

Beinn Ghlas Argyll

Wind Turbines and Golden Eagles

1999-2009

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Background

It was a condition of the planning consent for the Beinn Ghlas Wind farm that annual monitoring of the resident eagles should be carried out with a report submitted to the Argyll and Bute Council at the end of each year. These reports have not been published and have been treated as confidential by the Council and any other bodies such as Scottish Natural Heritage and the Royal Society for the Protection of Birds who might also have received copies, ostensibly to protect eagle nest sites.

A report for the period 2000-2007 commissioned by Beaufort Wind Ltd was also submitted to the Council but again has not been published.

My intention in preparing this report is to make available the facts regarding the eagle situation at Beinn Ghlas in a form which need not be withheld from the public. After persistent requests for copies of these annual and summary reports I was eventually allowed to read them but not take copies. I have made use of the recorded observations detailed in these reports.

Summary

- Beinn Ghlas [Conservation code BG 1] has long been known as an occupied eagle territory. Between 1970 and 1998, 50% of the breeding attempts [where eggs were laid] resulted in chicks being fledged. [Observations by Argyll Raptor Study Group and RSPB]
- Wind farm construction started in 1998 and the turbines were operational by the autumn of 1999.
- As required by the conditions of the planning consent, annual monitoring of eagle activity and the effect of agreed mitigation measures was commissioned by the power company and commenced in 1999.
- The only evidence of a breeding attempt by eagles after 1999 was when eggshell fragments were found below a nest site in 2001. This occurred when both adults had gone missing from a neighbouring range and new birds were exploring the vacant territories. From observations in subsequent years it has been accepted that the eagles visiting this nest site from 2002 onwards have been from the neighbouring range SC 3. There is no longer a resident pair of eagles at Beinn Ghlas. Five neighbouring territories continue to hold resident breeding pairs.
- The attempt to mitigate any adverse effect of the wind farm by removing sheep from a fenced area and thereby increasing live prey such as grouse and hares has not been successful.

History prior to 1999

The last chick known to have fledged from Beinn Ghlas was in 1991 when the nestling was fitted with a radio transmitter as part of the Forestry Commission/ RSPB radio tracking project.

In 1992 eggs were laid but did not hatch.

In 1993 both resident adults were trapped at the nest and fitted with radio transmitters. The single large nestling did not fledge and was found dead not far from the nest. Justin Grant found the adult male dead later that year.

In 1994 no active nest was located but eggshell fragments were found at a roost site on a crag not previously known as a nest site.

In 1995 the adult female still carrying the transmitter harness had found a new sub-adult partner and eggs were laid but did not hatch.

In 1996 a pair of eagles was seen displaying in April but no active nest was found.

In 1997 no active nest was located but there were reports of a pair of adults and an immature being seen south of Beinn Ghlas in October. The remains of the radio tagged female were found by Simon Lawrence at the end of the year.

In 1998 there was no action at any of the known nest sites although there were sightings of eagles.

The radio tracking project almost certainly increased the amount of human disturbance within the range, but the deaths of the two tagged adults occurred nearly four years apart, and there is no reason to assume that the remaining bird would not eventually have found a replacement.

Observations during this period were by the Argyll Raptor Study Group, and with more intensive work from 1991 to 1995 by RSPB contract staff employed on the radio tracking project.

Monitoring by Consultants 1999-2009

In order to comply with the conditional planning consent consultants were commissioned by the power company to monitor eagle activity and the effectiveness of the mitigation measures. Field work from 1999 to 2001 was carried out by Stuart Rae and was of a much more intensive nature than anything done previously and involved long vantage point watches at all seasons of the year.

In 1999 SR decided that there was a single adult male holding territory on Beinn Ghlas, and there was no breeding attempt. He also recorded activity by the eagles in the two ranges FG 2 and SC 3 located south of Beinn Ghlas. By late 1999 the wind turbines were operational.

In 2000 SR found that there was now a pair in the territory but the male was different from the 1999 bird. He described both birds as being in adult plumage, the male being very small, but the female was very large with a white base to her tail and large white patches on the wings. The new pair was observed displaying with the previous single male and also with eagles from the adjacent ranges FG 2 and SC 3. They also built a nest on a crag just outside the notional core area of the Beinn Ghlas territory. There was no record of this crag having been used in the past but SR had previously identified it as an old site in his 1999 searches. No eggs were laid but the pair continued to roost in the area and occasionally added fresh material to the nest.

In 2001 access to hill ground was severely restricted by the foot and mouth crisis but up until mid February SR was able to confirm that the same pair of eagles was still together and active about the 2000 nest site. When he was able to return in mid May he found broken eggshells below the nest crag and the female in the company of a new larger male bird. In his report for this year he notes that the pair at FG 2 reared a chick, but at

SC 3 he thought that there was only a single bird.

From 2002 to 2009 field work was carried out by Dave Walker who continued with the frequent visits and long vantage point watches started by Stuart Rae.

In 2002 DW found what he described as the resident pair active around the 2001 nest site and adding fresh material to the nest. He was also surprised to see one of the birds fly out to the south and land in the core area of range SC 3.

In all subsequent years up to and including 2009 DW was satisfied that most of the eagles that he observed in the vicinity of Beinn Ghlas were from FG 2 or SC 3 and mainly from the latter. In his report for 2005 he referred back to his report for 2002 and agreed that it was almost certainly one of the SC 3 birds that had been visiting the Beinn Ghlas nest in the March of 2002. It is now accepted by all observers that Beinn Ghlas has been abandoned as a separate viable territory since 2002. There has been no refurbishment of any of the known nest sites and no evidence of occupation by resident birds.

Discussion

The nest building at Beinn Ghlas in 2000 and the evidence for egg laying based on broken eggshells being found in 2001 ought to be considered against the fact that the two resident adults of range SC 3 both disappeared in the winter of 1998. Two Golden Eagles and a White-tailed Eagle had been found poisoned earlier in 1998 not far to the south in range BAR 5. There was no breeding attempt at SC 3 in any of the three seasons 1999, 2000, and 2001. A number of different eagles were seen, most in sub-adult plumage, with one near- adult female in 1999, and an adult male with a sub-adult female in 2001. [See below]. There was a lot of display and pair bonding and some nest building but it was not until 2002 that the first eggs were laid. So in effect there were two adjacent territories vacant at this time, SC 3 and BG 1 [Beinn Ghlas]. Given that it now has been accepted by all concerned that the eagles active about Beinn Ghlas from 2002 up to and including 2009, have been the SC 3 birds, and to a lesser extent the FG 2 birds, it is at least arguable that there never was a separate Beinn Ghlas pair in 2000-2001. The birds concerned might well have been exploring two vacant territories which very soon were combined into a single one.

In SR's report for 1991 he states that there appeared to be only a single bird in residence at SC 3, but on 28 February of that year I recorded a pair of eagles over the SC 3 nest crag and noted that the male was an adult, and the female a sub-adult showing long white flashes on the underside of the wings, small white spots on the upper side with good pale coverts, and a white band on the tail. This sounds very like the 2000 Beinn Ghlas pair described by SR although he thought the female was an adult.

In their report for 2000-2007, RM and DW considered my published suggestion that “wind farms and eagles do not go well together and extreme caution should be exercised when considering any further proposals for wind power development in eagle country.” (Mike Gregory. [2007]. Wind farms and Golden Eagles. The Argyll Experience. Scottish Bird News 84, pp. 12-15). My concern was based on the experience at Beinn an Tuirc in Kintyre where after construction of the wind farm, no chicks had been fledged; as well as at Beinn Ghlas which had been completely abandoned.

RM and DW then carried out a statistical analysis of breeding attempts [when eggs were laid] putting records from the two wind farms together and comparing them to data from ten control territories using data supplied by me. Their conclusion was that the frequency of egg laying was lower after construction than before it but not significantly so. In their opinion this did not refute my argument but neither did it offer any confirmation of it.

My response is that first of all I did not imply in my article that eagles would lay eggs less frequently after turbine construction than before. It should have been clear that my concern was that no chicks were being fledged. This is surely a much better measure of breeding productivity. Secondly their analysis was carried out by combining data for Beinn Ghlas with that for Beinn an Tuirc. The high incidence of egg laying at the latter is bound to compensate for the paucity at the former. Surely a report on eagle monitoring at Beinn Ghlas should analyse the data for that site alone and reach conclusions based on that.

In my productivity table I have added data up to 2009 for Beinn Ghlas and five nearby control territories. A simple study of this table should be sufficient to allow a reasonable conclusion to be drawn, namely that over a twelve year period from 1998 a previously viable golden eagle territory (BG 1) ceased to support nesting with even the occasional production of young. This coincided with the first years of operation of a wind farm and not long after the known loss of two resident adults. It is probable that one of the neighbouring pairs of eagles (SC 3) undertook a range extension or range switch over part of the former territory closest to the wind farm between 1999 and 2001. Within this local moorland area of Argyll there are currently two occupied ranges (SC 3) & (FG 2) whereas there were three present over the previous decade.

The terrain in the five control territories is very similar to that of Beinn Ghlas with no land above the 600 metre contour. They are all largely surrounded by mature conifer plantations and grazed by sheep and red deer. I have no information on vegetation and eagle prey abundance to compare with the intensive survey work undertaken at Beinn Ghlas but the heather elsewhere in Argyll seems to have been affected by the heather beetle in recent years. Red grouse are scarce everywhere and crows are common and often taken by the eagles. The one outstanding difference is that Beinn Ghlas is dominated by wind turbines, and I see no reason to alter the views expressed in my article of June 2007, namely that wind turbines and eagles do not go well together and extreme caution should be exercised when considering any further proposals for wind power development in eagle country.

PRODUCTIVITY TABLE FOR BEINN GHLAS AND FIVE CONTROLS

	BG 1	FG 2	SC 3	ST 4	CA 5	SL 6
1987	1	+	+	1	+	1
1988	+	2	1	1	FE	2
1989	1	1	1	FE	1	1
1990	+	1	1	FE	FE	2
1991	1	1	2	1	+	2
1992	FE	FE	FE	FE	FE	2
1993	FY	1	2	+	FY	1
1994	FE	1	1	FE	FE	2
1995	FE	1	1	+	FE	1
1996	+	FE	2	+	1	1
1997	[+]	2	2	+	FE	FE
1998	[+]	1	1	FE	1	FY
1999	[+]	FE	[+]	FE	FE	1
2000	[+]	+	[+]	FE	1	+
2001	[FE]	1	[+]	+	+	FE
2002	0	FE	FE	1	FE	+
2003	0	1	1	1	+	1
2004	0	1	1	1	1	FE
2005	0	FY	FE	1	FE	FE
2006	0	FE	1	1	FE	FE
2007	0	1	1	FE	1	FE
2008	0	1	1	1	1	+
2009	0	+	FE	1	+	+

FE = Eggs laid but failed to hatch

FY = Eggs hatched out but no chicks fledged

+ = Birds present but no active nest with eggs or chicks found

0 = No resident birds in territory

1-2 = Number of chicks fledged

NB. Bracketed entries refer to records that could be allocated to alternative territories or wandering individuals.