

Tipperary County Council

**The Old Farm Building, Town Park, Thurles,
Co. Tipperary**



BAT SURVEY

(Version 7th of August 2024)



Tait Business Centre, Dominic
Streett, Limerick City, Ireland.

t. +353 61 419477

f. +353 61 414315

e. info@ecofact.ie

w. www.ecofact.ie



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7 th August 2024	3.0	Issued	Dr Will O'Connor Eoin McMahon	Grace Walsh

Prepared by: -

Dr. Will O' Connor

PhD, MSc, BSc, CBiol, CEnv, MCIEEM, FRSB, MIFM

Chartered Biologist

Chartered Environmentalist

Date: 7th August 2024



1. INTRODUCTION

The purpose of this assessment was to determine the likelihood of bats being present at a site in Thurles, Co Tipperary. The building is an existing historic building in Thurles town which has been uninhabited for many years. Construction works are planned for the site. Ecofact was commissioned to complete a bat survey of the site in order to evaluate its potential importance for bats and outline the findings in a report. Figure 1 below shows the location of the site.

The survey was completed during October 2023 as a daytime visual inspection. The site was revisited during December 2023 when additional access to the building was provided. These surveys were followed by an in-season bat emergence / activity survey that was completed during July 2024.

1.1 Bat species in Ireland

There are eleven recorded bat species in Ireland, nine of which are considered resident on the island. Eight resident bat species and one of the vagrant bat species are members of the Vespertilionidae family. The ninth resident species is the Lesser Horseshoe Bat *Rhinolophus hipposideros*, which belongs to the Rhinolophidae family.

The resident Irish bat species are:

- Daubenton's bat (*Myotis daubentonii*)
- Whiskered bat (*Myotis mystacinus*)
- Natterer's bat (*Myotis nattereri*)
- Leisler's bat (*Nyctalus leisleri*)
- Nathusius' Pipistrelle (*Pipistrellus nathusii*)
- Common Pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)
- Brown Long-eared bat (*Plecotus auritus*)
- Lesser Horseshoe Bat (*Rhinolophus hipposideros*)

Other bat species (vagrants) recorded are:

- Brandt's bat (*Myotis brandtii*)
- Greater horseshoe bat (*Rhinolophus ferrumequinum*)



1.2 Legislation Relating to Bats

Bats are strictly protected under both national and international law. The purpose of this legislation is to maintain and restore bat populations within their natural range. This implies that the habitats on which they rely and the ecology of their life cycles should not be compromised by human activities. Where activities have the potential to compromise bat populations, measures are required to be put in place to avoid impacts or compensate and mitigate for those impacts. The key legislation which provides protection to bats is outlined below.

1.2.1 Wildlife Act 1976

In the Republic of Ireland, all bats and their roosts are protected under Schedule 5 of the *Wildlife Act 1976* (amended 2000). It is unlawful to disturb either without the appropriate Licence.

1.2.2 EU Habitats Directive

In addition to domestic legislation bats are also protected under the *EC Directive on the Conservation of Natural habitats and of Wild Fauna and Flora* (Habitats Directive 1992). This Directive 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 (*Rhinolophus hipposideros*) 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. The EU Habitats Directive has been transposed into Irish law with the European Communities (Birds and Natural Habitats) Regulations 2011.

A total of 41 SACs have been designated for the Annex II species lesser horseshoe bat (1303), of which nine have also been selected for the Annex I habitat 'Caves not open to the public' (8310).

1.2.3 Bern and Bonn Conventions

Ireland has also ratified two international conventions which afford protection to bats amongst other fauna. These are known as the 'Bern' and 'Bonn' Conventions. *The Convention on the Conservation of European Wildlife and Natural Habitats* (Bern Convention 1982), 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, which covers certain species of bat.



1.2.4 Derogation licences

Any works interfering with bats and especially their roosts, may only be carried out under a derogation Licence granted by National Parks and Wildlife Service (NPWS) pursuant to Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish law).

The destruction, alteration or evacuation of a known bat roost is a notifiable action and can only be carried out with a derogation licence from the National Parks and Wildlife Service. Any works that might interfere with bats or their roost sites can only be carried out under licence to derogate from Regulation 23 of the Habitats Regulations 1997 and Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish Law). Details with regards to Appropriate Assessments, procedures and parameters under which derogation licences may be obtained are outlined in Circular Letter NPWS 2/07 *'Guidance on Compliance with Regulation 23 of the Habitats Regulations 1997 – strict protection of certain species / applications for derogation licences'* issued on the 16th of May 2007 on behalf of the Minister of the Environment, Heritage and Local Government.

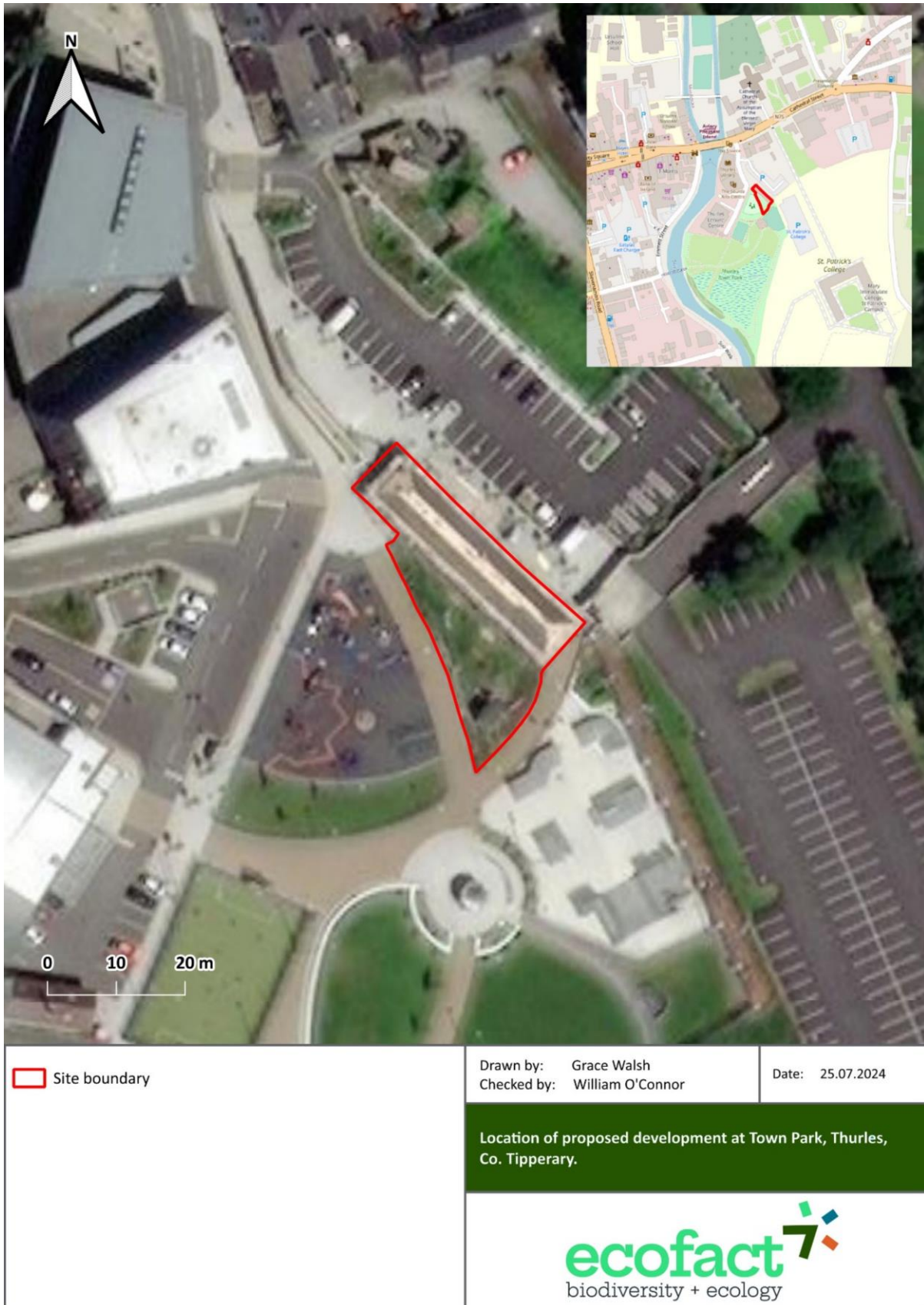


Figure 1 Location of subject site in Thurles, Co Offaly.



2. METHODOLOGY

2.1 Guidelines

The survey and assessment had regard to the methodology outlined in:

- Bat Mitigation Guidelines for Ireland v2 by Marnell et al., (2022)
- Bat Tree Habitat Key (BTHK) by Andrews, H (2018).
- Bat Surveys for Professional Ecologists: Best Practice Guidelines 4th Edition by Collins (2023)

2.1 Desktop review

The bat suitability of habitat in the study area for bats was obtained from the National Biodiversity Data Centre database. This map provides a picture of the broad scale geographic patterns of occurrence and local roosting habitat requirements for Irish bat species. The maps are a visualization of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats (Lundy *et al* 2011).

2.2 Field Surveys

2.2.1 October 2023 survey

A daytime visual survey of the buildings was carried out on the 12th of October 2023. The purpose of the survey was to look for signs of previous usage of the buildings by bats and assess the potential of the buildings to be used by bats – especially during the summer months when bats are active. The buildings were assessed for its potential usage by bats and was inspected both internally and externally for evidence of bats. Any potential ingress / egress points in the building structure were identified and any visible signs of bat usage were noted. Cracks, crevices, gaps in the roofing structure were investigated as potential ingress / egress points and for evidence of bat habitation, such as smearing lines, droppings and staining. The potential of the site to be used by foraging and commuting bats during the bat activity season was also considered.

2.2.2 Additional December 2023 survey

A second daytime visual survey of the buildings was carried out on the 12th of October 2023. Limited access was provided to the loft area for this visit. Access by ladder to the top of an internal stone wall



was provided but the loft could not be surveyed. A repeat of the October survey was completed and additional observations of the loft area were made.

2.2.3 July 2024 survey

The was visited on the 20th of July 2024. This survey included an updated daytime inspection of the building during daylight hours. The survey involved looking for evidence of roosting bats including droppings, staining, and feeding remains. The survey was completed from the outside of the building.

An emergence and activity survey was undertaken following the site inspections. The surveys included visual and hand-held detector surveys (Elekon Batscanner, Echo Meter Touch Pro 2). The emergence surveys extended from 30 mins before dusk to 2 hours after. Bat detectors with ultrasonic microphones are used as the ultrasonic calls produced by bats cannot be heard by human hearing. Bat species emerging from the building and using the site were recorded.

The site could all be accessed and the survey was completed within the appropriate season. The weather conditions were suitable for the surveys with no rain recorded.



3. RESULTS

3.1 Desk study

The National Biodiversity Data Centre (NBDC) maps landscape suitability for bats based on Lundy *et al.*, (2011). The maps are a visualisation of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats. Table 1 below gives the suitability of the study area for the bat species found in Ireland (based on NBDC) along with their Irish Red List Status (from Marnell *et al.*, 2009). The overall assessment of bat habitats for the current study area is given as 29.89. This is considered to be a moderate value.

Table 1 Suitability of the study area for the bat species (based on the NBDC data). Irish Red list status also indicated (based on Marnell *et al.*, 2019).

Common name	Scientific name	Suitability index	Irish red list status
All bats	-	29.89	
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	43	Least Concern
Brown long-eared bat	<i>Plecotus auritus</i>	41	Least Concern
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	49	Least Concern
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	0	Least Concern
Leisler's bat	<i>Nyctalus leisleri</i>	42	Near Threatened
Whiskered bat	<i>Myotis mystacinus</i>	20	Least Concern
Daubenton's bat	<i>Myotis daubentonii</i>	33	Least Concern
Nathusius's pipistrelle	<i>Pipistrellus nathusii</i>	5	Least Concern
Natterer's bat	<i>Myotis nattererii</i>	36	Least Concern

The 'National Bat Database of Ireland' was also checked for bat records in the Thurles area. There is one record of a Daubenton's bat from the River Suir immediately to the west of the proposed development site from 2007. There are no other records from the area. An updated review of these records was completed during August 2024.

3.2 Field survey

3.2.1 October 2023 visit

The field survey was completed on the 12th of October 2023 following a few relatively dry and settled days. The building is known as 'The Farm Building' and was formerly used to house and feed livestock. It is sited between a carpark and a children's play area with lots of street lighting. The site comprises



one structure, rectangular in plan, with limestone walls, unrendered on the exterior, and a hipped slated roof. Facias and soffits were formed of brick and therefore solid. The ground floor consists of four spaces of varying size, the large central space containing feed pens. An attic space at one end was not safe to access due to prior fire damage to the joists and flooring timbers. Many of the building's original roof timbers have been replaced with new rafters, purlins and joists and a modern membrane has been inserted between the timbers and the slates, which look original.

The Farm Building was surveyed both internally and externally. No evidence of bat activity was visible on the outside of the building. The areas around the building were searched for bat droppings and none were found. Although the days immediately preceding the survey were dry and settled, almost the entire of September was very unsettled and this would have blown away any accumulations of bat droppings. The building was then surveyed inside and remains of old bird's nests (likely Swallows) were found within at ceiling level. Bat droppings were found on internal walls. It is noted that the internal areas of the building appeared to have been recent cleared. Photos provided with the tender invite show debris inside the structure. Cleaning out the building like this would also have removed signs of bats in particular accumulations of droppings.

Due to its busy well-lit location the structure was initially considered to have little potential for roosting bats. However, bat droppings were recorded. Furthermore, the building has bat-friendly nooks between the stones of the external walls and possible roosting sites at roof, attic and wall-plate level. The louvred vent structure at the apex of the roof also provides potentially suitable roosting habitat for bats - this feature seems to be isolated from the main internal spaces. There are sufficient opes, gaps and louvred vents on the building's exterior to permit easy bat and bird ingress. For the purposes of this survey the curtilage is non-existent and there is little buffering between the building and the adjacent carpark and children's play area, both busy with human activity.

The Farm Building does have bat potential and bat droppings were found during the current survey (species unidentified). The attic spaces could not be accessed. However, our impression is that this is not a major bat roost and just a small quantity of bat droppings found during our survey. But this is nonetheless a confirmed bat roost. It is also a nesting site for Swallows (likely).

3.2.2 December 2023 visit

Access to the interior of buildings was provided but necessary access to loft area was not possible due to unsafe joists which had been damaged in a fire c.4years previously. Nevertheless, some limited



access to the loft area was effected by ladder to the top of an internal stone wall, but no further. Internal observations were made from this point.

Both bird and bat droppings were found in the loft. One bat dropping was found at loft area but access was limited to the top of an internal wall. Remedial works carried out at roof level, such as the insertion of a membrane between the rafters and slates might have affected bat ingress to the building. However, bat activity was confirmed despite the limited access.

3.2.3 July 2024 survey

The building was inspected on the 20th of July 2024. No signs or evidence of bat activity were recorded during the external inspection. This does not rule out bat occupancy and signs of bats such as droppings can be quickly dispersed. However, the absence of any signs of bat activity usually rules out a major roost being present.

House Sparrows (*Passer domesticus*) were confirmed to be nesting in the Louvred vent at the roof apex. No other birds were recorded using the building.

The emergence watch was completed on 20th July 2024. A small number of Common Pipistrelles (c. 5) were confirmed to be roosting in the building. The numbers present are very small and this is a few individual bats using the roof area. Pipistrelle roosts can contain over a thousand bats so this roost is at the bottom of the scale. The bats present are likely to be non-breeding bats. The emergence survey findings are in line with the previous winter surveys completed. The bats are roosting in the roof area and not in the walls of the building. The birds are also nesting in the roof. There is some ivy on the walls of the building but this is not being used by birds or bats.

During the activity survey, three bat species were recorded: Leisler's bat, Common Pipistrelle, and Soprano Pipistrelle were recorded in the general area foraging overhead and beside street lights. Leisler's bats were flying overhead and were not associated with the site. Overall activity levels were relatively low. This is expected considering the urban nature of the site and the presence of street lighting.

The results have confirmed that the building is a minor Pipistrelle roost. House Sparrows are also nesting in the roof and they are protected under the Wildlife Acts.



4. IMPACTS

4.1 Roost Habitat Loss

The proposed works would affect a bat roost. A small number of Pipistrelle bats are using this building as a roost site. Bat droppings were found in the building during the winter surveys, and an emergence watch during July 2024 confirmed that Common Pipistrelles were using the building. The numbers of bats present are low and this concerns only a few individuals non-breeding bats. Common Pipistrelle is one of the most common, adaptable, and widespread bat species in Ireland. However, all bats and their roosts are strictly protected in Ireland.

This building is confirmed to be used by small numbers of Pipistrelles during the summer months. The previous fire and subsequent works have reduced the value of this building for bats. However, a small number of bats are still using the building. House Sparrows were also confirmed to be nesting in the Louvred vent at the roof apex.

All bats and their roosts are ***strictly protected*** in Ireland and listed under Annex IV of the EU Habitats Directive. The EU Habitats Directive has been transposed into Irish law with the *European Communities (Birds and Natural Habitats) Regulations (2011)* (S.I. No. 477/2011). All bat species are also protected here under the *Wildlife Act (1976)* and *Wildlife (Amendment) Act (2000)* (S.I. No. 38 of 2000). Impacts on bats may also be the subject of claims under the *European Communities (Environmental Liability) Regulations (2008)* (S.I. No. 547/2008) where bat and their roosts may have been adversely affected by unauthorised activities.

4.2 Foraging and commuting

The areas around the subject building are already developed and affected by existing lighting. It is not predicted that there would be any impact on bat foraging and commuting routes.



5. MITIGATION

5.1 License Requirements

A derogation Licence under Regulation 25 of the European Communities (Natural Habitats) Regulations 1997 will be obtained for this work from the National Parks and Wildlife Service in advance of the works. No work on the building can be undertaken without this licence being in place. Disturbance of a known bat roost is a notifiable action under current national and European legislation.

5.1 Compensatory roosts

The low exterior walls are unstable for the placement of bat boxes, which may be subject to human interference.

It is proposed to accommodate the bats in the roof/attic in a managed way. An artificial bat roost compartment will be installed that can be accessed via bat tiles. The design of the proposed mitigation is provided in Appendix 1. This has been designed and will be implemented following the Bat Mitigation Guidelines (Marnell *et al.* 2022).

5.2 Avoidance Mitigation

Works can be planned for outside active bat season and completed under a derogation licence. The recommended time for these works to take place is October to April.

Due to the small numbers of non-breeding bats it is proposed to commence the works on the 1st of September, starting with activities that are least likely to disturb the bats. The bats were recorded using the roof area and not in the walls. Therefore the first works to take place will be the grouting of the walls. September is also outside of the bird nesting season.

The works can only take place under license and the timing of the works will be specified in the licence. It is considered that once the works have commenced on the roof that bats will no longer use the site until the works are completed and the small bat loft (see Appendix 1) has been installed.

The works will be monitored by an ecologist and if any bats are recorded at any time during the works then the ecologist and NPWS will be notified immediately.



5.3 Lighting

Bat Conservation Trust & Institute of Lighting Professionals (2018) guidance will be followed in relation to any new lighting, as well as Bat Conservation Ireland's *Bats & Lighting: Guidance Notes for Planners, Engineers, Architects and Developers* (2010).

5.4 Landscaping

Some landscaping for bats could be provided in the area, with night scented plants.

6. CONCLUSIONS

The current survey has confirmed the presence of as small number of Common Pipistrelle bats using the subject building. House Sparrows are also present.

The building is a minor bat roost and it is concluded that small numbers of non-breeding bats use this building summer months. A derogation licences is required for the works as a bat roost is affected. Mitigation for bats will be required. It is proposed part of the attic area of the building be modified to allow bats to use a defined compartment. Bats would access this compartment via bat tiles on the roof. Works will be delayed until September (timing to be agreed with NPWS and subject to licence).



REFERENCES

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PLATES



Plate 1 The subject building in Thurles, Co Tipperary, July 2024.



Plate 2 The subject building in Thurles, Co Tipperary, July 2024.



Plate 3 Corner of building - note gaps between stones.



Plate 4 Louvred vent at roof apex - vertical ope and gaps in limestone wall.



Plate 5 Side of building adjacent to playground with adjacent street lighting



Plate 6 Interior space below attic (2023 surveys).



Plate 7 Bat droppings on interior rendered wall (2023 surveys).



Plate 8 Main central livestock feeding hall - note new timbers (2023 surveys).



Plate 9 Gap in ground floor ceiling to attic space - note bat and bird droppings on wall (2023 surveys).



Plate 10 More bat and bird droppings on wall (2023 surveys).



Plate 11 Loft Area - note fire damaged joists. The A-frame originally hosted a hoisting mechanism for lifting animals (2023 surveys).



Plate 12 Loft Area above the level of the wall plate - most of the timbers were replaced after the fire (2023 surveys).



Plate 13 Loft Area - fire damaged joists and bird fouling. Bat and bird droppings present.



Plate 14 The nearby River Suir is an important habitat for bats (July 2024).



Plate 15 Suitable bat foraging and commuting habitats beside the River Suir to the east of the proposed works site (July 2024).



APPENDIX I BAT MITIGATION FOR ROOF

02 Thurles Market Quarter: Proposed Bat Detail
1:5 @ A3

02 Thurles Market Quarter: Proposed Bat Detail
1:5 @ A3

GENERAL NOTES:

This drawing **MUST** be read in conjunction with architect's specification and preliminaries for full details.

Refer to service engineer's drawings for specification for full details.

Refer to architect's specification for full list of standards to be adhered to. Standards are up to date at time of tendering. Where a standard is superseded by a European standard or another BS standard - the most current standard is to be used.

REFER TO THE ARCHITECTS SPECIFICATION AND THE FOLLOWING DRAWINGS FOR FURTHER INFORMATION:

- G-000 SERIES FOR SITE DETAILS
- G-200 SERIES FOR DETAILS
- G-400 SERIES FOR DETAILED SANITARY LAYOUTS
- G-500 SERIES FOR DOOR AND WINDOW SCHEDULES
- G-700 SERIES FOR FLOOR AND CEILING FINISHES
- G-800 SERIES FOR DETAILED STAIRS DRAWINGS
- G-900 SERIES FOR SITE FINISHES/ LANDSCAPING

WORKS REQUIREMENTS

NOTE: BASED ON TOPOGRAPHICAL MEASURED SURVEY RECEIVED FROM TIPPERARY COUNTY COUNCIL

WORKS REQUIREMENTS

NOTE: CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE SETTING OUT COMMENCING WORK OR PRODUCING ANY SHOP DRAWINGS.

PROJECT INFORMATION

PROJECT NAME: Thurles Market Quarter
CLIENT: M&E
DATE: 11/12/2023
DRAWN BY: M
CHECKED BY: M
SCALE: 1:5 @ A3
PROJECT NO: TMQ-G-275

REVISIONS

NO.	DATE	DESCRIPTION
1	11/12/2023	Issue for tender