Dripsey Castle Estate Bat Survey Report

Final

October 2024

Prepared for:

Meitheal Architects

www.jbaconsulting.ie

Document Status

Issue date	15th August 2024
Issued to	Eva Zivko
BIM reference	NKB-JBAI-XX-XX-RP-BD-0001-S3-P01
Revision	Final
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Contract

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This report describes work commissioned by Eva Zivko, on behalf of Meitheal Architects, by an instruction dated 18/06/2024. The Client's representative for the contract was Eva Zivko of Meitheal Architects. Hannah Mulcahy and Mia Heigh of JBA Consulting carried out this work.

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The methodology adopted and the sources of information used by JBA in providing its services are outlined in this Report. The work described in this Report was undertaken between June and August 2024 and is based on the conditions encountered and the information available during the said period. The scope of this Report and the services are accordingly factually limited by these circumstances.

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Contents

List of Figures

List of Tables

Abbreviations

BCT……Bat Conservation Trust

EC……..European Communities

EU……..European Union

NBDC……National Biodiversity Data Centre

NPWS……National Parks and Wildlife Service

NRA……National Road Authority

1 Introduction

1.1 Background

JBA Consulting Engineers and Scientists Ltd. (hereafter JBA) was appointed by Meitheal Architects to conduct a bat survey of Dripsey Castle Estate, Dripsey, Co. Cork. The proposed project involves the alterations, renovations, extension and change of use of agricultural buildings situated next to Dripsey House. This work is requested under a Request for Further information for Cork County Council.

Meitheal Architects commissioned JBA to identify the importance of the outbuildings to be renovated for roosting bats. The report presents a desktop study of the proposed site, identifying recent and historical records of bat roosting in the vicinity, summarises the findings of the surveys at the site, as well as habitats that may be suitable as commuting and foraging features.

A separate PEA report has been provided to assess the ecological features in Dripsey Estate. The PEA found no impacts to any protected habitats or species.

1.1.1 Legislative Context

All bat species are protected under the Wildlife Act (1976) and Wildlife [Amendment] Act (2000) in Ireland and bats are likely to be present on site.

Under international legislation, bats are further protected under the Convention for Conservation of European Wildlife and Natural Habitats (Bern Convention)(European Communities, 1982), which, 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) (European Communities, 1983) was instigated to protect migrant species across all European boundaries. The Irish Government has ratified both of these conventions. Also, the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) (European Commission, 1992) 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 European Habitats Directive, while the Lesser Horseshoe Bat (*Rhinilophus 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 current status and legal protection of the known bat species occurring in Ireland is given in Table 1-1 below.

Table 1-1 Current status and legal protection of bat species known to occur in Ireland

Species	Wildlife Act (1976) and amendments	Irish Red List Status	Habitats Directive	Bern & Bonn Conventions
Common Pipistrelle *Pipistrellus pipistrellus*	Yes	Least Concern	Annex IV	Appendix II
Soprano Pipistrelle *Pipistrellus pygmaeus*	Yes	Least Concern	Annex IV	Appendix II
Nathusius' Pipistrelle *Pipistrellus nathusius*	Yes	Least Concern	Annex IV	Appendix II
Leisler's Bat / Lesser Noctule *Nyctalus leisleri*	Yes	Least Concern	Annex IV	Appendix II
Brown Long-eared Bat *Plecotus auritus*	Yes	Least Concern	Annex IV	Appendix II
Lesser Horseshoe Bat *Rhinolophus hipposideros*	Yes	Least Concern	Annex II Annex IV	Appendix II
Daubenton's Bat *Myotis daubentonii*	Yes	Least Concern	Annex IV	Appendix II
Natterer's Bat *Myotis nattereri*	Yes	Least Concern	Annex IV	Appendix II
Whiskered Bat *Myotis mystacinus*	Yes	Least Concern	Annex IV	Appendix II

NB: Destruction, alteration or evacuation of a known bat roost is a notifiable action under current legislation and a derogation licence has to be obtained from the National Parks and Wildlife Service (NPWS) before works can commence.

Also, it should be noted that any works interfering with bats and especially their roosts, including for instance, the installation of lighting in the vicinity of the latter, may only be carried out under a licence to derogate from Regulation 23 of the Habitats Regulations 1997, (which transposed the EU Habitats Directive into Irish law) issued by NPWS. The details with regards to appropriate assessments, the strict parameters within which derogation licences may be issued and the procedures by which and the order in relation to the planning and development regulations such licences should be obtained, are set out 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 behalf of the Minister of the Environment, Heritage and Local Government on the 16th of May 2007.

Furthermore, on 21st September 2011, the Irish Government published the European Communities (Birds and Natural Habitats) Regulations 2011 which include the protection of the Irish bat fauna and further outline derogation licensing requirements re: European Protected Species.

Where bat roosts exist, an application may be made to the National Parks and Wildlife Service for a derogation licence to permit actions affecting bats or their roosts that would normally be prohibited by law. The applicant must demonstrate that there is no satisfactory alternative and that the action will not adversely affect the favourable conservation status of bat species. Each case is considered on its particular circumstances, and an application may be refused. Mitigation to reduce or compensate for any impact of development is generally a condition of the licence and should be proportionate to the predicted impact. Mitigation measures may require particular timing of operations, protection of existing roosts or the creation of new roosting facilities to replace ones being lost. Monitoring of the effect of mitigation is usually required (Marnell et al., 2022).

1.2 Site Location

Dripsey Castle Estate is a country house in the townland of Carrignamuck, situated 3.3km north-east of Coachford village. The house and demesne were dominant features in the rural landscape, throughout the eighteenth and nineteenth centuries. The Georgian mansion where the proposed works are located is surrounded by woodland and the Dripsey River flows through the site.

25 Inch maps were reviewed, and no caves were located around the site.

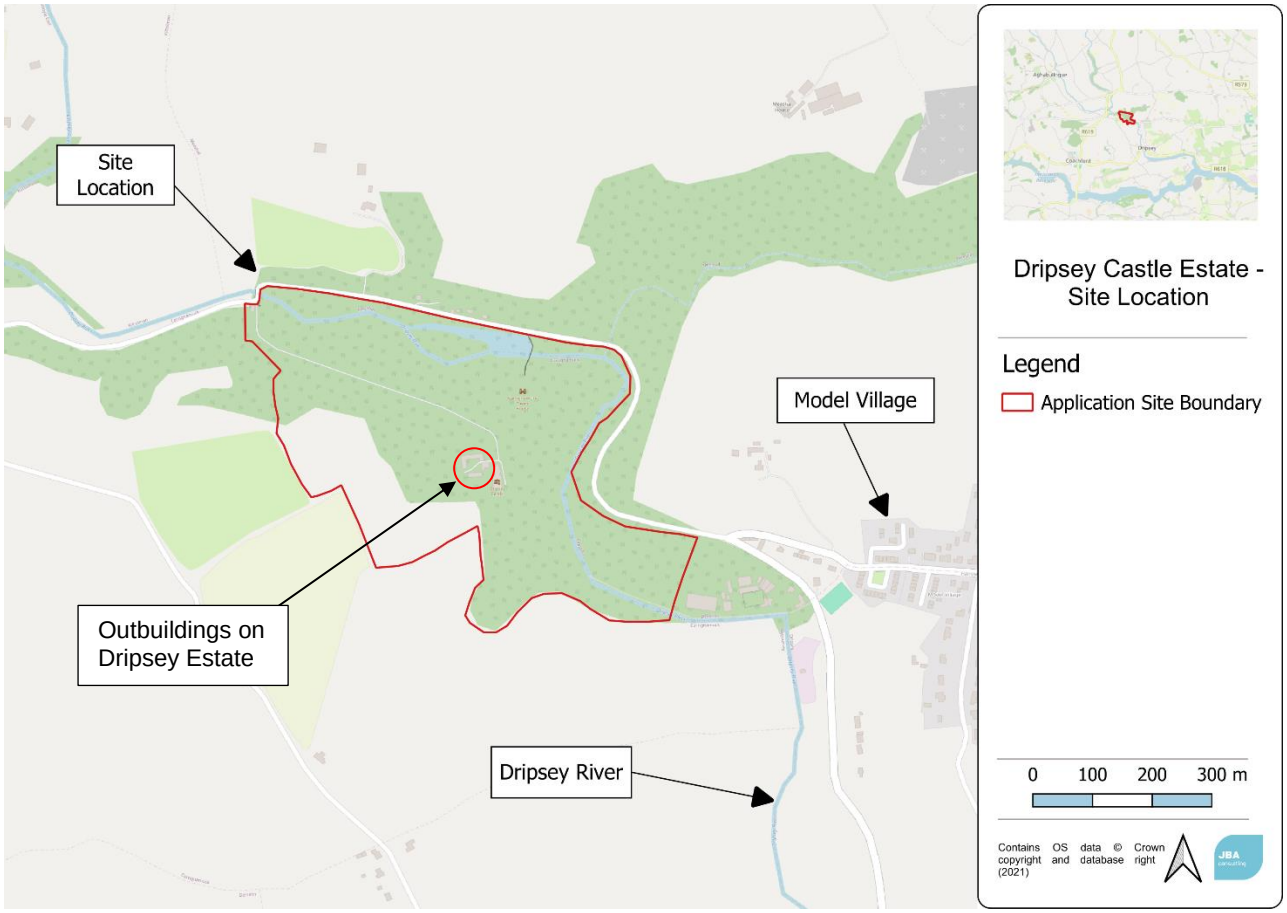

Figure 1-1: Site location of Dripsey Castle Estate. Works will take place in the outbuildings

1.3 Proposed Project

The proposed project is the renovation of agricultural buildings to the rear of the Georgian Mansion into accommodation and leisure spaces. Dripsey House was built in 1740. The works include:

- The alterations, renovations, extension and change of use of stable buildings into a garden room and 4 no. bedroom suites, for short-term letting,
- the alteration, renovation and change of use of cow byre and adjoining storage rooms into ancillary recreational facilities including a pool, sauna, steam room and changing facilities, and change of use of agricultural storage building to plant room,
- The alterations, renovations and change of use of agricultural barn and adjoining storage buildings into ancillary storage and general-purpose rooms, and construction of semi basement storage with overhead roof terrace.
- Planning permission is also being sought for elevational modifications including fenestration replacement & repair, structural interventions, construction of new opes, internal wall removal and roof repairs, and modifications to existing paving treatments to the above, along with the removal and decommissioning of the

existing wastewater treatment system (septic tank) and the provision and installation of a new wastewater treatment system including proprietary treatment plant and tertiary system & all ancillary site works necessary to facilitate the development.

The stable yard buildings are comprised of the following buildings: a single-storey cow byre to the north, double-storey building currently serving as an agricultural store, southern building historically used as the stables on the lower floor and store on the upper floor and a single-storey element to the east currently serving as a plant room.

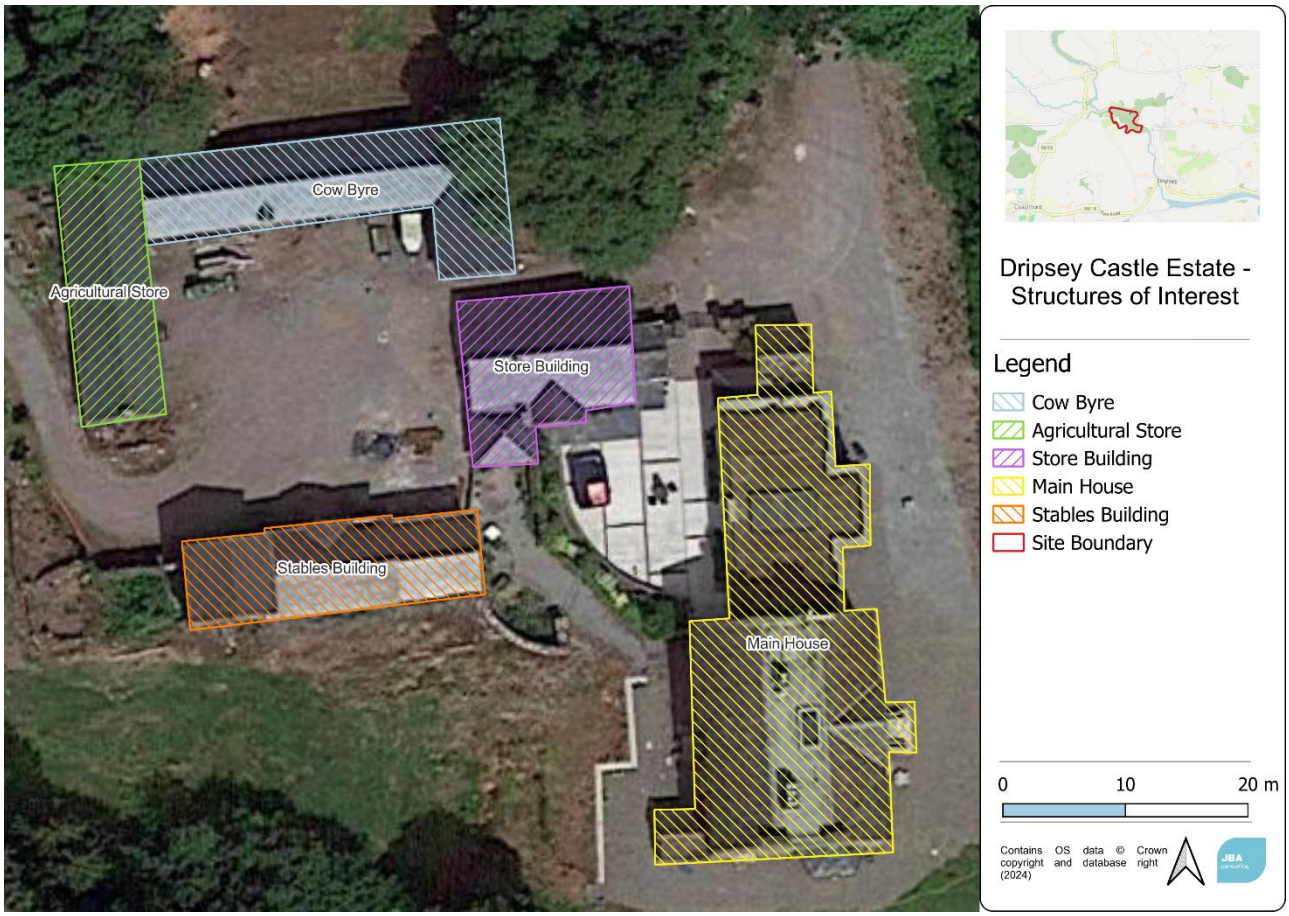

Figure 1-2: Proposed project buildings of interest.

2 Methodology

2.1 Bat Survey Guidance Documents

This report provides details of the survey methodology used, the relevant guidelines followed and any relevant existing data. Conclusions were determined based on the above and on empirical evidence gained from the bat emergence survey.

The following documents were referenced in support of the surveys:

- Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). (Collins & Bat Conservation Trust., 2023).
- The status of EU protected habitats and species in Ireland: Conservation status in Ireland of habitats and species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government (NPWS, 2019).
- Bats and Appropriate Assessment Guidelines. Bat Conservation Ireland (Bat Conservation Ireland, 2012); and
- Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes. National Roads Authority (NRA, 2018).
- Bat Mitigation Guidelines For Ireland – V2. National Parks and Wildlife Service, Cork County Bat Group (Marnell et al., 2022).

2.2 Survey Methodology

2.2.1 Desk Study

Data on previous records of bats within 2km and 5km grid of this area have been collected from a range of sources, including:

- National Parks and Wildlife Service (NPWS) website (NPWS, 2024),
- National Biodiversity Data Centre (NBDC) Biodiversity Maps (NBDC, 2024),
- NPWS Lesser Horseshoe Bat roost data (sensitive).

The data provides background information on previous bat records within the Dripsey Castle area.

2.2.2 Bat Survey Methods

Bat survey methods were based on Collins (2023) and the following documents were referenced in support of the study:

- Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). Bat Conservation Trust (Collins & Bat Conservation Trust., 2023).

- Bat Mitigation Guidelines for Ireland - V2. Irish Wildlife Manuals, No. 134. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland (Marnell et al., 2022).
- A conservation plan for Irish vesper bats, Irish Wildlife Manual No. 20. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland (McAney, 2006).
- Lesser Horseshoe Bat Species Action Plan 2022-2026 (NPWS & VWT, 2022)
- The status of EU protected habitats and species in Ireland: Conservation status in Ireland of habitats and species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government (NPWS, 2019).
- Bats and Appropriate Assessment Guidelines. Bat Conservation Ireland (Bat Conservation Ireland, 2012).
- Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes. National Roads Authority (NRA, 2018).

2.2.3 Bat Roost Assessment

Structures likely to be impacted by the proposed works were inspected to determine the potential for bat roosts to be present, using the methods specified in Collins (2023). Buildings and structures on the site were categorised as having wither 'negligible', 'low', moderate' or 'high' roosting potential and this was determined by applying the definitions given within the Bat Conservation Trust (BCT) Guidelines (see Table 2-1). Evidence of bat activity associated with potential roost sites include bat droppings, urine staining, feeding remains, scratch marks and dead/alive bats.

Table 2-1: Guidelines for assessing the potential suitability of proposed development sites for bats based on the presence of habitat features within the landscape (Collins & Bat Conservation Trust., 2023).

Suitability	Roosting Habitats	Commuting and Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to	Habitats that could be used by small numbers of commuting bats such as gappy hedgerow or unvegetated stream, but isolated, i.e., not very well connected to the surrounding landscape by other habitats. Suitable, but isolated habitats that could be used be a small

Suitability	Roosting Habitats	Commuting and Foraging Habitats
	be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	number of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitats but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by foraging bats such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broad-leaved woodland, treelined watercourses and grazed parkland. Site is closed to and connected to known roosts.

Once the roost suitability survey has been conducted, this information is utilised to inform the number of emergence surveys that would be required to determine presence/absence and help characterise the nature of the roost (Collins & Bat Conservation Trust., 2023).

Table 2-2: Recommendations for further surveys based on preliminary bat roost suitability (Collins & Bat Conservation Trust., 2023).

Low Roost Suitability	Moderate Roost Suitability	High Roost Suitability
One survey visit. One dusk emergence or dawn re-entry (structures). No further surveys required (trees)	Two separate visits. One dusk emergence and a separate dawn re-entry survey.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could wither be dusk or dawn.
This gives the recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees, but unlikely to give confidence in a negative result).		

2.2.4 Assessment of Structures on Site

A preliminary assessment of the buildings within the proposed site was undertaken on the 25th of June 2024 by JBA Ecologists Hannah Mulcahy and Mia Heigh. This survey was undertaken to determine the potential for buildings within the site to support roosting bats. An assessment of the value for potential roosting was assessed during a daytime site visit.

A second assessment was carried out on 19th of September 2024 by JBA Ecologists Dominic Tilley and Mia Heigh. The survey mainly focused on the previously inaccessible second storeys. The stability of the second storey flooring was previously unknown and there was a concern for the safety of the JBA staff on site.

2.2.5 Dusk Emergence Survey

A dusk emergence survey was carried out on the evening of the 25th of June 2024 by JBA Ecologists Hannah Mulcahy and Mia Heigh. Guidelines were followed according to ‘Bat Surveys for Professional Ecologists – Good Practice Guidelines’ 4th Edition.

The weather was clear, warm and mild, approximately 18°C. At sunset but before dusk (approx. 21:55), as per recommended guidance, the survey began.

A second emergence survey was conducted on the evening of 19th of September 2024. This emergence survey was undertaken by JBA Ecologists Dominic Tilley and Mia Heigh. Guidelines were followed according to ‘Bat Surveys for Professional Ecologists – Good Practice Guidelines’ 4th Edition.

The weather was clear, mild and dry, approximately 17°C At sunset but before dusk (approx. 19:40), as per recommended guidance, the survey began.

Table 2-3 List of equipment used during surveys

Equipment used
Titley Scientific Anabat Walkabout Active Bat Detector
Magenta Bat Detectors Mk5
Wildlife Acoustic Echo Meter Touch 2 Pro
Titley Scientific Anabat Chorus Static Detector
Pulsar thermal imaging device Axion 2 XQ35 pro
X2 A4 clipboards
X2 torches

2.3 Limitations and Constraints

The conclusion of this report necessarily relies on some assumptions, and it is inevitably subject to some limitations. These would not affect the conclusion, but the following points are recorded and taken into consideration during the assessment to ensure the basis of the assessment is clear.

- In order to achieve the objectives of the report and surveys within the time period of the commissioning of work and the planning submission, assumptions are made as to the usage of the site by bats outside of the survey period. The precautionary principle is used at all times, i.e. the absence of physical evidence cannot fully rule out the presence of bats within the habitat, e.g., commuting or foraging within suitable bat habitats will leave no physical evidence for surveyors to record during preliminary surveys.
- Some bat roost locations can be hidden from view with little visible signs of bat presence. Such locations include under walls or ceiling cladding, under slates or within wall cavities for examples.
- Some parts of the buildings were not accessible for safety reasons and were not accessed by the surveyors during the surveys. Access was not deemed safe to access the second floor of the tool shed building on both survey occasions. Where areas were not accessible, this is noted through the report.

3 Results

3.1 Database Search for Bat Records

A search for bats recorded in the area (within 2km) of the project through the NBDC website revealed that there have been some bat species recorded in the area in recent years. Table 3-1 shows the results of the database survey.

Table 3-1: NBDC records of bats within 2km of the site.

Species	Record Count	Date of Last Record	Title of Dataset
Brown Long-eared Bat *Plecotus auritus*	5	11/08/2001	National Bat Database of Ireland
Common Pipistrelle *Pipistrellus pipistrellus*	5	21/07/2016	National Bat Database of Ireland
Daubenton's Bat *Myotis daubentonii*	22	21/07/2016	National Bat Database of Ireland
Leisler's Bat *Nyctalus leisleri*	11	21/07/2016	National Bat Database of Ireland
Soprano Pipistrelle *Pipistrellus pygmaeus*	10	21/07/2016	National Bat Database of Ireland

Lesser Horseshoe bat: A wider search under NBDC records found that Dripsey is located just outside of the known recorded area of LHB range, with the nearest record located south of the River Lee Reservoir approx. 5km away in 2007 and approx. 7km in 2013.

All the above bats may be present at the site, and further survey work will be required to determine presence of these bats.

3.2 Results of Preliminary Roost Assessment

The buildings located within the scope of works were searched one by one for Potential Roost Features (PRFs) and were assigned a level of suitability based on the roosting habitat locations/features. Figure 3-1 shows the extent of the buildings inspected during the Preliminary Roost Assessment.

Four buildings within the proposed project site were inspected for evidence of bats– Cow Byre building, Store buildings, Stables building, Agricultural Store building. The main house is not part of these proposals. It was noted during the roost search that the roofs of all of the buildings were relatively new. Additionally, holes and crevices were present within all of the internal walls of the buildings, which would provide roosting features for crevice-dwelling bats.

Internal and external inspections were conducted, and evidence collected has been compiled below.

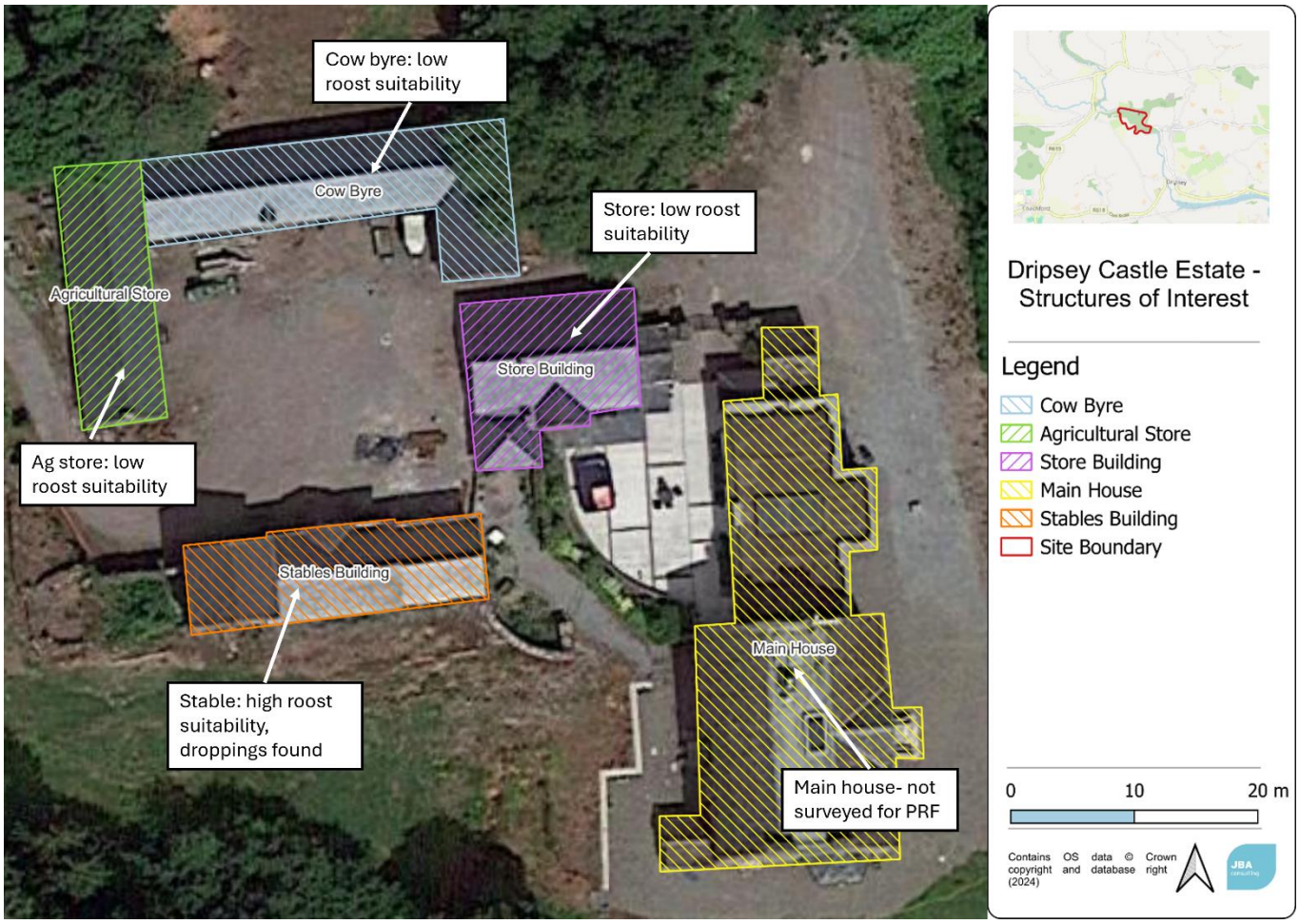

Figure 3-1: Map of buildings inspected with results of the Preliminary Roost Assessment (except the Main house which is not part of the proposed works).

3.2.1 Cow Byre Building

The cow byre building (Figure 3-5) was assigned a high level of suitability for roosting bats. The second level of the building had previously been inaccessible to surveyors due to the uncertainty of the stability of the floor. It was noted that gaps in the galvanised doors and wooden boarded windows could provide access points for bats entering the building.

Some of the roofing was visible from the ground floor, and notes were made on the apparent recent (i.e. <5 years) re-roofing of the building. The membrane appears clean and intact.

The upper floor of the building tuns part way along the length of the building. Access was gained by ladder, and examination of the upper floor was carried out. A large pile of wood, piping and other materials covers the floor close to the access point, making full examination of that area difficult. Further along from this pile, butterfly wings were

found (one pair) indicating likely feeding activity from bats. A cut approximately 5-10 cm long was observed in the roofing membrane, approximately in line with the access door to the upper floor from the outside (Figure 3-3). The roofing membrane was heavily stained and visibly sagging away from the roof structure.

Below this cut, 60-80 fresh droppings were observed (Figure 3-4). These were very dark in colour, and slightly sticky indicating recent deposition. Other dried and faded droppings were also recorded. A sample of the droppings was collected for DNA analysis to confirm species.

These observations confirm the presence of roosting bats in the building.

Figure 3-2: Cow byre building interior photograph of ground floor. A pool is proposed for this building.

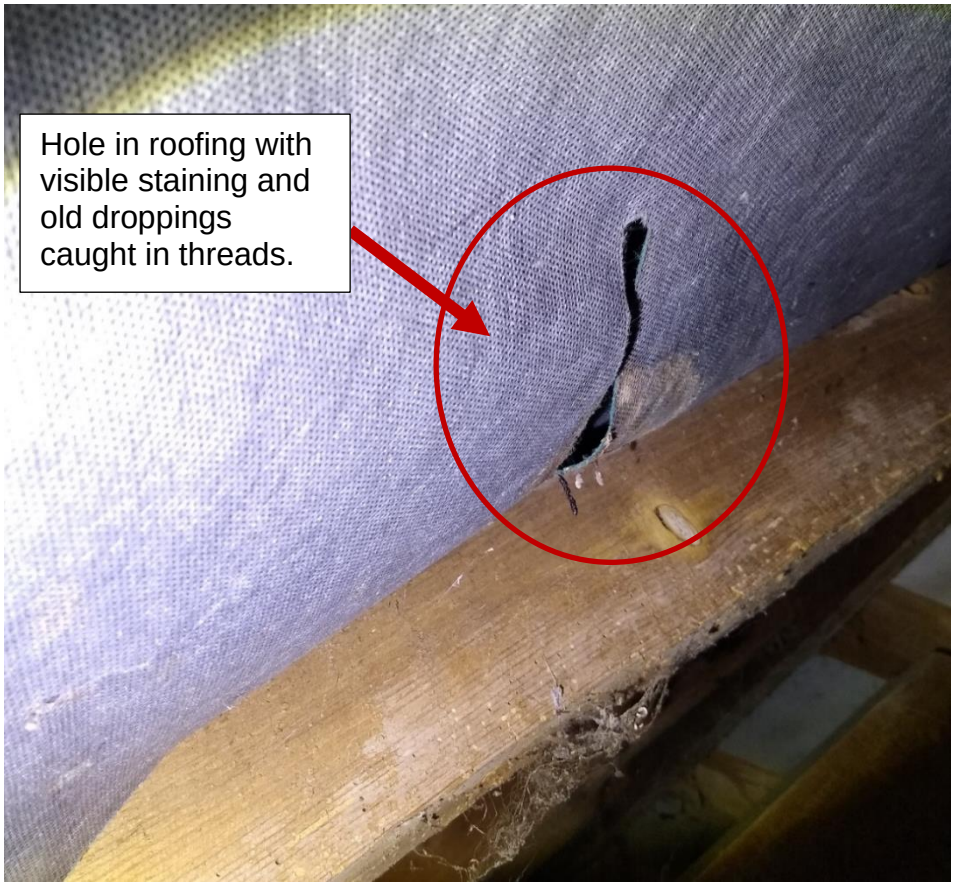

Figure 3-3: Staining around a hole in the roofing of the Cow Byre.

Figure 3-4: Droppings on the floor below the hole.

Figure 3-5: Cow byre building.

3.2.2 Store Building

This was assigned low-moderate level of suitability for roosting bats. The building a few potential access points for bats. It is the most used of all the sheds with a wood burner for heating. It will remain a store building.

Figure 3-6 Store building.

3.2.3 Agricultural Store Building

The Agricultural Store building (Figure 3-7) was assigned a Low - Moderate level of suitability for roosting bats. The building had many potential access points for bats,

including two open chimneys, gables and gaps in roofing and doors. The second level of this building was accessible from the rear.

No physical evidence of bat usage was identified within the building.

Figure 3-7: Exterior photograph of the agricultural store building.

Figure 3-8: Interior photograph of second floor of agricultural store building.

3.2.4 Stables Building (and tool shed)

The Stables building (Figure 3-9) also contained physical evidence of bat usage, and evidence had been found in this structure during the last roost assessment (25th June 2024). Bat droppings were found in four of the rooms in this building and included fresh droppings (Figure 3-10). The attic had a high volume of bat droppings. The building was assigned a 'High' level of suitability for bats. Externally there were multiple potential access points for bats, including gaps in wooden boarded windows and open holes in the walls.

The second floors of the central building and the toolshed had previously not been surveyed due to safety concerns. Prior to the 19th September survey, JBA Ecologists received a confirmation of stability from the client. The second floor of the toolshed was not accessed as the flooring was too unsafe but it was observed from the second floor internal window above the stables, The second floor tool shed had small number of bat droppings on the floor.

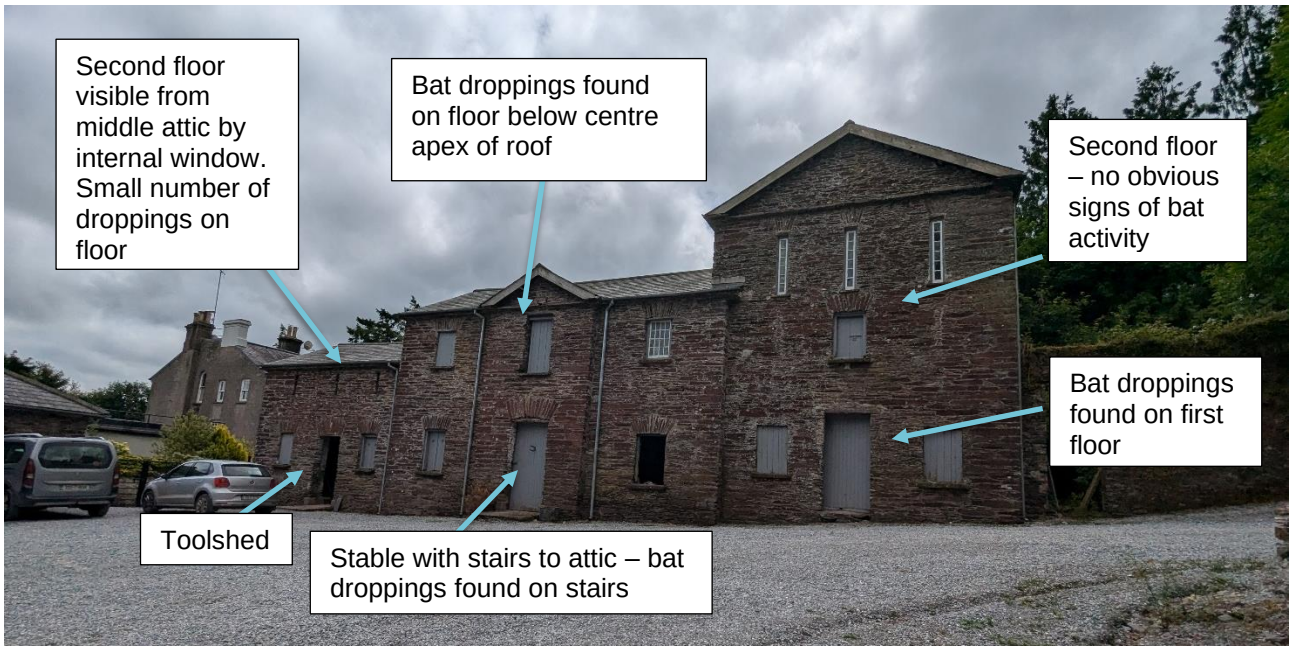

Figure 3-9: Exterior photograph of the Stables building.

Figure 3-10: Bat droppings found in Stables building.

Figure 3-11: Bat droppings found on second floor of the tool shed building.

3.3 Results of Emergence and Activity Survey

3.3.1 Emergence Survey 25th June 2024

The emergence survey started at approximately 21:55 at sunset and continued until 23:15. The first bat was recorded at 22:25, emerging from a gable on the roof of the

Georgian Mansion – Dripsey House, which is not part of the proposed works. A summary of the survey is provided in Table 3-2.

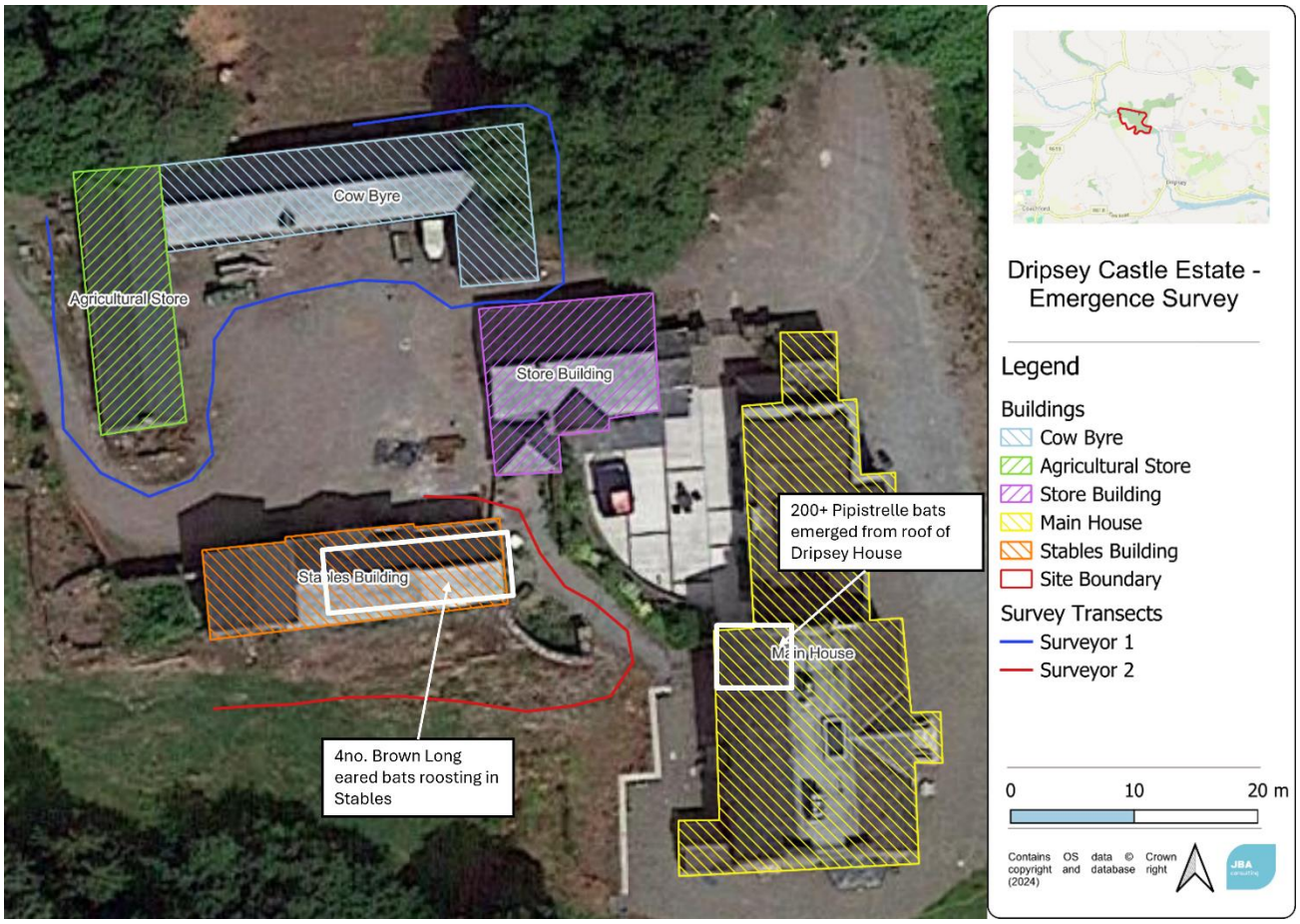

Figure 3-12: Map of all structures on site (Main House is not part of proposed works) with transects walked by each surveyor during the emergence survey.

Table 3-2: Summary of emergence survey 25th June 2024.

Time	Species	Location	Comments
22:25 – 22:53	Soprano Pipistrelle	Dripsey House	Between 22:25 and 22:53, 206 Soprano Pipistrelles were counted emerging from Dripsey House (exit points in Figure 3-14). They flew south-west towards the woodland and open grassland behind the Stables building.
22:45	Brown Long-eared Bat	Stables	Two BLE flying around (warming up) the internal attic space within the Stables building, not making any calls or very quietly calling.
22:50	Brown	Stables	Both BLE's stopped flying

	Long-eared Bat		around, unable to tell where they went but likely were resting in an inaccessible attic room.
22:55	Brown Long-eared Bat	Stables	Two bats (likely the two BLE's) seen emerging from the roof of the gable end of the Stables building. This area could not be entered as it is not structurally stable.
23:10	Brown Long-eared Bat	Stables	A third BLE was flying around the stable area below the Attic space and resting in the rafters (Figure 3-13). Previous two BLE's are also flying around in the attic again.
23:15	Brown Long-eared Bat	Stables	Two BLE's still flying around attic space. Survey ended at 23.45 and bats had not emerged.

Figure 3-13: Brown Long-eared Bat recorded at 23:10 in the stables to be renovated for accommodation. This building is confirmed roost for BLEs.

Figure 3-14: Emergence points used by the Soprano Pipistrelles from Dripsey House. No works are proposed on this building for the proposed project and this roost will not be impacted.

3.3.2 Emergence Survey 19th September 2024

The emergence survey started at approximately 19:40 at sunset and continued until 21:15. The first bat was recorded at 19:58, emerging from a gable on the roof of the Georgian Mansion – Dripsey House, which is not part of the proposed works. A summary of the survey is provided in Table 3-3.

Table 3-3: Summary of 19th September emergence survey.

Time	Species	Location	Comments
19:58 – 20:33	Soprano Pipistrelle	Dripsey House	Between 19:58 and 20:33, 10-20 Soprano Pipistrelles were counted emerging from Dripsey House. They flew south-west towards the woodland and open grassland behind the Stables building.
20:01	Soprano Pipistrelle	Cow Byre	2 bats emerge from hole in wall. Likely Soprano Pipistrelle.
20:05	Brown Long-eared Bat	Stables	Two BLE emerge from the rear most westerly gable of the Stables building, calling as they exit (Figure 3-15).
20:07	Brown Long-eared Bat	Stables	Single BLE emerges from the most westerly gable of the Stables building, flies directly into the central building's attic space (Figure 3-15).
20:25	Brown Long-eared Bat	Cow Byre	Flying up and down the front of the building. Not observed entering.
20:50	Brown Long-eared Bat	Stable	A single BLE was flying around the Attic space of the Stable building and resting in the rafters.

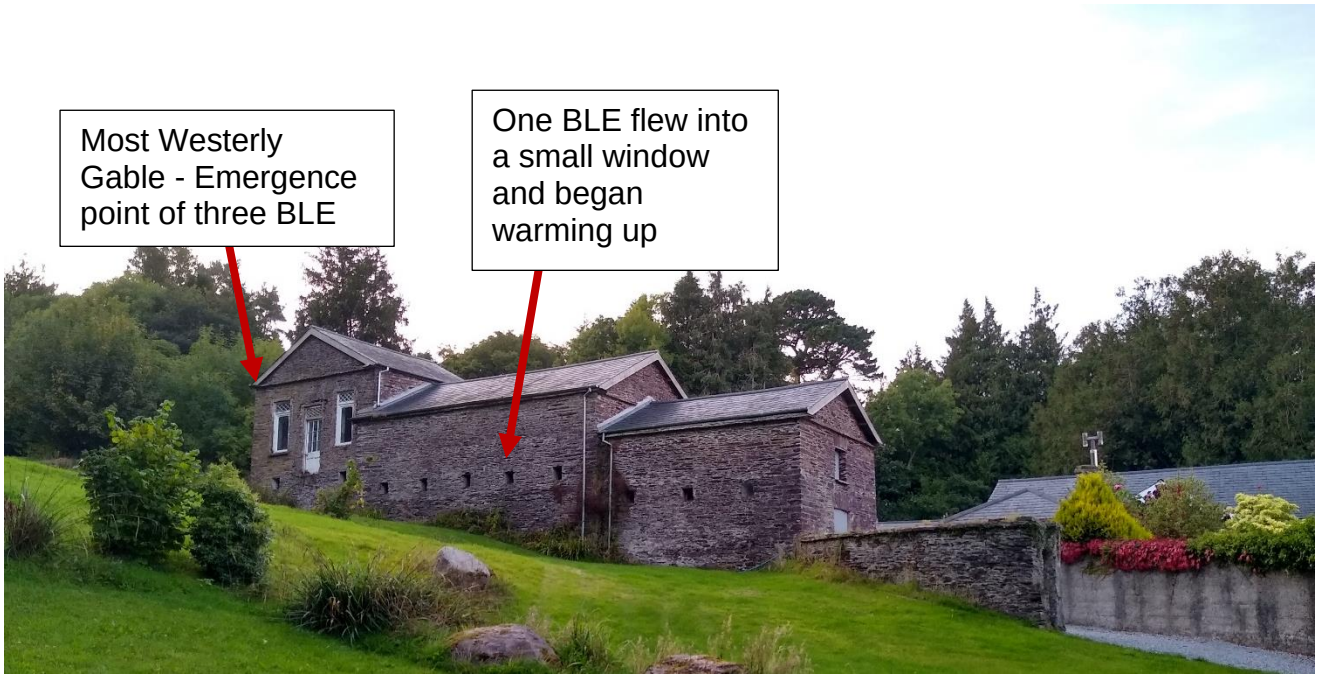

Figure 3-15: Rear of Stable building.

Figure 3-16: Cow Byre hole under gable where BLE bats emerged.

Static Detector Results

A static detector was used during the emergence survey to record bat passes. The species recorded were Brown Long-eared Bat, Common Pipistrelle, Leisler's Bat, and Soprano Pipistrelle. Species recorded and number of passes is shown in Table 3-4.

Table 3-4: Static detector results for 19th September emergence survey.

	Brown Long-eared Bat	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle
No. of Passes	22	17	19	121

3.4 Summary of Survey Findings

Stables Building

The Stables building has been confirmed as a roost for 4-5no. Brown Long-eared Bats, and large number of droppings in the attic suggests they use this space regularly. On 25th June, two BLEs were observed warming up, they were observed for over 1 hour to fly around the large open attic space, and rest on the eaves. The third bat was observed flying around in the ground floor level in the stable area. On 19th September, it was observed that these bats exited the building from the rear western gable/eaves of the Stables building.

This building is a roost for 4-5no. BLE bats, and they are likely roosting in the rear western gable/eaves of the Stables building, where emergence was confirmed on 19th September. Following two surveys where bats were overserved, it is not likely this is a significant roost and is likely to be a summer night roost for approximately 5 BLE bats.

Cow Byre Building

Two bats emerged from a hole in the wall close to the largest boarded up window, close to where a cut in the roofing fabric was noted in an internal inspection. On 19th September survey Soprano Pipistrelle bats emerged from this point in the Cow Byre.

They are likely roosting in the fabric of the roofing with low numbers and are likely linked to the large roost in Dripsey House roof.

Dripsey House

Dripsey House had a significant roost of >200 Soprano Pipistrelles in the roof and is likely to be a maternity roost considering the large numbers.

4 Potential Impacts of the Proposed Development on Bats

4.1 Brown Long-eared Bats Roosting in Stables

The Brown Long-eared bats (BLE) were found to be roosting in the stables building. The second emergence survey found they are likely to roosting in the roof of the western gable. The central second floor is used by BLEs to fly around or 'warm up' before emerging and to feed, but internal inspection of this space did not find them roosting internally in this space.

The proposals to renovate the old stables into self-contained accommodation will likely result in this building no longer being suitable for these bats in the main part of the building, and they will be displaced.

The works to the old stables will include alterations, renovations, extension and change of use of this building into a garden room and 4 no. bedroom suites, for short-term letting.

Figure 4-1: Drawings made of the current extent of the Stable building in which the BLE roost was recorded. This will be renovated to be guest accommodation.

4.2 Bats Roosting in Cow Byre

The bats (likely Soprano pipistrelles) roosting in the roof of the Cow Byre will be impacted by the proposals to renovate the old cow byre into recreational facilities including a pool, sauna, steam room and changing facilities. The proposals for the construction and operation will likely result in this building being less suitable for these bats, and they will be displaced from this building. This will not impact the population of the pipistrelles in the area as they are likely linked to the roost in the roof of Dripsey House.

4.3 Soprano Pipistrelles in Dripsey House

Dripsey House had a significant roost of >200 Soprano Pipistrelles in the roof. This building is not part of the proposed works for the project, and there will be no impact to these bats roosting in this building. One or two of these bats may opportunistically roost in the outbuildings however these buildings were generally of low suitability.

4.4 Lighting Impacts

The site was dark during the survey and there is very limited lighting at night – the only lighting was observed around the front of the house and parking area and this is set up on motion detector system which turns off automatically after a few minutes.

It is expected that some lighting will be required when the buildings are renovated and guests are staying in the accommodation. No lighting plan has been required for planning application. However the lighting will also be limited to areas required for guests and on a motion detector system. The client has been advised of lighting measures with consideration for bats following guidance documents:

- Guidelines for consideration of bats in lighting projects (Voigt et al, 2018) and
- Bats and artificial lighting in the UK Bats and the Built Environment series (Bat Conservation Trust 2018)

5 Mitigation

5.1 Timing of Works and Pre-construction Surveys

Before works begin, a pre-construction bat survey should be undertaken to determine if bats are present in the building. If works are being carried out in Winter, bats may be hibernating in crevices and can be harder to spot. Therefore, it is advised that the initial refurbishment works be carried out when bats are active so that they can be removed and fly away to another location.

When demolition begins, it is advised that an ecologist with suitable bat experience is present at the start of construction to ensure no bats resting will be killed or injured.

5.2 Providing Roosting Alternatives

Given the small number of brown long-eared (BLE) bats present in the stable building, it is likely a non-breeding site. As the bats will be displaced from these buildings, they are expected to find alternative roosts in the local area. Potential alternatives include other outbuildings, the main house, or the numerous mature trees within the Dripsey Estate. Consequently, the scale of impact on the BLE bat population is considered to be low. Further surveys requested by NPWS to confirm the numbers of these bats resulted in confirmation of no more than 5 individuals in this roost.

To ensure the preservation and accommodation of bats within the constraints of the new building usage, alternative mitigation measures were considered. Given the spatial design limitations and the residential conversion of the building, coupled with the introduction of a new heating system, and reduced entry points, it was determined that alternative accommodations within the buildings were impractical.

Consequently, installation of bat boxes emerged as the optimal long-term solution for supporting the bat population at the site. It is expected this will be suitable and proportional mitigation for the changes to this non-breeding BLE roost. Three bat boxes will be erected within 20-50 metres of the outbuildings. It is advised that 1FS Schwegler Large Colony Bat Box be chosen. These should be erected before the works begin.

Additionally, the surrounding woodlands on the Dripsey estate offer a rich habitat for brown long-eared (BLE) bats, providing ample foraging and roosting opportunities. The decision to utilize bat boxes aligns with the goal of maintaining and enhancing the ecological balance in the area, ensuring the bats have suitable and sustainable living conditions both within the immediate vicinity of the buildings and the broader estate.

5.3 Requirement for Derogation Licence

The stable building and cow byre to be renovated into accommodation and recreational facilities will disturb and likely displace BLE bats from their roosts. Therefore, a derogation licence is applied for as a confirmed bat roosts will be disturbed and modified that the buildings will no longer be suitable for bats resulting in loss of roost.

A derogation licence application had been sent along with a draft of this report to the Wildlife Licencing Unit in NPWS on 25th July 2024. NPWS requested (on 3rd September 2024) that another survey should be conducted in the building to confirm the numbers of BLE present. This additional survey was carried out on 19th September 2024, and this report has been updated with the findings of the surveys, and mitigation to reduce impacts to bats, and sent to NPWS to support derogation licence application.

References

Bat Conservation Ireland. (2012). *Bats and Appropriate Assessment Guidelines*. Bat Conservation Ireland. https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIreland-AA-Guidelines_Version1.pdf

Collins, Jan., & Bat Conservation Trust. (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th Edition*. Bat Conversation Trust.

European Commission. (1992). *The Habitats Directive*. https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en

European Communities. (1982). *Official Journal of the European Communities - Concerning the Conclusion of the Convention on the Conservation of European Wildlife and Natural Habitats*.

European Communities. (1983). *Official Journal of the European Communities - Conclusion of the Convention on the Conservation of Migratory Species of Wild Animals*.

Marnell, F., Kelleher, C., & Mullen, E. (2022). *BAT MITIGATION GUIDELINES FOR IRELAND-V2*.

McAney, K. (2006). *A conservation plan for Irish vesper bats.* National Parks and Wildlife Service, Department of Arts, Heritage and Gaeltacht. https://www.npws.ie/sites/default/files/publications/pdf/IWM20.pdf

NPWS. (2019). *The Status of EU Protected Habitats and Species in Ireland*.

NRA. (2018). *Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes*. National Roads Authority. http://www.tii.ie/technical-services/environment/planning/Best_Practice_Guidelines_for_the_Conservation_of_Bats_in_the_Planning_of_National_Road_Schemes.pdf

Voigt, C.C, C. Azam, J. Dekker, J. Ferguson, M. Fritze, S. Gazaryan, F. Hölker, G. Jones, N. Leader, D. Lewanzik, H.J.G.A. Limpens, F. Mathews, J. Rydell, H. Schofield, K. Spoelstra, M. Zagmajster (2018): Guidelines for consideration of bats in lighting projects. EUROBATS Publication Series No. 8. UNEP/EUROBATS Secretariat, Bonn, Germany, 62 pp

Bat Conservation Trust and Institution of Lighting Professionals (2018) Bats and artificial lighting in the UK Bats and the Built Environment series, Guidance Note 08/18.

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