

## Summary of breeding bird and bat activity surveys of sites at Caton-with-Littledale, Lancaster

*September 2019*



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For –

Caton-with-Littledale Parish Council

*September 2019*

### Notes

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- 2 The report can be made available to third parties**

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## **APPENDIX 1 BREEDING BIRD EVIDENCE CODES**

## 1 INTRODUCTION

The Greater Manchester Ecology Unit (GMEU) was commissioned by Caton-with-Littledale Parish Council to identify possible ecological constraints that could affect the potential allocation of sites for development in the emerging Caton-with-Littledale Neighbourhood Plan.

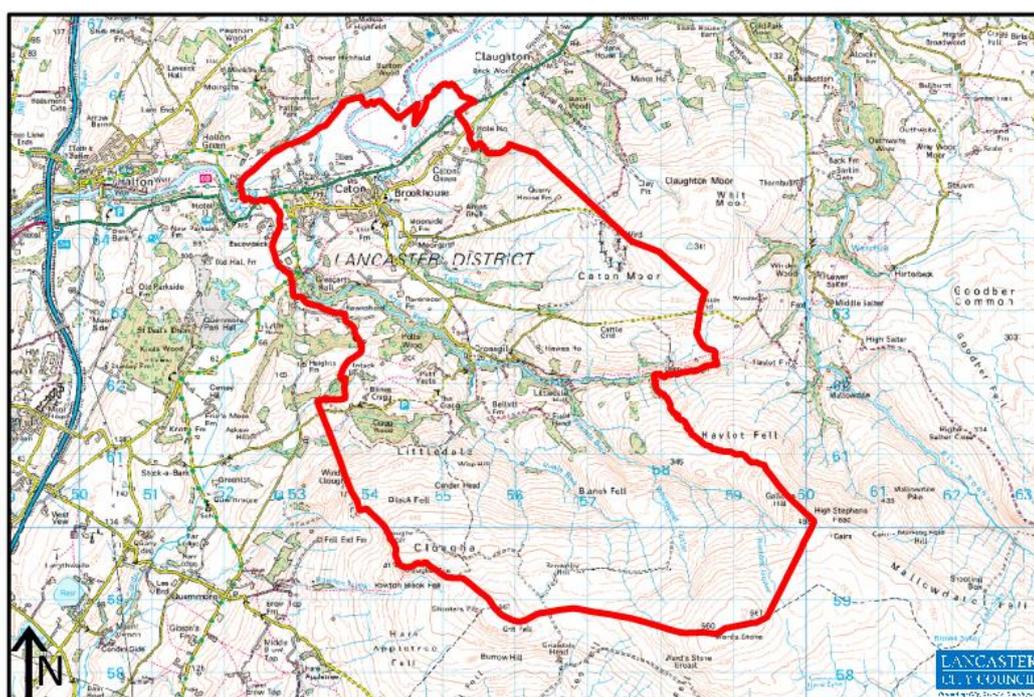
Preliminary Ecological Appraisals of the sites were carried out in the spring of 2018

During these preliminary ecological appraisals of all of the sites under consideration for allocation for future development in the Parish a number of sites were identified as having some potential to support breeding and birds and/or bats. Additional surveys were recommended.

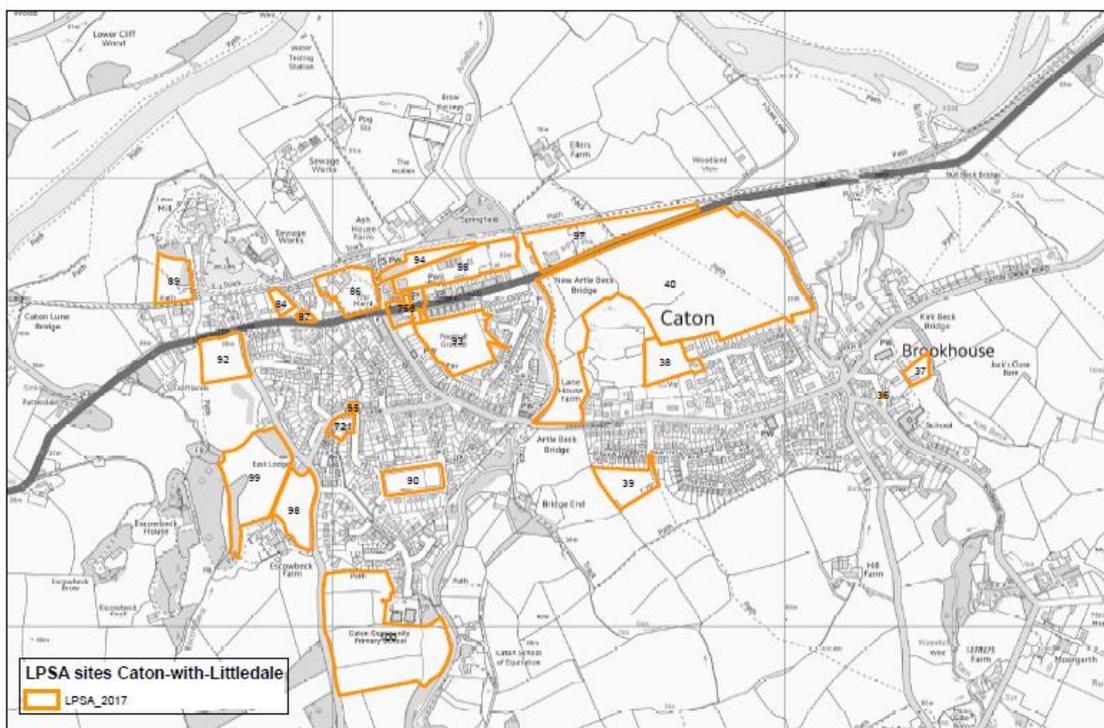
All UK species of bat and their roosting (resting) sites carry a high level of legal protection. All nesting birds, their eggs and young are legally protected under the terms of the Wildlife and Countryside Act 1981 (as amended).

This is a summary report of the breeding bird and bat activity surveys of the sites concerned, carried out from April – August 2019.

**Fig 1** Caton-with-Littledale Parish Boundary



**Fig 2** Locations and numbers of sites surveyed



Sites identified in the PEA's as requiring further surveys included sites numbered 37, 39, 40, 88, 89, 93, 94, 97, 98, 99 and 100. A site known as 'Artle Beck Brook' was also surveyed, the boundary of this site is not shown on Fig 2 but the location of the site is shown.

## 2 METHODOLOGY

### Breeding Birds

Conventionally breeding bird survey (BBS) methodologies following the Common Bird Census methodology set out by Gilbert et. Al. and Bibby involve at least three site visits during the breeding season.

Initial site inspections of all the sites listed above were carried out on the 25<sup>th</sup> April and the 30<sup>th</sup> April 2019. These visits, although over two days, were classed as the 'first visit' because some the sites were only visited once over the two days. The sites were surveyed by slowly walking and pausing to record birds seen or heard. Route directions were varied between each visit.

Following the initial surveys many of the sites were discounted from further survey because bird communities recorded during the first visit were unremarkable; birds recorded were not different from the common bird communities encountered

regularly in such an urban/suburban area and/or the sites were not considered to have high value breeding habitat.

Those sites regarded as potentially more important for birds because of the birds recorded during the first visit or because they supported good habitat included sites **40, 89, 98** and **99**. These sites were surveyed again on the 23<sup>rd</sup> May and the 18<sup>th</sup> June 2019.

On the second and third visits a series of transect and point counts were carried out, covering all habitat types present, from accessible points dispersed across the sites.

This survey method was chosen to suit the objectives of the surveys which were to identify the species present and estimate the approximate number of breeding territories of each species. Point count methods are suitable for conspicuous birds in woody or scrubby habitats and are also appropriate for the study of extensive areas, but do not provide the level of detail of mapped counts which whilst giving a more accurate estimate of abundance require greater survey effort. However, they are more efficient in terms of data collected per unit effort than mapped censuses, but less so than transects. They may be more appropriate than transects in areas where access is poor, or where habitat is very fine-grained.

Breeding bird codes as recorded in the tables below are taken from the BTO breeding bird survey codes (listed in Appendix 1)

## Bats

The aim of the bat surveys was simply to establish whether any bats used the sites and what species of bat were present in order to establish whether any sites had particular value for bats. Specific roost surveys of buildings and trees were not carried out because such surveys are very time-consuming and labour intensive. In addition, because many of the sites may not actually come forward for development for some years detailed surveys conducted at this time would very likely be premature. Bats are mobile in their habitats and can change roosting sites with some frequency. More detailed bat surveys will be required at a later (planning application) stage of the potential development process for a number of the sites concerned.

Bat surveys comprised simple 'walkover' surveys with vantage point stops carried out for two hours either side of sunset. Surveyors used Petersson D240 and Anabat 'Walkabout' ultrasound bat detectors during the surveys.

Bat surveys were carried out around dusk in May, June July and August 2019.

As with the bird surveys it was apparent from initial surveys, and from the habitats present, that some sites had much higher potential to support bats than others; these sites were re-visited.

## **Personnel**

Surveys were undertaken by Principal Ecologist Derek Richardson, Ornithologist Stephen Atkins and Ecologist Mandy Elford.

Derek has more than 25 years' experience as a professional ecologist. Stephen is the County Bird Recorder for Greater Manchester and has more than 10 years' experience as a professional ornithologist. Mandy has been a professional ecologist for more than 14 years and is a bat specialist. Mandy holds an NE Bat licence (2015-11597-CLS-CLS).

## **Limitations of the surveys**

As with many ecological surveys the results represent only a snapshot in time. Species are mobile and habitats change over time.

Access to sites relied on vantage points from publicly accessible places (public footpaths, roads and open land) and as a result access to all parts of all sites was not possible.

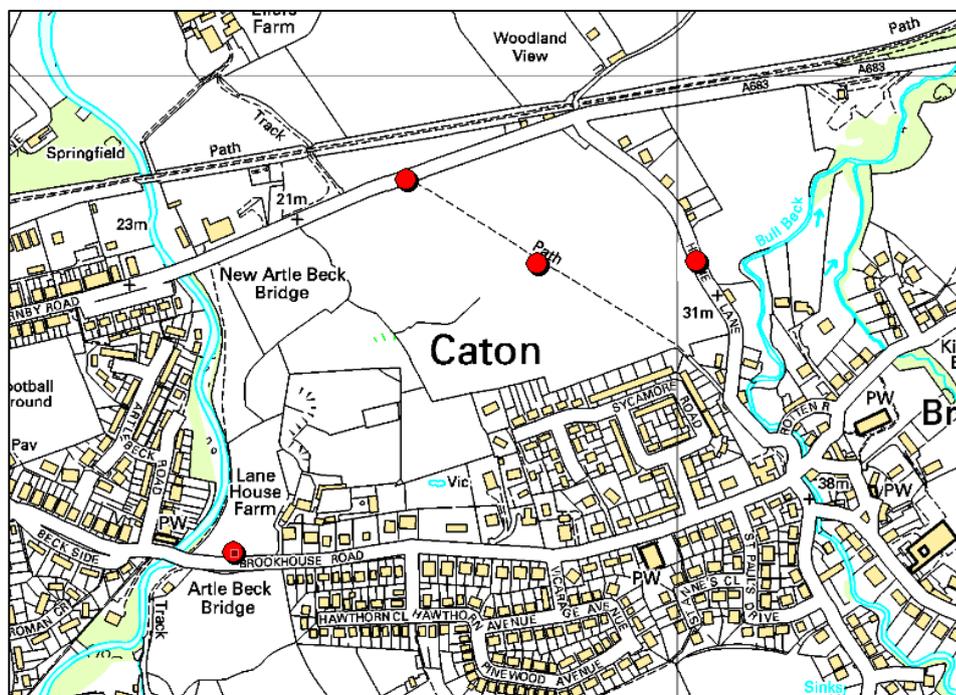
Nevertheless it is considered that the survey results do present a fair assessment of the value of sites for birds and bats at the time that the surveys were carried out.

### 3 RESULTS

#### 3.1 Bird Surveys

##### Site 40 and Artle Beck Bridge

Fig 3 Locations of vantage points (red dots) site 40



A very open site, with open pasture, wet grassland, boundary hedgerows and, towards the western boundary and the south (Artle Beck Bridge) there is a medium-sized watercourse and woodland along the river banks.

Due to some access restrictions it was not possible to survey the whole of the allocation in great detail, consequently the number of territories shown in table 1 are those actually recorded from the areas that were accessible. They should not be considered as an actual population estimate for each species across the whole site.

The total numbers of each species across the potential allocation will likely be significantly higher than numbers in the table.



**Wet grassland, site 40**

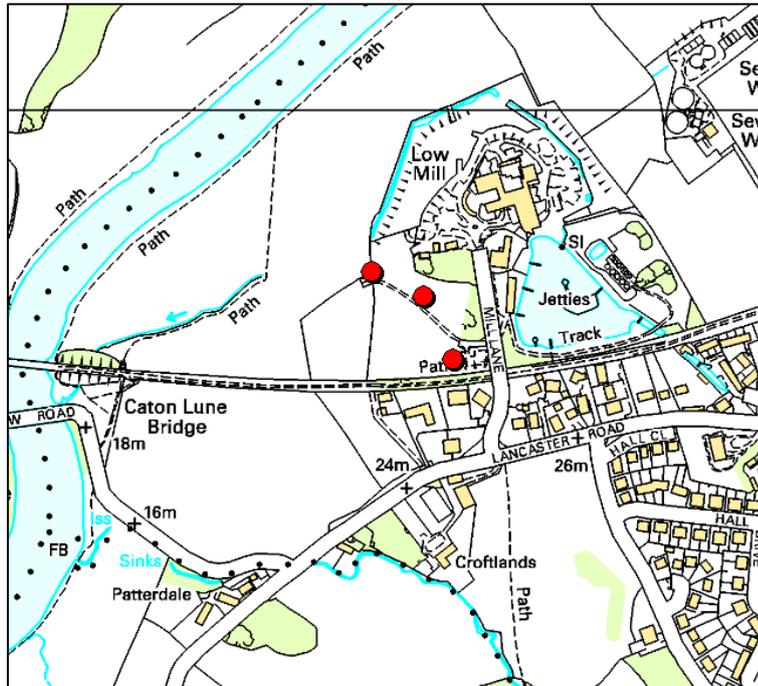
**Table 1 Site 40** Species, territory estimates and breeding status

Species	Visit 1 (no. of territories)	Visit 2 (no. of territories)	Visit 3 (no. of territories)	Conservation Status	Breeding Status
Blackbird	8	7	5		Confirmed (FF)
Blackcap	6	4	5		Probable (S)
Carrion Crow	-	-	-		Unknown (U)
Chaffinch	3	4	3		Probable (T)
Chiffchaff	6	5	5		Confirmed (S)
Curlew	1	1		Amber list	Possible (Pair, display, H)
Dunnock	7	3	4	S41 Amber list	Probable (T)
Goldfinch	3	6	2		Probable (N)
Greenfinch	3	2	2		Probable (D)
Great Tit	-	-	-		Unknown (U)
Grey Heron	-	-	-		-
House Martin	-				Flying over / feeding
Lapwing	-	-	-	Red List	Circling over field
Lesser black-backed gull	-	-	-	Amber	-
Jackdaw	-	-			Probable family groups present
Magpie	3	5			Probable, family party present
Pheasant	1				Possible (S)
Oystercatcher	-	1	1	Amber list	Probable (D)
Ringed plover	-	-	-	Red list	Flying over
Robin	11	8			Probable (T)
Sand Martin	-	-	-		Flying over
Song Thrush	3	3		S41 Red list	Possible (S)
Swallow	4	4			Possible (H)
Swift	-	-	-	Amber list	Flying over / feeding
Willow Warbler	5	2		Amber list	Probable (T)
Wood Pigeon	2	1			Possible (H)
Wren	12	15	8		Probable (T)

### Site 89

This site is a neglected field surrounded by mature broadleaved trees and shrubs, with open water habitats nearby.

**Fig 4** Locations of vantage points (red dots) site 89



**General view, site 89**

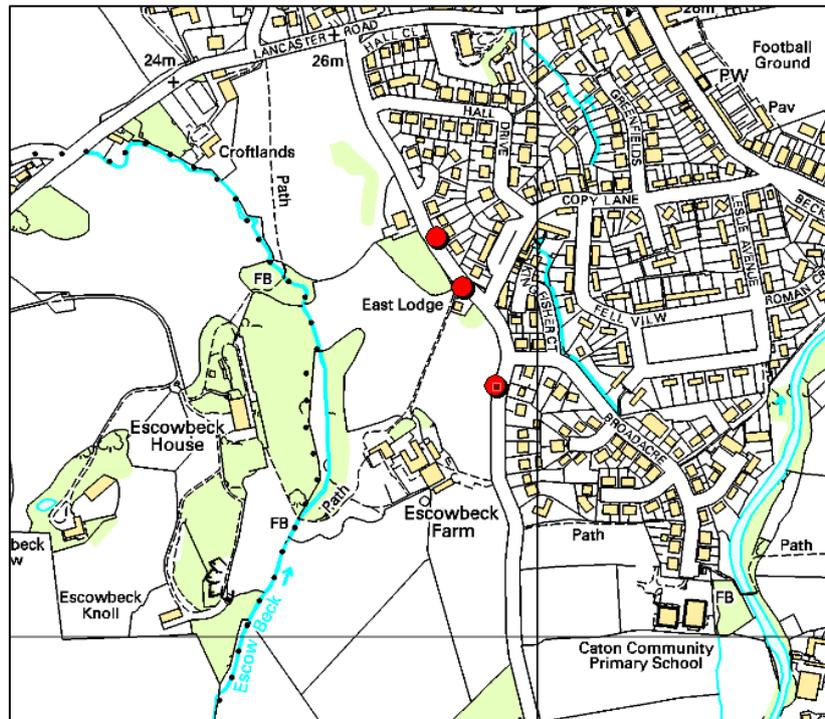
**Table 2 Site 89** Species, territory estimates and breeding status

Species	Visit 1 (no. of territories)	Visit 2 (no. of territories)	Visit 3 (no. of territories)	Conservation Status	Breeding Status
Blackbird	2	2	-		Confirmed (FF)
Blackcap	-	1	1		Probable (S)
Chaffinch	1	1	-		Probable (T)
Chiffchaff	-	1	1		Confirmed (S)
Dunnock	2	3	1	Amber list	Probable (T)
Garden Warbler	1				Probable (S)
Goldfinch	-	1	1		Probable (N)
Greenfinch	-	-	-		Probable (D)
Great Tit	-	-	-		Unknown (U)
House Sparrow	-	-	-	Red list	Possible (P)
Jackdaw	-	-	-		Family party present
Magpie	3	5			Probable, family party present
Robin	2	2	-		Probable (T)
Song Thrush	1	3	-	Red list	Possible (S)
Swallow	-	-	-		Flying over
Willow Warbler	1	2	1	Amber list	Probable (T)
Wood Pigeon	-	1	1		Possible (P)
Wren	3	4	4		Probable (T)

### Sites 98 and 99

These contiguous sites are dominated by open grassland but also support mature woodland close to the road and hedgerows

**Fig 5** Locations of vantage points (red dots) sites 98 and 99



**Table 3 Sites 98 and 99** Species, territory estimates and breeding status

Species	Visit 1 (no. of territories)	Visit 2 (no. of territories)	Visit 3 (no. of territories)	Conservation Status	Breeding Status
Blackbird	4	5	2		Confirmed (FF)
Blackcap	1	2	1		Probable (T)
Chaffinch	2	2	2		Probable (T)
Chiffchaff	1	-	-		Confirmed (FF)
Dunnock	1	1	-	S41 Amber list	Probable (T)
Goldfinch	-	-	1		Possible (H)
Great spotted woodpecker	-	-	-		Possible (H)
Greenfinch	-	-	-		Probable (D)
Long tailed tit	1	1	-		Probable (A)
Magpie	-	-	-		Probable – family group present
Nuthatch	-	-	-		Possible (H)
Pheasant	1	-	-		Possible (S)
Robin	4	3	3		Probable (T)
Song Thrush	-	1	-	S41 Red list	Possible (S)
Swallow	-	-	-		Possible nearby
Willow Warbler	-	2	2	Amber list	Probable (T)
Wood Pigeon	-	-	-		Possible (S)
Wren	4	3	3		Probable (T)

### 3.2 Bats

At least some bat passes were recorded on the majority of the sites surveyed; these were generally of Pipistrelle bats (both Soprano and Common) but on most sites bat numbers were low (likely less than 10 individual bats). Other bat species recorded included Brown long-eared, Noctule and a *Myotis* species, but these species were only found on selected sites within the 'hot-spots' identified below and in low numbers.

Pipistrelle bats are the most commonly encountered species of bat in the UK; they are closely associated with sub-urban areas and often roost in buildings. Soprano pipistrelles seem more common in the Parish than Common pipistrelles, possibly because of the nearby river corridors.

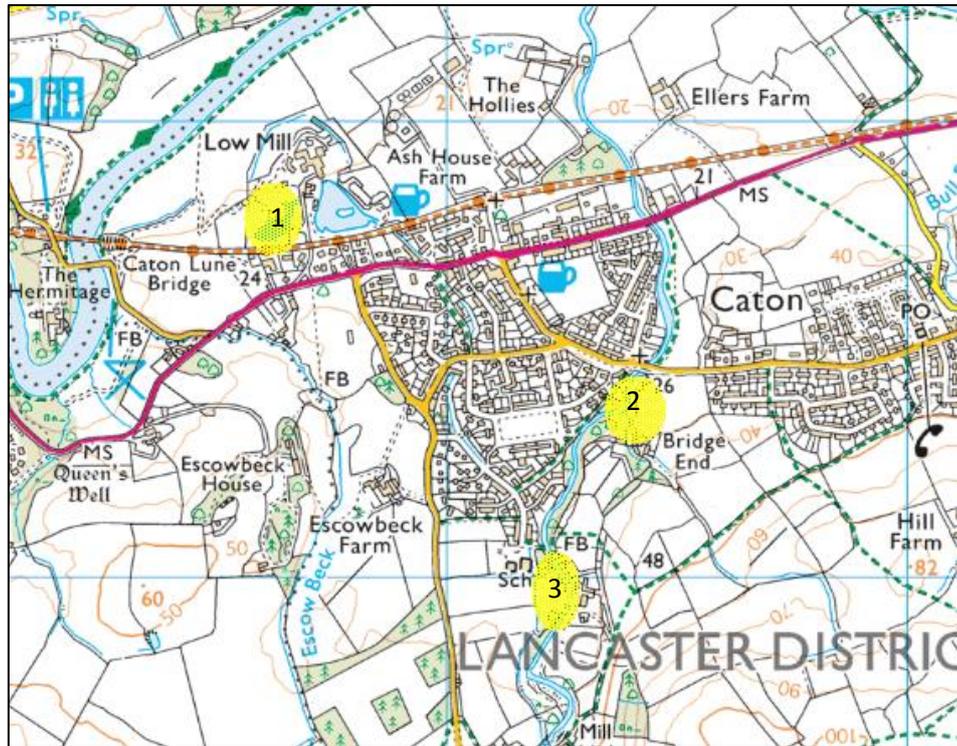
The 'bat hotspots' identified below were based on that findings that sites in these areas supported numbers of individual bats in excess of 15-20 and more than three species of bat. The sites were closely associated with optimal bat foraging habitats - close to areas of open water, mature broadleaved trees (particularly linear tree belts) and intact hedgerows.

**Area 1** supported high numbers of Soprano pipistrelle bats (more than 15 individuals), moderate numbers of Common pipistrelle bats (more than 5), low numbers of Noctule bats (2 individuals) and low numbers of Brown long-eared bats (1 individual).

**Area 2** supported high numbers of Soprano pipistrelle bats (more than 15 individuals), moderate numbers of Common pipistrelle bats (more than 10 individuals) and low numbers of Brown long-eared bats (2 individuals)

**Area 3** supported moderate numbers of Soprano pipistrelle bats, moderate numbers of Common pipistrelle bats, low numbers of Noctule bats (1 individual) and low numbers of probable *Myotis* bats (1 or 2 individuals)

**Fig 6 Identified areas of high bat activity (in yellow)**



The numbers of bats (and particularly of Soprano pipistrelle bats) recorded in these 'hotspot' areas implied that there are probably roosting sites for bats nearby. This was particularly true for Area 1 because the bats began to be active in this area before sunset.

## 4 Conclusions and discussions

### 4.1 Birds

There are three distinct breeding bird communities associated with the Parish

- Typical garden birds such as blackbird, robin and wren, bird communities found throughout the Parish.
- Songbirds more associated with semi-natural habitats such as willow warblers, chiff-chaff and blackcap
- Water and wading birds associated with coastlands, uplands and larger areas of wet (agricultural) grassland such as curlew, snipe and lapwing

A fourth possible community – woodland birds including Nuthatch and Great Spotted Woodpecker – is discernible but was not conclusive because the numbers of woodland bird species was low.

This community variety reflects the variety of habitats for birds found within the Parish and the location of the Parish, set between the Lancaster coastline along Morecambe Bay, an internationally important area for water birds, and the uplands to the east. The River Lune which runs east-west just to the north of the Parish provides an outstanding wildlife corridor linking the coastline with inland farmland and with the moorlands. Birds using this flyway can be expected to use land in the Parish as a stepping stone for feeding and resting as well as breeding.

Garden bird communities are found throughout the Parish, generally these communities are unremarkable.

The most important places in the Parish for songbirds are areas of open farmland (Areas 40 and 97).

The most important places in the parish for water and wading birds are the open wet grassland areas associated with sites 40, Artle Beck Bridge and the site behind the school, site 100. The curlew records are particularly notable because curlews are in significant decline in the UK and are now considered threatened, particularly in England.

#### **Recommendations - Birds**

- Maintain mature trees, hedgerows and open wet grassland areas in the Parish
- The loss of Site 40 in its entirety would cause losses to habitats suitable for use by important wading and wetland bird species, particularly curlew and lapwing
- New hedgerows and tree planting would benefit nesting birds
- The erection of bird boxes of a range of types throughout the Parish would be a useful habitat enhancement

Nesting boxes for Swifts and Owls are particularly recommended. Swift boxes are best installed in groups because Swifts are communal birds.

**Typical swift nesting box**



**Typical Owl Nest Box**



## 4.2 Bats

All UK bats are insectivorous. They therefore feed in places where insects are more numerous – around mature trees, hedge lines and standing and running water. Most species of bat will avoid open ground to avoid predation risk and will therefore move around the landscape along features which provide them with a degree of cover – hedgerows and linear tree belts.

The survey results very much confirm these known habitat associations for Caton-with-Littledale Parish. The most important bat communities are closely associated with areas supporting the best bat feeding habitats – trees, hedgerows, watercourses, open waterbodies and unmanaged grassland.

**But the results also indicate that bats are found throughout the Parish** and can, and do, turn in most locations. At least five species of bat were recorded –

- Soprano pipistrelle
- Common pipistrelle
- Brown long-eared
- Noctule
- *Myotis* sp

*Myotis* bat species can sometimes be difficult to distinguish to species level in the field.

The most common species of bat encountered was the Soprano pipistrelle.

### Recommendations - Bats

- Given that bats are found throughout the Parish any substantial works to buildings or mature broadleaved trees (such as demolitions or tree felling) anywhere should be informed by bat surveys of the building or tree.
- Habitat features of most value to bats such as areas of open water, mature trees or hedge lines must be retained as part of any planned development, or replaced if lost.
- Habitat enhancement for bats could be achieved by erecting artificial bat roosting boxes on trees or buildings in the Parish, and by planting new broadleaved trees and hedgerows.
- Any development should include a number of built in integral bat roosting features such as bat slates, bat tubes and bat bricks.

**Typical bat roosting boxes**



**Integral bat roosting features**



**Bat brick**



**Bat tube**



**Bat slate**

## APPENDIX 1 Breeding Bird Status Codes (British Trust for Ornithology)

### Breeding Status Codes

<b>Non-breeding</b>	
<b>F</b>	Flying over
<b>M</b>	Species observed but suspected to be still on <b>M</b> igration
<b>U</b>	Species observed but suspected to be s <b>U</b> mmerring non-breeder
<b>Possible breeder</b>	
<b>H</b>	Species observed in breeding season in suitable nesting <b>H</b> abitat
<b>S</b>	<b>S</b> inging male present (or breeding calls heard) in breeding season in suitable breeding habitat
<b>Probable breeding</b>	
<b>P</b>	<b>P</b> air observed in suitable nesting habitat in breeding season
<b>T</b>	<b>T</b> erritory presumed through registration of territorial behaviour (song etc) on at least two different days a week or more part at the same place or many individuals on one day
<b>D</b>	<b>D</b> courtship and <b>D</b> isplay (judged to be in or near potential breeding habitat; be cautious with wildfowl)
<b>N</b>	Visiting probable <b>N</b> est site
<b>A</b>	<b>A</b> gitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby
<b>I</b>	<b>I</b> brood patch on adult examined in the hand, suggesting <b>I</b> ncubation
<b>B</b>	<b>B</b> nest <b>B</b> uilding or excavating nest-hole
<b>Confirmed breeding</b>	
<b>DD</b>	<b>D</b> istraction- <b>D</b> isplay or injury feigning
<b>UN</b>	<b>U</b> sed <b>N</b> est or eggshells found (occupied or laid within period of survey)
<b>FL</b>	Recently <b>F</b> ledged young (nidicolous species) or downy young (nidifugous species). Careful consideration should be given to the likely provenance of any fledged juvenile capable of significant geographical movement. Evidence of dependency on adults (e.g. feeding) is helpful. Be cautious, even if the record comes from suitable habitat.
<b>ON</b>	Adults entering or leaving nest-site in circumstances indicating <b>O</b> ccupied <b>N</b> est (including high nests or nest holes, the contents of which can not be seen) or adults seen incubating
<b>FF</b>	Adult carrying <b>F</b> aecal sac or <b>F</b> ood for young
<b>NE</b>	<b>N</b> est containing <b>E</b> ggs
<b>NY</b>	<b>N</b> est with <b>Y</b> oung seen or heard

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