

# County Meath Barn Owl Monitoring Report 2024



Prepared by BirdWatch Ireland for Meath County Council

November 2024

### Funding:

Barn Owl monitoring in 2024 in County Meath was coordinated by BirdWatch Ireland and supported by Meath County Council and the National Parks and Wildlife Service through the Local Biodiversity Action Fund. The Local Authority Biodiversity Officer Programme is delivered in Partnership with the Heritage Council.

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### Acknowledgements:

We are grateful to Ben Malone, Biodiversity Officer, Meath County Council, and Loreto Guinan, Heritage Officer, Meath County Council, for their continued support of this project. Sincere thanks to the National Parks and Wildlife Service, Stephen Whelan of the Garristown Biodiversity Group, and Neil Mitham for their support and assistance with Barn Owl conservation in County Meath. Special thanks goes to the Meath BirdWatch Ireland Branch, and particularly Terry Cassidy, Franck Ar Moenner, Sophie Hayley, Paul Gallagher and Peter Farrell for their great work in initiating and implementing the Barn Owl Nest Box Scheme and for their continued knowledge, support and assistance in carrying out the Meath Barn Owl survey. Thank you to Nicola Carroll of the Louth Barn Owl Project for sharing information on Barn Owl sites on the Louth/Meath border. Thanks too to the Preston family at Swainstown Farm for hosting a Barn Owl workshop in September 2024. Thanks also to BirdWatch Ireland colleagues and staff for their assistance, particularly Brian Caffrey and Niall Hatch and to administration staff, particularly Annette Lambkin, Valerie Lowth, Fergus Conway and Louise Barry.

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## 1. INTRODUCTION

The Barn Owl is one of Ireland's most recognisable and admired birds. Known as the 'farmers friend', it has long been closely linked with farming practices in Ireland, and traditionally nested in old stone farm buildings, often within the farmyard. However, the Barn Owl is a species which has struggled in recent decades. Due to widespread declines in their population and range, it is now a Red-listed Bird of Conservation Concern in Ireland. The decline of the Barn Owl in Ireland has been driven by several factors, such as land use changes, the intensification of farming which has caused the loss of suitable foraging habitat, the increased use of rodenticides, and the loss of nest sites.

The Barn Owl is a cavity nesting species. Traditionally they have nested in cavities in old farm buildings and castles, chimneys of derelict buildings and the natural cavities of mature trees. The modernisation of farming practices, including the development of modern, steel structured farm buildings, has reduced the availability of suitable nesting sites for Barn Owls in farmyards. Some nest sites have been lost to building renovation and demolition, while others have been lost to the collapse of unmaintained ruins. Nest boxes simulate the cavity nesting requirements of the species, and as such, the Barn Owl has responded well to the provision of nest boxes in Ireland. BirdWatch Ireland has recorded over 150 nest boxes used by Barn Owls for breeding, and this number is increasing each year. In 2023 in County Cork alone, 46 nest boxes were used by Barn Owls for nesting (McCarthy *et al.*, 2023). These nest boxes provide safe and secure sites for nesting in buildings and on trees where there may be no other nesting opportunities. As well as benefitting Barn Owls, encouraging Barn Owls onto farms will also have benefits for the farmer. Many farmers have installed nest boxes as Barn Owls are one of the best means of natural rodent control. A pair of Barn Owls can catch over 20 rodents in a single night during the breeding season (hence their name 'the farmers friend').

Recent monitoring by BirdWatch Ireland is revealing a shifting pattern in the previous downward trajectory of the Irish Barn Owl population. A survey of the Barn Owl population of Meath in 2023 revealed early signs of recovery after an extended period of extensive declines (Cully *et al.* 2023). Over the preceding ten years, the Barn Owl breeding range had increased by a recorded 43%, with nine occupied sites recorded across the county in 2023, six of which had breeding pairs of Barn Owls. However, the Barn Owl breeding range in Meath has remained 44% lower than the range recorded between 1968-1972 (Sharrock, 1976), thereby demonstrating that the population had not fully recovered after extensive declines and remains limited in comparison with its historical range. Given the increasing trend of the breeding season range of Barn Owls between 2007/11 to 2023 (Balmer *et al.*, 2013; Cully *et al.*, 2023), it would be hoped that this positive trajectory has continued in the years since.

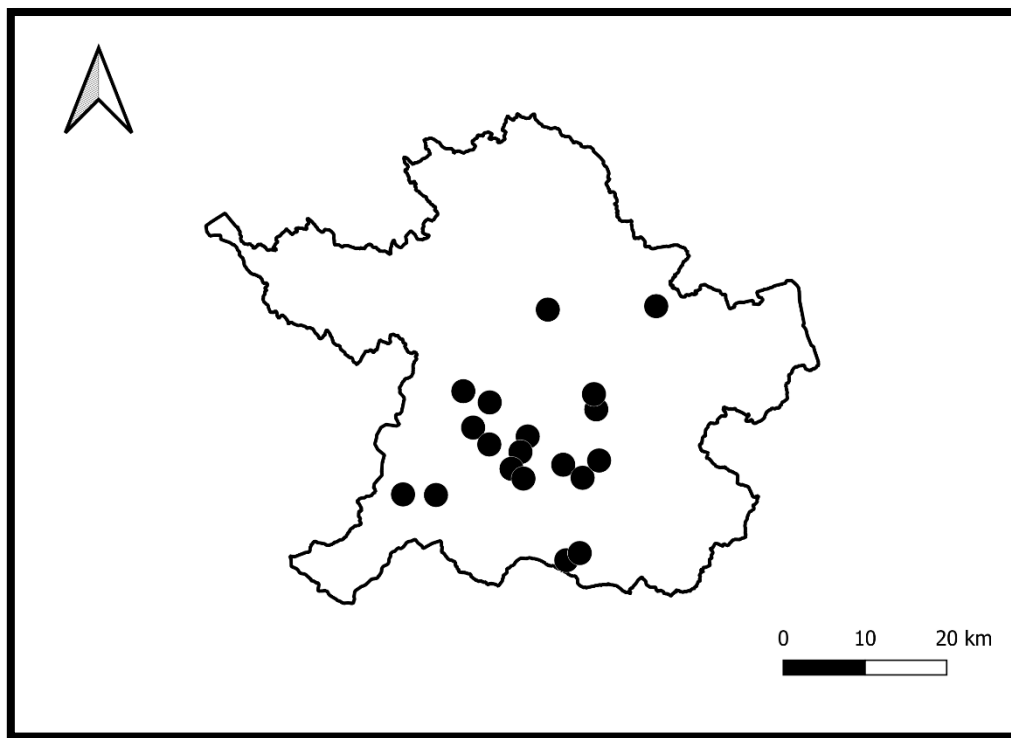
In the last number of years, the Meath Branch of BirdWatch Ireland initiated a nest box project in the county in order to provide safe and suitable nest sites for Barn Owls. Often times, nest boxes are safer and more secure than existing nests in natural tree cavities and buildings. Nest boxes also enable easier monitoring of Barn Owls and can lead to a more complete assessment of local populations. They are also a useful and effective conservation tool where existing nest sites are at

risk of being lost, through, for example, renovation or building collapse. Dedicated nest box projects in other counties have significantly increased the number of nest boxes available to Barn Owls (e.g. in Cork, Kilkenny, Laois, Offaly, Westmeath and Wexford). Additionally, the availability of potential nest sites may continue to decline if the Barn Owl population continues to recover. Therefore, the provision of nest boxes will enable the continued expansion of the population. In total, 20 nest boxes have been installed in Meath up to the start of the 2024 breeding season.

This report will provide an update on these nest boxes. We also provide an update on the status of Barn Owls during the breeding season in the county more widely.

## 2. County Meath Nest Boxes

A total of 20 nest boxes have been installed by the Meath Branch of BirdWatch Ireland in the county up to the start of the 2024 breeding season. The majority of nest boxes have been concentrated around the Trim area of Meath. The distribution of these nest boxes is shown below in Figure 1.



**Figure 1.** Locations of 20 Barn Owl nest boxes installed in Meath to the start of the 2024 breeding season.

## 3. Nest box results

Of 20 nest boxes installed by the Meath BirdWatch Ireland Branch, none have thus far been used by Barn Owls. However, when nest boxes installed by members of the public are included (two



nest boxes, both of which are in use), the occupancy rate of all nest boxes assessed is 10%. Although this is a lower occupancy of nest boxes compared to other counties, such as Clare, Offaly and Westmeath, it can take a number of years for nest boxes to be found and occupied by Barn Owls. Indeed, first year nest box occupancy in Westmeath was 15%, however second year occupancy rose to 60%. The longer timeframe of being in place coupled with an increasing Barn Owl population in the county led to this significant increase in nest box occupancy. Given the increasing trends in Barn Owl numbers throughout most counties in Ireland, due to the spread of non-native small mammal species (namely the Bank Vole and Greater White-toothed Shrew), it can be expected that the occupancy rates of nest boxes in Meath will increase in the years to come.

Through the installation of nest boxes in County Meath, the Meath Branch of BirdWatch Ireland are engaging and working with local volunteers, NPWS rangers and landowners which greatly assists in the running of the project, as well as giving locals ownership and involvement in the nest box scheme. Additional nest boxes have already been installed in 2024, as is detailed below in section 5, with additional nest boxes still to be installed.

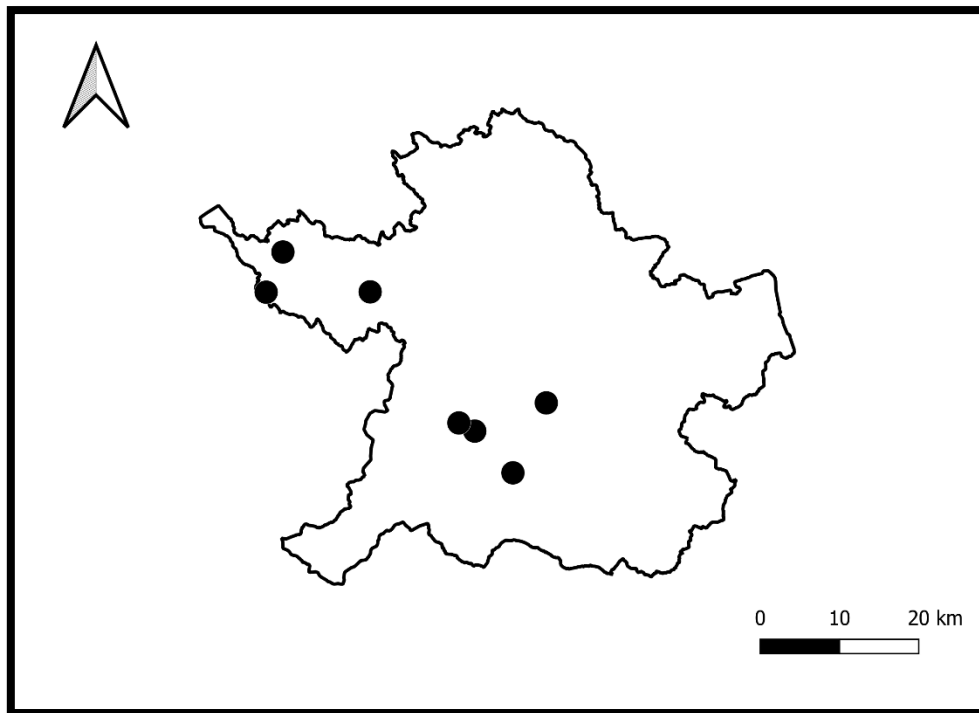
Informed by this nest box scheme, we set out the following recommendations:

- Expand the nest box scheme to install more nest boxes and further build capacity among local volunteers, landowners, and community groups.
- Continue to monitor and assess the success of nest boxes installed to date.
- All nest box locations will be provided in partnership with Meath County Council to help insure their future protection.

#### 4. County Meath Barn Owl monitoring results

A total of seven active Barn Owl sites were identified in County Meath in 2024, with six of these being confirmed nest sites (Figure 3). Similar to 2023, the main concentration of active Barn Owl sites was in the western half of the county.

Below we provide a description of the seven active Barn Owl sites from 2024. Additionally, the number of confirmed breeding sites remained the same across 2023 and 2024, despite three of the confirmed nests in 2024 being newly identified. Three sites that were confirmed as breeding sites in 2023 were not confirmed as breeding sites in 2024. One of these sites was not possible to survey due to difficulties with access and contacting the landowner, one site was surveyed and confirmed as active, but breeding was not confirmed (site 3 below), and the third site was surveyed but was not in use by Barn Owls in 2024. For this third site, it is likely that Barn Owls abandoned the site due to the presence of a new Raven nest within a few metres of the shallow cavity where the Barn Owls nested in 2023.



**Figure 2.** Active Barn Owls sites in 2024.

A site is recorded as **'active'** if Barn Owl activity is confirmed via evidence of fresh signs or confirmation of one or both adults via observation or vocalisation, but there is no indication of breeding. This could be a non-breeding site, used for roosting, or a 'breeding site' which may have failed prior to the survey visits.

Sites were confirmed as a **'breeding site'** based on confirmation of; a pair present at the site by observation or vocalisation; a female attending a nest, or confirmation of pre-laying, incubation or brooding behaviour; defensive behaviour by one or both adults; confirmation of a prey delivery or if young are observed or heard.

#### Site 1

This site was identified during the 2023 survey of Meath. The site is a ruined mansion where Barn Owls nest on top of a high wall. This makes accessing the nest for ringing unfeasible. In 2023, three near-fledged chicks were observed at this site. In 2024, two fledged chicks were observed during a night visit in July.

#### Site 2

This site was identified during the 2023 survey of Meath. This site is a large, ruined mill where Barn Owls nest in a cavity of a wall, where the cavity is part of an old chimney. Three of four well developed chicks were ringed at this site in July of 2024, with 4 chicks also being ringed at this site the previous breeding season in 2023.

### **Site 3**

This site was identified during the 2023 survey of Meath. This site is a derelict church where, in 2023, Barn Owls successfully bred in the bell tower of the church. However, during a daytime and night-time visit in July 2024, it was not possible to confirm the presence of chicks, and therefore it is unknown whether a breeding attempt was made this year. Fresh pellets at the site confirmed Barn Owl presence.

### **Site 4**

This site was identified during the 2023 survey of Meath, however locals reported that Barn Owls were present at the site as early as the 1990s. It is a large, ruined castle where Barn Owls successfully fledged five chicks in 2023. Three or four fledged chicks were observed during a night visit to this site in July 2024.

### **Site 5**

This site was identified during the 2023 survey of Meath, however it was not possible to survey it at the time due to a lack of access. This site is a large, ruined mansion. In the summer of 2024, a fledged Barn Owl was reported by a member of the public at this site. In addition, observations of Barn Owl presence (fresh pellets) were made by the fieldworker during a daytime sign searching visit to the site.

### **Site 6**

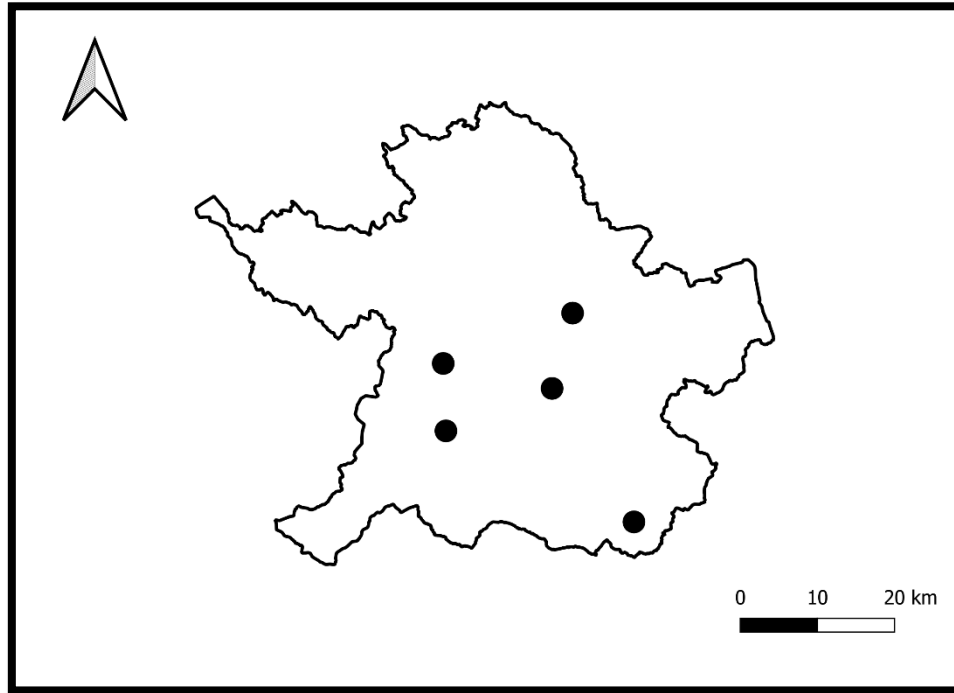
This site was identified during the 2024 breeding season, having been reported via a member of the public to the local Meath BirdWatch Ireland Branch. This site is a nest box in a barn which is partly in use. This is the first year the nest box has been occupied by Barn Owls, with at least two chicks successfully fledging from the nest.

### **Site 7**

This site was identified during the 2024 breeding season, having been reported via a member of the public. This site is a nest box in a largely disused barn. The breeding pair laid six eggs but these failed to hatch, therefore the breeding attempt was unsuccessful.

## 5. County Meath Barn Owl nest boxes 2024

The Meath Branch of BirdWatch Ireland have continued their nest box installations into 2024. To date, five nest boxes have been installed between May and October 2024, with two pole nest boxes also currently under construction (as of early November). It is expected that these nest boxes will be installed by the end of the year. The locations of the five nest boxes installed in 2024 to date are shown below (Figure 3), along with a selection of images of these nest boxes.

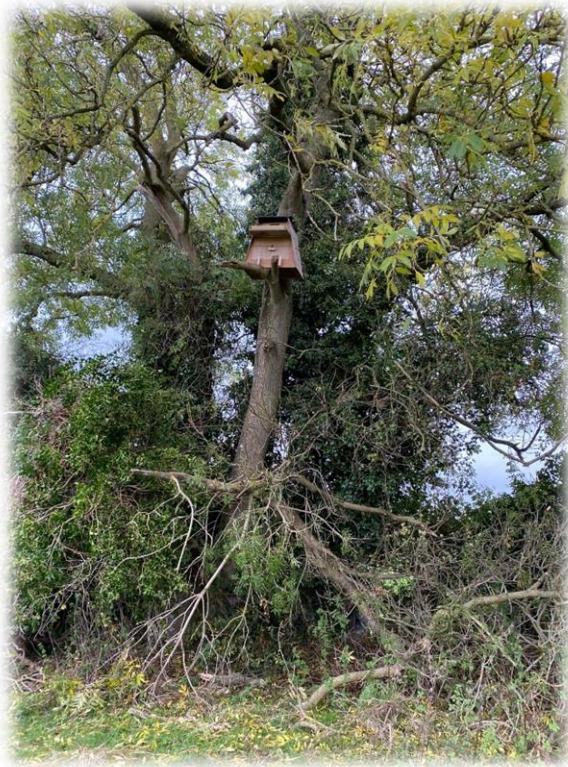


**Figure 3.** Locations of the five Barn Owl nest boxes installed in Meath between May and October 2024.





**Image 1.** Tree nest box installed by the Meath Branch of BirdWatch Ireland in spring 2024.



**Image 2.** Tree nest box installed by the Meath Branch of BirdWatch Ireland in October 2024.



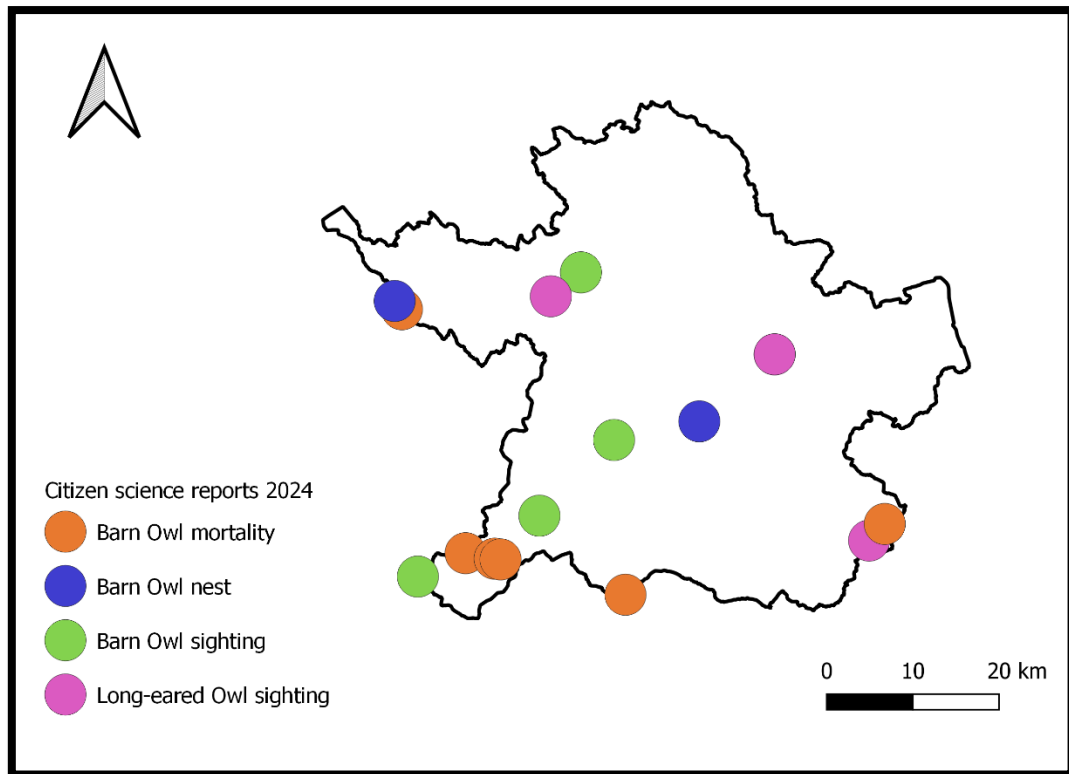


**Image 3.** Tree nest box installed by the Meath Branch of BirdWatch Ireland in October 2024 for Rathcairn National School.

## 6. Citizen Science- reports from members of the public

During the course of 2024, we received multiple reports by members of the public of Barn Owl sightings, dead Barn Owls and Barn Owl nest sites in Meath. Each report had to be assessed and verified where possible. Reports from members of the public led to the discovery of two of the six confirmed nest sites in Meath in 2024.

In total we received 16 reports from members of the public. This included six dead Barn Owls (five of which were found on motorways), four sightings of live Barn Owls, two nest sites (both in nest boxes) and four reports of Barn Owl that turned out to be Long-eared Owls (note that two of these Long-eared Owl reports were from the same location).



**Figure 4.** Citizen science reports from County Meath in 2024 (n = 16).

## 7. Awareness raising activities

Good cooperation with the farming community is crucial to the ongoing and future success of Barn Owl conservation measures in County Meath. To promote this cooperation Barn Owl conservation measures, a Barn Owl Conservation Workshop aimed at farmers, and supported by the Meath branch of the Irish Farmers Association, took place at Swainstown Farm on the 23<sup>rd</sup> of September 2024. The talk was well attended, with approximately 40 attendees. The event included a display of both Barn Owl nest box types- interior and exterior boxes.



**Figure 5.** Poster advertising the Barn Owl Conservation Workshop in Meath.





**Image 4.** The Barn Owl Conservation Workshop was well attended.



**Image 5.** Representatives of BirdWatch Ireland, BirdWatch Ireland Meath Branch, IFA Meath branch, Meath County Council and Swainstown Farm.

## 8. References

Balmer, D., Gillings, S., Caffrey, B., Swan, B., Downie, I. & Fuller, R. (2013). Bird Atlas 2007-11. The breeding and wintering birds of Britain and Ireland. British Trust for Ornithology, Thetford.

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All monitoring, ringing and photography (where relevant) was undertaken under licence from the National Parks and Wildlife Service. Nest boxes should never be inspected during the breeding season by unlicensed individuals and those without experience of Barn Owls.