



**Bat surveys and Building Assessment for Bats
Development at Abbeyland, Cavan town, Co. Cavan**

September 2022



**Report prepared for:
Cooney Architects and DHB Architects, September 2022**

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1. Introduction

The site of the proposed developments at Abbeyland, Cavan Town was assessed for bat potential by Flynn Furney Environmental Consultants on the 9th, 13th and 29th September 2022. Ecologist Aidan Murphy carried out an assessment of the existing buildings and habitats on the site for bat roost potential. Following this site assessment, no bat roosts were confirmed within the buildings surveyed. Aidan holds a BSc (Hons) in Wildlife Biology and an MSc in Ecological Assessment (UCC). Aidan has worked for six years as a freelance ecologist with survey experience including bats, birds, freshwater & terrestrial invertebrates, and botanical surveys

2. Site description

The study site is located in Abbeyland, Cavan town and covers properties between Abbey Street and Main Street and north of Bridge Street. The buildings comprise former McIntyre's Store, 8 & 16 Abbey street, Donohoe's Foodfare and the 'Back Building' with annexes behind Cavan Credit Union on Main Street. All the buildings are currently lying empty and in varying conditions from dereliction to well maintained. The buildings are described more fully in the results section. Abbeyland Park is located at the centre of the survey area and contains amenity grassland with mature trees.

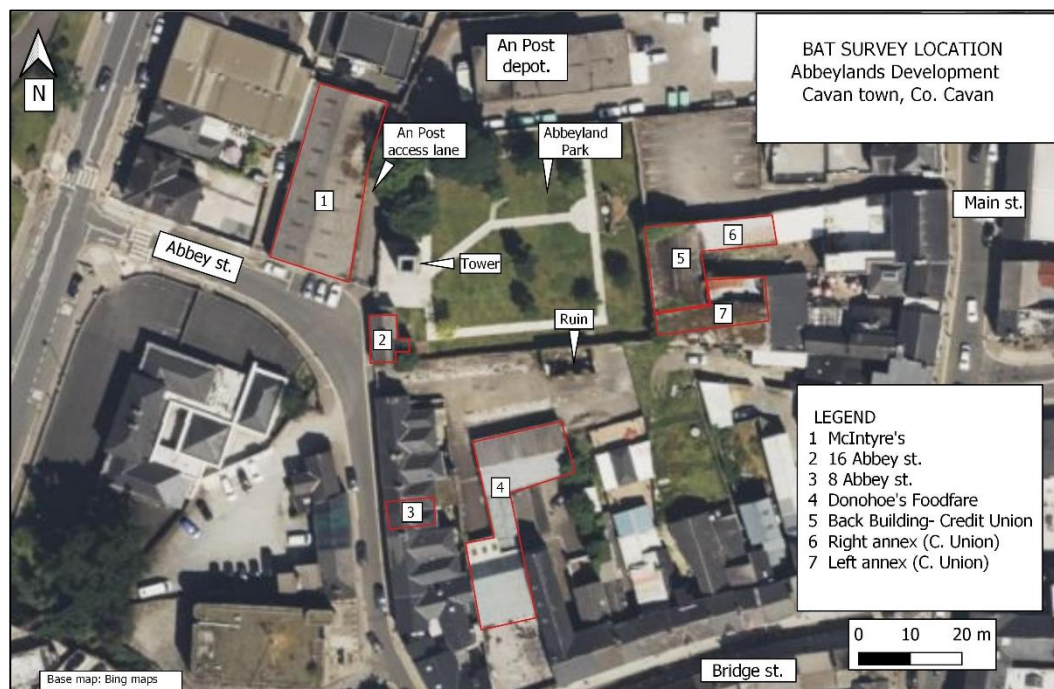


Figure 1. Site location. Buildings are numbered 1-7

3. 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 EC Birds and Natural Habitats Regulations (S.I 477 of 2011) 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.

Regulation 51(2) of the 2011 Regulations provides –

“(2) Notwithstanding any consent, statutory or otherwise, given to a person by a public authority or held by a person, except in accordance with a licence granted by the Minister under Regulation 54, a person who in respect of the species referred to in Part 1 of the First Schedule—

(a) deliberately captures or kills any specimen of these species in the wild, (b) deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration,

(c) deliberately takes or destroys eggs of those species from the wild,

(d) damages or destroys a breeding site or resting place of such an animal, or

(e) keeps, transports, sells, exchanges, offers for sale or offers for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive, shall be guilty of an offence.”

The grant of planning permission does not permit the commission of any of the above acts or render the requirement for a derogation licence unnecessary.

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Under existing legislation, the destruction, alteration or evacuation of a known bat roost is a “notifiable action”, and a derogation licence is required from the National Parks and Wildlife Service (NPWS) before works can commence on or adjacent to a known bat roost.

4. Methodology

4.1. Desktop study

The site is located within tetrad H40C (a tetrad is an area of 2 km x 2 km). A search of records held by the National Biodiversity Data Centre (NBDC)¹ portal was made. Such information can identify protected or notable species which may occur on the site or in the local area. It should be noted that an absence of records is likely to reflect an absence of survey data and cannot be taken as confirmation that a particular species is not present on a site or in the surrounding area. Also, due to the sensitive nature of such data, a location resolution of no less than 100 metres is made available for public viewing.

¹ <https://maps.biodiversityireland.ie/Map> (Accessed 11th October 2022)

4.2. Field study – bat surveys

4.2.1 Building Inspections

An assessment of all structures and buildings including their roof spaces was carried out on 9th and 13th September 2022. The external assessment was conducted during daylight hours from ground level. Binoculars were used for areas over 2 m in height. Internal inspections of the structure were carried out on the same days with ladders, high powered torches and an endoscope. The surveys included the attics and roof spaces. The survey identified any potential roost features or evidence of use by bats. Evidence of bat presence include droppings, grease staining (created when the bat's fur rubs against timber, etc. as it enters and exits its crevice space), urine marks, feeding signs (invertebrate remains such as moth and butterfly wings), dead bats and / or the presence of bat fly pupae, *Nycteribiidae*. Potential roosting features such as cracks, holes and crevices within features on-site were searched for and noted where necessary. The survey included an assessment of the trees on site for roost potential.

Evidence of bat roosts was searched for and information on all potential roosts was recorded according to roost identification guidelines 'Bat Survey Guidelines: Traditional Farm Buildings Scheme', Aughney, T., Kelleher, C. & Mullen, D. (2008)². Additionally, practice methodology referred to in other guidance documents including the 'NRA Guidelines for the Treatment of Bats during the Construction of National Road Schemes' (NRA, 2006)³ was implemented.

4.2.2. Dusk emergence surveys

Dusk surveys were conducted on the 9th, 13th and 29th September 2022 using a handheld Batbox Duet bat detector and handheld Echo Meter Touch 2 Pro bat detector. Weather conditions were optimum for bat activity during all surveys, with calm, dry and mild conditions. A second surveyor, Billy Flynn undertook bat emergence watches on the 9th and 13th September using a handheld Batbox Duet detector. Surveys commence 30 minutes before sunset and finished 90 minutes after sunset. Survey details are listed below.

- 9th September (Sunset 20:01) - Weather conditions were good for the survey (dry, 13°C, no breeze, ca. 80% cloud cover at 19:30). Any bats present are likely to be active.
Location: rear of Donohoe's Foodfare (A.M.), rear of 16 Abbey Street (B.F.)
- 13th September (Sunset 19:51) - Weather conditions were good for the survey (dry, 12°C no breeze and no cloud cover at 18:10). Any bats present are likely to be active.
Location: east side of Back Building, Credit Union (A.M.), west of Back Building (B.F.)
- 29th September (Sunset 19:11) - Weather conditions were good for the survey (dry, 11°C with no breeze and no cloud cover at 18:40). Any bats present are likely to be active.
Location: West and south-west sides of Back Building/ Abbeyland Park (A.M)

² Aughney, T., Kelleher, C. & Mullen, D. (2008). Bat Survey Guidelines: Traditional Farm Buildings Scheme. The Heritage Council, Áras na hOidhreachta, Church Lane, Kilkenny.

³ NRA (2006) Guidelines for the Treatment of Bats during the Construction of National Road Schemes, NRA, Dublin.

5. Results

5.1. Desktop study

The online search of the NBDC database returned no records for bats occurring within the tetrad H40C. Records within a 5 km radius of the site are presented in Table 1 below.

Bat Conservation Ireland's habitat suitability index⁴, available to view on the NBDC online mapping portal, classifies the landscape, within which the site is located, as having a medium to high habitat suitability for bats, with a score of 29.89 for all bat species. The three species of bat most likely to be associated with the habitats within this tetrad, as per the habitat suitability index, are common pipistrelle *Pipistrellus pipistrellus sensu lato* (score of 45), soprano pipistrelle *Pipistrellus pygmaeus* (score of 43) and Leisler's bat *Nyctalus leisleri* (score of 42).

Table 1. Bat records within 5 km radius of site

| Grid reference | Species | Recorder | Date of last record | Database | Distance from site |
|----------------|---|--|---|---|--------------------|
| H394058 | Nathusius's Pipistrelle (<i>Pipistrellus nathusii</i>) Natterer's Bat (<i>Myotis nattereri</i>) Daubenton's Bat (<i>Myotis daubentonii</i>) Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) Common Pipistrelle (<i>Pipistrellus pipistrellus sensu lato</i>) Brown Long-eared Bat (<i>Plecotus auritus</i>) | Brian Keeley | 11/06/2007 | National Bat Database of Ireland EIS surveys | 3.6 km NW |
| H398054 | Nathusius's Pipistrelle (Building) | Brian Keeley | 01/05/2003 | National Bat Database of Ireland EIS surveys | 3 km NW |
| H385038 | Nathusius's Pipistrelle (Building) Soprano Pipistrelle Brown Long-eared Bat (Building) Lesser Noctule (<i>Nyctalus leisleri</i>) (Building) | Tina Aughney Caroline Shiel | 14/08/2008 | National Bat Database of Ireland EIS surveys | 4.5 km SW |
| H384035 | Lesser Noctule Soprano Pipistrelle ----- Brown Long-eared Bat | T. Aughney ----- BLE Survey Volunteers | 11/09/2006 30/05/2007 ----- 05/08/2014 | National Bat Database of Ireland | 5 km SW |

⁴ Lundy, M.G., Aughney, T., Montgomery, W.I., & Roche, N. (2011) *Landscape conservation for Irish bats and specific roosting characteristics*. Bat Conservation Ireland. Accessed October 11th 2022.

5.2. Field study results

5.2.1. Building searches

No bat roosts or evidence of such was found in any of the surveyed buildings on site. Many of the buildings are constructed from modern materials and are generally in a sound structural state, providing limited roosting opportunities. Photographs and notes are presented in Appendix- Plates.

Building 1. Former McIntyre's Store

McIntyre's is a modern building with sheet metal roofing with no discernible access points for bats with exception of the east side of the building where sections of the external wall are rough and unfinished. This area corresponds with an interior toilet which showed signs of a rat infestation. Signs of rodents were restricted to the toilet and were not observed elsewhere in the building. The wall is not considered suitable for bat roosts as it suffers severe light pollution from the An Post access lane running adjacent to the wall.

Building 2. 16 Abbey Street

No 16 is a detached two-story house in poor repair with water ingress through the roof causing dampness throughout the building and adversely affecting the upstairs ceiling though it is still intact. The ceiling is not provided with an access hatch which makes a survey of the attic space impossible. The water storage tank is located on the flat roof extension to the rear of the house. The rear slated roof has gaps around ridge tiles and chimney flashing which are potential access points for bats.

Building 3. 8 Abbey Street

No 8 is a terraced house in good condition and no access points for bats were noted on the exterior. The search of the house and attic space revealed no trace of bats.

Building 4. Donohoe's Foodfare

Donohoe's Foodfare is a collection of buildings associated with food processing and storage. The buildings have sheet metal roofs. The first floor has an attic space with sufficient height to be used by bats. No signs of bats were observed with the exception of a small open area housing machinery located over meat processing rooms below. Two unidentified droppings were noted at the opening of this space on its north side. In the absence of any other signs of bat activity, including feeding remains, i.e. moth wings, it is probable the droppings arose from bats entering the space exploring or hunting for insects at night.

Buildings 5, 6 and 7. Back Building, Right Annex and Left Annex (Credit Union)

A search was made of the ground floor areas of all three buildings and no evidence of bat presence was noted in any of the buildings. The Back Building and the Left Annex are two story buildings but survey of the upper floor areas was not possible due to the dangerous condition of the floor timbers.

5.2.2. Dusk/emergence surveys

The results of dusk/bat activity surveys undertaken in September 2022 are summarised in Table 2 below. Two bat species were recorded; common pipistrelle and soprano pipistrelle.

The first bat encounter during the first emergence survey (9th September) was at 20:32 hrs and this was a soprano pipistrelle soon joined by a second. There was continuous feeding activity from the back of Donohoe's Foodfare, along the rear of the line of houses on Abbey Street and extending into Abbeyland Park. They were joined by a common pipistrelle at 20:40. The focus of the emergence survey was the rear of Donohoe's Foodfare and nos 8 and 16 Abbey Street. Bat activity ceased at 20:53.

The second night's emergence survey (13th September) focused on the east and west sides of the Back Building and annexes. Soprano and common pipistrelles were recorded and observed commuting over the east side of the Back Building with single passes. The west side within Abbeyland Park recorded soprano and common pipistrelles from 20:10 until 20:38 when bat activity ceased.

The third night's emergence survey (29th September) focused on the west side of the Back Building. Soprano and common pipistrelles were recorded from 19:29 to 19:47 on the west side of the Back Building with soprano bats making up the majority of bat passes.

No bats were seen to emerge from or return to any of the buildings.

Table 2. Bat activity recorded during dusk/ emergence surveys: 9th, 13th and 29th September 2022

| Time | Location | Species | Comments |
|-------------------------------|---------------------------|---|--|
| Dusk survey 9/09/2022 | | | |
| 20:30 | Rear Donohoe's Foodfare | Soprano pipistrelle | Detected - 2 bats, continuous feeding |
| 20:32 | Rear Donohoe's Foodfare | Soprano pipistrelle | Detected - 2 bats, continuous feeding |
| 20:40 | Rear Donohoe's Foodfare | Common pipistrelle | Detected - 1 bat, continuous feeding |
| 20:41 | Rear Donohoe's Foodfare | Common pipistrelle | Detected - 1 bat, continuous feeding |
| 20:50 | Rear Donohoe's Foodfare | Soprano pipistrelle | Detected - 1 bat, continuous feeding |
| 20:53 | Rear Donohoe's Foodfare | Common pipistrelle | Detected - 1 bat, continuous feeding |
| Dusk survey 13/09/2022 | | | |
| 20:11 | Back Bulilding, east side | Soprano pipistrelle | 1 bat Commuting north to south |
| 20:27 | Back Bulilding, east side | Common pipistrelle | 1 bat Commuting north to south |
| 20:32 | Back Bulilding, east side | Common pipistrelle | 1 bat Commuting north to south |
| 20:10 - 20:38 | Back Building, west side | Common pipistrelle Soprano pipistrelle | Continous feeding on Ivy |
| Dusk survey 29/09/2022 | | | |
| 19:29:- 19:33 | Back Bulilding, west side | Soprano pipistrelle | 2 bats, feeding around east of park 18 passes |
| 19:34 | Back Bulilding, west side | Common pipistrelle | Detected - 1 bat, continuous feeding |
| 19:35 | Back Bulilding, west side | Common pipistrelle | Detected - 1 bat, continuous feeding |
| 19:34 - 19:39 | Back Bulilding, west side | Soprano pipistrelle | 2 bats, feeding around east of park 14 passes |
| 19:40 - 19:47 | Back Bulilding, west side | Soprano pipistrelle | 1 bat, feeding around east of park 8 passes |

6. Mitigation measures

Wildlife surveys, including those for bats, are a 'snapshot' in time and the absence of a species, or evidence of their presence, does not preclude their presence at a later date. Some of the Abbeyland buildings, especially the buildings in poor condition offer potential roost locations for bats.

Prior to works commencing, emergence (dusk) and re-entry (dawn) watches should be undertaken to ensure no bats are present. These should be carried out during the appropriate season, May to September. If bats are not confirmed exiting or entering the buildings, a further internal survey is required before demolition works involving roofs can commence, under the supervision of an ecologist.

During the period October to April inclusive, a pre-works internal survey is required, and demolition works involving the roofs supervised by an ecologist.

If bats are confirmed, works cannot proceed until an NPWS derogation licence is obtained.

It is recommended that an ecologist has input into the external lighting plan for the future development to ensure the correct positioning and models of lighting columns are installed and the habitats around the development are not impacted by light overspill.

7. Conclusion

No evidence of bat roosts in any of the buildings on the site was confirmed. However, the presence of bats in the future cannot be completely ruled out. The buildings should be resurveyed for bats prior to any proposed demolition works as some time may have elapsed between the present survey and these works. Such works, particularly those involving roofs, should be done so under the supervision of an ecologist with a bat handling licence.

8. References

- Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.
- Lundy, M.G., Aughney, T., Montgomery, W.I., & Roche, N. (2011) *Landscape conservation for Irish bats and specific roosting characteristics*. Bat Conservation Ireland. Accessed October 11th, 2022. <https://maps.biodiversityireland.ie/Map>. Last accessed October 11th, 2022
- Marnell, F., Kelleher, C. & Mullen, E. (2022) *Bat mitigation guidelines for Ireland v2*. Irish Wildlife Manuals, No. 134. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland
- NRA (2006a) *Best practice guidelines for the conservation of bats in the planning of national road schemes*. National Roads Authority, Dublin, Ireland

9. Plates



Plate 1. McIntyre's front and west side. Photo facing north-east



Plate 2. McIntyre's interior. Photo facing rear wall,



Plate 3. First floor with timber cladding



Plate 4. Space between sheet metal roof (above) and cladding (below) is not insulated



Plate 5. McIntyre's east side is subject to serious light pollution from brightly lit access lane (An Post) which greatly reduces suitability for bats roosting. These lights overspill into the adjacent Abbeyland Park and negatively impact the foraging potential for bats. Photo facing north-west



Plate 6. Front of 16 Abbey Street. Photo facing south-east



Plate 7. Rear of 16 Abbey Street. Roof has potential bat roost features around chimney flashing and ridge (inset photo). Building suffers from damp with apparent water ingress of rain through roof with ceiling plaster deteriorating. Ceiling has no attic hatch and roof space could not be surveyed. Water storage tank is located on flat roof at rear of house. Photo facing south-west



Plate 8. Exterior 8 Abbey Street (centre) with inset photos of rear roof and attic



Plate 9. Rear of Donohoe's Foodfare buildings, marked with red arrows. Inset photo of meat processing room. Photo facing south

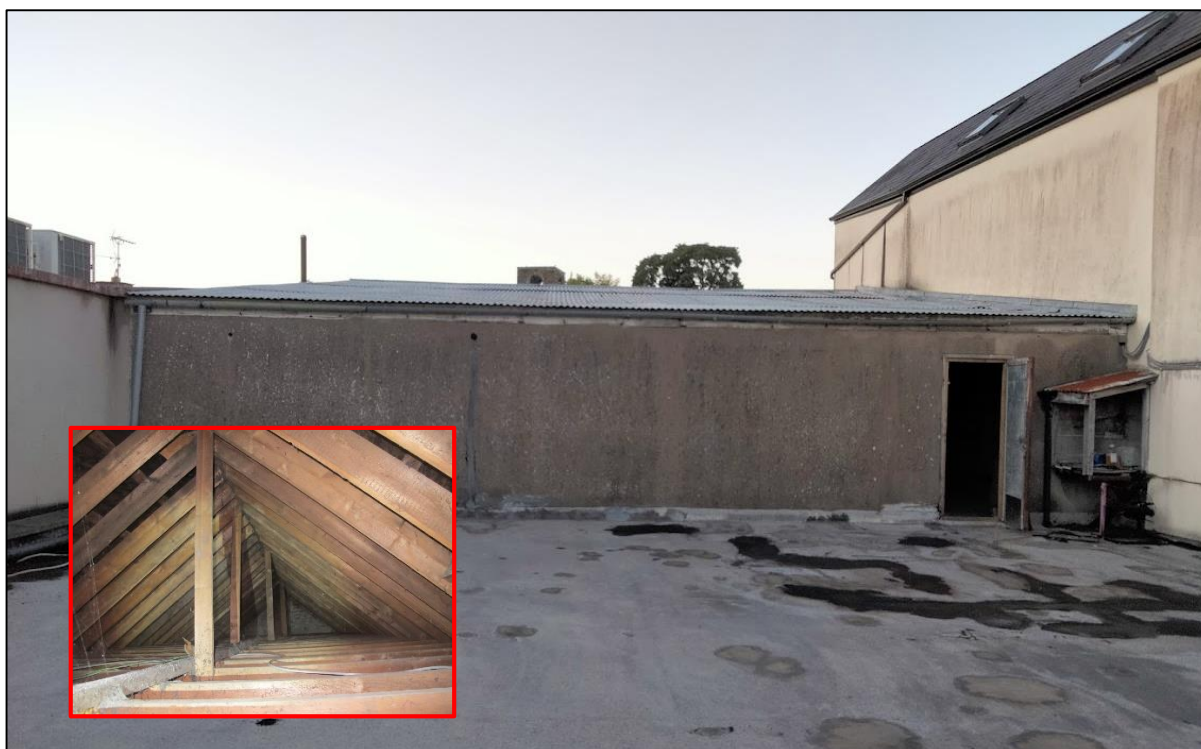


Plate 10. South facing corrugated roof of Donohoe's Foodfare. Inset photo of attic. Photo facing north



Plate 11. Donohoe's Foodfare machinery housing. Inset photos of machinery and services (left) and west facing hatch (right) where two bat droppings were noted.



Plate 12. Back Building (centre) with left annex (left) and right annex (right)



Plate 13. Rear of Back Building facing west onto Abbeyland Park with northern side on left. Photo facing south-east

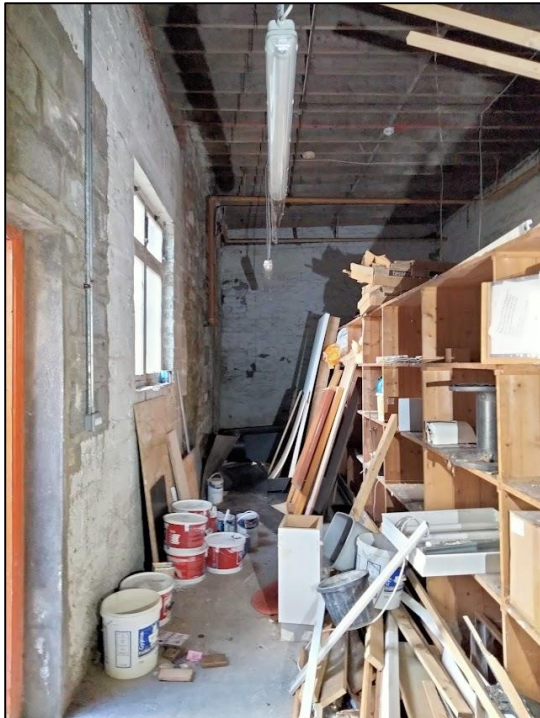


Plate 14. Inner bay of Back Building (front door on left)



Plate 15. Outer bay of Back Building



Plate 16. First floor of Back Building. Survey of this space was not possible due to floor in dangerous condition with wall plate supporting the floor coming away from wall bulging outwards (on right/back wall). While no bat roost features were discerned from a vantage point in the north-west corner (as per photo) the building is open at the southern end and there is potential for night roosting/perching in the roof timbers. Bats were not observed emerging from the Back Building during surveys.



Plate 17. Right Annex off Back Building. A dead startling was noted in this section which connects with the Back Building. No likely access points for bats were noted. Inset photo of internal roof space



Plate 18. Front of Left Annex. Phot facing south-west



Plate 19. Left Annex, roof facing onto the front (north) has collapsed, rooms below are exposed and damp. Photo by Liam O'Reilly, Architect (Cavan Co. Council)

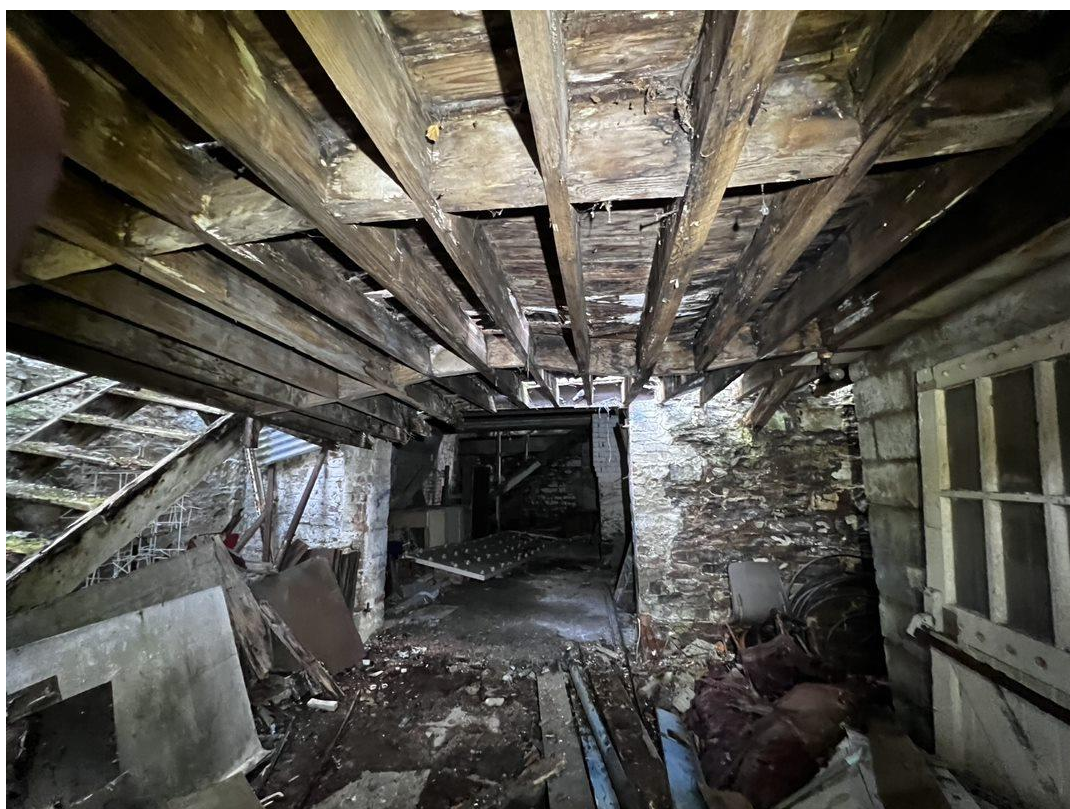


Plate 20. Left Annex interior. The floor timbers are rotten and dangerous to walk on, a survey of the upper floor was not possible. The building is in a state of dereliction and is suffering badly from the ingress of rainwater and is very damp. Photo by Liam O'Reilly



Plate 21. Upper floor of Left Annex. Photo by Liam O'Reilly using a GoPro camera on extension