

# ***The Guernsey Barn Owl Survey Report 2022***

## ***Summary***



# Acknowledgements

Julie Davis (Survey coordinator, fieldwork, data entry and analysis, report writing/editing)

Jamie Hooper (Survey Team member, consultant, report editing/proof reader)

Chris Maurant (Channel Islands Bird Ringing Scheme ringer)

Elizabeth Sweet (Guernsey Biological Records Centre, fieldwork, IT support, infographics, data analysis, report editing)

Vic Froome (Owl Box Project and associated data)

Dot Bramall (the original Guernsey Barn Owl list)

The Barn Owl Trust (advice and special thanks for allowing the Guernsey Survey Report to be based on *The Devon Barn Owl Survey Report, 2013*)

Ben Le Prevost (Barn Owl enthusiast and finder of breeding sites)

Steve Levrier (photo)

Funding

The Ornithological Section, La Société Guernesiaise

General

All the landowners who facilitated the fieldwork

Grow Ltd (making new owl boxes)

La Société Guernesiaise

The National Trust of Guernsey

The Jersey Barn Owl Trust (information sharing about ringing and winter programmes)

Everyone who has contributed records and photographs

# List of abbreviations

ACLMS	Agriculture, Countryside and Land Management Services, States of Guernsey
BOT	The Barn Owl Trust
GBRC	Guernsey Biological Records Centre
LSG	La Société Guernesiaise
Triple-S	Site of Special Scientific Interest (location of locally important plants and/or wildlife species)

Photos:

Title Page	Kim Wilkinson
Page iii	Chris Bale (Barn Owl)
Page 1	Steve Levrier
Pages iii,3,4 and 18	Julie Davis (Barn Owl Trust)
Page 21	Mike Cunningham

# 1. Background to the Survey

## 1.1 Introduction

Barn Owls are an indicator species of open farmland and rough grassland. They are a measure of the health of these habitats. If Barn Owls are in decline, it indicates there is a problem. It is a warning sign that other wildlife which depends on these habitats may be under threat. (<https://www.biologicalrecordscentre.gov.gg/our-projects/barn-owl/>)

As Barn Owls are an indicator species it is important to have a reasonably accurate record of Guernsey's population: how many breeding pairs there are and how this compares with earlier years. They are a resident breeding species, although uncommon (Guernsey Bird Checklist 2020, [www.guernseybirds.org.gg](http://www.guernseybirds.org.gg)).

They hunt voles and mice in rough grassland. Most Barn Owls die from starvation, either they



Barn Owl with Vole

cannot find enough prey if voles have a poor breeding year, or poor weather restricts hunting activity.

Barn Owls nest in cavities. In nature, they would choose a hole high up in a tree on the edge of woodland, or a deep crevice in a quarry face. They also nest up in the rafters of outbuildings. Old granite barns have a gap high up in the gable end of the stonework where the owls would fly in and out. Farmers traditionally encouraged Barn Owls as they controlled rodents.

They are often faithful to a particular breeding site. Guernsey has several traditional breeding sites which have been used by generations of Barn Owls. At least one has probably been used for over a hundred years.

After chicks have hatched, the male leaves the nest but continues to bring in prey items. He will roost nearby, so having two boxes in a location is recommended.

If there is a sudden, unexpected disturbance, Barn Owls may desert a site. Nesting sites need to be treated with respect.

## **1.2 Aims**

In December 2019 the Ornithological Section of La Société Guernesiaise resolved to undertake a survey of the local Barn Owl population.

The aim was to produce a robust, evidence-based report by the end of 2020:

- to show the presence or absence of Barn Owls from previously known breeding sites
- to show Barn Owl abundance and distribution
- to establish a baseline for future analysis of breeding site and population trends

The report seeks to:

- inform future policy decisions made by the States of Guernsey concerning the protection of Barn Owls, and their habitats
- inform interested parties of the current status of Guernsey's Barn Owl population
- help to identify mitigation measures

## **2 Methods**

### **2.1 Survey Sites**

The 2022 Survey is the first of its kind in Guernsey. Records of breeding sites were collated from:

- desk research based on Vic Froome's information on his boxes from the late 1990s - 2012
- reports submitted to the Survey by landowners and the public in response to specific media appeals.
- information acquired by the Survey in the course of general enquiries
- information from members of the Ornithological Section of LSG and other members of the local birdwatching community
- Barn Owl ringing data

### **2.2 Site search methods**

Wherever possible, a physical search was conducted, looking for signs of occupation: sighting of a Barn Owl, fresh pellets, fresh whitewash (Barn Owl excrement) and feathers. If a search did not take place, the landowners gave detailed information to the Survey team.

The Survey benefited from the purchase of 3 trail cams, kindly funded by the Ornithological Section of LSG. There were some teething problems, but they proved to be an invaluable tool.

### 3 Results

#### 3.1 Coverage

The Survey covered the island of Guernsey. It did not include other islands in the Bailiwick.

#### 3.2 Site Occupation

Table 1. Known site occupation in 2019 - records where Barn Owls present 2017-2019

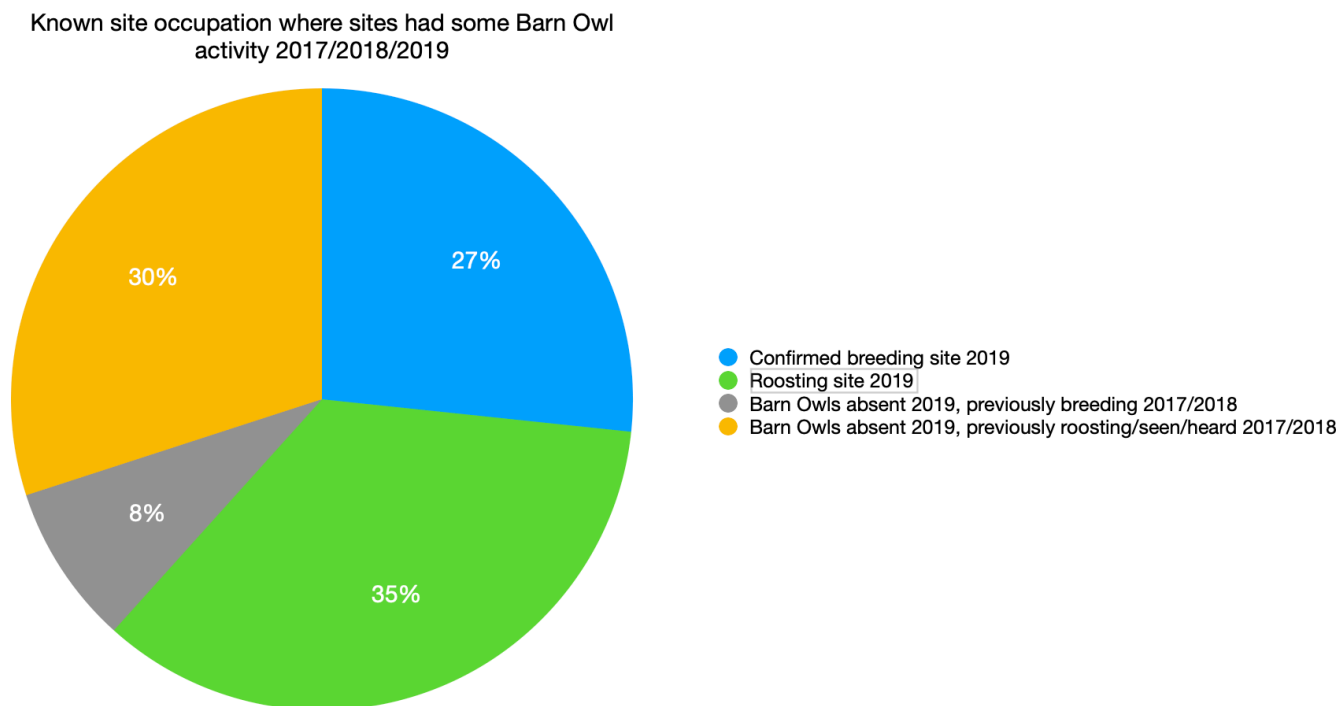
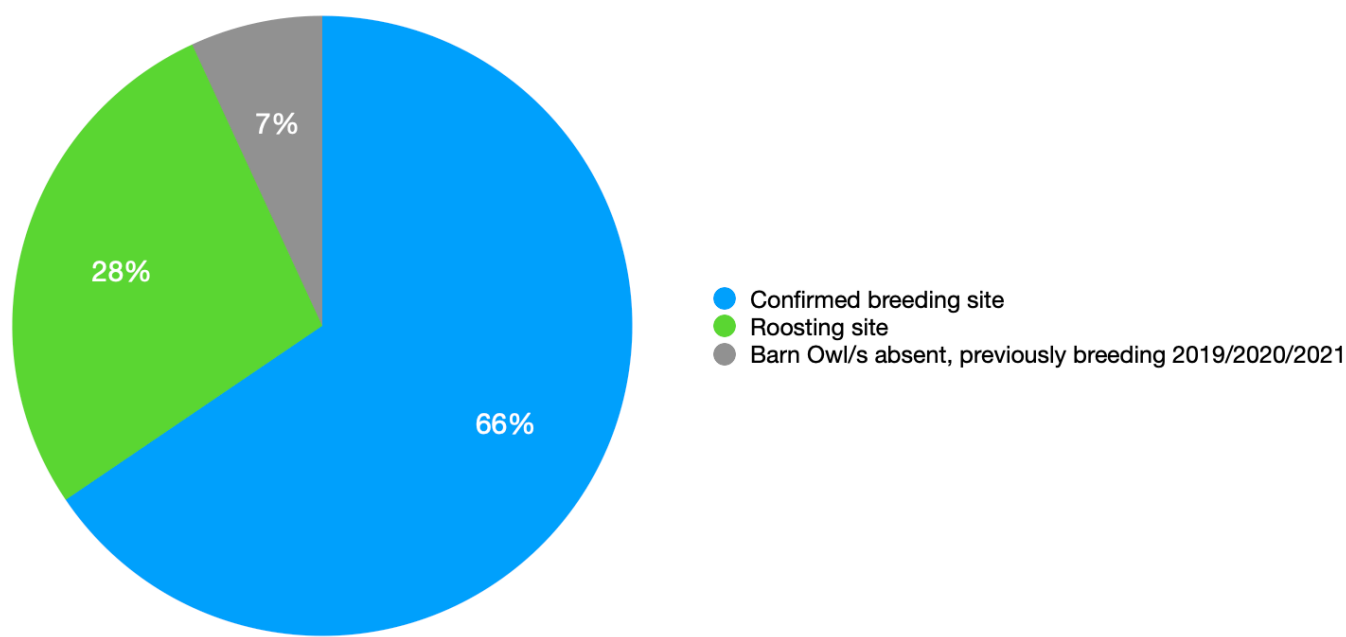




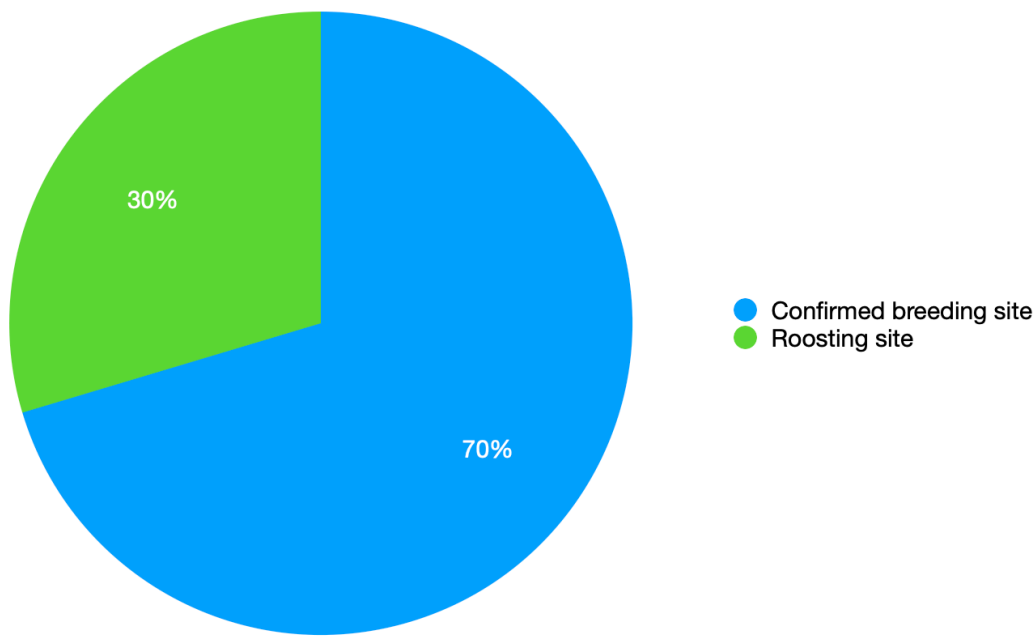
Table 2. Known site occupation in 2022 - records where Barn Owls were present in 2022.

Number of known viable breeding sites	Confirmed breeding sites	Roosting site, previously used for breeding 2019 - 2021	Barn Owl/s absent in 2022, previously breeding 2019/2020/2021	Barn Owls absent, previously seen/ heard at site 2019/2020/2021
29	19	8	2	unknown

Known site occupation 2022



Known breeding and roosting sites 2022



### 3.3 Abundance

Table 3. Known Guernsey Barn Owl Population in Autumn 2022.

\* 8 roosts, 2 had non-breeding pair

	Number of known viable breeding sites	Confirmed breeding	Roosting site	Barn Owls absent in 2019, previously breeding 2017-2018	Barn Owls absent in 2019, previously seen/heard at site 2017 - 2018
Data from Vic Froome	22	9	13	5	18
Data from other sources	15	7	8	unknown	unknown
<b>Totals</b>	<b>37</b>	<b>16</b>	<b>21</b>	<b>5</b>	<b>18</b>

### 3.4 Distribution

Map Showing Distribution of Breeding Sites by Parish

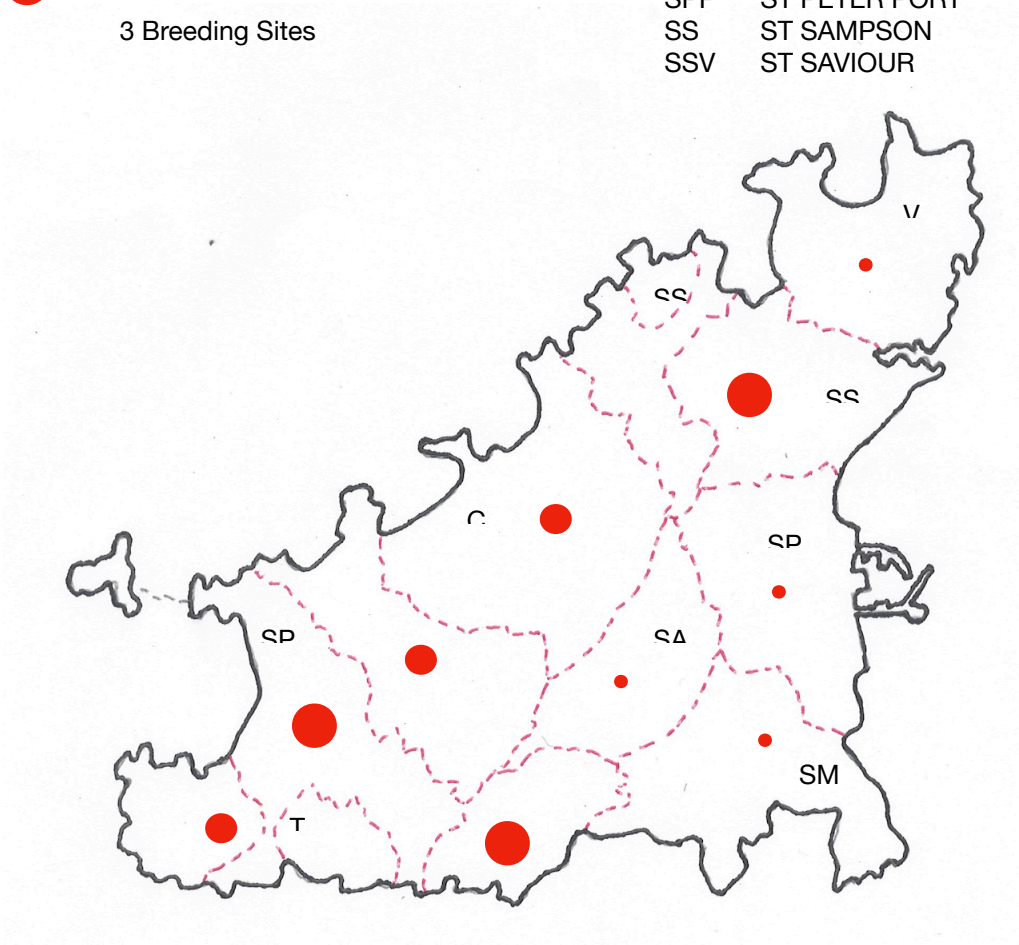
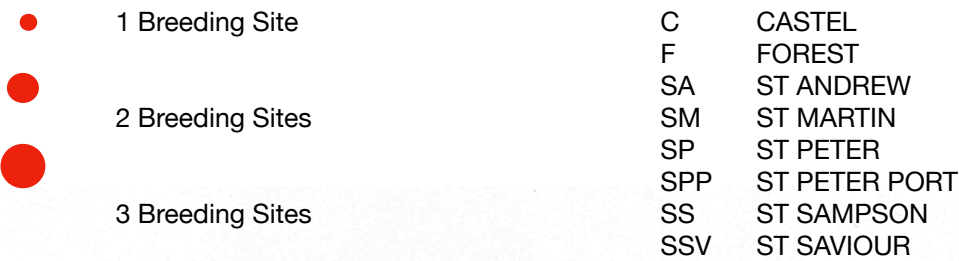
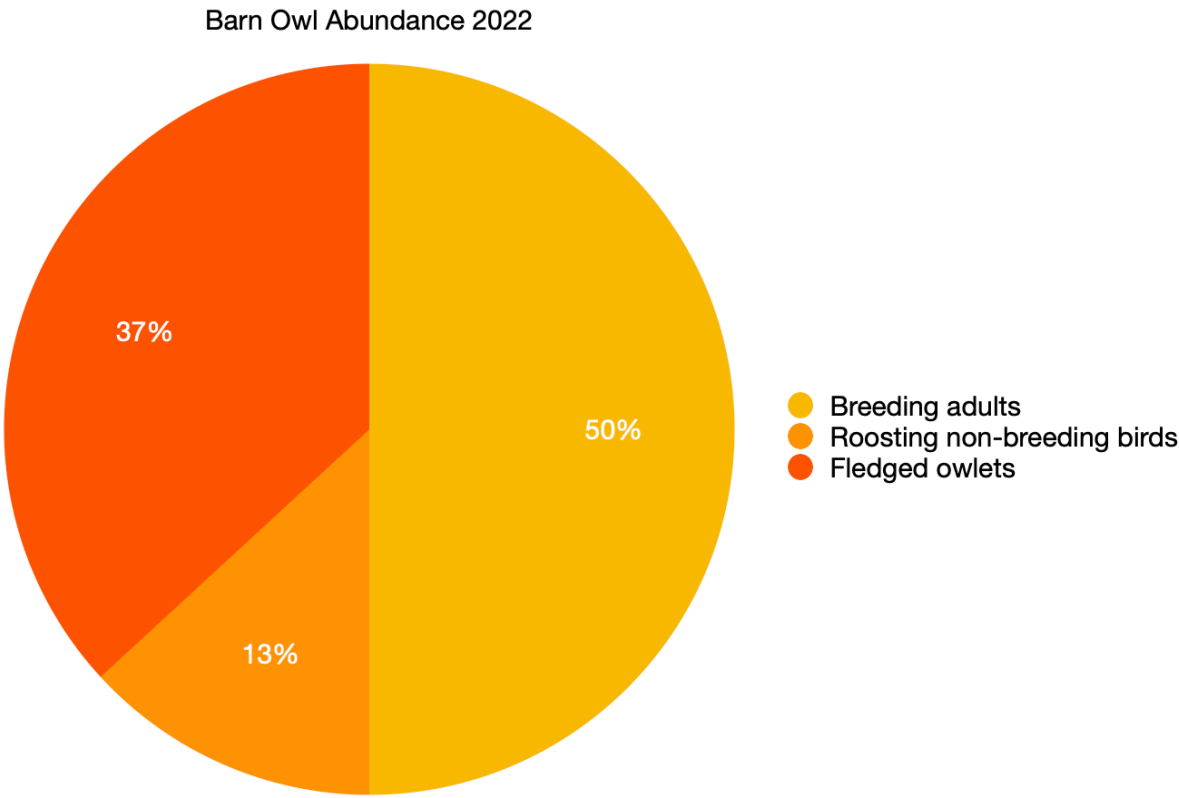


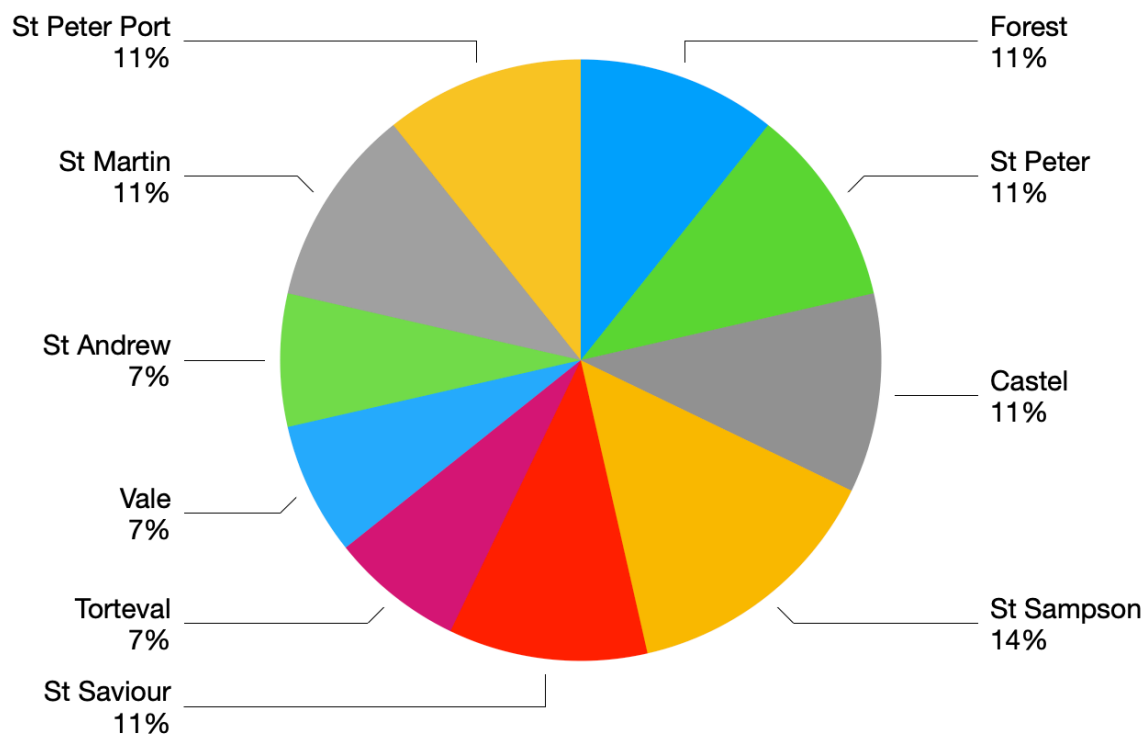


Table 4. Parish Distribution of Fledged Chicks 2022

Category	Number
Breeding adults	38
Roosting non-breeding birds	10*
Fledged owlets	28
<b>Total</b>	<b>76</b>



Parish	Number of confirmed breeding sites	Number of broods x number of chicks	Number of fledged chicks
Forest	3	3x1	3
St Peter	3	3x1	3
Castel	2	1x1, 1x2	3
St Sampson	3	2x1, 1x2	4
St Saviour	2	1x1, 1x2	3
Torteval	2	2x1	2
Vale	1	1x2	2
St Andrew	1	1x2	2
St Martin	1	1x3	3
St Peter Port	1	1x3	3
<b>Totals</b>	<b>19</b>	<b>12x1, 5x2, 2x3</b>	<b>28</b>



## **4 Discussion**

### **4.1 Covid**

Fieldwork originally planned for the 2020 season was postponed, because of Covid and lockdowns, until the 2022 season. The report scheduled to be published by the end of 2020 was delayed until the end of 2022.

### **4.2 Recording/survey methodology**

The 2022 Survey was largely based on Vic Froome's records which he kindly gave to the Survey team. They cover a period from 1997 to 2012. This data was the backbone of the 2022 survey.

Desk research to bring the data up to date was carried out over the winter 2019/2020. Private property owners were contacted by telephone or letter.

Responses were received were disappointingly low.

The Survey results show the minimum number of breeding sites.

### **4.3 Nest site occupancy**

Barn Owls are very faithful to a breeding site. In Guernsey there are several traditional breeding sites which have been used over many generations. Several of the owl boxes put up by Vic Froome have been used almost continuously since the late 1990s and early 2000s.

Owl boxes also attract Stock Doves. There were 8 reports of Stock Doves taking over an owl box, some of which had been used by Barn Owls previously.

Since 2017, 15 sites have been lost that had been used for breeding. Some of these sites may be used again in the future. In 2022, one site was used for breeding after a gap of several years.

The overall loss of these sites is an indication that the Barn Owl population is declining.

### **4.4 Abundance and Guernsey's Barn Owl population count**

The 2022 Survey recorded 19 confirmed breeding sites (38 adults) with a minimum of 28 fledged chicks. Together with 10 known non-breeding birds from other sites, Guernsey's known Barn Owl population is at least 76 birds in autumn 2022.

These figures are almost certainly less than the actual number of Barn Owls resident in the island. Barn Owls are a difficult species to survey, even in a small island.

It is highly likely that some breeding sites have not been included.

It is also highly likely that the number of chicks will be more than the 28 recorded. 8 broods were recorded as having 'at least 1 chick'. The exact number of chicks from these broods was not known. It is very probable that some of these broods had more chicks.

The fledged chick count needs to be balanced against a high mortality rate among 1st-year birds over the winter. The chances are that of the 28 1st-year birds that have fledged, around two-thirds of them will not survive the winter.

### **4.5 Distribution**

Barn Owls bred in every parish in 2022.

The Survey shows that their stronghold is in the more rural parishes of Castel, Forest, St. Saviour, St Peter and Torteval (*Table 5*). St Sampson showed up well at there were two breeding sites with two chicks each. There are a small number of breeding sites in the Vale. There is an isolated one near the east coast.

There are some very surprising gaps, particularly a broad north-westerly band from Jerbourg/ Moulin Huet in St. Martin, through part of St Andrew to Fort Hommet and Cobo in the Castel. This may be because breeding sites are present, but are not known to the Survey team.

There are several breeding sites in close proximity to the airport. This is unfortunate as there have been injuries and fatalities on the site.

## **5 Factors affecting Guernsey's Barn Owl population**

### **5.1 Impact of lack of statutory protection of Barn Owls**

'Limited local legislation is in place to protect wild birds and wild flowers.' 'There are currently no comprehensive and over-arching laws which specifically seek to protect wildlife or habitat in the Bailiwick.' (*Safeguarding Guernsey's Wildlife, A Biodiversity Strategy for Guernsey*, 2015, States of Guernsey).

Barn Owl breeding sites are protected when owls are actively breeding. The Protection of Wild Birds Ordinance, 1949 (as amended) states that it is a criminal offence knowingly to disturb breeding birds or their nests. This is the extent of statutory protection.

**Mitigation** - none currently in place.

### **5.2 Impact of lack of statutory protection of habitat**

There is no statutory protection of habitat in Guernsey.

**Mitigation** - none currently in place.

### **5.3 Impact of loss of habitat**

#### **5.3.1 Loss of foraging habitat**

'The optimum foraging habitat for Barn Owls is rough grassland with a litter layer of no less than 7cm deep.' (Barn Owl Conservation Handbook). This is the preferred habitat of the Barn Owl's main prey item, the Guernsey Vole. They make tunnels through the thatch so they are hidden from view from aerial predators. They do not escape from the Barn Owl's excellent sense of hearing.

The 2018 Habitat Survey recorded a significant decline in Species-Rich Grassland, a 37% decrease since 1999. Heathlands, while showing some recovery are also less than they were in 1999. These are the habitats where Barn Owls hunt.

There are several factors contributing to the decrease in these habitats locally.

- farming is becoming more intensive. Some uneconomic land parcels have been abandoned or had management reduced and are returning to scrub
- agricultural land is being turned into domestic curtilage
- land is being developed for housing, light industry and recreation

**Mitigation** - none currently in place.

#### **5.3.2 Loss of natural breeding habitat**

There was a 131% increase in all types of Woodland between 1999 and 2018, due to a natural succession from scrub and newly planted woodland. This will create natural sites for Barn Owls to breed in the long term. In 2022, trees in new areas of woodland will not be sufficiently mature.

**Mitigation**

- *Vic Froome's owl box project and other individuals making or buying owl boxes. although many of these boxes are now coming to the end of their life.*
- *It is planned to set up a winter rolling programme of repair and maintenance, similar to that carried out by the Jersey Barn Owl Conservation Trust, for at least the next 5 years. Efforts are underway to secure equipment and a team of volunteers to help clean out and restore boxes at breeding sites to extend their lifespan.*
- *Future measures could include identifying suitable areas and encouraging landowners either to replace old boxes that are beyond repair or putting up new ones.*

**5.3.3 Loss of suitable outbuildings**

Many barns and outbuildings in Guernsey have been converted into habitable accommodation. The pool of suitable outbuildings for Barn Owls has been reduced. In the UK there is a policy ensuring the interests of a protected species are given full consideration. No such requirement exists locally. Without built-in owl provision, eg. owl box in the roof space, these conversions mean that viable nesting sites are being lost.

**Mitigation** - none currently in place.

*Future measures could include an environmental survey for evidence of breeding/roosting Barn Owls. If an outbuilding has evidence of occupation, planning regulations could require making provision for the owls e.g. putting up an owl box or having an owl box fitted in the roof space.*

**5.4 Impact of unfavourable weather**

Barn Owls cannot hunt in wet weather. They will keep a cache of food but prolonged wet weather can result in starvation.

Locally, recent long spells of hot, dry weather has also had a negative impact on the Barn Owl population as it results in a drop of vole numbers.

These negative impacts are balanced by the Barn Owl's ability to recover relatively quickly. With favourable conditions, they can raise bigger broods and sometimes have more than one brood in a year.

**Mitigation** - no practical measures possible.

**5.5 Impact of the airport**

Guernsey Airport is situated close to several long term breeding sites. Barn Owls are attracted to the grassland within the airport. There have been collisions with vehicles and aircraft which have resulted in injuries and at least one fatality in the past few years.

**Mitigation** - no practical measures possible.

**5.6 Impact of rodenticide**

There is no reliable evidence of rodenticide as a factor that is affecting the Barn Owl population locally. Barn Owls can die as a result of secondary poisoning when they catch prey that has eaten rodenticide.

It is concerning that some landowners, including States-held land, have used rodenticides in the past which have accidentally been taken out beyond the site into areas where Barn Owls hunt and breed.

**Mitigation** - none currently in place.

*Future measures could include stricter regulations about the application of rodenticides, undertaken by qualified personnel.*

## **6. Summary**

Coverage of the Survey was satisfactory and very much helped by previous datasets and the use of trail cams.

In 2019, there were 18 sites where Barn Owls were absent where they had been seen or heard in the previous 2 years. Together with the reduced occupancy of nest sites in 2022 this strongly indicates a declining population.

Even taking into account that there is a high probability there are breeding sites that are not known to the Survey team and that the actual size of the Barn Owl population will be bigger than the known numbers from the survey, Guernsey has a small population and action is needed if it is to stay viable.

The scale of the decrease in Species-Rich Grassland is a major concern for the future of Barn Owls in Guernsey. If the island continues to lose this valuable foraging habitat at its current rate, what remains would only sustain a reduced Barn Owl population. Increasing pressures for development together with the lack of statutory habitat protection pose a threat to the future viability of the species.

Guernsey has an excellent record of mitigating the loss of natural breeding sites by the provision of owl boxes. Loss of breeding sites from converted outbuildings could be offset by the introduction of planning legislation. Similar to the UK, this would require an ecological survey and built-in owl provision in a building that is shown to be used by Barn Owls.

Responsible use of rodenticide would reduce the threat of secondary poisoning and would be a benefit to the wider environment.

This has been Guernsey's first in-depth survey. It will serve as a baseline for future counts which are planned to take place for at least the next 5 years.