

## PEAK DISTRICT BIRD OF PREY INITIATIVE – 2020 YEAR-END REPORT

### Overview of Results 2020 Season

The Initiative continues to be dependent for monitoring data on the local Raptor Groups, partner staff and volunteers, and on those gamekeepers who report sightings to the Raptor Groups. The partners on the Initiative would like to record their thanks for the considerable amount of work that goes into this.

Covid-19 and associated movement restrictions provided some initial challenges to monitoring and there was welcome co-operation between landowners, keepers and raptor workers to help overcome this. It has been a better year for the partnership.

Where birds of prey nested and laid eggs, overall 2020 was a good year for breeding success in terms of young fledged, though it showed mixed fortunes for different species. Most notable was the successful fledging of young from all 6 known nesting attempts by **Peregrine**. Although the population still remains well below the targets based on late 1990s figures, this 100% nesting success is a very welcome and significant improvement on previous years (double the number of successful nests and almost double the number of fledged young of any year since the Initiative was launched in 2012). **Goshawk** numbers were comparable to last year, sustaining the improvements from previous years, with 7 out of the 9 known nesting attempts successfully fledging young.

The status of **Merlin** in the Peak District continues to be of concern. Although there was some welcome recovery in the number of nesting pairs (from 14 to 16 pairs) following a decline in 2019, this remains below the 2012-18 average of 22.6 pairs and well below the target (based on late 1990s population) of 37 pairs. This is despite the fact that there was 100% nesting success, and fledging success per occupied territory was the highest since the Bird of Prey Initiative was launched in 2012. For unknown reasons the relatively large number of young successfully fledging from Peak District moors is therefore not translating through to the larger breeding population that might be expected. Discovering what happens to the fledged chicks is becoming a pressing need.

2020 appears to have been a poor vole year in the Peak District, which is the most likely reason for there being only 1-3 unconfirmed nesting attempts by **Short-eared Owls**, with no successful breeding confirmed. Although there were occasional sightings of **Hen Harriers**, hopes that a pair would return to breed for a third successive year did not materialise.

Six incidents of illegal bird of prey persecution were confirmed by the police within the area covered by the Initiative during 2020- 4 shootings (3 Buzzards, 1 Short-eared Owl) and 2 poisonings (1 Buzzard and Peregrine together, and 1 Peregrine). This is an increase from two suspected cases in 2019. In addition, local gamekeepers played a key role in alerting police to the suspicious behaviour of an individual on moorland in the north of the Peak District, which led to his arrest and conviction following the discovery of a large number of bird eggs at his home.

Past data on persecution incidents recorded by the Raptor Persecution Priority Delivery Group and by the RSPB is presented in the 2019 report- see [https://www.peakdistrict.gov.uk/data/assets/pdf\\_file/0028/99712/Bird-of-Prey-Initiative-2019-report.pdf](https://www.peakdistrict.gov.uk/data/assets/pdf_file/0028/99712/Bird-of-Prey-Initiative-2019-report.pdf).

Updates for 2020 are currently unavailable.

During the 2021 season, the Initiative will focus particularly on the following issues:

- Working with the police on measures to deter the theft of Peregrine eggs and young at sites throughout the Peak District
- Continuing to encourage early reporting of raptor sightings to the raptor groups (particularly Short-eared Owl and Hen Harrier) by moorland managers
- Encouraging more joint site visits between gamekeepers and raptor workers if COVID restrictions allow
- Working with partners to clarify and encourage compliance with protocols for reporting of suspected incidents of persecution and theft of eggs/young

### **2020 Season- Summary**

Species	Territories occupied by pairs	Pairs known to have laid eggs	No. of pairs known to have fledged young	No. young fledged	Agreed Targets (based on figs. at SPA designation)*
Peregrine	6	6	6	14	17 prs
Short-eared Owl	1-3?	?	?	?	5-yr ave. 25 prs
Merlin	16	16	16	50+	37 prs
Goshawk	9	9	7	16-17	None set
Hen Harrier	0	0	0	0	None set

\* Targets were originally set for 2015 for the Dark Peak only, but the figures here include an additional 2 pairs of Peregrine and 5 pairs of Merlin for the South West Peak, which was included from 2016 onwards.

## Peregrine Falcon (*Falco peregrinus*)

### 2020 results

- 6 territories were occupied by pairs. Further pairs were sighted at other traditional nesting sites but did not settle.
- All 6 pairs bred successfully, fledging a total of 14 young.

### Measurement against the Initiative's targets

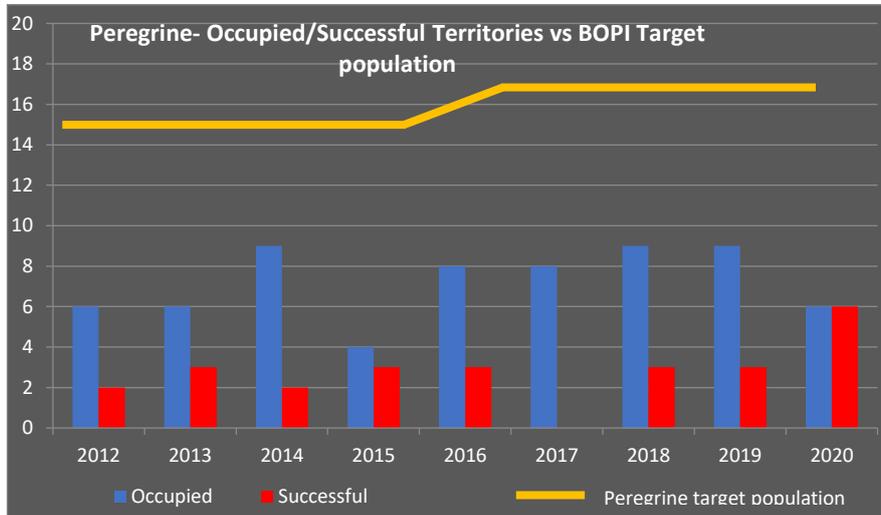
- The number of pairs (6 occupied territories) remains well below the target of 17 pairs.
- The number of young fledged per occupied territory was 2.33, exceeding the target of 2.07 young (based on national average).

### Trend

During the lifetime of the Initiative, the number of occupied territories has averaged 7.2 pairs\* (range 4-9 pairs) (Fig. 1). The 2020 figure of 6 pairs is slightly below the average but falls within this range. There is therefore no discernible trend. The number of pairs that successfully fledged at least one young has varied between 0-3 pairs up to 2020, when all 6 nesting pairs successfully fledged young- a substantial improvement with double the number of successful nests of any year since 2012.

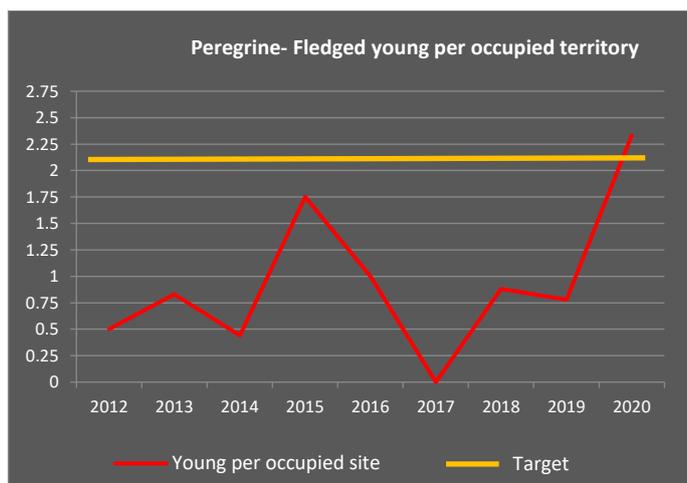
\*Note this average excludes the SW Peak prior to 2015.

Figure 1



The productivity has ranged from no successful nests in 2017 to 1.75 young per occupied territory in 2015. The 2020 figure of 2.33 young per occupied territory, reflecting the success of all 6 nests, is a significant increase (Fig. 2).

*Figure 2*



### Comparison with national data

- The proportion of nests which successfully fledged young (100%) is substantially better than the national average of 63% (Wilson et al, 2018), and exceeds the figure of 71% for the Peak District as a whole during the period 1984-2006 (Amur et al, 2011).
- The number of young successfully fledged per occupied territory (2.33) also exceeds the national average of 1.35 (Wilson et al, 2018). It also exceeds the range of 0.71-0.83 young per occupied territory which Ratcliffe (1993) gives as an indication of the level needed to sustain existing population levels, suggesting that recruitment in 2020 should, for the first time since the Initiative was launched in 2012, be ample to allow population increase on the Peak District moors without recruitment from elsewhere.

### Additional Notes

The number of nesting pairs remains low, but the excellent nesting success in 2020 is a very welcome improvement. There were, however, two confirmed incidents of illegal persecution (both poisonings- 1 in the Dark Peak and 1 in the SW Peak).

## Short-eared Owl (*Asio flammeus*)

### 2020 results

- 1-3 unconfirmed pairs reported.

### Measurement against the Initiative's targets

- Annual comparisons are not appropriate as numbers fluctuate considerably. The number of confirmed pairs has ranged from 0-15 since 2012, well below the target of 25 pairs, though monitoring is not comprehensive.

### Trend

Numbers of Short-eared Owls fluctuate considerably from year to year, with high numbers in “good vole years” and sometimes with no birds in “poor vole years”, making it impossible to identify short-term trends. During the lifetime of the Initiative numbers appear to have followed this

fluctuating pattern, with 2015 and 2018 being good years, 2012 and 2014 being moderate years and 2013, 2016 & 2017 being poor years. 2020 appears to have been a poor vole year and the population of Short-eared Owls was accordingly small.

#### Additional Notes

Monitoring of Short-eared Owls continues to prove difficult as it has throughout the Bird of Prey Initiative due to the nocturnal habits and remote nesting locations. In addition, breeding success is largely thought to be related to the wide annual fluctuations in the populations of short-tailed voles. The cyclical changes in vole populations and the nomadic behaviour of Short-eared Owls means they are less associated with traditional nesting sites than the other species. Establishing comparative population figures therefore relies more on comprehensive survey coverage of the entire open moorland area, which is beyond the scope of the Initiative.

2020 was a poor vole year and Short-eared Owls were consequently present only in low numbers, and with no confirmed breeding. No chicks were ringed or nests visited but fledged young were spotted and reported, and adults were seen carrying prey (indicative of breeding attempts). There was one confirmed incident of illegal persecution (shooting), though it is unclear whether the offence took place during 2020 or the previous season.

Better reporting of birds in breeding habitat early in the season would be very helpful, to establish more accurate numbers of breeding pairs.

### **Merlin - (*Falco columbarius*)**

#### 2020 results

- 16 territories were occupied by pairs. There were early sightings at other sites but no sign of nests.
- All 16 occupied territories successfully fledged young, with a total of 50+ young fledged.

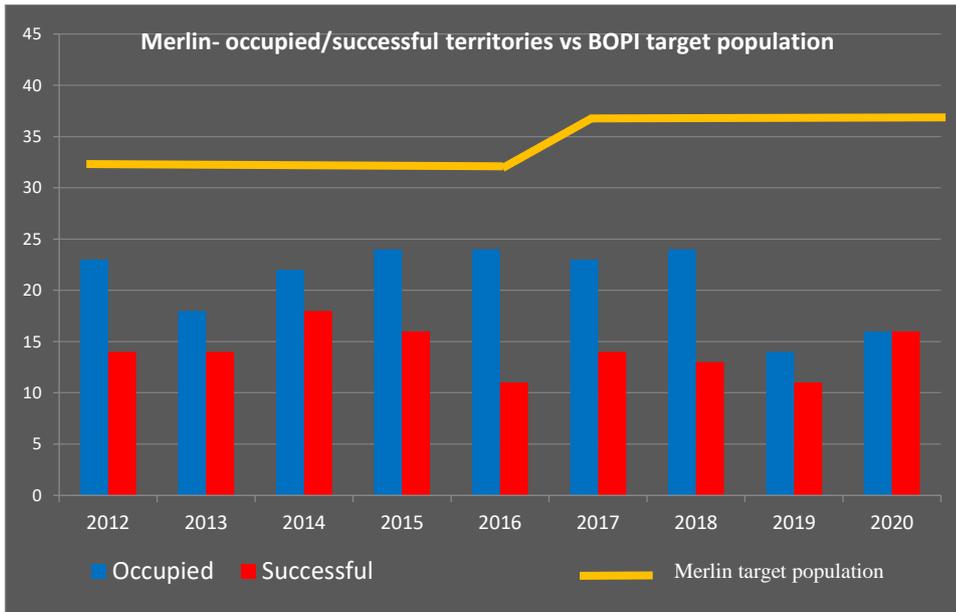
#### Measurement against the Initiative's targets

- The number of pairs (16 occupied territories) remains well below the target of 37 pairs.
- The success of those pairs that did establish territory however was well above target, with 50+ young fledged- an average of at least 3.13 young fledged per occupied territory compared to the target of 2.1-2.4.

#### Trend

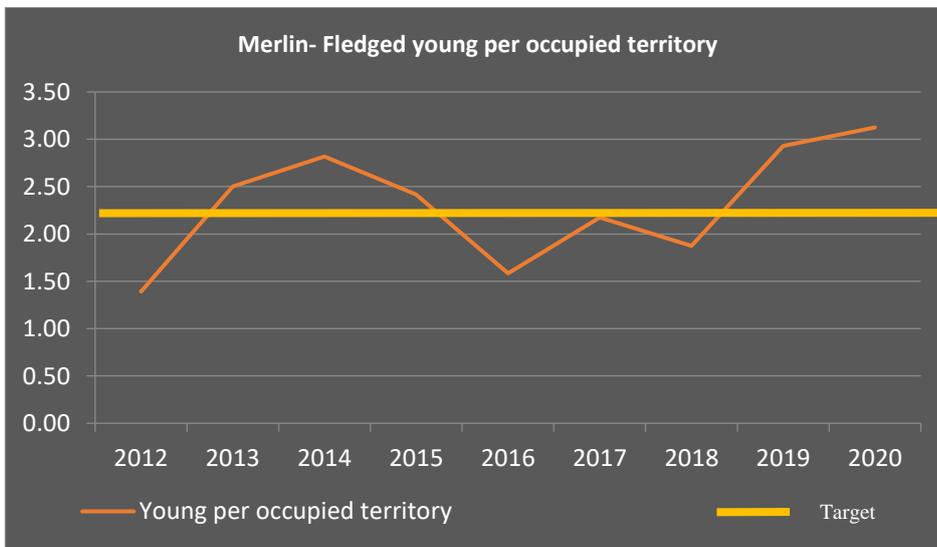
The number of occupied territories recovered somewhat to 16 pairs from a low of 14 pairs in 2019, though still below the previous 2012-18 average of 22.6 pairs (Fig. 3).

*Figure 3*



The breeding success of those pairs that did establish territory was the highest it has ever been during the 9 years of the Initiative. (Fig. 4).

*Figure 4*



Comparison with national data

- The proportion of nests that successfully fledged young (100%) is significantly higher than the national average of 65% (Bibby & Nattress, 1986).
- The number of young successfully fledged per occupied territory (3.13) is also significantly higher than the national average of 2.25 (Bibby & Nattress, 1986). National data suggests that an average of less than 2 young fledged per pair may be associated with a declining population (Bibby & Nattress, 1986), suggesting that the fledging success in 2020 should be ample to allow population increase on the Peak District moors.

- Merlin are known to have declined over a long period nationally. Throughout the 9-year period of the Initiative, the Peak District population has remained broadly stable in the low 20s, albeit at a much lower level than in the 1990s. The drop in numbers in 2019 was therefore of concern, and the partial recovery in 2020 is therefore a welcome trend.

Additional Notes

The distribution of occupied territories shows a marked concentration of breeding success to the Dark Peak north of the A57. There were no reported incidents of illegal persecution of Merlin.

**Goshawk (*Accipiter gentilis*)**

2020 results

- Nine sites were occupied by pairs. Other sites were prospected but did not result in nesting.
- All nine pairs were known to have laid eggs. Two failed at the egg stage for unknown reasons and 16-17 young successfully fledged from 7 nests.

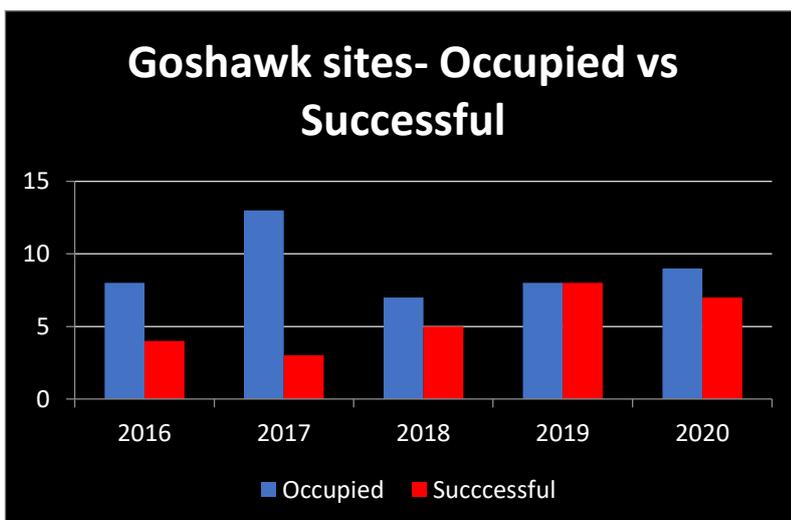
Measurement against the Initiative’s targets

No quantitative targets were set for Goshawk; however in 2016 the Initiative added Goshawk to its remit, and agreed that we wished to see “*sustainable breeding population of Goshawks present at traditional moorland-edge breeding sites, with no illegal persecution*”. It is difficult to assess progress against this ambition, other than to note the population and breeding trends, and the *Additional Notes* below.

Trend

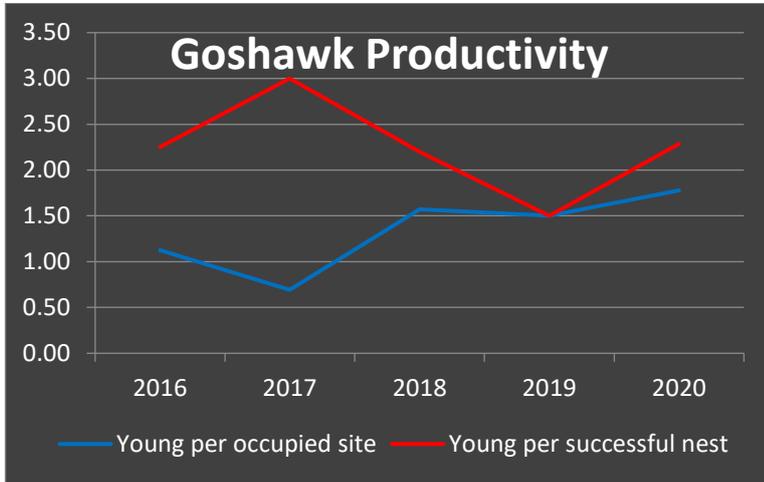
Of the 5 years in which the Initiative has included Goshawk in monitoring figures, the nine pairs in 2020 is similar to the average though below the maximum of 13 pairs in 2017. The number of successful pairs (7) was just one down on the 2019 figure, maintaining an improved condition compared to 3-5 successful pairs per year in 2016-18 (Fig. 5).

Figure 5



The number of young fledged per occupied site has continued to rise since 2017, mainly reflecting the high proportion on nests that have successfully fledged young (Fig. 6). This resulted in significantly more young fledged in 2020 (16-17), compared to 9-12 young fledged in each of the previous 4 years.

*Figure 6*



Comparison with European and national data

- The proportion of confirmed nests that successfully fledged young in 2020 (77.8%) is in line with an average of 77% across Western Europe (Kenward et al, 2007).
- The number of young successfully fledged per occupied territory (1.78) is also in line with the average of 1.8 for Western Europe and is within the range of 1.68-1.71 young per clutch that Kenward et al. (2007) give as an indication of the level needed to sustain existing population levels.

Additional Notes

There were no reported incidents of illegal persecution of Goshawk.

**Hen Harrier (*Circus cyaneus*)**

2020 results

- There were occasional sightings but no signs of breeding.

Measurement against the Initiative's targets

No quantitative targets were set for Hen Harrier; however in 2016 the Initiative added Hen Harrier to its remit, and agreed that we wished to see Hen Harrier “return as a regular breeding species”. Hopes that a pair would return in to breed 2020 for the third year in a row did not, unfortunately, materialise.

Trend

Hen Harriers are regularly sighted in low numbers in the Peak District, but breeding remains sporadic with only six successful nesting attempts in the last 23 years since they returned to the Peak District.

### Additional Notes

Although there were no breeding pairs, as usual a few individuals over-wintered in the Peak District so fingers crossed for 2021. There were no reported incidents of illegal persecution of Hen Harriers.

### References

- Amar A., Court I. R., Davison M., Downing S., Grimshaw T., Pickford T. & Raw D. (2011). *Linking nest histories, remotely sensed land use data and wildlife crime records to explore the impact of grouse moor management on peregrine falcon populations*. Biological Conservation (2011). Elsevier.
- Bibby C. J. & Nattrass M. (1986): *Breeding Status of the Merlin in Britain*. British Birds 79: 170-185
- Kenward R., Katzner T., Wink M., Marcström V., Walls S., Karlbom M., Pfeffer R., Bragin E., Hodder K. & Levin A. (2007). *Rapid Sustainability Modeling for Raptors by Radiotagging and DNA-Fingerprinting*. The Journal of Wildlife Management, Vol. 71, No. 1, pp. 238-245. Allen Press.
- Ratcliffe D. (1993). *The Peregrine Falcon*. T. & A.D. Poyser.
- Wilson M. W., Balmer D. E., Jones K., King V. A., Raw D., Rollie C. J., Rooney E., Ruddock M., Smith G. D., Stevenson A., Stirling-Aird P. K., Wernham C. V., Weston J. M. & Noble D. G. (2018): *The Breeding Population of Peregrine Falcon (Falco peregrinus) in the United Kingdom, Isle of Man and Channel Islands in 2014*. Bird Study, 2018. British Trust for Ornithology.

## APPENDIX 1- PROJECT BACKGROUND

Five leading land management and conservation organisations in the Peak District National Park got together in 2011 to develop an initiative to boost birds of prey populations in the Dark Peak.

In 2011, the organisations involved - the Peak District National Park Authority, Moorland Association, the National Trust, Natural England and RSPB\*- with support from local Raptor Groups and Derbyshire Constabulary, set five-year targets for healthy sustainable breeding populations of three target species - Merlin, Peregrine Falcon and Short-eared Owl- based on population levels in the 1990s, and from 2016 extended to include Hen Harrier and Goshawk (without targets).

Together the five organisations funded an independent field worker from 2012-18 to help ascertain accurate breeding data and to facilitate co-operation between raptor workers and shooting interests. In 2019 and 2020 data was collated by the two raptor groups - the Peak District Raptor Monitoring Group (PDRM) and South Peak Raptor Study Group (SPRSG) - who work together to monitor and record the breeding success of raptors in the Peak District. This data was collated both from their own fieldwork and from reports from gamekeepers.

The survey methods being used are in line with those documented in *Raptors: A field guide for surveys and monitoring*, Jon Hardey, Humphrey Crick, Chris Wernham, Helen Riley, Brian Etheridge and Des Thompson - Section 2.2.1 Counts of occupied home ranges and active nests.

The report data comprises verified nesting attempts and their outcomes based on the agreed best practice survey methods. Unverified nesting attempts such as isolated reports of fledged birds late in the season have been noted, but are excluded from the totals as they may be dispersing young that have fledged elsewhere. We encourage early reporting of sightings to obtain more accurate figures for confirmed pairs. With the exception of Short-eared Owls (as discussed in the species summary), we are confident a very high percentage of nesting attempts are located, and that the data published is statistically robust.

The initial targets were set for the Dark Peak in 2011 based on confirmed numbers in the late 1990s, and average nesting success nationally. These were expanded with the inclusion of the South West Peak in 2016 and are as follows:

- Peregrine- 17 breeding pairs. Target nesting success rate of 2.07 young per occupied territory.
- Short-eared owl- 25 breeding pairs on average. No target nesting success rate.
- Merlin- 37 territorial pairs. Target nesting success rate of 2.1-2.4 young per occupied territory.

\* The RSPB discontinued their involvement in the Initiative in January 2018.

## APPENDIX 2- BIRD OF PREY INITIATIVE PROJECT AREA

**Project area (also includes adjacent woodland from Moscar north for Goshawk)**

