



Flynn Furney Environmental Consultants

**Bat survey and building inspection,
Main Street, Ballinamore, Co. Leitrim**



For: dhb Architects, Waterford

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1. Introduction

Flynn Furney Environmental Consultants were commissioned by *dhb Architects* to undertake a building assessment for bat roost potential / presence at a building on Main Street, Ballinamore, Co. Leitrim. An inspection of the building and rear outbuildings and dusk emergence survey was carried out on the 19th of October 2023. The non occupied derelict property is located along Main Street (R202 road), Ballinamore, Co. Leitrim, located at ITM 612874 811444, *Figure 1*. The property consists of a two-storey town building with a slate roof. There is a more recently built extension attached to the rear of the building which has tile roofing, *Figures 2 & 3*. The surveyed building has attached buildings on both sides and the property backs onto a supermarket car park.

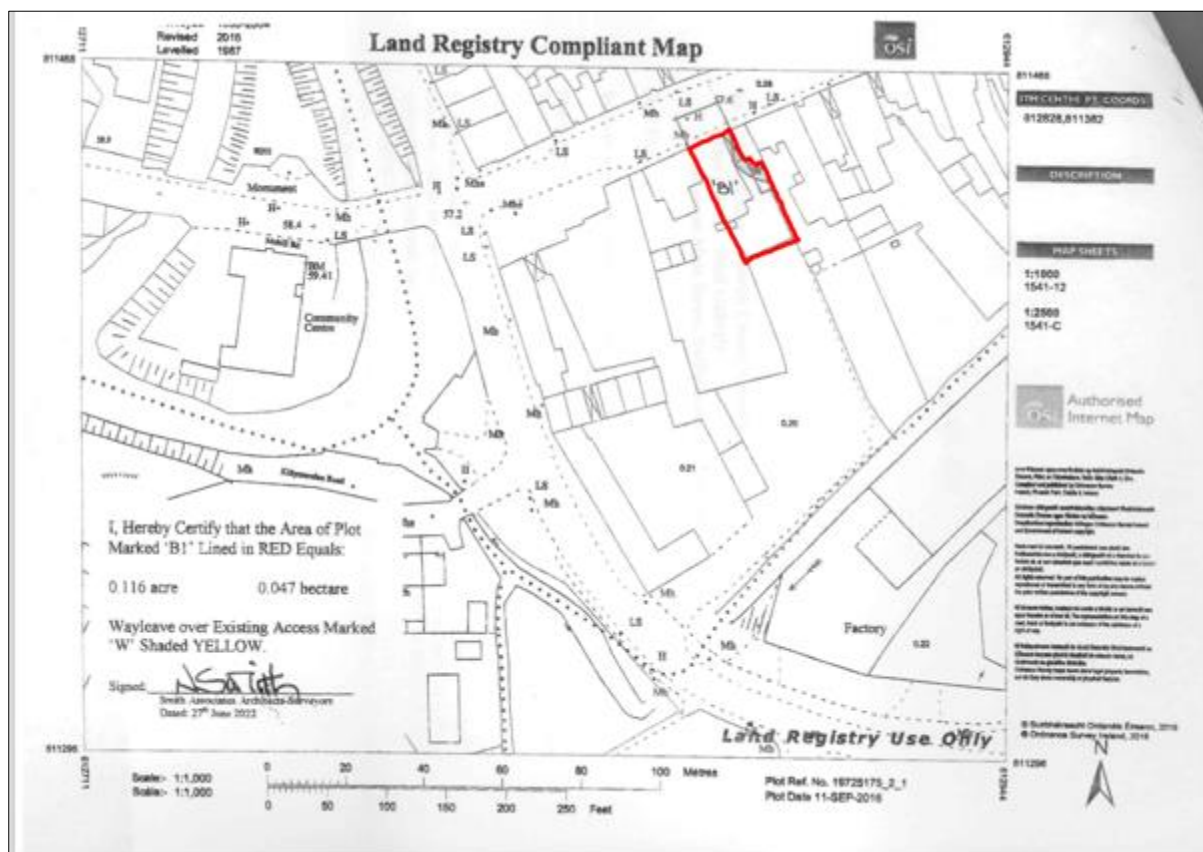


Figure 1. Location of proposed development



Figure 2. *View of the rear of the property.*



Figure 3. *View of the building's roof, taken from the rear of the property.*

2. Legislation and bats

All bat species are protected by law in Ireland at a national and European level. Nationally, the Wildlife Act 1976 (amended 2000) makes it an offence to wilfully interfere with, or destroy, the resting or breeding place for bats. All species of Irish bats are listed under Schedule 5 of the Wildlife Act (1976) making it an offence to:

- Intentionally kill, injure, or take a bat
- Possess or control any live or dead specimen or anything derived from a bat
- Wilfully interfere with any structure or place used for breeding or resting by a bat
- Wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose

The EU 'Habitats' Directive (92/43/EC; transposed into Irish law by S.I. No. 94 of 1997) provides legal protection for bats and their roosts at a European Union level. In addition, the Irish government are signatories of the 1979 Bonn 'Convention on the Conservation of Migratory Species of Wild Animals' and the 1982 Convention on the 'Conservation of European Wildlife and Natural Habitats'. Ireland must also fulfil commitments under the 1991 'Eurobats Agreement' for the conservation of bats in Europe. Under the EU Habitats Directive, lesser horseshoe bats are listed as an Annex II species (afforded special protection). All other Irish bat species are listed in Annex IV (general protection) of this directive.

Under existing legislation, the destruction, alteration or evacuation of a known bat roost requires the National Parks and Wildlife Service (NPWS) being notified before works can commence on or adjacent to a known bat roost. A derogation licence from NPWS must be obtained prior to commencement of works.

3. Methodology

3.1 Desk study

The property is in tetrad G94S (a tetrad being an area of 2km²). A search of bat records held on the National Biodiversity Datacentre's (NBDC) online portal¹ for this tetrad, was requested. Such information can identify bat species which may occur at the proposed development site or in the local area.

3.2 Building searches

Suitable features on the exterior and in the interiors of the buildings were searched using a hand torch and an endoscope. Evidence for bat presence includes dead and live animals, bat droppings, urine staining, greasy marks at crevice entrances and lack of cobwebs at entrance to crevices and gaps. Due to the height of the main building, soffits and fascias could not be examined up close, with the assessment being carried out from ground level using binoculars.

¹ <https://maps.biodiversityireland.ie/Map/Terrestrial/Dataset/128> Accessed October 16th, 2023.

3.3 Bat emergence watch

A dusk bat emergence watch was undertaken on the evening of the 19th of October. The selected vantage point was in the rear yard where full views of the rear of the building and the roof were afforded. The front of the building faces the town street and is illuminated by street lighting and other commercial properties, rendering it less likely to be used by bats, so therefore an emergence watch was not undertaken of the front. Also, the front of the building is in a structurally sounder condition, with less features that bats may use for roosting or accessing the interior. The dusk watch started at 17:55 (thirty minutes before a 18:25 sunset). Weather conditions were calm, dry and mild with an air temperature of +11°C at 18:00. The emergence watch lasted until 19:15, at which time the level of darkness would prevent the surveyor from accurately locating the origin of any detected bat species. An Echometer EM3 full spectrum bat detector was used.

4. Results

4.1 Desk Study

The NBDC database search returned no bat records for tetrad H11F, the tetrad within which the site is located. An online search was also made of adjacent tetrads however no bat records were in any of these tetrads. It should be noted that a nil return of records is likely to reflect an absence of survey data and cannot be taken as confirmation that bats are not present at the site or surrounding areas. In addition, Bat Conservation Ireland's habitat suitability index², available to view on the NBDC online mapping portal, classifies tetrad H11F, within which the site is located, as having a low to moderate habitat suitability for bats. A bat habitat suitability index score of 20.67 was assigned to most of this tetrad. The three bat species most likely to be found in this tetrad, as per the habitat suitability index, are Brown long-eared bat *Plecotus auritus* (index value of 32), Soprano pipistrelle *Pipistrellus pygmaeus* (index value of 32), and Leisler's bat (index value of 31).

4.2 Building searches

The exterior of the building was scanned for features that may be of use to bats to access the building. Such features included missing roof slates, structural cracks in the building and rotting or damaged soffits and fascias. Some gaps in the roof slates were noted. The fascias of the rear extension part of the building are in a generally poor state and provide potential features for bats however it was noted that the timber is decaying in places due to wet induced rot, rendering it as having a low suitability for roosting bats, Figure 4.

A search of the interior building was carried out across both storeys of the building and (insofar as possible) of the attic space beneath the roof. The most modern part of the building is the function room/pool room to the rear. There was no ceiling over most of this and the entire room could be searched from roof to floor. Ready access was also allowed to the downstairs rooms and reception

²Lundy, M.G., Aughney, T., Montgomery, W.I., & Roche, N. (2011) *Landscape conservation for Irish bats and specific roosting characteristics*. Bat Conservation Ireland. Accessed October 16th, 2023.

area. Access and visibility was also sufficient for a thorough search of the upstairs bedrooms and bathroom. Signs of bat habitation as given in Section 3.2 were sought. None were found.

Access was allowed to the attic via a trapdoor. Although the attic was largely dry, a hole in the roof where a tile is missing has allowed ingress of water. There was no evidence of any bat habitation but there was an abundance of cobwebs. The latter would indicate no regular use of the attic space by bats.

It should be noted that there is a stone-built party wall between the landing and the front bedroom. This disallowed access and inspection. While it is unlikely that bat roosts occur here, this possibility cannot be ruled out. This section of the roof should therefore be dismantled by hand should there be any roosting bats here.



Figure 4. *Fascia along the rear extension gable.*



Figure 5. Upstairs front bedroom



Figure 6. Kitchen/living area downstairs



Figure 7. Attic space – note missing roof tile



Figure 8. Attic space – the stone construction party wall shown to the right of photograph.



Figure 9. Gap in roof of function room.



Figure 10. Roof space at rear of function room. Note abundance of cobwebs.

4.3 Emergence watch

The emergence watch of the rear of the building commenced at 17:55. No bats were observed exiting the main building or the extension. During the watch, five bat passes were detected (four soprano pipistrelles and one Leisler's bat). It is suspected that there is a soprano pipistrelle roost located in rear outbuildings of the property to the east of the subject site, as all four passes were detected within a two-minute timeframe (18:31 – 18:33). All four soprano pipistrelle bats were observed flying from the direction of these outbuildings.

5. Discussion

5.1 Bats

Although the building search and emergence watch was undertaken outside of the optimal bat surveying season, May to September, the lack of evidence of bat presence, such as droppings, indicates that this building is not used by bats. However, surveys such as these represent a 'snapshot' in time and as bats are a transitional species and move between suitable roosting locations throughout the year, it is not possible to definitively confirm the absence of bats based on the low level of survey effort as was applied to this building. Based on the findings of the building inspection, no further surveys for bats, such as emergence and re-entry surveys are considered necessary. However, when the facias and soffits are being replaced, and other roof related works being undertaken, the work team should be vigilant for bats, as a precaution. As a portion of the attic space could not be searched, it is recommended that the roof tiles here are removed by hand.



Figure 11. Section of roof where it is recommended that tiles be removed by hand.

If during demolition / renovation works, bats are encountered, then works in that particular area where bats are found must be stopped and an ecologist contacted. An assessment of the roost type, species and appropriate mitigation measures will then be required to obtain a derogation license from the National Parks and Wildlife Service (NPWS). The project ecologist will advise what works may or may not proceed whilst waiting for a licence to be approved.

5.2 Possible bat enhancement measures

The installation of permanent access openings into the roof space should be considered, irrespective of the building not being confirmed as a bat roost, *Figure 5*. Providing that water tanks are covered, bat roosts create little, if any, issues when roosting in residential / commercial roof spaces. Such an action could potentially benefit the local bat population in the future, especially at a time when many older buildings are being demolished or renovated.



Figure 12. Example of an adapted roof slate that permits bat access to a roof space.

Additionally, Schwegler 1FFH Universal bat boxes provide potential roosting opportunities for many species of bat. These boxes should be erected on the southerly, south-westerly or south-easterly aspects of the buildings. The boxes should be erected at a height of 5 metres above ground level in areas of not affected by streetlight or residential illumination.

5.3 Birds

If construction works commenced or are ongoing during the bird breeding season, then the internal and external surfaces of the buildings should be checked for active nests. Species that typically nest in buildings include barn swallow *Hirundo rustica* and corvid (crow) species. If a nest is found, consultation with an ecologist and National Parks and Wildlife Service (NPWS) will be required to determine the best course of action. These measures are required to avoid committing an offence under Section 22 of the Wildlife Act 1976-2018 as amended regarding the enforcement of the protection of wild birds.

6. Conclusion

No bats were confirmed using the building as a roost during the building surveys and bat emergence watch. Vigilance is required when building works commence to ensure that no bats are present. The suggested bat enhancement measures should be considered to potentially enhance the local bat population.
