

## **NATIONAL PARK AUTHORITY REPORT ON PEAK DISTRICT BIRD OF PREY INITIATIVE 2012-2015**

### Background

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In 2011, following concerns about declining populations of several birds of prey, reported instances of known or suspected illegal persecution and the failure of nest protection schemes to maintain bird of prey populations, five leading land management and conservation organisations in the Peak District National Park agreed targets to try and restore populations of 3 key birds of prey in the Dark Peak.

The organisations involved - the Moorland Association, the National Trust, Natural England, Peak District National Park Authority and RSPB - set targets for restoring breeding populations of Merlin, Peregrine Falcon and Short-eared Owl, the 3 bird of prey species for which the Peak District Moors Special Protection Area was designated. These targets were set for 2015. The partnership also set out an expectation that populations of other birds of prey such as Goshawk would be maintained, and that Hen Harrier would be encouraged to breed successfully.

The target area comprised the Peak District Moors Special Protection Area, excluding the South West Peak. The boundaries of the project area were therefore contiguous with the Dark Peak and Eastern Peak District Moors SSSIs. The South West Peak was excluded at this stage due to the logistics of covering the entire area and the fact that reports of known or suspected illegal persecution of birds of prey were much less evident within that area.

The targets were based on the known populations at the time of SPA designation, adjusted to take account of those pairs which fell within the SPA but outside the project area (i.e. the South West Peak). In addition to population targets, the partnership agreed targets for breeding success of Peregrine and Merlin based on national averages (figures not available for Short-eared Owl).

### The work of the Initiative

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In 2011 consultants were engaged to carry out independent monitoring of the 3 target species in the Dark Peak. This identified issues of liaison with raptor workers, moorland keepers and owners, and availability of time and personnel to carry out the work. Survey coverage was therefore limited and a different approach adopted in subsequent years.

From the 2012 season onwards the five organisations jointly funded an independent field officer to help collate and corroborate accurate breeding data and to facilitate co-operation between raptor workers and shooting interests. The two raptor groups in the Peak District- the Peak District Raptor Monitoring Group (PDRM) and South Peak Raptor

Study Group (SPRSG)- work closely together to monitor and record the breeding success of raptors in the Peak District. Both committed to offering the Initiative their full support and co-operation in trying to achieve the described aims and objectives, and a representative attended steering group meetings to advise on the work.

Information on breeding raptors of the 3 target species was collated from 3 sources-

- fieldwork carried out by members of the two raptor groups. Results were reported to the project field officer who collated the data, assisted with fieldwork and corroborated breeding success.
- reports of raptors provided by moorland keepers. These were reported to the field officer who either followed them up himself or passed the information on to the raptor groups. Latterly some information was provided by keepers direct to members of the raptor groups.
- fieldwork carried out directly by the project field officer, for example checking previously known sites.

The survey methods used were in line with the methods documented in “*Hardey J., Crick H., Wernham C., Riley H., Etheridge B. & Thompson D. (2013). Raptors: A Field Guide for Surveys and Monitoring. (Section 2.2.1- Counts of occupied home ranges and active nests)*”.

In addition to the monitoring work the Initiative has promoted the aims of achieving the targets through liaison with moorland owners and keepers, and the field officer has been extensively involved in encouraging dialogue between raptor group members and moorland keepers. The field officer also spent a significant amount of time in 2014 and 2015 collating and helping monitor Hen Harrier reports and nesting attempts.

## Targets

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The targets agreed for the 3 species are set out in Table 1 below.

*Table 1- Targets agreed for the Dark Peak by partners in the Initiative*

Species	Target population by 2015 (pairs)	Target breeding success (young per occupied territory)
Peregrine	15	2.07
Merlin	32	2.1-2.4
Short-eared owl	25 (5-yr ave.)	No target

The target for Short-eared Owl was expressed as a 5-year average due to considerable annual variation in the population, associated with cyclical variation in the population of its prey species, voles.

## Results

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### Peregrine

Table 2 below summarises figures for 2012-15. Neither the population nor breeding success targets for Peregrine were met, both falling well short of the target. The number of occupied territories showed an encouraging increase from 6 in 2012 to 9 in 2014, but declined to a low of only 4 occupied territories in 2015 (target: 15 pairs). Throughout the 4 years the number of pairs successfully fledging young has remained relatively constant, at just 2-3 pairs. The breeding success rate generally reflects this- in years where more territories were occupied, more failed to fledge any young.

*Table 2- Peregrine population and breeding success, Dark Peak, 2012-15*

Year	Territories checked	Territories occupied by pairs	Territories occupied by single birds	Pairs known to have laid eggs	Pairs known to have fledged young	Minimum no. young fledged	Breeding success (young per occupied territory)
2012	14	6	Not recorded	5	2	3	0.5
2013	14	6	Not recorded	3	3	5	0.83
2014	16	9	Not recorded	4	2	4	0.44
2015	20	4	6	3	3	7	1.75
<b>Total</b>	<b>64</b>	<b>25</b>	<b>6</b>	<b>15</b>	<b>10</b>	<b>19</b>	<b>0.76</b>

The main reason the target has not been met is due to a shortfall in pairs successfully establishing territories. Failure of established pairs to then reach the egg-laying stage has also been a contributory factor. Complete or partial failure after egg-laying has been less significant.

### Merlin

Table 3 below summarises figures for 2012-15. The population target was not met, with the number of occupied territories remaining relatively constant over the 4-year period at between 22-24 pairs except in 2013 when it dipped to 18 pairs (target: 32 pairs). The breeding success, however, has significantly exceeded targets.

*Table 3- Merlin population and breeding success, Dark Peak, 2012-15*

Year	Territories checked	Territories occupied by pairs	Territories occupied by single birds	Pairs known to have laid eggs	Pairs known to have fledged young	Minimum no. young fledged	Breeding success (young per occupied territory)
2012	60	23	Not recorded	19	14	32	1.39
2013	60	18	Not recorded	16	14	45	2.5
2014	44	22	Not recorded	18	18	62	2.82
2015	46	24	3	18	16	58	2.42
<b>Total</b>	<b>210</b>	<b>87</b>	<b>3</b>	<b>71</b>	<b>62</b>	<b>197</b>	<b>2.26</b>

As with Peregrines there has been a shortfall in pairs successfully establishing territory. However in the case of Merlin this has been against a background of increased breeding success rates, so that in 2014 and 2015 the total number of young fledged was not far short (85-92%) of what might have been expected had the target population been reached. The overall population figures also mask changes in distribution, with Merlin on the lower-lying Eastern Moors declining from some 6 pairs to none in 2014 and 2015.

### **Short-eared Owl**

Monitoring of Short-eared Owls proved very difficult for several reasons:

- Related to the wide annual fluctuations in their population linked to cyclical changes in vole populations, Short-eared Owls are less associated with traditional nesting sites than the other 2 species. Establishing comparative population figures therefore relies more on comprehensive survey coverage of the entire moorland area, which was beyond the scope of the Initiative.
- In 2014 and 2015 (good vole years) birds were more active at dusk and less visible in daylight hours than in previous years, possibly due to the abundance of prey negating the need to hunt during the day. Fieldwork in remote breeding locations at dusk, with return after dark, was not practicable on health & safety grounds.
- Again in 2014 and 2015, considerable time (both for raptor workers and the field officer) was taken up with other species, notably the presence of Hen Harriers.

Table 4 below therefore shows the minimum figures known, but should not be regarded as comprehensive. Figures for 2012 are considered reasonably accurate as is the complete absence of birds in 2013, as there were very few sightings and it was a poor vole year. However figures for 2014 and 2015 (both good vole years) are considered to be underestimates for several reasons- Short-eared Owls were seen hunting in many more areas; there were a number of areas where there was some evidence of breeding behaviour but breeding could not be confirmed; post-fledging young were seen in some areas where breeding had not been recorded; many areas were not checked at an appropriate time of day (late evening); and areas which were monitored in more detail

(e.g. Dove Stone) revealed more pairs than were being picked up elsewhere. Raptor group members commented that the 2015 figures in particular are “very conservative”.

*Table 4- Short-eared Owl : Minimum figures for population and breeding success, Dark Peak, 2012-15*

Year	Territories occupied by pairs	Pairs known to have laid eggs	Pairs known to have fledged young	Minimum no. young fledged
2012	7	5	2	7
2013	0	0	0	0
2014	7+	?	?	?
2015	16+	?	11+	?
<b>Average</b>	<b>7.5+</b>			

Given the difficulties of monitoring and the fact that the figures are considered underestimates it is impossible to know whether or not the target of 25 pairs was met.

### **Hen Harrier**

In 2006 two Hen Harrier nests successfully fledged 10 young in the Dark Peak, following the disappearance of the males during the nesting period and a subsequent decision to provide supplementary feeding. This was the first instance of Hen Harriers nesting in the Dark Peak since the 1800s (although a pair bred successfully in the South West Peak in 1997).

During the project period there were a handful of sightings of single birds during the early spring in 2012 and 2013, but no signs of breeding activity. In 2014, following the prolonged presence and display of a male throughout the spring, the shooting tenant located a nest in early August and reported it to the project’s field officer. The pair subsequently hatched 5 eggs and successfully fledged 2 young. Post-mortem examinations indicated that disease was almost certainly a key factor in the deaths of the other 3 young. In 2015 there were several sightings reported throughout the spring, including a displaying male in April and a displaying female in May in the vicinity of the 2014 nest site; however the birds were not observed to be around for long and no nesting attempt was recorded.

### **Goshawk**

Goshawks were not actively monitored as part of the Initiative; however both the number of pairs occupying territories in the Dark Peak and the breeding success remain low, with the raptor groups recording a maximum of 2 successful pairs in any one year- well below the numbers present in the late 1990s /early 2000s.

## Incidents of Persecution

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During the project period there were no confirmed cases of illegal persecution involving any of the 3 target species, although in both 2013 and 2014 all activity ceased early at 2 Merlin sites in West Yorkshire, despite birds being observed displaying and calling. Such circumstances are unusual and would not normally be expected.

In 2012 a Goshawk nest on the edge of the project area was deliberately destroyed and the 4 well-developed eggs were found smashed on the ground below the nest. In 2014 a Goshawk was discovered dead near the southern part of the project area, the post mortem indicating injuries consistent with a spring trap.

There were one or two incidents involving other Bird of Prey species- in 2014 a Common Buzzard found was a spring trap near Winscar Reservoir, South Yorks; and another Buzzard was found dead near Glossop. Subsequent post mortem revealed that the bird had been shot.

## Conclusions

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The very low numbers of successful breeding **Peregrine**- well below the target- continues to give real cause for concern. There is very little unequivocal evidence of the reasons for this other than the fact that it is generally the result of low numbers of birds establishing territory and laying eggs, despite apparently suitable habitat and an increasing population in surrounding areas (both the White Peak and surrounding urban areas). Failure after egg-laying does not appear to be a significant factor. The successful breeding sites have largely remained the same throughout the period of the initiative, and the absence of birds from some expected sites (i.e. which have supported pairs regularly in recent years) and the desertion of other sites early in the season is concerning.

The failure of **Merlin** to show any population increase is also disappointing, but set against a background of continuing national declines the overall maintenance of numbers in the Dark Peak is welcome. The figures mask some geographical shift, with populations on the Eastern Peak District Moors declining to zero during the project period. Both locally and nationally breeding success appears to be high and increasing, so there are clearly unidentified issues post-breeding that are preventing the expected population increase, given the number of young fledging each season.

It is difficult to draw significant conclusions on the trend in **Short-eared Owl** populations given the problems in monitoring them reliably; however at the start of the project there were some concerns that Short-eared Owl were suffering from unexplained failures after laying eggs or whilst feeding small young in areas where historically the species had been very successful. By 2015 these issues seem to have abated or ceased

completely, with successful breeding once again becoming the norm throughout the study area.

The partially successful nesting of a pair of **Hen Harriers** in the Dark Peak in 2014 was very welcome, tempered by the lack of breeding attempts the following year. The lack of breeding success nationally appears to be a key factor limiting opportunities for the Hen Harrier to establish a regular breeding population locally.

The continued very low numbers of successful breeding **Goshawk** in the Dark Peak and surrounding area, and the failure of a number of nests around the moorland edge of study area which fail in unexplained circumstances, continues to be of real concern.

The Initiative has been very successful in building relationships between raptor workers and shooting interests, with access for monitoring now universal. The field officer has played a critical role in this. Moorland keepers have increasingly liaised with the project's field officer to report possible breeding sites and facilitated access to sites. The reporting of the Hen Harrier nest site to the field officer by the shooting tenant in 2014 was particularly welcome.

### Acknowledgements

The partnership would like to thank Geoff Carr and Charlie Horsford who carried out the preliminary fieldwork in 2011. Since 2012 Jamie Horner has been the project field worker, and the partnership is particularly grateful to Jamie for the key role he has played in helping build co-operation between raptor group members and moorland keepers to facilitate survey and monitoring of birds of prey.

Members of the Peak District Raptor Monitoring Group and South Peak Raptor Study Group have been very generous in their support for the work of the Initiative- in their willingness to share information.

The co-operation of moorland owners and keepers in allowing access to their land to carry out monitoring work, and in reporting raptor sightings to the field officer, has been essential to the work of the Initiative.