

Knepp Castle Estate

Breeding Bird Survey

2018

By

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1.0 INTRODUCTION

Repeat transect surveys of the breeding bird communities present within two discrete areas of the Knepp Castle Estate were carried out in spring/summer 2018 following similar surveys in 2005 and 2007 – 17. The aims of the surveys were to:

- Identify the bird species breeding on site and to estimate the number of territories,
- Highlight the conservation status of the bird species recorded.

2.0 METHODOLOGY

2.1 Surveyor

The surveys were again conducted by Paul James who carried out the previous surveys.

2.2 Field methods

The same two transects were surveyed as in previous years: the first in the northern block of the Estate north of the A272 and east of Shipley Road (transect A) and the second in the southern block south of Countryman Lane and west of New Barn Farm (transect B). Ten visits were made to each transect between March and June. The dates on which visits were made were as follows: 25th & 31st March; 14th & 17th April; 10th, 13th & 28th May; and 6th, 12th & 19th June.

Each visit was made in good weather starting approximately one hour after sunrise. The surveys were conducted by slowly walking the pre-established transects and recording the species encountered (by sight or sound) on large scale maps using the standard Common Birds Census species and activity codes (Marchant 1983). On completion of the surveys, the registrations were copied across onto species maps which were then used to estimate the number of territories for each species, a technique known as territory analysis (Bibby *et al* 2000). For the purposes of this survey, a territory was defined by the presence of a singing male on two or more dates, a bird (or pair) behaving territorially on two or more dates, alarm calls from adults or food/nesting material being carried by adults.

3.0 SURVEY RESULTS

3.1 Weather summary

The early part of spring was rather unsettled, with some short spells of cold wintry weather, but also some drier spells. A particularly warm spell in the third week of April was followed by a May which, despite a brief cold spell to start, was one of the warmest on record. Weather systems approached the UK from the west for most of March and April, with only brief settled spells, but easterly winds were common during May. Below average temperatures for much of March and the first half of April meant a delayed start to the growing season, though the warmth of April 18th-21st was a sharp contrast. Although most areas had a drier May, spring rainfall totals were above average for eastern, central and southern areas. Sunshine was above average in most areas, especially further north.

March 2018 saw temperatures well below average in all areas; the UK monthly mean temperature was 1.6 °C below the long-term average. Though April did see further cold weather, the warm spell in the third week meant that overall the month was warmer than average, especially towards south-eastern areas, and the UK as a whole saw mean temperatures 1.0 °C above average. May was warmer than average, especially for maximum temperatures, with a UK mean temperature 1.7 °C above average.

March was much wetter than average across most of England and eastern Scotland, though markedly drier than average in many north-western areas. Overall the UK had 110% of average rainfall. April was again somewhat wetter than average for most areas, but northern Scotland was slightly drier; the UK overall had 119% of the month's average rainfall. May was generally drier than average, though thunderstorms were common in the last week, so rainfall totals exceeded the average in a few places and were 69% for the UK as a whole.

Many areas had rather less sunshine than average during March, though western fringes of Britain fared better. April saw more sunshine than average across northern Scotland, but other areas were duller, especially the south-west. May was the UK's sunniest on record, with sunshine totals above average almost everywhere. Sunshine totals for the UK overall were 83% of average in March, 90% of average in April, and 132% of average in May.

(Source: <https://www.metoffice.gov.uk/climate/uk/summaries/2018/spring>)

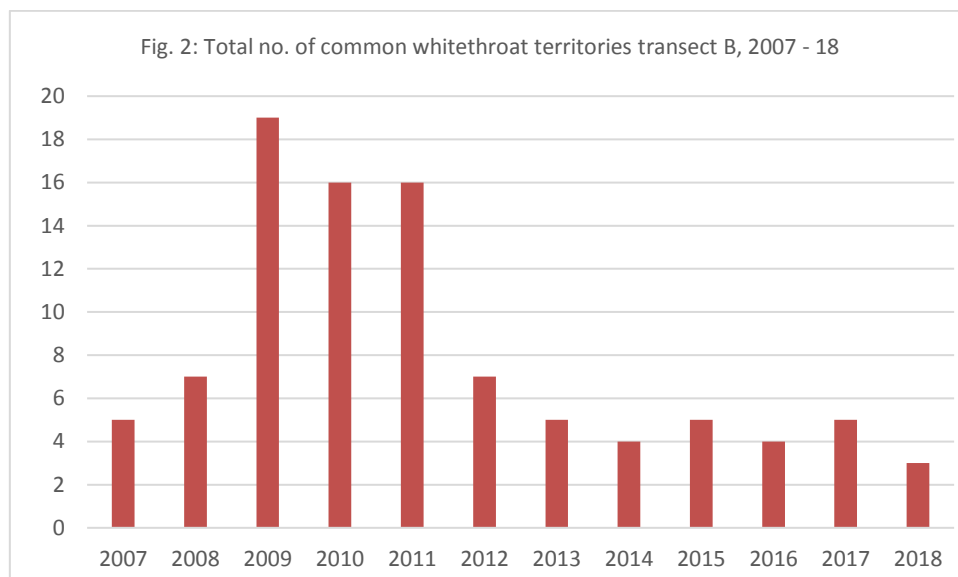
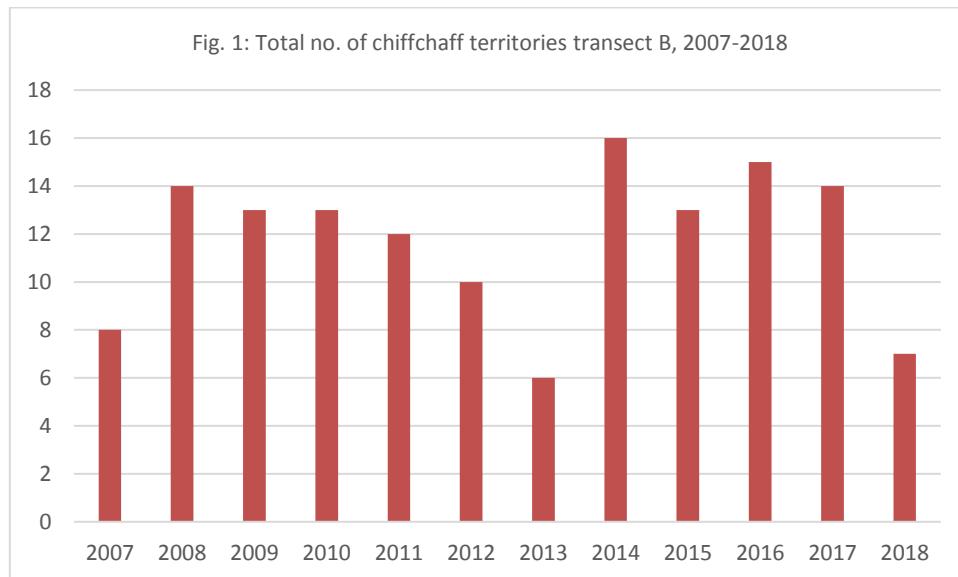
3.2 Species recorded

A total of 57 species was recorded in 2018 (see Appendices 1 – 4). Two ‘new’ species was noted (black-headed gull & ring-necked parakeet) bringing the total for the two transects since the surveys commenced in 2005 to 95 (see Appendix 5). Included in this overall total are 22 Red List Species of High Conservation Concern and 21 Amber List Species of Medium Conservation Concern as identified by the latest assessment of the conservation status of all the UK’s 247 regularly occurring birds (Eaton *et al* 2015).

The approximate locations of the territories identified for each species are shown in fig. 3 - 6. Note that territories for some species such as cuckoo may cover a large area so the registrations on the maps may only indicate the approximate location of a territory.

4.0 CONCLUSIONS

A comparison of the results for 2018 with those for 2017 shows little or no change in most species. It was however a poor year for chiffchaff (fig. 1) and also common whitethroat which continued its downward trend from a high of 19 territories in 2009 (fig. 2).



Twenty species of conservation concern and one additional Schedule 1 species were recorded in 2018, some of which are dealt with below:

Turtle dove (BoCC red list)

The first recorded were three 'purring' males on 10th May, two of which were in Brookhouse 4 and the other in Wild Flower Meadow. At Brookhouse 4 there were further males on 13th May, 6th June and 12th June. Other sightings, all of 'purring' males, were from Oaklands 4 on 13th May, Brookhouse 9 on 28th May, both Brookhouse 6 & 7 on 12th June, and Brookhouse 6 on 19th June. Territory analysis indicates a minimum of three 'purring' males audible from transect B.

Cuckoo (BoCC red list)

This is always a difficult bird to survey as singing birds are very mobile and may be encountered almost anywhere in the southern block. The first record for transect B was of a singing male along the northern edge of Brookhouse 4 on 14th April. Subsequent sightings were of two together at the same location on 17th April, singing males west of Brookhouse 7 on 10th May, in Brookhouse 4 and along the southern edge of Wild Flower Meadow on 13th May, in Bull Field and on the western edge of Brookhouse 9 on 12th June, and in flight over Brookhouse 4 on 19th June. None was recorded along transect A.

Peregrine (BoCC green list, Schedule 1)

A pair of adult Peregrines was observed along transect A for the fourth year running. On most visits, the male was observed sitting on the electricity pylon near Keeper's Cottage (grid ref TQ 16123 23500). There was no repeat of the alarm calling noted in late May/June 2017 perhaps suggesting a failed nesting attempt in 2018.

Nightingale (BoCC red list)

The decline from a high of five territories in 2007 and 2009 continues with no registrations at all in the 2018 transect surveys, the first blank year since the surveys began.

5.0 REFERENCES

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Appendix 1 – List of species recorded, spring 2018

Species	BTO species code	Bird of Conservation Concern (BoCC status)
Canada goose	CG	Not assessed
Greylag goose	GJ	Not assessed
Gadwall	GA	Amber
Mallard	MA	Amber
Tufted duck	TU	Green
Pheasant	PH	Not assessed
Grey heron	H.	Green
Little grebe	LG	Green
Red kite	KT	Green
Buzzard	BZ	Green
Peregrine	PE	Green
Moorhen	MH	Green
Coot	CO	Green
Black-headed gull	BH	Amber
Herring gull	HG	Red
Stock dove	SD	Amber
Woodpigeon	WP	Green
Turtle dove	TD	Red
Ring-necked parakeet	RI	Not assessed
Cuckoo	CU	Red
Green woodpecker	G.	Green
Great spotted woodpecker	GS	Green
Magpie	MG	Green
Jay	J.	Green
Jackdaw	JD	Green
Rook	RO	Green
Carrion crow	C.	Green
Goldcrest	GC	Green
Great tit	GT	Green
Blue tit	BT	Green
Coal tit	CT	Green
Marsh tit	MT	Red
Long-tailed tit	LT	Green
Chiffchaff	CC	Green
Willow warbler	WW	Amber
Blackcap	BC	Green
Garden warbler	GW	Green
Lesser whitethroat	LW	Green
Common whitethroat	WH	Green
Nuthatch	NH	Green
Treecreeper	TC	Green
Wren	WR	Green
Starling	SG	Red
Blackbird	B.	Green
Fieldfare	FF	Red
Song thrush	ST	Red

Redwing	RE	Red
Mistle thrush	M.	Red
Robin	R.	Green
Dunnoch	D.	Amber
House sparrow	HS	Red
Chaffinch	CH	Green
Goldfinch	GO	Green
Linnet	LI	Red
Bullfinch	BF	Amber
Yellowhammer	Y.	Red
Reed bunting	RB	Amber

Birds of Conservation Concern (BoCC)

- Red list species are those that are globally threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; or those that have declined historically and not shown a substantial recent recovery.
- Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a significant recent recovery; rare breeders; or those with internationally important or localised populations.
- Species that fulfil none of the criteria are green listed while non-native species are not assessed (Eaton *et al* 2015).

Appendix 2: Number of territories - Transect A

Species	Species code	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Canada goose	CG	-	-	-	1	1	-	-	-	-	-	-	-
Mandarin	MN	-	-	1	-	1	-	-	-	-	-	-	-
Mallard	MA	-	-	1	1	-	-	1	-	2	1	1	1
Pheasant	PH	-	-	-	1	-	1	-	-	-	-	-	-
Common buzzard	BZ	1	-	1	1	1	-	-	-	-	1	-	-
Moorhen	MH	-	-	-	-	-	-	-	-	-	-	-	1
Kestrel	K.	1	-	-	-	-	-	-	-	-	-	-	-
Hobby	HY	-	-	1	-	1	-	1	1	-	1	-	-
Peregrine	PE	-	-	-	-	-	-	-	-	1	1	1	1
Stock dove	SD	1	2	1	1	-	-	1	-	-	-	1	-
Woodpigeon	WP	3	-	2	2	-	1	-	-	2	-	-	1
Cuckoo	CU	1	-	-	-	-	-	-	-	-	-	-	-
Little owl	LO	2	2	-	-	-	-	-	-	-	-	-	-
Green woodpecker	G.	1	1	1	2	-	-	-	-	1	-	-	-
Great spotted woodpecker	GS	3	3	4	1	1	1	2	1	2	1	2	-
Magpie	MG	2	-	-	-	-	-	-	-	-	-	-	-
Jay	J.	2	-	-	-	-	-	-	-	-	-	-	-
Jackdaw	JD	-	-	1	2	-	4	2	2	-	1	1	-
Carrion crow	C.	-	1	-	-	-	-	1	1	-	-	1	-
Goldcrest	GC	1	4	4	1	3	2	2	3	3	2	3	2
Blue tit	BT	2	8	7	7	4	5	4	3	6	6	5	8
Great tit	GT	3	8	10	4	5	6	6	5	6	3	5	4
Coal tit	CT	1	3	1	2	1	3	1	2	1	1	2	3
Marsh tit	MT	1	2	-	2	-	-	-	-	-	-	-	-
Skylark	S.	1	2	1	1	1	1	1	1	-	-	-	-
Long-tailed tit	LT	2	2	4	1	2	-	-	1	1	-	1	1
Chiffchaff	CC	4	7	8	7	7	6	4	5	6	6	7	3
Willow warbler	WW	1	1	2	1	-	-	-	-	-	-	-	-
Blackcap	BC	5	3	5	6	6	6	5	5	4	5	3	4

Garden warbler	GW	1	1	1	-	-	1	1	1	-	-	-	-
Common whitethroat	WH	-	1	1	-	-	-	1	-	-	-	-	-
Nuthatch	NH	1	3	3	3	2	1	2	3	2	1	-	2
Treecreeper	TC	1	2	3	1	3	1	2	3	1	1	-	1
Wren	WR	12	21	17	10	11	10	7	8	11	11	12	14
Starling	SG	-	-	-	-	-	-	-	-	1	-	-	-
Blackbird	B.	5	2	4	1	-	2	1	3	2	2	2	4
Song thrush	ST	3	2	3	1	-	3	1	1	2	2	3	2
Mistle thrush	M.	-	1	1	-	-	-	-	-	-	-	-	-
Robin	R.	8	23	20	15	13	10	16	11	14	14	13	16
Dunnock	D.	3	2	4	4	1	2	2	1	2	2	3	3
Chaffinch	CH	9	13	15	9	9	10	7	1	3	3	2	2
Goldfinch	GO	1	1		2	1	1	1	-	-	-	1	1
Bullfinch	BF	-	-	1	-	-	-	-	1	1	1	1	-
Yellowhammer	Y.	-	1	1	-	-	1	-	-	-	-	-	-

Appendix 3: Number of territories - Transect B

Species	Species code	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Greylag goose	GJ	-	-	-	-	-	-	-	-	-	1	-	-
Canada goose	CG	1	-	-	-	-	-	-	-	-	-	-	1
Mandarin	MN	-	-	-	-	-	-	-	1	-	-	-	-
Gadwall	GA	-	-	-	-	-	-	-	-	-	-	-	1
Mallard	MA	2	1	-	-	2	1	1	5	3	1	2	1
Tufted duck	TU	-	-	-	-	-	-	-	-	-	-	1	2
Grey partridge	P.	-	-	1	-	-	-	-	-	-	-	-	-
Little grebe	LG	-	-	-	-	-	-	-	1	1	1	1	1
Common buzzard	BZ	1	1	-	1	-	-	-	-	-	-	-	-
Moorhen	MH	2	2	4	3	2	2	1	3	4	3	1	-
Coot	CO	-	-	-	-	-	-	-	1	1	2	1	1
Stock dove	SD	1	3	-	2	2	3	1	2	2	1	1	1
Woodpigeon	WP	2	4	-	1	3	2	1	1	1	1	1	1
Collared dove	CD	-	-	1	-	-	-	-	-	-	-	-	-
Turtle dove	TD	2	2	2	2	2	1	-	4	2	3	2	3
Cuckoo	CU	2	2	3	1	1	2	1	3	2	2	1	2
Barn owl	BO	-	-	1	-	-	-	1	-	-	-	-	-
Tawny owl	TO	-	-	-	-	-	1	-	-	-	-	-	-
Green woodpecker	G.	4	2	1	1	-	1	-	1	-	-	-	-
Great Spotted Woodpecker	GS	2	1	1	1	1	1	1	2	1	2	2	3
Jay	J.	-	2	1	-	-	1	-	-	-	-	-	-
Magpie	MG	1	2	1	1	1	-	-	-	-	-	1	-
Jackdaw	JD	1	1	1	1	2	3	7	4	3	2	2	2
Rook	RO	-	-	8	10	12	9	4	6	8	7	9	nc
Carrion crow	C.	-	2	-	-	1	1	1	-	1	-	1	-
Goldcrest	GC	-	-	-	-	-	-	-	-	2	2	2	1
Great tit	GT	3	10	8	7	9	6	6	2	4	5	5	6
Blue tit	BT	5	9	8	6	7	5	5	7	8	6	6	8
Woodlark	WL	-	2	-	-	-	1	-	-	-	-	-	-

Skylark	S.	4	9	11	9	4	3	-	-	-	-	-	-
Swallow	SL	1	-	-	-	-	-	-	-	-	-	-	-
Pied wagtail	PW	-	1	-	-	-	-	-	-	-	-	-	-
Long-tailed tit	LT	1	3	1	1	3	1	1	-	2	1	1	1
Chiffchaff	CC	8	14	13	13	12	10	6	16	13	15	14	7
Willow warbler	WW	-	-	-	-	-	-	1	-	-	-	-	-
Blackcap	BC	7	9	8	9	11	7	7	8	8	6	9	6
Garden warbler	GW	5	6	6	3	7	4	4	3	4	3	2	4
Lesser whitethroat	LW	-	4	3	2	1	1	1	1	2	4	3	1
Common whitethroat	WH	5	7	19	16	16	7	5	4	5	4	5	3
Reed warbler	RW	-	1	-	-	-	-	-	1	-	-	-	-
Nuthatch	NH	2	1	2	1	2	3	1	1	1	1	-	-
Treecreeper	TC	-	1	2	-	-	1	1	2	1	1	4	1
Wren	WR	13	16	16	12	14	11	12	20	16	23	20	16
Blackbird	B.	4	6	7	7	2	5	6	6	8	9	10	11
Song thrush	ST	4	4	3	4	6	5	6	7	7	8	4	2
Mistle thrush	MT	-	1	-	1	1	-	-	1	2	1	-	-
Robin	R.	5	21	16	14	18	19	17	20	17	18	20	21
Nightingale	N.	5	4	5	4	4	4	3	1	2	2	1	-
Dunnock	D.	6	12	13	5	7	7	9	6	7	9	8	9
House sparrow	HS	1	1	1	-	-	1	1	-	-	-	1	1
Chaffinch	CH	12	18	14	21	13	9	8	6	5	6	3	4
Goldfinch	GO	-	1	1	1	1	-	1	-	1	1	1	1
Linnet	LI	-	1	2	1	-	-	-	-	-	-	-	-
Bullfinch	BF	1	5	3	2	1	-	-	2	-	-	2	-
Yellowhammer	Y.	3	8	6	4	2	3	1	1	1	1	-	-
Reed bunting	RB	-	2	1	1	-	-	-	-	-	1	-	-

Appendix 4: Additional species recorded, 2018

Species	Observations
Greylag goose	Transect B: Pair on Brookhouse 8 pond on 25 th March. One there on 10 th May & five on 13 th May.
Gadwall	Transect B: Two pairs on Brookhouse 8 pond on 27 th March and a male there on 7 th April.
Pheasant	Transect A: Two on 25 th March, singles on 31 st March and 14 th April. Transect B: One on 6 th June.
Grey heron	Transect A: Two singles on 14 th April. Transect B: Singles on 31 st March & 6 th June.
Red kite	Transect A: One in flight at Coate's Furzefield on 14 th April departed NE.
Buzzard	Transect A: Recorded on four visits, max two on 31 st March. Transect B: Recorded on five visits, max. two on 25 th March.
Black-headed gull	Transect A: One flew W on 28 th May.
Herring gull	Transect A: Two flew N on 28 th May. Six flew NE on 6 th June.
Ring-necked parakeet	Transect A: One in flight on 25 th March.
Green woodpecker	Transect A: One on 31 st March. Transect B: Singles on 25 th March, 14 th April and 6 th June.
Jay	Transect A: Singles on 31 st March and 28 th May. Transect B: Recorded on five visits, max. four on 6 th June.
Magpie	Transect A: Two on 25 th March, one on 13 th May. Transect B: Three on 25 th March, five on 13 th May.
Carrion crow	Transect A: Pair on 31 st March, one on 28 th May.
Coal Tit	Transect B: Singing male on 28 th May.
Marsh tit	Transect A: Singing male in Alder Copse on 31 st March.
Willow warbler	Transect B: Four singing males on 17 th April were not recorded subsequently and were most likely migrants.
Garden warbler	Transect A: Singing males at separate locations on 13 th & 28 th May.
Lesser whitethroat	Transect A: Singing male on 28 th May only.
Whitethroat	Transect A: Singing male on 13 th May only.
Nuthatch	Transect B: Two on 6 th June.
Starling	Transect B: Two on 31 st March.
Fieldfare	Transect B: Ten on 25 th March, 20 on 31 st March.
Redwing	Transect B: Singles on 25 th & 31 st March.
Mistle thrush	Transect A: Two in flight on 10 th May. Singing male in Alder Copse on 13 th May. Transect B: Singles on 13 th & 28 th May, the latter alarm calling in Brookhouse 4.
Linnet	Transect B: One in flight on 28 th May.
Bullfinch	Transect A: Singles in Hartsgravel Wood on 25 th March and Alder Copse on 13 th May. Transect B: Single birds on 14 th April & 6 th June.
Yellowhammer	Transect B: One in flight on 31 st March.
Reed bunting	Transect B: Singing male in Brookhouse 8 on 25 th March.

Appendix 5: Species recorded, 2005 - 18

Species	BoCC status	Species	BoCC status
Greylag goose	No status	Rook	Green
Canada goose	No status	Carrion crow	Green
Mandarin duck	No status	Raven	Green
Gadwall	Amber	Goldcrest	Green
Teal	Amber	Firecrest	Green
Mallard	Amber	Great tit	Green
Shoveler	Amber	Blue tit	Green
Tufted duck	Green	Coal tit	Green
Pheasant	No status	Marsh tit	Red
Red-legged partridge	No status	Woodlark	Red
Grey partridge	Red	Skylark	Red
Grey heron	Green	Swallow	Green
Cormorant	Green	House martin	Amber
Little grebe	Green	Meadow pipit	Amber
Red kite	Green	Grey wagtail	Red
Sparrowhawk	Green	Pied wagtail	Green
Buzzard	Green	Long-tailed tit	Green
Kestrel	Amber	Chiffchaff	Green
Hobby	Green	Willow warbler	Amber
Peregrine	Green	Blackcap	Green
Moorhen	Green	Garden warbler	Green
Coot	Green	Lesser whitethroat	Green
Lapwing	Red	Whitethroat	Green
Green sandpiper	Amber	Reed warbler	Green
Woodcock	Red	Nuthatch	Green
Snipe	Amber	Treecreeper	Green
Black-headed gull	Amber	Wren	Green
Lesser black-backed gull	Amber	Starling	Red
Herring gull	Red	Blackbird	Green
Great black-backed gull	Amber	Fieldfare	Red
Feral rock dove	No status	Song thrush	Red
Stock dove	Amber	Redwing	Red
Woodpigeon	Green	Mistle thrush	Red
Collared dove	Green	Spotted flycatcher	Red
Turtle dove	Red	Robin	Green
Ring-necked parakeet	No status	Nightingale	Red
Cuckoo	Red	Dunnock	Amber
Barn owl	Green	House sparrow	Red
Little owl	No status	Chaffinch	Green
Tawny owl	Amber	Brambling	Green
Swift	Amber	Greenfinch	Green
Kingfisher	Amber	Goldfinch	Green
Green woodpecker	Green	Linnet	Red
Great spotted woodpecker	Green	Lesser redpoll	Red
Lesser spotted woodpecker	Red	Bullfinch	Amber
Magpie	Green	Yellowhammer	Red
Jay	Green	Reed bunting	Amber

Jackdaw	Green		
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