BAT SURVEY

August 2022

ST. CLARE VILLA, LUCAN ROAD, LUCAN, CO. DUBLIN

PREPARED BY LORRAINE BENSON, CONSULTANT ECOLOGIST FOR GAP ARCHITECTURE ON BEHALF OF JOHN SHENTON & MARGARET HANLON TO PROVIDE INFORMATION TO ASSIST WITH THE PLANNING PROCESS IN RELATION TO THE PROPOSED DEVELOPMENT AT THE ST. CLARE VILLA, LUCAN ROAD, LUCAN, CO. DUBLIN.

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INTRODUCTION

This bat survey report has been commissioned by GAP Architecture on behalf of John Shenton & Margaret Hanlon to provide information to assist with the planning process in relation to the proposed development at the St. Clare Villa, (Clareville on google maps) Lucan Road, Lucan, Co. Dublin

The Applicant proposes to demolish an existing residential dwelling and build a new business and residential unit in its place at the site on Lucan Rd, Lucan Co Dublin.

The location of the subject site is shown in an aerial view on Figure 1.1.

The aim of the bat survey is to confirm the:

- Potential for the structures or trees on site to support roosting bats;
- Presence of roosting bats at these structures;

If present, the species roosting at the structure and the estimated number of bats roosting at the structure will be described.

The results of the bat survey and recommendations arising from the survey findings are presented in this report.

Fig 1.1 Aerial map of the site at St Clare Villa (Clareville) Lucan Rd. Dublin

BATS – CONSERVATION STATUS

Nine species of bat occur regularly in Ireland and all are protected by national and European Union (EU) legislation. The foraging habitats chosen by a species reflect both its ability to catch prey in different environments, depending on echolocation calls and wing morphology, and also the quality of the foraging habitat in providing sufficient insect prey. All species of bat that occur in Ireland are listed on Annex IV of the EU Habitats Directive (92/43/EEC), defined as species in need of strict protection. One species , the Lesser horseshoe (Rhinolophus hipposideros) is included in Annex II, as a species requiring special protection measures including designation of Special Areas of Conservation (SACs). This species occurs in the west of Ireland and there are no known records of this species in the East.

In Ireland the majority of bat roosts are in buildings and under bridges. However, tree roosts may also occur.

OVERVIEW OF THE SURVEY SITE

The site is an existing private dwelling with a typical sub-urban garden shown in fig 1.2 . The mature garden has seven trees one if which is a 3meter high conifer, Lawson cypress *Chamaecyparis lawsoniana* . The site is bounded in the front by the main Lucan Rd. The rear is bounded by a small park on either side of the Liffey walking trail with deciduous trees on both sides. The river Liffey flows 220 m to the north west of the dwelling site.

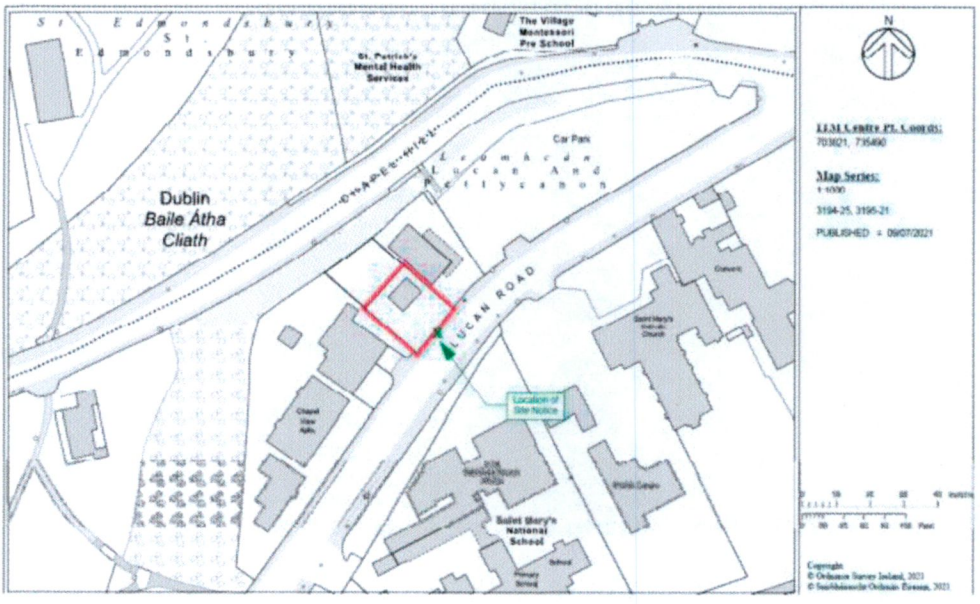

Fig 1.2

BAT SURVEY METHODOLOGY

The methodology followed is based on Guidelines by the NRA[1] and the NPWS. [2]

Step One: Desk top review of available data sources viz. NBDC habitat suitability index and empirical records of bat species within 1 km of the development site.
Step Two : Desktop review of aerial photos (from Google Maps Pro) to determine ecological features which may affect suitability of the site for bat species
Step Three : A daytime site visit to establish presence/ absence looking for visual evidence of bats at or around the site.
Step 4 : A dusk survey (Emergence survey) including using an acoustic monitor (Echo Meter Touch) to measure any bat activity within the curtilage of the dwelling .

DESK STUDY

A pre-survey data search was conducted in order to collate existing information from the footprint of the proposed development site and its surrounding area on bat activity, roosts and landscape features that may be used by bats. The data search comprised the following information sources:

- Review of known bat records from the National Bat Database held by the National Biodiversity Data Centre (www.biodiversityireland.ie)
- Review of bat suitability index for the project site and for the area
- Ecological desktop and survey data gathered for the proposed scheme to determine suitability for bats
- Review of Ordnance Survey mapping and aerial photography of the proposed scheme area and its environs to determine suitable foraging, roosting and commuting areas for bats.

The National Biodiversity Data Centre database was interrogated to establish the habitat suitability index for the Lucan Rd. The suitability index was 35.44 for all bat species. The suitability index ranges from 0 to 100. These species and their individual indices are listed below.

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[1] https://www.tii.ie/technical-services/environment/planning/Best_Practice_Guidelines_for_the_Conservation_of_Bats_in_the_Planning_of_National_Road_Schemes.pdf

[2] https://www.npws.ie/sites/default/files/publications/pdf/IWM25.pdf

NBCD map viewer displays the suitability index for different bat species for Lucan Rd as listed below:

All Bats	35.44
Pipistrellus pygmaeus (Soprano Pippistrelle0	43
Plecotus auratus (Brown Long-eared Bat)	50
Pipistrellus pipistrellus (Common Pipistrelle)	50
Rhinolophus hipposideros (Lesser Horseshoe Bat)	0
Nyctalus leisleri (Leisler's Bat)	51
Myotis mystacinus (Whiskered Bat)	33
Myotis daubentoniid (Daubentons Bat)	33
Pipistrellus nathusii (Nathusius' pipistrelle)	18
Myotis nattereri (Natterers Bat)	41

A review of National Biodiversity Data Centre (NBDC) records on 26 August 2022 did not reveal any previous records for bats within or surrounding the project site. There are no records for bats within the 1km square in which the project site is located. The project site is not located within the zone of influence of any Special Area of Conservation (SAC) that is designated for its role in supporting lesser horseshoe bats.

While there were no records of bats for the area, the habitat suitability index, tree survey and the aerial surveys of ecological features (proximity to a park, trees and the river) indicate a possibility of bats occurring at the site. A Step Three survey was undertaken.

STEP THREE: DAYTIME SURVEY

Step Three daytime survey took place on 26 August to search for droppings / stains in or around the building. No evidence of bats were found during this visual survey. The building, sheds and mature trees in the garden had the potential to host bat roosts. Therefore, a step four Emergence Survey was undertaken.

STEP FOUR: EMERGENCE SURVEY

Two fieldworkers carried out a dusk survey to monitor for emergence of bats from the building and garden. Fieldworkers took up position at the front and back of the dwelling.

The survey focused on the potential access/egress points to the dwelling. The Echometer Touch bat detector was set to record throughout the emergence survey. The surveys period took place 30 minutes before sunset and one hour after sunset on 26 August. Sunset on 26 August was at 20:29.

No bats were seen to emerge from the dwelling during the survey period.

Bats were observed to fly over the project site on two occasions by field workers at 20.48 and 20.58. The flight path of these two observations is at figure 3.3. The bat detector recorded several bats to species level. An example of the data received from the Spectrogram and GPS view, with flight path result, are at figure 3.1.and 3.2 . The species identified at 3.1.and 3.2. by the bat detector was Soprano Pippistrelle *Pipistrellus pygmaeus*.

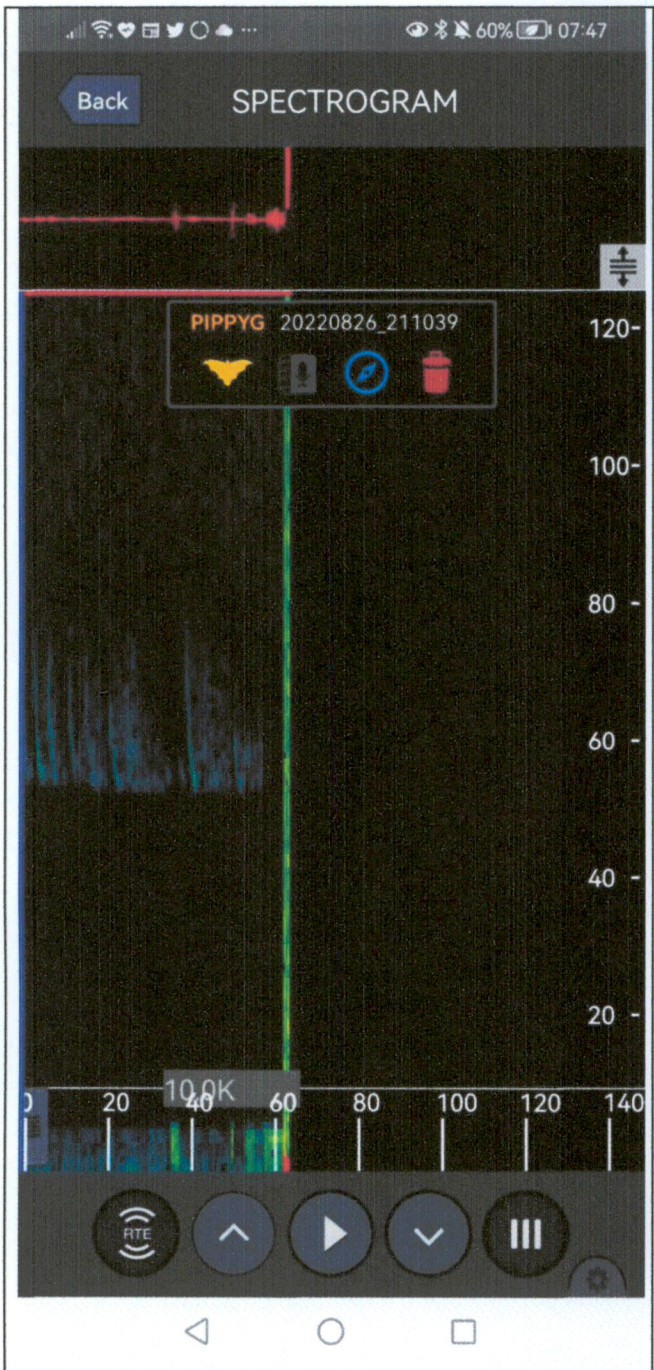

Figure 3.1 Spectrogram of Soprano Pippistrelle recorded at 21.10 on 26 August 2022

Figure 3.2 Flight path of Soprano Pippistrelle recorded at 21.10 on 26 August 2022

Figure 3.3 flight paths observed by fieldworker at 20.48 (orange line) and 20.58 (blue line)

INSPECTION SURVEY RESULTS

No evidence indicating the presence of bats such as droppings or staining was noted. There was no evidence of bats emerging from the dwelling or trees in the observation window of 1.5. hours within the curtilage of the site.

There was evidence of bats in the area around the site. These bats were observed by the fieldworkers and recorded by the bat detector.

RECOMMENDATION

No bats were seen to emerge from the building or garden. In view of the results there would appear to be no impediment to proceeding with the development.

Given the presence of bats in the area the client may wish to consider incorporating bat bricks into the building or providing bat boxes in suitable locations as a positive contribution to conservation.

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Bibliography

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