



BAT ECO SERVICES

**Student Accommodation,
Rathdown Road,
Grangegorman, County Dublin.**

Bat Survey

Dr Tina Aughney

2018

Report prepared for:



SUMMARY

Site: HJ Nolan, Rathdown Road, Grangegorman, Co. Dublin

Development: Student Accommodation

Proposed work: Removal of factory buildings

Grid reference (IG): O 14667 35387

Bat Survey by: Dr Tina Aughney

Bat species recorded: Commuting: soprano pipistrelle, Leisler's bat and common pipistrelle.

1. Introduction

HJ Nolan's fish factory, Rathdown Road, Grangegorman, Co. Dublin was surveyed by Bat Eco Services, in relation to potential bat roosts. Such surveying was completed due to the fact that bats are protected species under the Wildlife Act (1976) and Wildlife [Amendment] Act (2000). Across Europe, they are further protected under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1982), which, 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. The Irish government has ratified both these conventions. Also, the EC Directive on The Conservation of Natural habitats and of Wild Fauna and Flora (Habitats Directive 1992), 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 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.

Therefore a bat survey was requested to determine the bat usage of this proposed development and in view of the fact all bat species are protected under Irish and EU legislation.

1.1 Site description

The survey was of factory buildings comprised of various units constructed from various materials. The immediate vicinity of the site is entirely composed of buildings and artificial surfaces and there are no significant areas of open green space or clusters of mature trees within 100m of the site.

The proposed development will see the demolition of the existing buildings and construction of a new student accommodation complex.

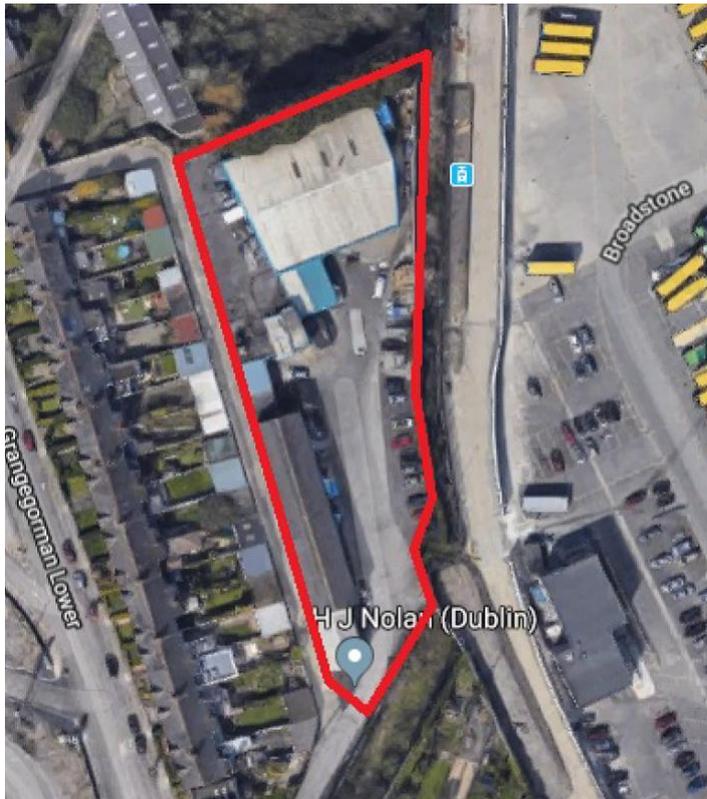


Figure 1: Aerial photograph of proposed development site.

2. Survey Methodology

This report presents the results of a site visit by Bat Eco Service completed 23rd June 2018 during which a bat survey was completed. A daytime survey was undertaken to identify potential roosting sites and foraging habitats.

Evidence of bats is in the form of actual bats (visible or audible), bat droppings, urine staining, grease marks (oily secretions from glands present on stonework) and claw marks.

Dusk surveying was completed by two surveyors using bat detectors (Wildlife Acoustics Echometer Touch units attached iPad 2s and Pettersson D200 Heterodyne Bat Detector unit). Dusk surveys were completed during the hours of 22:00 hrs. to 00:00 hrs. Surveyor 1 was located within the factory grounds while Surveyor 2 was located in the alley adjacent to the factory buildings.

Three units of static recorders were deployed: Wildlife Acoustic SongMeter 2 BAT+ Platform and two units of Bat Logger A+ units located as follows:



Figure 2: Survey Area – Blue (Bat Logger A+ Unit A); Green (Bat Logger A+ Unit B) and Red (Wildlife Acoustics Songmeter 2 BAT+ Unit 4)

The use of this recording devices results in a far greater sampling effort over a shorter period of time. Bat detectors are employed as the ultrasonic calls produced by bats cannot be heard by human hearing. Bat Logger A+ units and Wildlife Acoustics Song Meter SM2 and SM3 BAT Platform Units use Real Time recording as a technique to record bat echolocation calls and using specific software, the recorded calls are identified. It is these sonograms (2-d sound pictures) that are digitally stored on the SD card and downloaded for analysis. These results are depicted on a graph showing the number of bat passes per species per hour/night. Each bat pass does not correlate to an individual bat but is representative of bat activity levels. Some species such as the pipistrelles will continuously fly around a habitat and therefore it is likely that a series of bat passes within a similar time frame is one individual bat. On the other hand, Leisler's bats tend to travel through an area quickly and therefore an individual sequence or bat pass is more likely to be indicative of individual bats.

The recordings were analysed using various software. Recordings made by were analysed using BatClassifyIreland.

2.1 Survey Constraints

This survey was undertaken inside the preferred summer months of mid-April to mid-September. There are no survey constraints.

3. Bat Survey Results

Weather Conditions	Clear sky, calm, dry and 17 ^o C.	23 rd June 2018
Sunset	21:25 hours	23 rd June 2018
Dusk Survey	22:00 to 00:00 hrs	23 rd June 2018

The buildings were inspected and there were no evidence of bats roosting (i.e. no droppings or sightings of bats).

3.1 Dusk & Dawn Surveys

During the Dusk Survey, three species of bat was recorded: soprano pipistrelle, Leisler's bat and common pipistrelle. These species were recorded commuting along the alley adjacent to the proposed development site. But no bats were recorded within the proposed development site.

The first bat was recorded at 22:52 hrs and this was a soprano pipistrelle commuting from N to S down the adjacent alley. There was a total three Leisler's bat passes was recorded over the duration of the survey.

The first common pipistrelle was recorded at 22:59 hrs and this individual again commuted through the alley. There was a total three common pipistrelle bat passes was recorded over the duration of the survey.

Leisler's bats were not recorded until 23:16 hrs.

Overall bat activity was low and no roosting bats were recorded in any of the buildings.

3.2 Static Unit Surveys

No bats were recorded on the static units within the proposed development site. This confirms that there are no roosting bats within the buildings.

4. Management of structures in view of Bat Fauna

This report will draw on guidelines already available in Europe and will use the following documents:

- *A conservation plan for Irish vesper bats, Irish Wildlife Manual No. 20 National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.*
- *Bat Mitigation Guidelines for Ireland. Irish Wildlife Manuals, No. 25. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.*
- *National Biodiversity Plan. Department of Arts, Heritage, Gealtacht and the Islands.*
- *The status of EU protected habitats and species in Ireland: Conservation status in Ireland of habitats and species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government.*

Three species of bat were recorded foraging in low numbers in the survey area. However no bats were recorded roosting in the buildings surveyed.

4.1 Predicted Impacts

The removal of the buildings will not result in the loss of a bat roost and will not impact on local bat populations.

4.2 Mitigation Measures

Mitigation measures are not required in the relation to the removal of the buildings within the proposed development site.

References and Bibliography

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- Mullen, E. 2007 *Brandt's Bat Myotis brandtii in Co. Wicklow*. Irish Naturalists' Journal 28: 343.
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- Racey, P. A. & Swift, S. M. 1986 The residual effects of remedial timber treatments on bats. *Biol. Cons.* 35: 205 - 214.
- Richardson, P. 2000 *Distribution atlas of bats in Britain and Ireland 1980 - 1999*. The Bat Conservation Trust, London, UK.
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- Wildlife Act 1976 and Wildlife [Amendment] Act 2000. Government of Ireland.

Appendices

Bat ecology – general

The bat is the only mammal that is capable of true flight. There are over 1,100 species worldwide, representing almost a quarter of all mammal species. There are 47 species in Europe - in Ireland, ten species of bat are currently known to exist, which are classified into two families, the Rhinolophidae (Horseshoe bats) and the Vespertilionidae (Common bats).

Prey

All the European bat species feed exclusively on insects. A Pipistrelle, weighing only 4 to 8 grammes, will eat up to 3000 insects every night, ensuring a build up of fat in the bat's body to allow it to survive the winter deep in hibernation.

Breeding and longevity

Irish bats can produce one young per year but, more usually, only one young is born every two years (Boyd & Stebbings, 1989). This slow rate of reproduction inhibits repopulation in areas of rapid decline. Although bats have been known to live for twenty or more years, this is rare as most die in their first and the average lifespan, in the wild, is four years.

Threats

All bat species are in decline as they face many threats to their highly developed and specialised lifestyles. Many bats succumb to poisons used as woodworm treatments within their roosting sites (Racey & Swift, 1986). Agricultural intensification, with the loss of hedgerows, treelines, woodlands and species-rich grasslands have impacted bat species also. Habitual roosting or hibernation sites in caves, mines, trees and disused buildings are also often lost to development. Summer roosts are prone to disturbance from vandals. Agricultural pesticides accumulate in their prey, reaching lethal doses (Jefferies, 1972). Chemical treatments in cattle production sterilise dung thus ensuring that no insects can breed within it to be fed upon by bats. Likewise, river pollution, from agricultural runoff, reduces the abundance of aquatic insects. Road building, with the resultant loss of foraging and roosting sites is a significant cause in the reduction of bat populations across Europe.

Extinction

As recently as 1992, the greater mouse-eared bat *Myotis myotis* became the first mammal to become extinct in Britain since the wolf in the 18th century.

Ireland Red List No. 3: Terrestrial Mammals

Bats

Species: Common Name	Irish Status	European Status	Global Status
Brandt's bat	Data deficient	Least Concern	Least Concern
Daubenton's bat	Least Concern	Least Concern	Least Concern
Whiskered bat	Least Concern	Least Concern	Least Concern
Natterer's bat	Least Concern	Least Concern	Least Concern
Leisler's bat	Near threatened	Least Concern	Least Concern
Nathusius' pipistrelle	Least Concern	Least Concern	Least Concern
Common pipistrelle	Least Concern	Least Concern	Least Concern
Soprano pipistrelle	Least Concern	Least Concern	Least Concern
Brown long-eared bat	Least Concern	Least Concern	Least Concern
Lesser horseshoe bat	Least Concern	Least Concern	Least Concern

Marnell, F., Kingston, N. & Looney, D. (2009) *Ireland Red List No. 3: Terrestrial Mammals*, National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.