

**THE MAMMALS OF
NEWBRIDGE HOUSE,
DONABATE
FINGAL, CO. DUBLIN**



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Introduction

Donabate is a coastal area of Fingal that has undergone rapid change in terms of population within the past ten years. While much of the area is still agricultural, there is evidence of major expansion of the former village and it is highly likely that there will be increasing expansion of this suburbanisation.

Newbridge House is a former demesne in county council ownership that boasts parkland, areas given over to pasture but managed with wildlife in hand, a model farm and public amenities such as a playground, a picnic/barbecue area and paths throughout for walking, orienteering and other pastimes.

Given the presence of an estate house, farm buildings, mature trees and hedgerow and pasture and the presence of farm animals, it would be expected that there would be a rich and diverse bat fauna.

Equally, other mammals such as badgers, foxes etc. would be expected in such a site, with adjoining farmland and potential for availing of human activities.

SURVEYING FOR MAMMALS

Bats of Newbridge House

The estate was examined during September 8th 2005 for the presence of bats during a daytime examination of Newbridge House itself, the Lanestown Castle and a number of bat boxes were checked at this stage along the main avenue.

The estate was again examined for bats on the night of September 8th extending into the morning of September 9th 2005 to identify the presence of feeding and commuting bats and to check bat boxes that had been unreachable during the daytime assessment.

Bat boxes erected on beech and ash trees on the Newbridge House estate were checked on November 18th 2005 for hibernating bats or historical signs of occupancy during which Lanestown Castle was examined for evidence of hibernating bats.

Information regarding Newbridge House was formerly gathered by the author for the Dublin Bat Group and this information is included here for comparison. Additional information was provided by Paschal Murphy who has a special interest in the wildlife of the estate and in his role of estate management has considerable exposure to the mammals and birds of the estate.

Other mammals

Examination for the presence of other mammals commenced on July 29th 2005 and was carried out on September 8th, 9th and November 18th. This involved the detection of trails, paw prints, droppings, scats, spraints, visual observations of mammals themselves, discussions with Park staff and the identification of burrows etc.

Bat species present

Brown long-eared bat	<i>Plecotus auritus</i>
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>
Common pipistrelle	<i>P. pipistrellus</i>
Leisler's bat	<i>Nyctalus leisleri</i>

The bat most evident at Newbridge House is the brown long-eared bat. This is due to the presence of a roost within the attic of the house and within the cellar of Lanestown Castle. Ironically, this is a species that is normally overlooked during bat detector assessments due to the weak signal produced by this species in flight; a FM sweep emitted through the nostrils and only properly picked up within several metres of the bat with a bat detector.

Furthermore, this signal is often too low to be picked up with a bat detector using time-expansion only and is best detected using a heterodyne system.

Brown long-eared bats were noted at the apex of the attic of the house in the warmest part of the attic. One bat was roosting individually while there was also a small cluster of bats (two or three individuals). Piles of droppings here indicate that there are a greater number of bats present in the summer and it is likely that the typical maternity roost size for brown-long-eared bats (c. 25 individuals) is established here during the summer.

In Lanestown Castle, five bats were noted in the castle, one of which flew around when disturbed. There were no bats within the castle during the second visit and it would appear that bats do not roost openly here in winter and may instead roost deep within crevices in the stonework.

A brown long-eared bat emerged from a small shelter in the walled garden/ orchard after sunset and it would appear that this bat was roosting within the stonework of this building.

Brown long-eared bat activity was noted in this orchard area, in the woodland stretching eastwards from Newbridge House and in hedgerow within the Wildlife Area.

One of the bat boxes on the beech and ash trees to the east of the main avenue and south of the river was occupied by 17 soprano pipistrelles. These exited from the box shortly after it was opened.

The bats were resting on top of an old bird's nest. No bats were present here during a second examination of the box in winter.

Bats were noted in bat boxes by a staff member a number of years ago and it is likely that the boxes have been used regularly by different individuals as well as repeat occupiers and by a number of species.

Soprano pipistrelles appeared very early to the rear of Newbridge House farm buildings and the roofs of this building would all offer good roost potential. The House has considerable roost potential and discussions with Paschal Murphy would indicate that the roof was previously a major bat roost site. Attic spraying may have inadvertently affected bats during early operations within the estate.

Soprano pipistrelles fed in the orchard and around the farm buildings. Common pipistrelles were also noted occasionally during assessments throughout the estate including along the edge of woodland to the east of Newbridge House.

The second box on the tree discussed above was too high to examine on the same day due to the height at which it is erected. However, examination of the box during early morning return behaviour uncovered that Leisler's bats were roosting within this box. Approximately ten Leisler's bats were seen and heard to return to this box.

Leisler's bats were noted feeding over the parkland and calling repeatedly around the open area close to the coffee shop/ toilets area. In a study here by the Dublin Bat Group, a Leisler's bat male repeatedly called around the perimeter of the House in a similar fashion and it is possible that the attic is used as a mating roost. Bat boxes have been shown to serve as mating roosts for this species (Hopkirk 2003) and the assemblage within the box discussed above may be a harem established by a male Leisler's bat.

During the erection of bat boxes within the estate, bats were heard squeaking inside a crevice/ cavity within an ash tree in the same clump of trees. This crevice was examined in 2005 but as would be expected, bats were absent as they are more likely to be in a site less prone to temperature fluctuations during the hibernation period.

Four species of bat would appear to be low diversity for such a large estate, given that there are areas where there is a management procedure aimed at encouraging and protecting wildlife.

It would be expected that species such as Natterer's and whiskered bat should be present in an estate with many trees, grassland etc. and given the variety of farm buildings. During an examination including the Open Farm for Dublin Bat Group, it was apparent that an ultrasonic scarer was installed in buildings to reduce rat problems. This may have had an impact on bats.

One free-standing building was observed at sunrise for returning bats but no bats were seen to return to it. The building is not easily accessible for examination. This building clearly has potential as a roost site for bats especially as it would not require rodent control measures as would be necessary within the farm yard.

The absence of a large water body may be a limiting factor for bats.



Newbridge House attic: Brown long-eared bats at the roof apex.

This species is typical of large attics such as this. Parkland is one habitat within which this bat feeds. Woodland is another such feeding site. These are both catered for at Newbridge House demesne.



Newbridge House attic: Piles of droppings indicate that bats roost in the attic in numbers typical of a brown long-eared bat roost maternity population (25 to 30 individuals)



Lanestown Castle: Brown long-eared bat roost. Bats were roosting in the cellar of the castle. In all five individuals were present here.

Mammals of Newbridge House

Brown long-eared bat	<i>Plecotus auritus</i>
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>
Common pipistrelle	<i>P. pipistrellus</i>
Leisler's bat	<i>Nyctalus leisleri</i>
Fox	<i>Vulpes vulpes</i>
Badger	<i>Meles meles</i>
Otter	<i>Lutra lutra</i>
American mink	<i>Mustela vison</i>
Stoat	<i>Mustela erminea hibernica</i>
Rabbit	<i>Oryctolagus cuniculus</i>
Irish hare	<i>Lepus timidus hibernicus</i>
Grey squirrel	<i>Sciurus carolinensis</i>
Brown rat	<i>Rattus norvegicus</i>
House mouse	<i>Mus musculus</i>
Wood mouse	<i>Apodemus sylvaticus</i>
Hedgehog	<i>Erinaceus europaeus</i>

The above list includes all mammals for which there is evidence of their presence. Undoubtedly, pygmy shrew is common and widespread throughout the estate. They are normally encountered in long grass or in dry stone walls. Trapping would be required to confirm their presence but this measure was not deemed necessary for this evaluation.

A fox was observed travelling along the lawn to the east of Newbridge House towards the House itself. Scats and fox scent were widespread.

Badger setts were not discovered during this study even though Mr. Paschal Murphy reported two areas where setts were known or considered to be present. One sett is located within a woodland patch adjacent to the playground and running down to the stream which traverses the estate. No sett could be found here but even on the last date of examination, vegetation such as blackthorn was impenetrable.

Another difficulty in this woodland is the number of manmade paths. These create a difficulty in tracking back to a sett or following the movements of a mammal through the wood. All tracks that were successfully followed back to a burrow were clearly rabbit in origin.

A second area where a sett was reported or where badgers were most often seen was in scrub between the farm and the wood to the east of the house. No badger activity or setts were noted here.

Mr. Paschal Murphy noted that badger digging was very evident on occasion in the grassland adjacent to the car park. Surprisingly, no badger digging was noted here. No latrines or digging were evident throughout the estate.

It would appear that there are no main setts active within Newbridge House demesne. Paschal Murphy did note that badger road casualties could be seen occasionally on the perimeter roads of the estate.

An otter spraint was noted on an old sluice gate frame over towards the Kilcrea area. Staff had occasionally noted otters in this area.

Mink are known to be present on the estate or entering from outside to prey on poultry whenever possible.

Paschal Murphy reported seeing a stoat on the service roads around the perimeter of the open farm area carrying her young in her mouth while re-locating them.

All of the remaining mammal species would be expected in this estate. Red squirrels have been absent from the estate for approximately twenty years (c.1985) and greys are common. Hares are most in evidence in February/ March during mating and at other times disappear into the scrub at the Wildlife Area (observations of staff).

A hedgehog was observed traversing the grassland towards the free-standing building (derelict house?) on the morning of September 9th 2005. This species is widespread throughout Ireland.

Significance of the mammal fauna at Newbridge House

The bat fauna is of note at Newbridge House as it is dependent upon the house and on the bat boxes formerly erected by Dublin Bat Group, now part of Bat Conservation Ireland. The boxes have provided roosting opportunities for Leisler's bats and soprano pipistrelles and it is likely that other bats have availed of these boxes in the period between their erection and examination.

It would be expected that whiskered bats or Natterer's bats would avail of a site such as Newbridge House and demesne and their absence is surprising. This may be due to the overall sparsity of water. However, it should not be ruled out that these bats may occur seasonally or in small numbers and that their presence is simply overlooked.

Badgers were not active upon the estate in November and this is certainly surprising given the suitability of the estate. There are tracks at the Kilcrea gate that are clearly used by badgers. There is also a sett close to the playground according to Paschal Murphy. This sett proved difficult to pinpoint and this in itself suggests that it must also have been inactive during this assessment.

Monitoring of mammals at Newbridge House

An assessment for badgers should be carried out in the spring period to determine if badgers are breeding upon the estate or if they are entering the estate at this time. This would also be a good time to examine the grounds more thoroughly for badgers.

A range of bat boxes should be erected to provide roosting options for bats to allow for monitoring of the presence of known bat species (pipistrelles, Leisler's and brown long eared bats) but also to allow for the detection of the less common species, if present.

All changes to Newbridge House and the Lanestown Castle must take the presence of the bats into account. Any restoration work, major repair work etc. should be carried out having sought advice from a bat specialist.