

Breeding Wader Monitoring at Lough Neagh/Beg

2007

A report to Environment and Heritage Service

by

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February 2008



CONTENTS

SECTION	PAGE
1. INTRODUCTION	3
1.1 Background	3
1.2 Aims of the survey	3
2. METHODS	3
2.1 Scope of the survey	3
2.2 Survey methodology	4
2.3 Interpretation	4
3. RESULTS	5
3.1 Summary of results	5
3.2 Habitat change	5
4. SITE ACCOUNTS	8
4.1 Reedy Flat	8
4.2 Lough Beg NW	10
4.3 Kiltagh Point - Blacker's Rock	11
4.4 Washing Bay	12
4.5 Columbkille Point	13
4.6 Kiltagh Point – Ardboe Point	14
4.7 Killycolpy	15
4.8 Back Lower	16
4.9 Three Islands	17

1. Introduction

1.1 Background

Allen and Mellon Environmental Ltd were contracted by Environment and Heritage Service to undertake breeding wader surveys at selected sites within Lough Neagh and Lough Beg Areas of Special Scientific Interest (ASSIs) during the 2007 breeding season. Breeding waders are listed as a qualifying feature for both ASSIs.

Both Lough Neagh and Lough Beg have been covered by a series of breeding wader surveys in the past. The baseline was established by a full survey of all suitable shoreline sites as part of the NI Breeding Wader Survey in 1986/87. Following this survey sites were categorised as Grade 1 (20+ pairs), Grade 2 (10-19 pairs) or Grade 3 (<10 pairs).

Partial re-surveys of selected sites around Lough Neagh/Beg were undertaken in 1992 and 2000. Breeding wader monitoring is undertaken annually at Lough Beg NNR by EHS and RSPB.

1.2 Aims of the survey

. The aims of the 2007 survey were to:

- Assess numbers of breeding waders (lapwing, snipe, curlew and redshank) at selected sites around Lough Neagh/Beg;
- Provide up to date information as part of the ASSI condition monitoring process;
- Obtain data on site characteristics (eg wetness, grazing, ditches) to inform future site management.

2. Methods

2.1 Scope of the survey

Nine sites were selected by EHS for survey during 2007. Eight of these were at Lough Neagh and one at Lough Beg. Full surveys were undertaken at six sites and partial surveys at three, where parts of these sites were unsuitable for breeding waders (see site accounts for details).

The sites selected comprised five Grade 1 and four Grade 2 sites from the NI Breeding Wader Survey 1986/7. All nine sites were covered during the 1992 re-survey of breeding wader sites, but two sites were not covered by the survey work undertaken in 2000.

2.2 Survey methodology

The standard O'Brien and Smith survey technique for lowland breeding waders was used. This methodology is identical to that used in all previous breeding wader surveys at Lough Neagh/Beg.

Three visits, at least one week apart, were undertaken between 16th April and 9th June 2007. Sites were visited in early morning from 0600hrs and no survey was started later than 1000hrs. Each individual field was walked, so that the surveyor was within 100metres of every point. Registrations of waders and other breeding wetland birds of interest were recorded on a field-by-field basis on 1:10,000 maps.

The same site boundaries and field numbers were used to allow direct comparison with all previous surveys. All habitat data were also recorded using identical parameters to previous surveys.

2.3 Interpretation

Bird registrations obtained during all visits were interpreted using identical criteria as previous breeding wader surveys, which is consistent with the O'Brien and Smith methodology. This can be summarised as:

Snipe

Snipe breeding numbers represent the peak numbers of displaying (drumming or chipping) birds recorded.

Lapwing

Breeding numbers are estimated by dividing the peak number of displaying or territorial birds by two.

Redshank

The average number of birds counted up to May 20th (when the first young appear) was used as the basis for calculating the number of breeding pairs. This has been found to correlate with the estimated number of pairs and precludes over-estimating numbers post-incubation when adults are very conspicuous.

Curlew

The estimated number of pairs was based on the presence of displaying birds or pairs.

3. Results

3.1 Summary of results

A total of 84 pairs of waders (lapwing, snipe, redshank and curlew) were recorded during fieldwork. This compares to 240 pairs from the same sites in 1986/7, 145 pairs in 1992 and 110 pairs (from seven sites) in 2000. Several other wader species were recorded, but the only additional breeding waders were a pair of common sandpipers at Columbkille Point. The figures provided in this report relate to the key target species only (lapwing, snipe, curlew and redshank).

Declines have occurred at seven of the nine sites since the previous survey. The two sites which did not show a decline are –

- Reedy Flat: numbers showed a slight increase from 38 to 41 pairs between 2000 and 2007.
- Washing Bay: numbers remained at 7 pairs between 2000 and 2007;

Most of the other sites have shown a gradual decline between 1986/7 and 2007. However, wader numbers at Kiltagh Point – Ardboe Point declined rapidly from 16 pairs to 4 pairs between 2000 and 2007, although numbers were stable in the three previous surveys. Breeding waders are now almost totally absent from several sites, most notably Columbkille Point which supported 21 pairs in 1986/7, but only one pair of snipe in 2007.

Possible reasons for declines at individual sites are discussed in Section 4 (Site Accounts), and management recommendations are provided.

3.2 Habitat change

There was widespread evidence of recent and ongoing habitat change across most of the surveyed sites. The most significant issues identified are:

- Scrub encroachment
- Under-grazing
- Re-seeding of fields and continued use of fertilizers
- Ineffective ditch systems (too dry and/or steep sided)

The combination of agricultural intensification and abandonment (sometimes within the same site) significantly restricts the area of suitable habitat for breeding waders. At some sites scrub and woodland encroachment was so serious that sections of the sites could not be surveyed. Details of management issues are discussed in more detail in Section 4 (Site Accounts).

Table 1 presents a summary of breeding wader numbers at all nine sites. Table 2 provides a comparison between 2007 and previous surveys for all sites.

Table 1 Breeding wader numbers (pairs) at sites surveyed in 2007

Site	Number of visits	Snipe	Lapwing	Redshank	Curlew	Total Breeding Waders (pairs)
Reedy Flat (AR001)	3	17	11	12	1	41
Kiltagh Point – Blacker's Rock (TY002)	3	9	4	2	0	15
Lough Beg NW (LD002)	3	9	0	2	0	11
Washing Bay (TY005)	3	5	0	0	2	7
Kiltagh Point–Ardboe Point (TY007)	3 (Field 1-6) 2 (Field 7-11)	3	0	1	0	4
Killycolpy (TY009)	3	2	0	0	0	2
Back Lower (TY004)	2	2	0	0	0	2
Columbkille Point (AR003)	3	1	0	0		1
Three Islands (AN002)	1	0	1	0	0	1

Table 2 Details of wader numbers at sites surveyed in 2007 from all surveys

Site	L 86	L 92	L 00	L 07	CU 86	CU 92	CU 00	CU 07	RK 86	RK 92	RK 00	RK 07	SN 86	SN 92	SN 00	SN 07	Total 1986	Total 1992	Total 2000	Total 2007
Reedy Flat	7	8	10	11	0	0	0	1	20	12	20	12	6	10	10	17	33	32	38	41
Kiltagh Point – Blacker's Rock	9	3	2	4	0	1	1	0	11	4	4	2	15	8	12	9	35	16	19	15
Lough Beg NW	21	3	2	0	7	2	1	0	30	6	3	2	17	13	8	9	75	24	14	11
Washing Bay	3	5	1	0	2	2	2	2	4	4	0	0	10	2	4	5	19	13	7	7
Kiltagh Point – Ardboe Point	3	7	4	0	0	1	0	0	6	9	9	1	3	1	3	3	12	18	16	4
Killycolpy	0	0	-	0	2	1	-	0	1	1	-	0	7	4	-	2	10	6	-	2
Back Lower	6	4	4	0	0	1	0	0	4	5	4	0	14	3	0	2	24	13	8	2
Columbkille Point	7	3	4	0	0	0	0	0	10	10	1	0	4	7	3	1	21	20	8	1
Three Islands	5	2	-	1	0	0	-	0	3	1	-	0	3	0	-	0	11	3	-	1

4. Site Accounts

The following accounts provide details of the condition of the sites for breeding waders, and outline recommendations for future management. More detailed management prescriptions would require additional analysis of management history including grazing details.

Each site is ranked 1, 2 or 3 to reflect the priority which should be attached to positive wader management.

- Priority 1: Sites where significant wader populations already occur (or did in the past) and where basic management measures could maintain or enhance wader numbers across much of the site;
- Priority 2: Sites with potential for breeding wader enhancement across at least part of the site, through introduction of appropriate management such as grazing and scrub clearance;
- Priority 3: Sites which have become largely unsuitable for breeding waders and where intensive management would be required to restore them.

4.1 Reedy Flat (AR001) Priority 1

4.1.1 Site summary

Total: 41 pairs

Snipe: 17 pairs

Lapwing: 11 pairs

Curlew: 1 pair

Redshank: 12 pairs

This was by far the best site for breeding waders of the nine surveyed, and was the only site to show any increase from the baseline survey in 1986/7. This can be largely attributed to a high count of territorial snipe on the last visit in June 2007. An area of cutover bog beyond the SE end of the site (behind fields 4 and 5) supported at least two additional pairs of lapwing, and it is possible that one of the 11 pairs recorded from Reedy Flat was more associated with this area.

Despite this, the numbers of both lapwing and redshank at the site were encouraging (see Table 2).

The majority of breeding wader activity is at the central core of the site (fields 7-9), with far fewer registrations at the eastern and western ends of the site, where the fields are dry and have been improved. Fields 1, 2, 5 and 6 were cut for silage prior to the final visit on 9th June. Even within the core area, most wader activity was at the lough edge, where the ground is wetter and tussocks of rushes occur. Further inland the fields are drier and the grass is a little lush to support breeding lapwing, for example. Conditions during the survey were very dry, although there were small areas of flooded or swampy ground in fields 4 – 9, mostly close to the lough shore. Field 8 was the wettest, with up to 20% flooding at the final visit.

Significant breeding wader activity (including lapwing) was recorded on the final visit, indicating that some successful breeding had taken place.

4.1.2 Management recommendations

The key objective for this site should be to maintain the breeding wader populations of the core fields (7-9). There is also potential to enhance the inland sections of these fields and the fields lying to the east and west.

1. Retain cattle grazing at central core of site. Consider increasing stocking levels at least on inland sections to enhance fields for lapwing.
2. Prevent further re-seeding
3. Prevent use of chemical fertilisers;
4. Manage dry outer fields (eg 1-6 and 12, 13) for lapwing through appropriate grazing regime in place of silage production;
5. Manage ditches where appropriate to provide at least one shallow sloping bank and keep clear of vegetation.

4.2 Lough Beg NW (LD002)

Priority 1

4.2.1 Site summary

Total: **11 pairs**

Snipe: 9 pairs

Redshank: 2 pairs

Lough Beg NW has endured the greatest wader losses of any Lough Neagh/Beg site, with a decline from 75 pairs in 1986 to just 11 in 2007. Although habitat changes have occurred, some losses are more difficult to explain, including the lapwing breeding in the improved fields at the north of the site.

The snipe figure given may be an underestimate of the actual total, given that the peak count from the three visits is used as the population estimate. However it is clear that the breeding wader interest is now concentrated into a small section of the site.

Fields 1-4 and 7-12 are improved and unsuitable for breeding waders apart from perhaps lapwing which were present in numbers during the original survey. No lapwings were recorded during the first visit, when breeding lapwing would be expected to be on site, and so these fields were not walked in subsequent visits.

Fields 19 and 20 at the south of the site were the wettest and held most of the breeding wader interest (snipe). However, there is evidence that Field 19 in particular is under-grazed and that scrub is encroaching. Field 6 formerly held significant numbers of waders, but held only one pair of redshank and one territorial snipe during the survey. This field is now dominated by tall rank *Juncus*, which makes it unattractive to most waders.

4.2.2 Management recommendations

Management should be targeted at Fields 19 and 20, although Field 6 also presents significant opportunity for enhancement. This site is a High Priority for management in view of its former importance and the presence of significant wader populations nearby at Lough Beg West.

1. Manage ditches to have shallow profile and sward of Fields 1-5 for lapwing (ie sward to be <8cm in spring).
2. Provide a mosaic of suitable areas within Field 6 by cutting rushes, baling and removal in selected areas. Creating a patchwork of habitats is labour intensive but has shown to be beneficial for breeding waders at Lower Lough Erne and Portmore Lough.
3. Introduce a suitable grazing regime throughout the site to control the sward.
4. Introduce an appropriate grazing regime to Field 19 and monitor current grazing regime in Field 20. Undertake scrub removal programme in Fields 19 and 20 as a matter of urgency before it becomes more established.

4.3 Kiltagh Point – Blacker’s Rock (TY002) Priority 2

4.3.1 Site summary

Total:	15 pairs
Snipe:	9 pairs
Lapwing:	4 pairs
Redshank:	2 pairs

Breeding wader numbers at this site have declined by >50% since the baseline survey. Most of this decline occurred between 1986/7 and 1992, and numbers seem to have remained virtually stable since then. However, it is notable that in 2007 the only wader activity during the 2nd and 3rd visits related to snipe. No territorial lapwing or redshank was recorded after visit 1, which suggests that breeding was unsuccessful. Two additional pairs of lapwing were associated with the fields immediately to the north of Field 5. The height of vegetation may have been a factor in the loss of birds in later visits, as it grew to over 50cm in these fields by the 3rd visit. Another factor in overall wader declines may be the encroachment of alder woodland and gorse scrub, which although present in 1986/7, appears to have spread considerably. During the 2007 survey, only Field 4 was being grazed by cattle, although three goats were present in Field 6.

Wetness was variable across the site, with Fields 2 and 6 consistently the wettest in all three visits.

4.3.2 Management recommendations

Management effort should continue to be targeted at those fields controlled by EHS (eg Fields 5 and 6). Elsewhere there is considerable scope for enhancement through rush control and suitable grazing etc.

1. Continue management of EHS controlled fields – ie rush control and scrub clearance - and introduce appropriate grazing.
2. Increase grazing density across the whole site.
3. Remove invading scrub
4. Consider rush/grass mowing, baling and removal

4.4 **Washing Bay (TY005) Priority 2**

4.4.1 Site Summary

Total:	7 pairs
Snipe:	5 pairs
Curlew:	2 pairs

This linear site was described in the 1896 Breeding Wader Survey report as “one of the more developed sites”, due to the presence of adjacent playing fields, a clay pigeon shoot and warehouses etc. Development has continued in the area, and Field 9 is now the location of a peat processing plant.

Three other fields (7,8 and 10) have developed into wet woodland and are now unsuitable for breeding waders. This area now forms the Wetlands Park managed by Dungannon and South Tyrone Borough Council. In view of this Fields 7-10 were omitted from the survey.

Virtually all waders were associated with Fields 1-4 and in particular around Roskeen Point, which is consistent with the situation during the original survey. These fields are cattle grazed, although no grazing was recorded in Fields 1 and 2 during the survey. Field 4 held cattle throughout, and was heavily poached as a result. Scrub encroachment is a feature of all these fields. The area north of Field 6 is now largely unsuitable for breeding waders.

A displaying curlew was present in Field 12 on both the first and second visits, although part of the field was ploughed between Visit 1 and 2. Another pair was associated with Fields 2 and 3 and the adjacent cutover bog. The absence of any curlew during the final visit strongly suggests that neither pair bred successfully.

4.4.2 Management recommendations

The fields in the eastern part of this site (fields 1-6) have potential for breeding wader enhancement. However, the remainder of the site has been heavily modified and shows little potential for significant enhancement.

1. Ascertain grazing history of Fields 1 and 2 and modify accordingly.
2. Modify grazing of Fields 4 and 5 to reduce poaching and enhance sward structure.
3. Consider removal of encroaching scrub in fields 1-6.

4.5 **Columbkille Point (AR003)**

Priority 2

4.5.1 Site Summary

Total: **1 pair**

Snipe: 1 pair

This site also appears to have changed dramatically between the original survey and present day. The main change relates to the point itself (Field 6), which supported several pairs of both lapwing and redshank. The site is described in 1986 as having a “fringe of *Juncus*” while today the whole point is covered with rank *Juncus* which makes it unsuitable even for snipe. The

remainder of the site, both east and west of the point has been largely improved and is very dry. No grazing animals were recorded on the point. Only Fields 1 and 2 were grazed during the survey, although the sward may have still been a little long for lapwing. Field 9 had a short sward during the first visit, but was managed for silage and unsuitable for waders.

4.5.2 Management recommendations

Columbkille Point and the fields which flank it (5 and 6) should be targeted for management, as this area still retains the potential to support breeding waders.

1. Undertake rush management (mowing, baling and removal) at Field 6 (Columbkille Point).
2. Ascertain grazing history of Field 6 and introduce grazing or modify as appropriate.
3. Improved fields could be managed for lapwing with appropriate grazing regimes in place.
4. Undertake ditch management to enhance profile and water transport capability of existing and former ditches.

4.6 Kiltagh Point – Ardboe Point (TY007)

Priority 2

4.6.1 Site Summary

Total: **4 pairs**
Snipe: 3 pairs
Redshank: 1 pair

The southern part of this site (Fields 1-6) is a continuation of the Blacker's Rock-Kiltagh Point site (TY002). The land use is rough grazing and the fields are very similar to those in the northern part of TY002. These fields held all of the breeding waders recorded.

Fields 7-11 are separated from the rest by the wooded Farsnagh Point. These fields were already largely improved in 1986/7, but held several pairs of lapwing and redshank. In 2007 Fields 7-11 were extremely dry and Field 9 appeared to have been recently reseeded. Although

a few waders were recorded in Visit 1 and one snipe in Visit 2, none exhibited any territorial behaviour. Only Fields 1-6 were walked during the third visit.

4.6.2 Management recommendations

Any management effort should be focussed on the southern part of the site, as this area represents an extension of site TY002.

1. Reinstall ditch systems with shallow profile on at least one side
2. Introduce appropriate grazing regime
3. Prevent re-seeding and use of fertilizers

4.7 Killycolpy (TY009) **Priority 3**

4.7.1 Site Summary

Total: 2 pairs

Snipe: 2 pairs

This small site supported ten pairs of waders in 1986/7, but just two pairs of snipe in 2007. Fields 2 and 3 were characterised by rank vegetation and waterlogged soil. Some of the swampy areas may be unsuitable for grazing. Field 4 is now largely unsuitable for waders due to the invasion of scrub and woodland. Field 1 was very dry with rank *Juncus* and was the only field grazed during the survey. Grazing of fields 1 and 2 is important to enhance the sward for both waders and botanical interest.

4.7.2 Management recommendations

This site could be resource intensive to manage due to the extent of scrub encroachment, rank vegetation and waterlogged ground.

1. Ascertain grazing history of Fields 1 and 2 and modify accordingly. Waterlogged areas may need to be fenced to exclude stock.
2. Remove invasive scrub

3. Undertake rush management of Field 1 (eg mowing, baling and removal) to reinstate a suitable sward for breeding waders.

4.8 Back Lower (TY004)

Priority 3

4.8.1 Site Summary

Total: 2 pairs

Snipe: 2 pairs

This site has changed considerably between 1986/7 and the present day. Over half of the site is now totally unsuitable for waders. Fields 1 and 2 are dry and reseeded, while Field 3 has not been grazed for some time and is extremely rank with scrub encroachment. Fields 4-8 are now dense wet woodland. Field 9 has been reseeded and modified during works on the new Community Centre. Fields 1-3 were visited only once (Visit 1), while Fields 4-8 were omitted from the survey altogether.

In the original survey, the majority of wader activity was centred on Field 10. Although this field still appeared to be suitable, only one pair of snipe (plus several non-territorial birds) was recorded. Scrub encroachment may be an issue, but the lack of breeding waders was a little surprising.

All waders were recorded on the first visit. With the exception of a passing lapwing, no waders were recorded during the second visit and no third visit was undertaken.

4.8.2 Management recommendations

Much of the site is now unsuitable for waders. Management work should initially be targeted at Field 10.

1. Ascertain grazing history for Field 10 and modify accordingly.
2. Remove encroaching scrub from Field 10 and 12.

3. In drier areas reinstate the former ditch system.
4. Prevent further reseeding and use of fertilizers

4.9 Three Islands (AN002) Priority 3

4.9.1 Site Summary

Total: 1 pair

Lapwing: 1 pair

In 1986/7 most wader activity was at the western part of this site, and the eastern quarter of the site was considered unsuitable for waders as it now consists of a narrow strip of potentially suitable habitat but is backed by heavy scrub. Scrub and woodland invasion has claimed part of the western end and only Fields 3-7 appeared potentially suitable for waders.

Survey work was hampered by the presence of a bull in Fields 3-7. After the first visit, it was considered too dangerous for a fieldworker to be exposed to a bull at this site, and so no further visits were undertaken.

Despite this, it is not considered that any breeding waders were overlooked. One pair of lapwing was in display over Field 4, and they may have bred in the site. However, three pairs of lapwing were also associated with ploughed fields beyond the site boundary and adjacent to Field 4. No other waders were recorded in the site.

4.9.2 Management recommendations

1. Consider remedial actions in the western fields, including large scale scrub removal, followed by introduction of an appropriate grazing regime.