.	BC.	
Common Dog Violet.	Viola riviniana.	AM.	
Marsh Violet.	Viola palustris.	HM.	
Greater Stitchwort.	Stellaria media.	AM.	
Slender ST. John's-wort.	Hypericum pulcrum.	AM.	
Wood-sorrel.	Oxalis acetosella.	HM.KL.	
Petty Whin	Genista anglica.	KL.	Germination encouraged by fire, eg Heather burning.
Common Gorse.	Ulex europaeus.	ALL	
Lesser Yellow Trefoil.	Trifolium dubium.	PP.HM.	
Common Vetch.	Vicia sativa.	BC.AM.KL.	
Rowan.	Sorbus aucuparia.	BC.KL.AM.	
Bramble.	Rubus fruticosus.	ALL	
Tormentil.	Potentilla erecta.	ALL	
Barren Strawberry.	Potentilla sterilis.	BC.PP.	
Water Avens.	Geum rivale	AM.	
Meadowsweet.	Filipendula ulmaria.	ALL.	
Round-leaved Sundew.	Drosera rotundifolia.	BC.	Insectivorous plant of damp and mossy peat ground.
Golden Saxifrage.	Chrysosplenium oppositifolium.	BC.	
Broad- leaved Willowherb.	Epilobium montanum.	BC.	
Rosebay Willowherb.	Chamaenerion angustifolium.	HM.AM.	
New Zealand Willowherb.	Chamaenerion pedunculare.	BC.	On mossy rocks close to a stream.
Common Nettle.	Urtica dioica.	ALL.	
Holly.	Ilex aquifolium.	BC.	
Alder.	Alnus glutinosa.	KL.AM.HM.	
Bog Myrtle.	Myrica gale.	KL.	One of the best sites in North Northumberland.
Downy Birch.	Betula pubescens.	KL.	
Goat Willow.	Salix caprea.	ALL.	
Angelica.	Angelica sylvestris.	PP.	
Marsh Pennywort.	Hydrocotyle vulgaris	BC.PP.	
Sheep's Sorrel	Rumex acetosella.	BC.	Thrives on compacted peat or overly burned heather ground.
Bilberry.	Vaccinium myrtillus.	ALL	
Cowberry.	Vaccinium vitis-idaea.	KL.	
Cranberry.	Vaccinium oxycoccus.	KL. BC.	
Crow Berry.	Empetrum nigrum.	BC.PP.	
Rhododendron.	Rhododendron ponticum	AM.KL.	
Heather.	Calluna vulgaris.	ALL	
Cross-leaved Heath.	Erica tetralix.	ALL	
Bell Heather.	Erica cinerea.	ALL	
Primrose.	Primula vulgaris.	AM.HM.KL.	

Creeping Jenny.	Lysimachia nummularia.	BC.	
Bog Pimpernel.	Anagallis tenella.	BC.	
Chickweed Wintergreen.	Trientalis europaea.	ALL	Common here, not so in many areas.
Bogbean.	Menyanthes trifoliata.	AM.	
Foxglove.	Digitalis purpurea.	ALL	
Brooklime.	Veronica beccabunga.	BC.	
Common Cow-wheat.	Melampyrum pratense	AM.	
Marsh Lousewort	Pedicularis palustrisAM.	AM.	
Lousewort.	Pedicularis sylvatica	BC.PP.AM.	
Yellow Rattle	Rhinanthus minor.	AM.	
Water Mint.	Mentha aquatica.	AM.BC.	
Bugle.	Ajuga reptans.	KL.HM.	
Wood Sage.	Teucrium scorodonia.	ALL	
Field Forget-me-not.	Myosotis arvensis.	BC.	
Common Butterwort.	Pringuicula vulgaris.	AM.	
Honeysuckle.	Lonicera periclymenum.	BC.	
Common Valerian.	Valariana officinalis.	KL.	
Marsh Valerian.	Valariana dioica.	PP.	
Heath Bedstraw.	Galium saxatile.	ALL	
Marsh Bedstraw.	Galium palustre.	BC.	
Cleavers.	Galium aparine.	BC.	
Crosswort.	Galium cruciata	HM.AM.	
		BC.AM.HM.KL	
Devil's-bit Scabious.	Succisa pratensis.	.	
Colt's-foot.	Tussilago farfara.	AM.	
Butterbur.	Petasites hybridus.	KL.	
Common Cat's-ear.	Hypochoeris radicata.	AM.	
MONOCOTYLEDENS.			
Bluebell.	Endymion non-scriptus.	AM.BC.HM.	
Bog Asphodel.	Narthecium ossifragum.	AM.BC.PP.	
Common Spotted Orchid.	Dactylorhiza fuchsii.	KL.AM.PP.	
Heath spotted Orchid.	Dactylorhiza maculata.	AM.KL.	
Broad-leaved Pondweed.	Potamogeton natans.	KL.BC.PP.	
Hare's Tail Cotton Grass.	Eriophorium vaginatum.	ALL.	
	Eriophorium		
Common Cotton Grass.	augustifolium.	ALL.	
Deer-Grass.	Scirpus cespitosus.	ALL.	
Purple Moor Grass.	Molinia caerulea.	HM.	
Moor Mat Grass.	Nardus stricta.	HM.	
Sweet Vernal Grass.	Anthoxanthum odoratum	KL.	
Heath Woodrush.	Luzula multiflora.	BC.	
Field woodrush.	Lazula campestris	KL.	
Scots Pine.	pinus silvestris	HM.	
FERNS AND ALLIES.			
Bracken.	Pteridium aquilinum.	ALL.	
Hard fern.	Blechnum spicant.	BC.PP.KL.	
Lemon Scented Fern.	Oreopteris limbosperma.	HM.	
Common Spleenwort.	Asplenium trichomanes.	AM.	Maidenhair Fern.
Wall-rue.	Asplenium ruta-muraria.	AM.	
SEDGES AND RUSHES.			
Green Ribbed Sedge.	Carex binervis.	KL.	
MOSSES.			
Polytrichum	Polytrichum commune.	KL.	

Bird Species recorded during NEBS survey. (To March 2016)

Little Grebe	Grey Heron	Mute Swan	Greylag Goose
Shelduck	Wigeon	Teal	Tufted Duck
Goldeneye	Goosander	Red Kite	Hen Harrier
Common Buzzard	Sparrowhawk	Goshawk	Kestrel
Peregrine Falcon	Merlin	Red Grouse	Red-legged Partridge
Grey Partridge	Quail	Pheasant	Moorhen
Coot	Oystercatcher	Golden Plover	Lapwing
Common Sandpiper	Redshank	Curlew	Woodcock
Snipe	Jack Snipe	Black-headed Gull	Common Gull
Herring Gull	Lesser B-b Gull	Greater B-b Gull	Woodpigeon
Feral Pigeon	Stock Dove	Cuckoo	Short-eared Owl
Barn Owl	Nightjar	Swift	Green Woodpecker
Great Spotted Woodpecker	Skylark	Sand Martin	Swallow
House Martin	Meadow Pipit	Tree Pipit	Pied Wagtail
Grey Wagtail	Wren	Duncock	Robin
Redstart	Wheatear	Whinchat	Stonechat
Song Thrush	Redwing	Mistle Thrush	Fieldfare
Blackbird	Ring Ouzel	Garden Warbler	Blackcap
Lesser Whitethroat	Whitethroat	Sedge Warbler	Grasshopper Warbler
Willow Warbler	Chiffchaff	Goldcrest	Spotted Flycatcher
Great Tit	Coal Tit	Blue Tit	Marsh Tit
Long-tailed Tit	Nuthatch	Treecreeper	Magpie
Jay	Jackdaw	Rook	Carrion Crow
Raven	Starling	Chaffinch	Linnet
Redpoll	Twite	Goldfinch	Greenfinch
Siskin	Bullfinch	Crossbill	Reed bunting
Yellowhammer	Whooper Swan		

Total – 107 species