

**Farm Buildings, Rockforest,
Co. Tipperary
(Planning Reference 25/7/24)**



BAT SURVEY

7th September 2024



Tait Business Centre, Dominic Street,
Limerick City, Ireland.

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1. INTRODUCTION

This report provides a bat survey of farm buildings at Farm Buildings, Rockforest, Co. Tipperary (Planning Reference 25/7/24).

The site location is shown in Figure 1.

1.1 Bat species in Ireland

There are eleven recorded bat species in Ireland, nine of which are considered resident on the island. Eight resident bat species and one of the vagrant bat species are members of the Vespertilionidae family. The ninth resident species is the Lesser Horseshoe Bat *Rhinolophus hipposideros*, which belongs to the Rhinolophidae family.

The resident Irish bat species are:

- Daubenton's bat (*Myotis daubentonii*)
- Whiskered bat (*Myotis mystacinus*)
- Natterer's bat (*Myotis nattereri*)
- Leisler's bat (*Nyctalus leisleri*)
- Nathusius' Pipistrelle (*Pipistrellus nathusii*)
- Common Pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)
- Brown Long-eared bat (*Plecotus auritus*)
- Lesser Horseshoe Bat (*Rhinolophus hipposideros*)

Other bat species (vagrants) recorded are:

- Brandt's bat (*Myotis brandtii*)
- Greater horseshoe bat (*Rhinolophus ferrumequinum*)

1.2 Types of bat roost

The main types of bat roost are as follows:-

- Maternity site, where pups are born and raised to independence;
- Hibernation site, where bats may be found during the winter;
- Mating site, where males and females gather during the autumn;
- Feeding site (night roost), where bats rest between feeding bouts during the night but are rarely present by day;
- Transitional (or swarming) site, where bats may be present during the spring or autumn;
- Satellite roost, used by males and non-breeding females.

The presence of a large maternity roost can normally be determined on a single visit at any time of year, provided that the entire structure is accessible and that any signs of bats have not been removed by others. However, minor roosts are less obvious. 'Presence/absence' surveys may determine presence but it can be extremely difficult to demonstrate absence for highly mobile animals such as bats.



1.3 Legislation Relating to Bats

Bats are strictly protected under both national and international law. The purpose of this legislation is to maintain and restore bat populations within their natural range. This implies that the habitats on which they rely and the ecology of their life cycles should not be compromised by human activities. Where activities have the potential to compromise bat populations, measures are required to be put in place to avoid impacts or compensate and mitigate for those impacts. The key legislation which provides protection to bats is outlined below.

1.3.1 *Wildlife Act 1976*

In the Republic of Ireland, all bats and their roosts are protected under Schedule 5 of the *Wildlife Act 1976* (amended 2000). It is unlawful to disturb either without the appropriate Licence.

1.3.2 *EU Habitats Directive*

In addition to domestic legislation bats are also protected under the *EC Directive on the Conservation of Natural habitats and of Wild Fauna and Flora* (Habitats Directive 1992). This Directive seeks to protect rare species, including bats, and their habitats and requires that appropriate monitoring of populations be undertaken. All bat species are protected under Annex IV of the EU Habitats Directive, while the lesser horseshoe bat (*Rhinolophus hipposideros*) is listed under Annex II. Member states are required to designate Special Areas of Conservation for all species listed under Annex II in order to protect them. The EU Habitats Directive has been transposed into Irish law with the European Communities (Birds and Natural Habitats) Regulations 2011. A total of 41 SACs have been designated for the Annex II species lesser horseshoe bat (1303), of which nine have also been selected for the Annex I habitat 'Caves not open to the public' (8310).

1.3.3 *Bern and Bonn Conventions*

Ireland has also ratified two international conventions which afford protection to bats amongst other fauna. These are known as the 'Bern' and 'Bonn' Conventions. *The Convention on the Conservation of European Wildlife and Natural Habitats* (Bern Convention 1982), in relation to bats, exists to conserve all species and their habitats. *The Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention 1979, enacted 1983) was instigated to protect migrant species across all European boundaries, which covers certain species of bat.

1.3.4 *Derogation licences*

Any works interfering with bats and especially their roosts, may only be carried out under a derogation Licence granted by National Parks and Wildlife Service (NPWS) pursuant to Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish law).

The destruction, alteration or evacuation of a known bat roost is a notifiable action and can only be carried out with a derogation licence from the National Parks and Wildlife Service. Any works that might interfere with bats or their roost sites can only be carried out under licence to derogate from Regulation 23 of the Habitats Regulations 1997 and Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish Law). Details with



regards to Appropriate Assessments, procedures and parameters under which derogation licences may be obtained are outlined in Circular Letter NPWS 2/07 '*Guidance on Compliance with Regulation 23 of the Habitats Regulations 1997 – strict protection of certain species / applications for derogation licences*' issued on the 16th of May 2007 on behalf of the Minister of the Environment, Heritage and Local Government.



Figure 1 Location of the subject at Rockforest, Co. Tipperary (Planning Reference 25/7/24).



2. METHODOLOGY

2.1 Guidelines

The survey and assessment had regard to the methodology outlined in:

- *Bat Mitigation Guidelines for Ireland v2* by Marnell *et al.*, (2022)
- *Bat Tree Habitat Key (BTHK)* by Andrews, H (2018).
- *Bat Surveys for Professional Ecologists: Best Practice Guidelines 3rd Edition* by Collins (2016)
- *Guidance on the strict protection of certain animal and plant species under the Habitats Directive in Ireland* by NPWS (2021)
- *Bat Workers' Manual 3rd Edition* by JNCC (2004) and
- *British Bat Calls: A Guide to Species Identification* (Russ, 2012).

Table 1 Definition of bat roost types adapted from Collins (2016).

Roost Type	Definition
Day Roost	A place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
Night Roost	A place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
Feeding Roost	A place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
Transitional/occasional Roost	Used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
Swarming Site	Where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites.
Mating Sites	Where mating takes place from late summer and can continue through winter.
Maternity Roost	Where female bats give birth and raise their young to independence.
Hibernation Roost	Where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.
Satellite Roost	An alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

2.2 Desktop review

The bat suitability of habitat in the study area for bats was obtained from the National Biodiversity Data Centre database. This map provides a picture of the broad scale geographic patterns of occurrence and local roosting habitat requirements for Irish bat species. The maps are a visualization of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats (Lundy *et al* 2011). This desk study was originally completed in July 2023 and was updated in February 2024. A search was completed on the National Biodiversity Data Centre datasets for any new relevant bat records for the area.

2.2 Field Surveys

A survey of the site was carried out on the 27th of July 2024. All parts of the site were accessible during the current survey. The survey involved a full day-time inspection of the site and the buildings structures onsite. The survey had regard to the methodology outlined in *Bat Mitigation Guidelines for Ireland* by Kelleher & Marnell (2006) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines* by Collins (2016). The site was walked and assessed in terms of suitability of habitat for bats. The subject buildings were assessed for their potential usage by bats. The subject buildings were inspected both externally and internally for any evidence of bat use. Any potential ingress / egress points in the building



structures were identified and any visible signs of bat usage were noted. Cracks, crevices etc. were investigated as potential ingress / egress points and for evidence of bat usage and / or habitation, such as smearing lines, droppings and staining.

3. RESULTS

3.1 Desk study

The National Biodiversity Data Centre (NBDC) maps landscape suitability for bats based on Lundy *et al.*, (2011). The maps are a visualisation of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats. Table 1 below gives the suitability of the study area for the bat species found in Ireland (based on NBDC) along with their Irish Red List Status (from Marnell *et al.*, 2009). This is an updated assessment completed in February 2024 but the rating has not changed since the Ecofact (2023) survey. The overall assessment of bat habitats for the current study area is given as 32.78 which is considered to be low.

Table 3 Bat Suitability for habitats in the study area of the proposed development, as obtained from NBDC maps. Irish red list status also indicated.

Common name	Scientific name	Suitability index	Irish red list status
All bats	-	32.78	
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	45	Least Concern
Brown long-eared bat	<i>Plecotus auritus</i>	43	Least Concern
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	50	Least Concern
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	2	Least Concern
Leisler's bat	<i>Nyctalus leisleri</i>	44	Near Threatened
Whiskered bat	<i>Myotis mystacinus</i>	33	Least Concern
Daubenton's bat	<i>Myotis daubentonii</i>	35	Least Concern
Nathusius's pipistrelle	<i>Pipistrellus nathusii</i>	1	Least Concern
Natterer's bat	<i>Myotis nattererii</i>	42	Least Concern

3.2 Field survey

The site consists of several sheds, a barn, a large modern cow shed, and surrounding yards. The entrance road is oriented to the northwest, and most of the buildings follow the same orientation. The sheds and the barn are in poor condition, and most are slated for demolition. A slatted tank for holding slurry has been installed in the ground adjacent to the modern cow shed. No other recent construction work was observed.

All of the buildings were surveyed, but signs of bat activity were found in only two of the sheds. A small number of old bat droppings were recorded in each of these sheds, though no bats were observed during the survey. The droppings were likely to be from a Pipistrelle species.

The sheds, being generally low in height and vulnerable to predators, are mostly unsuitable for anything more than temporary bat roosts. Additionally, the poor state of repair of the sheds provides limited suitable cavities or shelters for roosting bats, even for temporary use. The crevices present in both sheds were inspected, and no bats were found. No further signs of bats were discovered in any of the other buildings.



The immediate area surrounding the site is primarily agricultural, with a few mature trees, none of which seem to offer much potential as bat roosts. Likewise, the surrounding lands do not provide ideal foraging habitat for bats.

Some old nests were visible in a few of the sheds, but no active nests were found in any of the buildings on the site. Feral pigeons were observed roosting on the cross beams at ceiling level in the modern cow shed.

In conclusion, occasional individual bats may have used these sheds in the past, but there is no evidence of a significant roost, and no bats were found roosting in any of the buildings during the survey. One of the sheds has a partially collapsed wall, which may have made it more suitable for bats before the damage occurred. While individual non-breeding bats could potentially use any of the buildings, the old droppings suggest only minimal past use, and there were no signs of current activity. The number of bat droppings found was nominal, and though the buildings may have offered more roosting potential in the past, the indications are that they are not currently being used by bats.



4. IMPACTS

4.1 Roost Habitat Loss

The two sheds are considered to be historical minor roosts used by a small number of Pipistrelles. The evidence points to this probably being a minor satellite roost in the past used by small numbers of male or non-breeding female bats. Demolishing the building will result in the loss of a former or potential minor roost – so mitigation will be required a precaution. It is noted again that any derelict building could, at any time, be used by roosting Pipistrelles. It is not an unusual finding and this is a common an adaptable bat species. Standard routine bat mitigation is all that will be required (see Section 5).

4.2 Foraging / Commuting Habitat Loss

The site provides only marginal bat foraging and commuting habitat. It is not predicted that there would be any impact on bat foraging and commuting routes from the development of the site.



5. MITIGATION

5.1 License Requirements

A derogation Licence under Regulation 25 of the European Communities (Natural Habitats) Regulations 1997 will need to be obtained for this work from the National Parks and Wildlife Service in advance of demolition works. These licences are routinely granted for works like this. Works on any derelict buildings like the subject one will require this licence to be in place.

5.2 Avoidance Mitigation

Demolition works can be planned for outside active bat season and completed under a derogation licence. The bird nesting season should also be avoided. Works should take place during the period October to February.

5.3 Bat Boxes

Four bat boxes will be installed to compensate for the loss of the historical roost.



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PLATES



Plate 1 View of site from NE - note modern cow shed on the left. Shed 2 is in the foreground. The mature trees in the background don't present a lot of potential for bat roosts.



Plate 2 Rear of Shed 2 - bat droppings were found on an interior wall - note Japanese knotweed in front of shed.



Plate 3 Rear of Shed 1 - bat droppings were found on an interior wall.



Plate 4 Entrance of main yard from road. No signs of bats were found in the buildings in the foreground.



Plate 5 Front of Shed 1 - shed to the right with galvanised metal door - bat droppings present.



Plate 6 Front of Shed 2 - shed with green roof - bat droppings were found on interior walls, in both sections. bat droppings were found on interior walls of both sheds



Plate 7 Front of Shed 1 - bat droppings were found within.



Plate 8 Interior of Shed 1 - a few bat droppings were found within. Note the arrangement of roof timbers and paucity of good bat roosts. Some of the roof covering is also missing.



Plate 9 Sheds 1 & 3 - bat droppings were found on interior walls of both sheds.



Plate 10 Interior of barn - no evidence of bat activity was found here.



Plate 11 Rear of Shed 2 - bat droppings were found on an interior wall - note Japanese knotweed in foreground.



Plate 12 Interior of modern cow shed. This structure is to be retained. Roosting pigeons were seen here, but there were no signs of bats.