

SUBMITTED WITH PLANNING APPLICATION SD18A/0363

**An Evaluation of Lands at Athgoe, Newcastle,
County Dublin For Potential as Bat Roost Sites and
For Feeding and Commuting**



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September 2018

Introduction

Bats are a widespread element of the Irish fauna. They are known to occur from much of the rural landscape, but they are also present within the urban environment and here they occupy buildings and occasionally trees for short or long periods. Houses and other buildings are a vital element of the annual cycle of all Irish bat species and at no time more so than the period May to August, but many bats may also avail of buildings as hibernation sites, but the presence of bats may be impossible to determine at that time of year.

Changes to a site such as tree felling and hedgerow clearance and the introduction of new houses and entire estates may remove roost sites and reduce the lands available to bats as a feeding site or in some way prevent full utilisation of the area by bats by interfering with a bat's ability to commute through a site or roost within the site.

Bats are protected by Irish and EU law and to prevent unlawful injury or death, it is essential that a full understanding of the site is available in advance to protect the resident bats from unintentional disturbance and to create a pathway by which a legal derogation and exemption may be designed in consultation with the National Parks and Wildlife Service. This is a service of The Department of Culture, Heritage and the Gaeltacht if impacts are likely to be severe.

Prior to significant changes to a site it may be necessary to ensure that there will be no impact upon protected species, such as all of Ireland's bats. Bats of less common species may be present within a site unbeknownst to owners and residents and there is a requirement to undertake a survey by suitably qualified ecologists with the appropriate equipment to determine which species are present.

Should bats be present, knowledge of the species concerned and the potential consequences of the modifications of the site can assist in identifying measures to alleviate the negative effects of these changes.

Surveying for bats in August is a very suitable time to address the usage of a site during the late breeding period and the foraging by the young of the year and gives a level of information that can assist in evaluating the site for summer usage and can highlight areas of good feeding.

The mating season is under way and mating roosts may be shown up during an assessment at this time. There are no buildings within the site but there are several mature trees. The site offers feeding and commuting opportunities and could potentially hold roost sites. These options are considered and any mitigation that may be required to counter impacts from the proposed development.

Methodology

The survey was undertaken on August 22nd to 23rd, 2018. The assessment commenced with an examination of the garden sheds that would be removed as a consequence of development prior to dusk. This involved an examination of the timber and brick shed during a slow walk around the trees while keeping an eye for bats approaching from any surrounding buildings including the metal shed close to the house. An examination of available information from Bat Conservation Ireland, personal data and other known survey results was undertaken to compile a list of most likely species in addition to the evaluation of the habitat and known distributions of Irish species.

The lands were assessed for bat activity both through an examination at emergence time (approximately sunset) and return time (prior to sunrise). This involved an examination with the assistance of an Echometer 3 and a Pettersson D240X and by placing a Songmeter2Bat+ at the permanent garden shed for over an hour before moving it into the garden close to the metal shed prior to dawn. The hedgerow of the lands that will be developed as part of this proposal was examined from within one of the gardens and then to the rear of the gardens and included hedgerow of the adjoining lands.

A pre-dawn assessment examined the hedgerow within the site and houses around the site to provide information on the potential as roost sites of these houses.

Bat fauna of the site at Athgoe, Newcastle

Roosting species

None

Bat species feeding or commuting within the site

Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>
Common pipistrelle	<i>Pipistrellus pipistrellus</i>
Leisler's bat	<i>Nyctalus leisleri</i>
<i>Unidentified bat signal</i>	<i>Probable Myotis possibly whiskered bat</i>

While there are no bats roosting within the site, bats were clearly commuting through the site following emergence in addition to feeding within the site. There is a bat roost within the house on the opposite side of the road to the proposed development and this would appear to be a soprano pipistrelle roost based on the observations during this assessment.

Leisler's bat activity was noted early in the survey, but these bats were entering the site from outside and were occasional in their use of the site. Common and soprano pipistrelle were noted within the site throughout the survey and a male common pipistrelle was noted to call from the corner of the leylandii within the adjoining field. This bat repeatedly flew along the hedgerow and regularly emitted social calls.

One *Myotis* bat signal (a genus that covers 4 species of bat that have been noted in Ireland) or brown long-eared bat sequence was noted within the site after emergence would be expected, along the eastern tree line. The signal was faint, and it is possible that it was coming through the trees from the opposite side of the trees, within the surrounding field. This species may commute through the field or may feed within the field but was not noted on the static monitor.

Potential Impacts

Roost Loss and Injury or Death of bats

As there is no substantial building demolition within the site, building removal by way of the permanent shed and temporary shed and tree felling within the site create the risk of roost loss and injury to bats if not examined prior to such operations. Bats often require several minutes to become active to avoid the risk of injury from chainsaws or falling trees. None of the trees within the garden to the east were considered to offer high bat roost potential based on bat activity and the features visible within the trees within the site.

Loss of habitat

There will be a loss of mature trees, hedgerow, pasture and scrub that will reduce insect abundance and feeding and commuting corridors. The removal of the leylandii will reduce cover but the species does not support insect diversity. It will also allow greater light to enter and this may allow greater plant diversity where planting is undertaken.

Disturbance from lighting

Lighting will be increased for two different functions: 1) Access and safety 2) Security and policing. The former is to allow ease of use at night. The latter is to ensure a perceived higher security level.

Lighting may affect bat species, in particular, light-intolerant bat species during foraging and if directed at emergence points would affect all bat species, even those that will feed in illuminated areas.

Mitigation

Tree felling

All leylandii may be felled at any point (avoiding the bird nesting season unless they have been checked and shown to be devoid of bird nests). Mature trees with bat roost potential (mature broadleaves with any cavities or crevices) shall be felled in late autumn. This would include the months of September and October. Should the trees be felled in winter, an evaluation of the trees shall be carried out by a bat specialist prior to felling. Surveying in winter may not be possible by way of a bat detector assessment and a visual examination undertaken by a licensed bat specialist would be required. This would most probably necessitate access to height and the use of a fibrescope if any trees are considered to have good potential for hibernation.

Lighting

Lighting must be designed that will limit overspill from the required area for illumination and prevent light pollution. This should aim to avoid mature trees but must also avoid illumination of roost sites such as the house to the north of the site. LED is the most energy efficient source available and wherever a permanent source of night lighting is unessential, it should be motion-activated.

Bat boxes

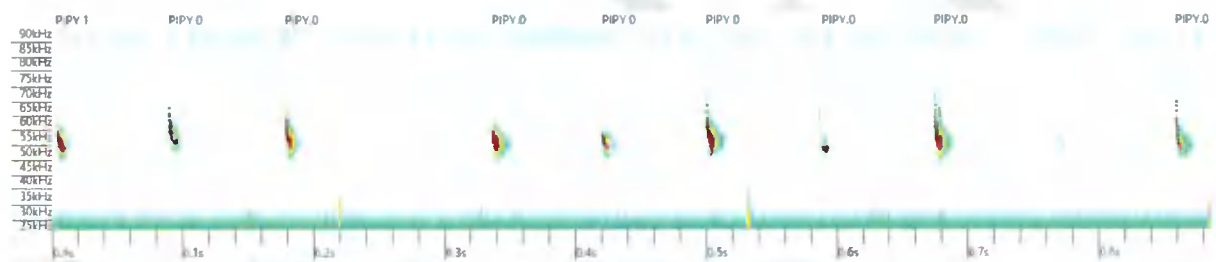
3 x 2F Schwegler boxes shall be erected within unlit areas away from traffic and likely disturbance. These must be no less than 3 metres above ground in uncluttered areas facing in a southerly direction. Boxes may be attached to buildings trees or poles.

Planting of vegetation

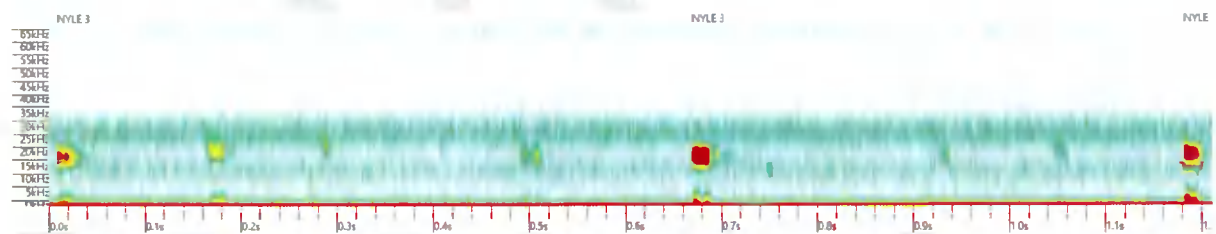
Species to provide nectar for night-flying insects such as moths should be included in the planting mix. This could include species such as dog rose, night scented stock, honeysuckle and *Clematis* and other species attractive to moths and other nocturnal insects.



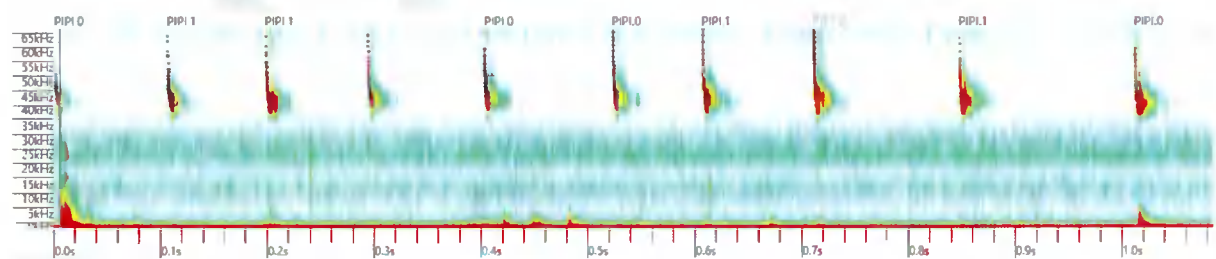
Permanent shed building: No bat droppings were noted within and no bats emerged or returned to the building



Soprano pipistrelle bat at 20.57 hours



Leisler's bat at 21.14 hours



Common pipistrelle at 21.31 hours

BCIreland data: search results 13 Sep 2018			
Search parameters: Roosts Transects Ad-hoc observation sites with observations of all bats within 1000m of N9976828701.			
Roosts			
Name	Grid reference	Address	Species observed
Stables	O0000028000	Newcastle Lyons; Newcastle; Co. Dublin.	Pipistrellus spp. (45kHz/55kHz)
Two storey house; Oakville House	N998287	Main Street; Newcastle; County Dublin	Pipistrellus pygmaeus; Unidentified bat
Transects			
Name	Grid reference start	Species	
Newcastle Lyons	O0000028000	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz)	
Survey	Grid reference	Date	Species
EIA survey- Paul Scott (Scott Cawley)	N998287	10/05/2010	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus; Unidentified bat
EIS surveys - Brian Keeley	N9965028800	20/01/2006	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz)
EIS Surveys - Tina Aughney	O007279	29/06/2012	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
EIS Surveys - Tina Aughney	O007279	12/07/2011	Nyctalus leisleri; Pipistrellus pygmaeus

