BAT SURVEY REPORT

SOMERTON HOUSE, GRAIGUECULLEN, CO. CARLOW

2026

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1.0 INTRODUCTION

1.1 PROJECT BRIEF

Panther Environmental Solutions (PES Ltd) were commissioned by Larkin Associates, to conduct bat survey works in relation to a residential housing development at Somerton House, Graiguecullen, Co. Carlow. The proposed development will consist of the renovation of the existing Somerton House (protected structure Ref CT 55 and NIAH Ref. 100000003) to construct 2no. of 1-bed apartments and 2no. of 2-bed apartments within the building envelope, and all associated site works at Somerton House, Graiguecullen, Co. Carlow.

The aim of the study was to determine the following:

- Identify the baseline use of the site by bats including species present, activity levels, important bat habitats and landscape connectivity.

This report details the methodology used and results of the bat surveys undertaken and assesses the importance of the existing site to bats. Where appropriate, avoidance or mitigation measures will be recommended.

1.2 SITE LOCATION

The proposed development site is located in the townland of Graigue, Co. Carlow. The site is located at Irish Grid Reference (271504E, 176375N) or Irish Transverse Mercator (671449E, 676405N). The development is located within Carlow town, along the border with Co. Laois, and would be considered urban in nature.

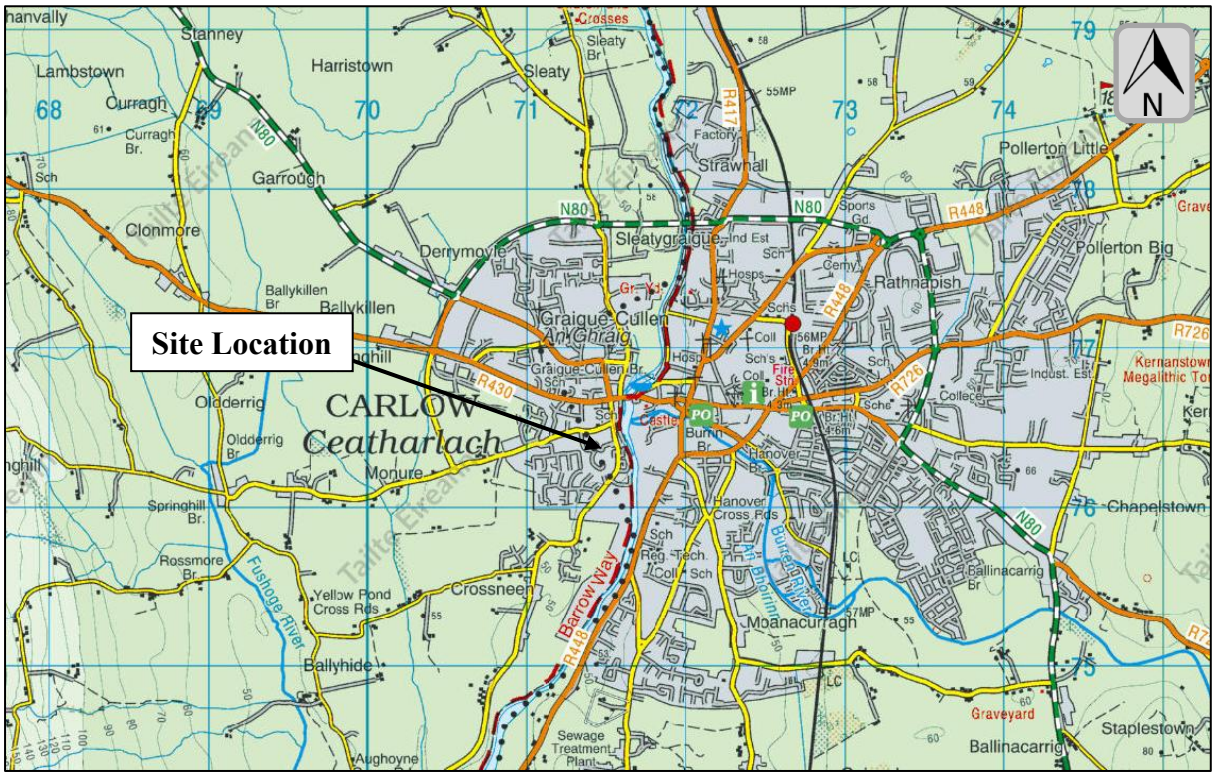


Figure 1.1: Site Location (Discovery Maps)

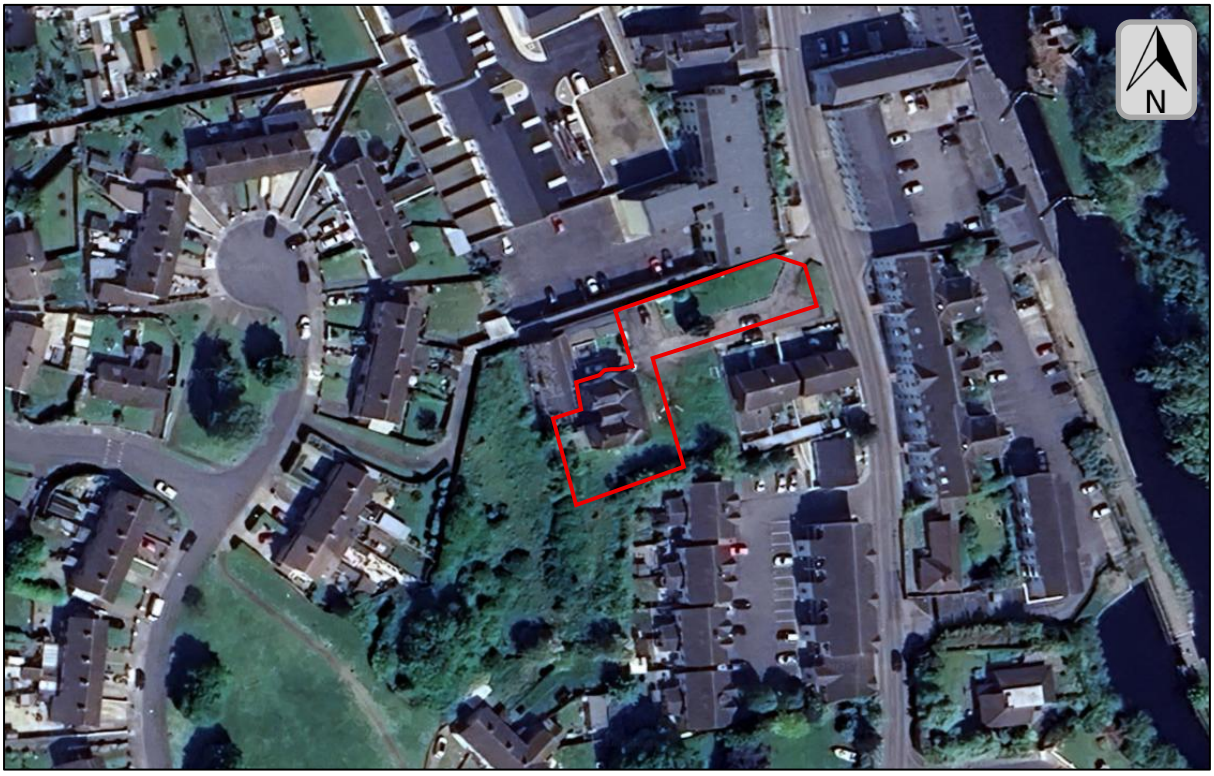


Figure 1.2: Aerial Image (Google Earth)

2.0 LEGISLATION AND POLICIES

All bat species and their roosting sites are strictly protected under the following national and international legislation to maintain and restore bat populations:

2.1 NATIONAL LEGISLATION

All Irish bat species are protected under national legislation in the form of the Wildlife Act 1976 and subsequent amendments. Under Section 23 of the Wildlife Act (1976-2000) it is an offence to:

- Purposely kill, injure or take a bat;
- Possess or control any live or dead specimen derived from a bat;
- Deliberately interfere with any structure or place used for breeding or resting by a bat;
- Deliberately interfere with a bat while it is occupying a structure or place which it uses from that purpose.

2.2 INTERNATIONAL LEGISLATION

All bat species are protected under Annex IV of the EU Habitats Directive 92/43/EEC while the Lesser Horseshoe (*Rhinolophus hipposideros*) is offered further protection under Annex II of this directive. As a result, SACs have been designated for this species throughout its European range, including in Ireland.

The Directive was transposed into Irish law with the European Communities (Birds and Natural Habitats) Regulations 2011. Under the Habitat Regulations 2011 actions that intentionally or unintentionally harm, damage or destroy a bat or its roosting site are considered to be an offence. According to Section 54(2) of the Habitats Regulations 2011, a derogation licence to disturb bats or the breeding or resting places may be granted 'where there is no satisfactory alternative, and the derogation is not detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range.

Furthermore, as a signatory to the EUROBATS Agreement (Agreement on the Conservation of Populations of European Bats, 1994), Ireland is required to protect their habitats and important feeding areas from damage or disturbance. All Irish bat species are listed in Appendix II of the Bern Convention (1979), as species requiring protection.

A list of bat species known to occur in Ireland is given in **Table 2.0**, including nine resident species and two vagrant species, which have only been recorded on a single or handful of occasions in Ireland.

Table 2.0: Bat Species in Ireland – Status and Distribution

Species	Occurrence in Ireland	Conservation Status (NPWS, 2025)	Distribution in Ireland (McAney, 2006)
Common Pipistrelle (*Pipistrellus pipistrellus*)	Resident	Favourable	Widespread
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	Resident	Favourable	Widespread
Nathusius' Pipistrelle (*Pipistellus nathusii*)	Resident	Unknown	Widespread
Leisler's Bat (*Nyctalus leisleri*)	Resident	Favourable	Widespread
Brown Long-eared Bat (*Plecotus auritus*)	Resident	Favourable	Widespread
Daubenton's Bat (*Myotis daubentonii*)	Resident	Favourable	Widespread
Whiskered Bat (*Myotis mystacinus*)	Resident	Favourable	Widespread
Natterer's Bat (*Myotis nattereri*)	Resident	Favourable	Widespread
Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	Resident	Inadequate	West of Ireland
Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)	Vagrant	n/a	Two existing records from Co. Wexford and Co. Wicklow
Brandt's Bat (*Myotis brandtii*)	Vagrant	n/a	Handful of records from counties Wicklow, Clare and Kerry

2.3 GUIDELINES

The following Bat Survey and reporting has been carried out with reference to the following guidelines:

- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester;
- Bat Mitigation Guidelines for Ireland v2. (Marnell, Kelleher and Mullen, 2022);
- Collins (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines - 4th Edition;
- National Roads Authority (2005) Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes;
- National Roads Authority (2006) Guidelines for the Treatment of Bats During the Construction of National Road Schemes;
- Bat Conservation Ireland (2010) Bats & Lighting - Guidance Notes for Planners, Engineers, Architects and Developers;
- Institute of Lighting Professionals (2023) Bats and Artificial Lighting at Night;
- Institute of Lighting Professionals (2018) Bats and Artificial Lighting in the UK – *Bats and the Built Environment* series;

3.0 METHODOLOGY

3.1 DESKTOP REVIEW

Every effort has been made to provide an accurate assessment of the situation pertaining to the site. However, an ecological survey can only assess a site at a particular time and is limited by various factors such as the season, timing of the survey, climatic conditions and species behaviour. Ecological surveys such as bat surveys are therefore snapshots in time and should not be regarded as a complete study. Direct observations or evidence of protected species is not always recorded during ecological surveys. However, this does not indicate that the species is absent from the site. To ensure any limitations encountered did not significantly impact upon the findings of the ecological assessments', cognisance has been taken of available online baseline data. This included reference to the following resources and publications:

- National Biodiversity Data Centre (NBDC) online mapping and species records;
- Bat Conservation Ireland datasets and publications, e.g. Bat Record Maps, Bat Landscapes, Brown Long-eared Bat Roost Monitoring;
- National Parks and Wildlife Service (NPWS) datasets;
- Carlow County Development Plan 2022-2028;
- Carlow – Graiguecullen Joint Urban Local Area Plan 2024-2030;
- Satellite imagery for features within the landscape from various sources (Google Maps, Digital Globe).

3.2 FIELD SURVEYS METHODOLOGY

The existing linear features including hedgerows and treelines on site and the existing Somerton House were the main focus of the surveys outlined below. The aims of the bat surveys are to collect robust data following good practice guidelines to allow an assessment of the potential impacts of the proposed development on existing local bat populations and to facilitate the design of control measures, enhancement and monitoring strategies for local bat populations recorded.

Depending on the type of site or habitats contained within the survey can concentrate on areas of suspected or potential bat roosts such as buildings (with accessible features) and trees with cracks and crevices. This is done to determine if the building/tree is a bat roost.

Table 3.1: Ecological Survey Dates

Survey	Study Area	Survey Dates
Preliminary Roost Assessment	Somerton House	5th May 2026
Daytime Bat Walkover	Complete Site	5th May 2026
Emergence Survey	Somerton House	5th May 2026 28th May 2026

3.2.1 Preliminary Roost Assessment

A preliminary roost inspection survey was carried out on Somerton House on the 5th May 2026 in-line with the best practice methods outlined in the Bat Conservation Trusts "Bat Surveys for Professional Ecologists", 4th Edition (Collins, 2023).

The preliminary assessment comprised of an external inspection of Somerton House during daylight hours of the house to identify any potential roost features and evidence of bat activity. An external and internal inspection of adjoining sheds to the west of Somerton House was also carried out. The search was carried out systematically to identify potential access points and roosting places. Surveying also involved searching for evidence of bat presence including but not limited to :

- Live or dead specimens;
- Bat droppings;
- Urine splashes;
- Fur oil staining;
- Squeaking noises;
- Feeding remains (e.g. moth wings);
- Odour.

Potential Roost Features (PRFs) within the structure were assessed for their suitability for bats based on the guidelines by Collins (2023), given in **Table 3.2** below.

Table 3.2: Guidelines for assessing potential suitability of roost habitats in structures for bats

Potential Suitability	Roosting habitats in structures
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels.
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these potential roost sites do not provide enough space, shelter, protection, ap propriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but un likely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure 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. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.

Potential types of bat roost are listed in **Table 3.3** below.

Table 3.3: Bat Roost Types

Roost Type	Definition
Day Roost	A place where individual bats, or small groups, rest or shelter in the day during the summer.
Night Roost	A place where bats rest or shelter in the night but are not found in the day. May be used by a single individual on occasion or it could be sued regularly by the whole colony.
Feeding Roost	A place where individual bats, or a few individuals, rest or feeds for short periods during the night but are not present by day.
Transitional Roost	A place used by a few individuals or occasionally small groups for generally short period of time on waking from hibernation or in the period prior to hibernation.
Maternity Roost	A place where female bats give birth and raise their young to independence. In some species males may also be present in the maternity roost.
Hibernation Roost	A place where bats may be found individually or together during winter. They have a constant cool temperature a high humidity.
Satellite Roost	An alternative roost found in close proximity to the main nursery colony used by a few individuals to small groups of breeding females throughout the breeding season.

3.2.2 Daytime Bat Walkover

A Daytime Bat Walkover survey was carried out across the site on the 5th May 2026. The aim of the Daytime Bat Walkover survey is to assess the suitability of habitats on site for bats to roost, commute and forage on site and in the surrounding area. The Daytime Bat Walkover survey determines the suitability of the site for bats and informs further required surveys. The survey was carried out in-line with the best practice methods outlined in the Bat Conservation Trusts "Bat Surveys for Professional Ecologists", 4th Edition (Collins, 2023). The criteria for assessing the suitability of proposed development sites for bats is based on the guidance provided in Collins (2023) and is outlined in the table below.

Table 3.4: Guidelines for assessing potential suitability of features for bats

Potential Suitability	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines or generate/shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitats that could be used by small numbers of bats such as flight-paths such as a gappy hedgerow or un vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a park-land situation) or a patch of scrub
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths 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 broadleaved woodland, tree-lined watercourses, and grazed park-land. Site is close to and connected to known roosts.

In accordance with the best practice methods outlined in the Bat Conservation Trusts "Bat Surveys for Professional Ecologists", 4th Edition (Collins, 2023) the site was walked in a systematic manner where accessible. Habitats that were suitable for bats to commute and forage at were identified and recorded. Survey conditions were optimal with temperatures of approx. 13° and no precipitation.

3.2.3 Emergence Survey

Dusk emergence surveys were carried out on the existing Somerton House located on site across May 2026. The survey was informed by the Preliminary Roost Assessment and focussed on potential exit/entry points identified. The survey was carried out in accordance with the best practice methods outlined in the Bat Conservation Trusts "Bat Surveys for Professional Ecologists", 4th Edition (Collins, 2023) with the aim to determine the presence of roosting bats in the structures via direct detection of emerging bats post-sunset. Surveys commenced c. 15mins prior to sunset and were concluded c. 2hrs 15min post-sunset. See **Table 3.5** below for a summary of the survey effort.

Table 3.5: Emergence Survey Efforts

Date	Duration	Sunset	Weather
05/05/2026	20:45-23:15	21:02	Temp: 11°C – 7.9°C Wind: Calm Cloud Cover: 5 oktas Precipitation: None
28/05/2026	21:20-23:50	21:37	Temp: 15°C – 14°C Wind: Light Breeze Cloud Cover: 4 oktas Precipitation: None

The equipment used for the bat emergence surveys included an Anabat Walkabout Bat Detector and an Axion XQ30 Pro thermal imaging camera which acted as a survey aid, as per Fawcett Williams (2021). The thermal imaging camera was positioned with a clear view of potential access features identified during the preliminary roost assessment. Footage from the thermal imaging camera was then reviewed following the survey to confirm no potential emergence was missed during the survey.

All echolocation calls were recorded during the survey, and a time-stamped record of observations was made including information pertaining to flight direction and height, numbers of bats, type of flight, apparent behaviour etc. Any bats detected during the survey emerging from the structures were recorded on field sheets and maps.

3.2.4 Data Analysis

Bat echolocation calls collected during the surveys were stored and analysed using Anabat Insight V2.5. Bat Classify plug-in for Anabat Insight was used to process recorded calls and all calls were manually verified. Noise files were also checked to identify any bat calls recorded but not identified by the analysis software. Footage captured by the thermal imaging camera was reviewed with the use of Windows Media Player.

3.2.5 Survey Limitations

The surveys were carried out in May which is within the optimal bat survey period. The surveys were conducted in suitable weather conditions. Therefore, the seasonality of the surveys are not considered to be a limiting factor in this instance.

Safe access into the internal space of Somerton House was not available due to the hazardous and structurally compromised condition of the structure. Visual inspection from the ground floor entrance highlighted the collapse or demolition of the ground floor as well as exposed voids and loose debris, therefore an internal inspection of the house was not undertaken during the Preliminary Roost Assessment, and observations were limited to an external inspection.

4.0 RESULTS

4.1 DESKTOP REVIEW

4.1.1 Carlow - Graiguecullen Joint Urban Local Area Plan 2024-2030

The Carlow Graiguecullen Joint Urban Local Area Plan 2024-2030 was reviewed for references specific to the protection of bats. The following objectives were identified:

NH. P11:
Ensure that lighting proposals along water courses, rivers, and streams in the joint urban area, are not in conflict with bat species, and to ensure that expert advice is sought on such lighting proposals in order to mitigate the impacts of lighting on bats and other species and habitats.

4.1.2 Carlow County Development Plan 2022-2028

The Carlow County Development Plan 2022-2028 was reviewed for references specific to the protection of bats. The following objectives were identified:

IW P6:
Ensure that lighting proposals along water courses, rivers, streams and canal corridors, are not in conflict with bat species, and to ensure that expert advice is sought on such lighting proposals in order to mitigate the impacts of lighting on bats and other species.

4.1.3 Sites of International Importance

Special Areas of Conservation (SAC) and Special Protection Areas (SPA) are sites that are deemed to be of European Importance. They form part of a network of sites to be designated across Europe in order to protect biodiversity within the community known as Natura 2000 sites.

The proposed development site is located in proximity to several Natura 2000 sites included below in **Table 4.1**. These Natura 2000 sites do not include bats in their conservation interests and therefore are not relevant to the current assessment.

Table 4.1: Natura 2000 sites within 15km of the development site

Site Name	Designation	Site Code	Distance
River Barrow and River Nore	SAC	002162	53m E
Slaney River Valley	SAC	000781	11.27km E

4.1.4 Sites of National Importance

At a national level, the basic designation for conservation is Natural Heritage Areas or proposed Natural Heritage Areas (NHA/pNHA). NHAs are designated to protect habitats, flora, fauna, and geological sites of national importance.

There is one NHA and 7 pNHAs located within 15km of the proposed development site (see **Table 4.2**). Where available, the site synopsis for each of the pNHAs were analysed for reference to bat species, however, no bat species were referenced for any of the pNHAs.

Table 4.2: Natural Heritage Areas and proposed Natural Heritage Areas within 15km.

Site Name	Designation	Site Code	Distance
Oakpark	pNHA	000810	3.98km NE
Cloghristick Wood	pNHA	000806	6.02km S
Coan Bogs	NHA	002382	10.49km SW
Barrow Valley at Tankardstown Bridge	pNHA	000858	10.86km N
Ballylynan	pNHA	000857	11.90km N
Ardistan Fen	pNHA	000788	12.26km SE
Ballymoon Esker	pNHA	000797	13.58km S
Corballis Hill	pNHA	001389	15.19km NE

4.1.5 Data Search

The development is located outside of the current distribution and current range of Lesser Horseshoe Bat (*Rhinolophus hipposideros*)[1303] but within the current distribution and current range of Common Pipistrelle (*Pipistrellus pipistrellus*)[1309], Soprano Pipistrelle (*Pipistrellus pygmaeus*)[5009], Natterer's Bat (*Myotis nattereri*)[1322], Daubenton's Bat (*Myotis daubentonii*)[1314], Brown long-eared Bat (*Plecotus auratus*)[1326], and Leisler's Bat (*Nyctalus leisleri*)[1331]. The site is outside the current distribution but within the current range of Nathusius' Pipistrelle (*Pipistellus nathusii*) [1317] and Whiskered Bat (*Myotis mystacinus*)[1330].

The NPWS's National Lesser Horseshoe Bat Roost Database was consulted (April 2026) with regards to any roost records for Lesser Horseshoe Bat (*Rhinolophus hipposideros*). The Lesser Horseshoe Bat is mainly confined to the West of Ireland, with the NPWS database indicating that the nearest record for this bat is located north of Limerick city within the townland of Lisnagry (Grid R6559). **Table 4.3** below are the National Biodiversity Data Centre records for bat activity in S77 (NBDC 10km square) in which the proposed development is located.

Table 4.3: NBDC records for bats within the 10km square (S77)

NBDC Records For Bats	
Species	**Date of last record**
Common Pipistrelle (*Pipistrellus pipistrellus*)	09/10/2015
Daubenton's Bat (*Myotis daubentoniid*)	23/09/2021
Leisler's Bat (*Nyctalus leisleri*)	02/10/2015
Natterer's Bat (*Myotis nattereri*)	06/07/2009
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	09/10/2015
Brown Long-Eared Bat (*Plecotus auritus*)	09/10/2025

In addition, Bat Conservation Ireland's habitat suitability index available to view on the NBDC online mapping portal, classifies the landscape, within which the site is located, as having

moderate habitat suitability for bats, with a score of 35.78 for the development site and the surrounding area. 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. The maps are constructed using spatial units of the OSI National Grid. The index presented is for all species combined, in addition to the individual species' indices (Lundy et al., 2011).

Table 4.4: Bat habitat suitability index for the proposed development site

Bat Habitat Suitability Index	
Species	**Index**
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	44
Brown long-eared Bat (*Plecotus auritus*)	52
Common pipistrelle (*Pipistrellus pipistrellus*)	53
Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	0
Leisler's Bat (*Nyctalus leisleri*)	48
Whiskered Bat (*Myotis mystacinus*)	32
Daubenton's Bat (*Myotis daubentoniid*)	41
Nathusius's Pipistrelle (*Pipistrellus nathusii*)	6
Natterer's Bat (*Myotis nattereri*)	46

4.2 PRELIMINARY ROOST ASSESSMENT

The preliminary roost assessment comprised of a thorough inspection of the exterior of Somerton House for evidence of the presence of roosting bats and/or any potential to support roosting bats. The interior of the structure was not safely accessible due to its structurally unstable condition. An exterior and interior inspection of the outbuildings to the rear of Somerton House was also carried out.

Somerton House is located within the urban area of Graiguecullen, Co. Carlow and comprises a Regency house dating from c. 1800-1810. The building consists of a detached two-storey over basement dwelling of traditional masonry construction, with a pitched hipped roof covered with slate roof tiles and stone ridge tiles. The majority of external doors and windows have been boarded up excluding two windows on the northern end of the structure. Where openings have been boarded up, gaps between the wooden plywood and the masonry have been created.



Plate 4.1: Front and side (Western and Northern aspect) of Somerton House

Whilst the roof structure is generally intact and in good condition there are a number of loose roof and ridge tiles allowing for access into the roof void (see **Plate 4.2**).

Previous demolition works to the rear of the structure (western aspect) to remove the external walls has exposed the internal roof truss structure, further allowing for potential access to the roof void of the house (see **Plate 4.3**). These works have also resulted in crevices and cavities forming where the removed external walls adjoined the remining external walls (see **Plate 4.4**). A missing window frame and glazing to the rear of the structure (western aspect) has resulted in a large opening which provides direct access to the internal space of the building fabric.



Plate 4.2: Loose roof and ridge tiles.



Plate 4.3: Previous demolition works at rear of house (western aspect).

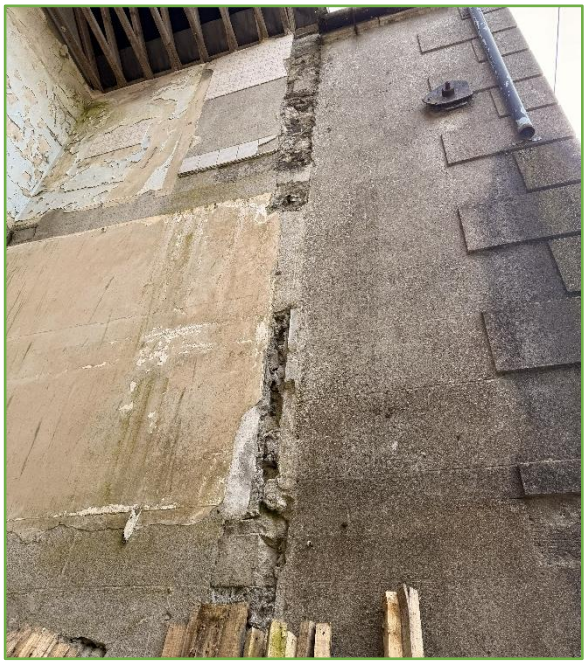


Plate 4.4: Crevices and cavities from removal of external walls



Plate 4.5: Missing window frame and glazing (western aspect)

A series of outbuildings are located to the rear of the Somerton House structure which are overall in poor condition (see **Plate 4.5 & 4.6**). The outbuildings are constructed of a mix of masonry with stone and brick walls and corrugated ceiling. There are several large openings for potential bat entry/exit owing to the open doorways. Exposed stonework and gaps in between wooden lintels/door frames create a number of suitable crevices for crevice dwelling bats.



Plate 4.5: Outbuildings to rear of structure



Plate 4.6: Outbuildings to rear of structure

Adjoining Somerton House and the rear of the outbuildings is a stone and masonry wall (see **Plate 4.7**). Areas of exposed stonework and dense ivy cover provide potential roost features for crevice dwellings bats however the features are only suitable for individual crevice-dwelling bats.



Plate 4.7: Stone and masonry wall adjoining Somerton House and outbuildings

No bats or evidence of bats were recorded during the external search of the Somerton House structure and during the internal and external search of the outbuildings. The house and associated outbuildings showed a number of potential entry/exit points and contained crevices offering suitable features for roosting bats. Taking into consideration the surrounding habitat and the features of Somerton House and outbuildings the structures have been assigned *Moderate* suitability for roosting bats.

4.3 DAYTIME BAT WALKOVER

The Daytime Bat Walkover Survey comprised of a systematic walk of the site where accessible to determine the suitability of the site for bats.

The development site is situated within an urban environment with residential dwellings located directly to the east, southeast, north and north west of the site. The River Barrow is located approximately 57m to the east of the site.

The majority of the site comprises Somerton House and the adjoining outbuildings. Further artificial surfaces onsite consist of the gravel yards surrounding the structures. Along the most southern boundary a mature Cherry Laurel (*Prunus laurocerasus*) hedgerow divides the site with the neighbouring properties (see **Plate 4.8**).



Plate 4.8 Hedgerow along southern boundary of site

Further habitats present on site include an area of amenity grassland to the northeast of the site and areas of ornamental and non-native shrubs also to the northeast of the site.

With regards to foraging and commuting bats the mature hedgerow to the south of the site may be utilised and would be considered to be of **moderate suitability** offering the site connection to the wider landscape particularly to the southwest of the site. The remaining habitats onsite would be considered to be of **low suitability** for foraging and commuting bats.

4.4 EMERGENCE SURVEYS

5th May 2026

The first registration recorded comprised of a Leisler's bat at 21:00 approximately 2 minutes prior to sunset. Although no observation was made of this bat due to the early timing of the registration it is likely that the bat emerged from roost within the vicinity of the site.

At 21:23 approximately 21 minutes post-sunset a Common Pipistrelle was observed entering the site to the south and foraging in the yard area in front of the house to the east of the site. **At 21:31 approximately 29 minutes post-sunset a Common Pipistrelle was observed likely emerging from the outbuildings to the rear of the house** (west of the site) and foraging within the open space to the rear of the house.

From this point onwards consistent foraging activity was observed in the yard areas to the front, rear and southern side of the house, mainly comprising of Common Pipistrelle. The first Soprano Pipistrelle registration was recorded at 22:17 approximately 75 minutes post-sunset. Further records consisted of general activity mainly comprising Common Pipistrelle with Soprano Pipistrelle and Leisler's bats recorded in lower levels.

28th May 2026

Activity levels during the survey carried out on the 28th May 2026 were lower than the previous survey carried out on the 5th May 2026. **The first observation consisted of a Soprano Pipistrelle likely emerging from the rear of the house at approximately 22 minutes post-sunset. At 24 minutes post-sunset a Common Pipistrelle was observed emerging from the rear of the house, flying within the open space to rear of the house and then re-entering the house.**

The first Leisler's Bat registration was recorded at 22:10 approximately 33 minutes post-sunset however no observation was made of this bat. The remaining observations comprised Common Pipistrelle and Soprano Pipistrelle foraging within the yard spaces to the front and south side of the house as well as within the open space to the rear of the house. Bats were also observed consistently entering and leaving the site from the south west boundary.

Lower activity levels were observed during the survey on the 28th May than during the survey conducted on the 5th May.

Table 4.5: Total number of bat passes recorded per species during surveys.

Date	Common Pipistrelle	Soprano Pipistrelle	Leisler's Bat	Total No. of Passes
5th May 2026	272	5	5	**282**
28th May 2026	84	24	12	**120**

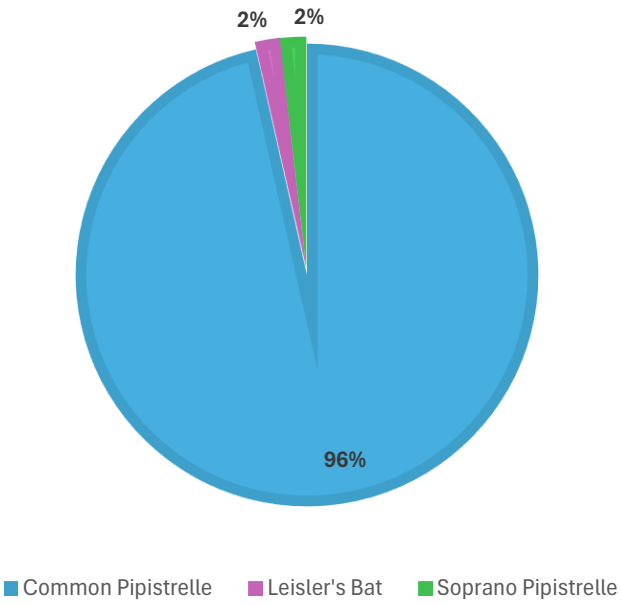


Figure 4.1: Species composition recorded during survey on 5th May 2026

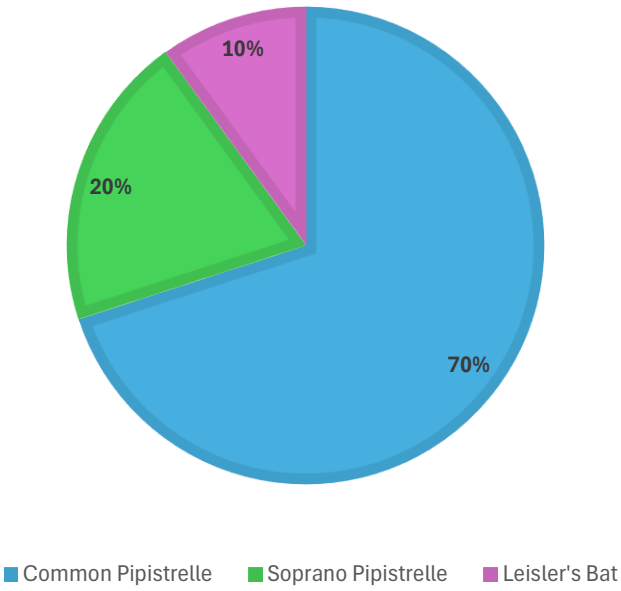


Figure 4.2: Species composition recorded during survey on 28th May 2026

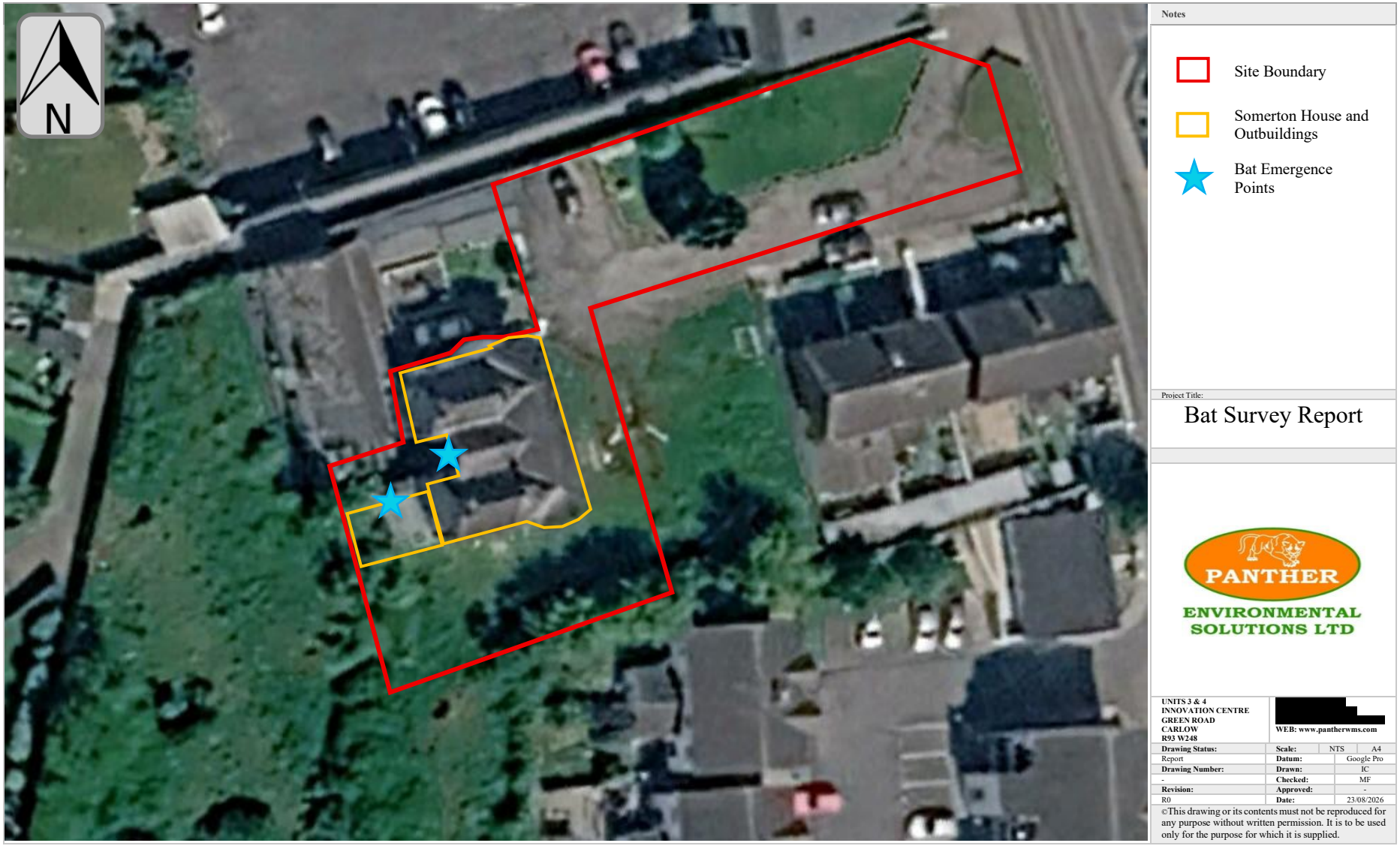


Figure 4.3: Bat Emergence Points Identified

5.0 EVALUATION

5.1 LOSS OF ROOSTING HABITAT

The proposed development will involve the renovation of the existing Somerton House structure, the partial demolition of the existing outbuilding structures and the conversion of retained stone outbuilding structure to facilitate bicycle storage.

The emergence survey carried out on the 5th May 2026 recorded a single Common Pipistrelle likely emerging from the outbuildings to the rear of Somerton House. Therefore, on the basis of observed emergence behaviour and adopting a precautionary approach, the outbuildings are considered to support a small day roost. The partial demolition and renovation works to the outbuildings would likely lead to the loss of the existing bat roost and any bats present may be at risk of disturbance, injury or mortality in the absence of appropriate mitigation measures.

The emergence survey carried out on the 28th of May recorded one Common Pipistrelle and one Soprano Pipistrelle emerging from the rear of Somerton House where previous demolition works have been carried out. The observations are also consistent with the presence of a day roost used by small numbers of Common Pipistrelle and Soprano Pipistrelle, and no evidence of a maternity, hibernation or roost of higher conservation significance was recorded. Renovation works similarly will likely lead to the loss of the existing bat roost and any bats that may be present would be at risk of disturbance, injury or mortality in the absence of appropriate mitigation measures.

Common and Soprano pipistrelles are amongst the most common and widespread species of bats in Ireland with both species commonly encountered throughout Ireland (NPWS, 2025). Both species are described as being adaptable in their habitat use with Soprano Pipistrelle showing some preference for aquatic habitats (NPWS, 2025). The overall trend in conservation status for the national population of both species in Article 17 reporting is considered to be Improving (NPWS, 2025).

In the absence of mitigation, the loss of potential bat roosting habitat would be considered to be a Long-term Slight Negative Effect. Although roost loss will occur, the roosts are considered to be of low conservation significance, comprising very small numbers of widespread species. The implementation of measures recommended below will mitigate potential impacts as a result of the proposed development ensuring there will be no adverse effect on the conservation status of the local bat population.

5.2 FORAGING / COMMUTING HABITAT

The majority of the proposed development site consists of artificial surfaces and buildings. Bats were observed foraging within the yard spaces to the front and rear of Somerton House as well as to the south of the site. During the surveys bats were also observed commuting into the site from vegetated habitat located outside of the site boundary to the southwest.

The proposed development will involve the limited removal of vegetation to allow for the provision of parking. The existing hedgerow to the south of the site will be retained as part of the proposed development.

Considering the small area of vegetation to be removed and the availability of commuting habitat to the southwest of the site the loss of vegetation is considered to be a Long-term Not Significant Negative Effect.

5.3 DISTURBANCE

Lighting

Due to the proposed development's location within the urban landscape of Graiguecullen the existing levels of artificial lighting on site are considered to be high particularly to the east of the site as a result of street lighting and lighting from adjacent residential dwellings.

No additional artificial lighting is currently proposed as part of the operational phase of the development. Light levels are not anticipated to increase significantly during the construction phase of the proposed development, as works will be largely confined to daylight hours. However, it is possible that temporary lighting required during the construction phase may impact on foraging and commuting bats. The impact of increased lighting levels during the construction phase is assessed as Short-term, Not Significant, Negative, however, mitigation measures below are provided to reduce any potential impact from artificial lighting during the construction phase.

5.4 LANDSCAPE CONNECTIVITY

Landscape connectivity is an important element in the assessment of developments on local bat populations (Frey-Ehrenbold et al., 2013). The proposed development site is located within the urban area of Graiguecullen and is boarded by existing residential dwellings located directly to the east, southeast, north and north west of the site.

The broader landscape is considered of local importance for bats, with a 35.78 average landscape suitability score.

The proposed development site is not considered to form an important landscape connectivity feature for bats, with commuting activity primarily associated with vegetated habitat located beyond the southwestern boundary. The proposed development will result in limited vegetation removal with the existing hedgerow to the south of the site retained as part of the development.

As such, it is considered that the proposed development will not result in any significant effects on the sites connectivity within the wider landscape and on commuting routes for local bat populations.

6.0 MITIGATION

6.1 OVERVIEW

A total of two bat species were confirmed roosting with Somerton House and the associated outbuildings based on emergence survey observations; Common Pipistrelle and Soprano Pipistrelle. The proposed development will likely result in the loss of the day roosts within the existing buildings. A derogation licence is therefore required from the National Parks and Wildlife Service (NPWS) for works to the existing buildings as per Regulation 54 of the Habitats Regulations.

The following measures have been designed in line with Bat mitigation guidelines for Ireland (Marnell et al. 2022) to mitigate against potential impacts as a result of the proposed development, with the objective of ensuring the continued use of the building by roosting bats following the completion of the proposed development.

6.2 REMOVAL OF ROOSTING HABITAT DURING WORKS TO OUTBUILDINGS

The concrete structure outbuilding to the rear of Somerton House will be removed as part of the proposed development. The stone structure outbuilding will be retained and renovated to facilitate bicycle parking. Therefore, the Common Pipistrelle roost within the outbuildings is likely to be removed as part of these proposed works

The following measures are proposed to minimise the impact of the works where possible.

- The demolition and renovation works to the outbuildings should be undertaken outside the active bat season where possible (i.e. outside April to September);
- Should works to the outbuildings be undertaken during the active bat season, works should be immediately preceded by a roost inspection survey and emergence surveys to determine if bats are using the structures and the location of roosts.
- Should small numbers of bats be recorded emerging from the structures they will require exclusion from the structures (i.e. blocking of entry/exit points or use of a one-way exclusion tube).
- Any crevices identified during the roost inspection survey that do not contain bats will be blocked.
- For demolition works, the roof structure should be removed first and the building left for 24 hours to allow any potential bats still present to exit.
- Where re-roofing works are proposed on the stone outbuilding to be renovated these should ideally be undertaken during autumn or spring when bats will be capable of feeding and will not have begun giving birth. Any potential remedial timber treatment required should be carried out during period 1st October to 1st May, as the chemicals involved in these treatments can be harmful to bats. Should roofing felt be installed it should be 1F Bitumen felt or similar ‘bat friendly’ membrane, as this material does not contain polypropylene filaments that can trap bats.
- Prior to the commencement of works, a toolbox talk will be undertaken to ensure that all staff members are fully aware of the sensitivities of the site i.e. existing Common Pipistrelle roost.

- A qualified ecologist and/or the local NPWS conservation officer will be present to oversee the initial demolition works.

6.3 REMOVAL OF ROOSTING HABITAT DURING WORKS TO SOMERTON HOUSE

As part of the proposed development the existing Somerton House will be renovated to provide for 2no. of 1-bed apartments and 2no. of 2-bed apartments. Therefore, the Common Pipistrelle and Soprano Pipistrelle roost with Somerton House is likely to be removed as part of the proposed works.
The following measures are proposed to minimise the impact of the works where possible.

- Works to this building should be undertaken outside the active bat season where possible (i.e. outside April to September);
- Should works to Somerton House be undertaken during the active bat season, works should be immediately preceded by a roost inspection survey and emergence surveys to determine if bats are using the structure and the location of roosts.
- Should small numbers of bats be recorded emerging from the structures they will require exclusion from the structures (i.e. blocking of entry/exit points or use of a one-way exclusion tube).
- Any crevices identified during the roost inspection survey that do not contain bats will be blocked.
- Where re-roofing works are proposed these should ideally be undertaken during autumn or spring when bats will be capable of feeding and will not have begun giving birth. Any potential remedial timber treatment required should be carried out during period 1st October to 1st May, as the chemicals involved in these treatments can be harmful to bats. Where replacement of roofing felt is proposed the roofing felt to be installed should be 1F Bitumen felt or similar 'bat friendly' membrane, as this material does not contain polypropylene filaments that can trap bats.
- Prior to the commencement of works, a toolbox talk will be undertaken to ensure that all staff members are fully aware of the sensitivities of the site i.e. existing Common Pipistrelle and Soprano Pipistrelle roost.
- A qualified ecologist and/or the local NPWS conservation officer will be present to oversee the proposed commencement works.

6.4 PROVISION OF COMPENSATORY ROOSTS

- Prior to the commencement of works 2no. of tree and/or pole mounted Bat Boxes such as Eco Kent Bat Box or Schwegler 1FF bat boxes (or similar comparable designs) will be erected near to the buildings, potentially to the southwest of the site.
- The bat boxes should be placed at a minimum height of 4m, in varying orientations and away from existing artificial lighting.
- In addition to the above 2 no. of built in/integrated bat boxes such as Schwegler Bat Wall System 3FE (or similar comparable designs will be placed on the external walls at the rear of Somerton House. These boxes should be erected at a minimum of 3.5m height.
- The bat boxes should be installed under the guidance of a qualified ecologist and/or the local NPWS conservation officer.

These are suitable mitigation measures for a bat roost of low conservation importance (i.e. individual bats, or small numbers, of common species) in accordance with Marnell et al. (2022)5 which states the mitigation requirement is "Flexibility over provision of bat boxes, access to new buildings etc. No conditions about timing or monitoring".

6.5 LIGHTING

The following measures are proposed to minimise the impact of lighting during the construction phase of the development.

- Construction works during hours of darkness during the active bat season (April-October) would be kept to a minimum.
- Direct lighting of sections of hedgerows and treelines on site during the construction phase will be avoided where possible.
- Directional lighting during the construction phase should be used where possible, and lighting should be of a low height without compromising safe working conditions.
- White light emitting diode (LED) will be used where possible, which is considered to be low impact in comparison to other lighting types.

Additional artificial lighting is not currently proposed as part of the development, however, should artificial lighting be included as part of the development the following guidelines should be taken into consideration:

- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Column heights should be restricted to 6m reducing the amount of light spillage (e.g. <8m) (Bat Conservation Ireland, 2010).
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1min) timers.
- No lighting should be directed at bat boxes.

6.6 MONITORING

Monitoring of the installed bat boxes should be undertaken by a suitably qualified ecologist once works have been completed. It is recommended that within the second active bat season following the completion of works additional site surveys should be undertaken. The boxes should be investigated by ladder and records taken on the usage of the boxes by bats. The ecologist should determine the suitability of the bat boxes post-construction and should make any necessary recommendations on the relocation or replacement of bat boxes. Any boxes recorded to be utilised by bats will be strictly protected. Any bat boxes noted to be damaged or removed will be replaced by the same or similar comparative available model.

7.0 DEROGATION LICENCE APPLICATION

The NPWS document, "Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland" (NPWS Guidance Series 1) was reviewed prior to the undertaking of this derogation licence application. Article 16 of the Habitats Directive sets out three pre-conditions, all of which much be met before a derogation from the requirements of Article 12 or Article 13 of the Directive can be granted. The preconditions are also set out in the Regulation 54 of the Regulations as follows:

1. A reason(s) listed in Regulation 54 (a)- (e) applies
2. No satisfactory alternative exist
3. Derogation would not be detrimental to the maintenance of a population(s) at a favourable conservation status

Surveys undertaken in May 2026 confirmed the presence of a small day roost used by Common Pipistrelle and Soprano Pipistrelle within Somerton House and the associated outbuildings. The roost is considered to be of low conservation significance with no evidence recorded of a maternity, hibernation or other roost type of higher conservation significance. As the structures to renovated / demolished contain a confirmed bat roost, a derogation licence is required prior to works commencing.

This derogation licence application satisfies the three Regulation 54 licencing tests as follows:

Test 1 – Reasons for Seeking Derogation

Regulation 54(2) (A-E) of the European Communities (Birds and Natural Habitats) Regulations states that a derogation licence may be granted for any of the reasons listed (a) to (e).

This application qualifies under Regulation 54(2) (A-E) due to the following:

c) In the interest of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.

The proposed development relates to the renovation of the existing Somerton House and partial demolition/renovation of the associated outbuildings to the rear of Somerton House. The proposed development would result in the provision of 2no. of 1-bed apartments and 2no. of 2-bed apartments. The Carlow County Development Plan 2022-2028 has a target of 3,107 total new residential units to be delivered across the county over the lifetime of the plan. The proposed development will aid in meeting this housing target.

Therefore, the development will aid in fulfilling the housing need and as such is of public interest of a social and economic nature.

In addition, the existing Somerton House is state of disrepair with the internal structure of the house presenting a health and safety risk. Evidence of unauthorised access and anti-social behaviour was noted on site. Due to the site's location with the urban area of Carlow/Graiguecullen there is a likelihood of further anti-social behaviour onsite presenting a significant health and safety risk to the public.

Therefore, the proposed development to renovate Somerton House would also be in the interest of public safety.

Test 2 – There is No Satisfactory Alternative

Under Regulation 54(3)(a) of the European Communities (Birds and Natural Habitats) Regulations, a derogation licence may only be granted where there is no satisfactory alternative that would avoid impacts on a protected species.

Do nothing scenario: Under the do nothing scenario the existing Somerton House and associated outbuildings would remain with no works undertaken to facilitate the residential development. It is likely that Somerton House and the outbuildings would further deteriorate over time resulting in uncertainty regarding the long-term suitability for roosting bats particularly due to the potential for water ingress to the rear of Somerton House.

Under the do nothing scenario the buildings in their current state will continue to pose a risk to public health and safety. Additionally, the failure to undertake the works would result in the loss of an opportunity to provide residential accommodation through the reuse of an existing structure. This scenario is therefore unsatisfactory.

Demolition of existing Somerton House and Outbuildings and no new development: This scenario would result in the demolition of the existing buildings removing the risk to public health and safety. However, under this scenario the bat roosts would similarly be lost and would be subject to a derogation licence. This would also not allow for the provision of residential development and is therefore unsatisfactory.

Retaining Existing Roost Features in Situ: Alternative approaches were considered to allow for the retention of the roost features in situ. However, the proposed renovation works will require repair and replacement of elements of the building fabric, including areas where roost access points and potential roost features occur. Therefore, the retention of roost features cannot be achieved while delivering the proposed development and would prevent the necessary structural repairs and building alterations required to secure the long-term structural integrity of the buildings and to make the structure habitable.

Alternative Location: The proposed development involves the renovation and reuse of existing buildings. The relocation of the development to an alternative site would not allow for the restoration and long-term safeguarding of the existing Somerton House and outbuildings. Additionally, the relocation of the proposed development to an alternative site may result in additional impacts as a result of new construction or land take.

Chosen Option: The chosen option was the renovation of the existing Somerton House and the partial demolition/renovation of the outbuildings. Provision of alternative roosting habitats as well as incorporated mitigation measures will ensure the maintenance of the species conservation status.

Test 3 – Impact of Derogation on Conservation Status

Bat surveys undertaken in May 2026 identified the presence of small Common Pipistrelle and Soprano Pipistrelle day roosts with Somerton House and the outbuildings. The emergence surveys recorded 3 no. of emerging bats over the two survey nights. The surveys did not identify a roost of higher conservation significance such as a maternity or hibernation roost.

Potential impacts arising from the proposed development include the loss or alteration of roosting features currently used by the Pipistrelle bats as well as disturbance or mortality during the demolition/construction phase of the development.

Mitigation measures have been designed in respect to the proposed development to prevent bat mortality, minimise disturbance and ensure no net loss of roosting habitat (as detailed in Section 6 above).

Common and Soprano Pipistrelle are both widespread species, commonly encountered during bat surveys. As per Article 17 reporting (NPWS,2025) the overall conservation status of both species is Favourable and Improving. The confirmed roosts are considered to be of local significance only and do not represent a roost of higher conservation significance.

In the absence of mitigation, the loss of the identified roosts would constitute a long-term slight negative effect at the local level. However, implementation of the mitigation and compensation measures detailed in Section 6, including timing of works, supervised exclusion, provision of compensatory roost features and post-construction monitoring, will ensure that suitable roosting opportunities remain available within the local area.

Accordingly, the proposed development is not considered detrimental to the maintenance of the local Common Pipistrelle and Soprano Pipistrelle populations at a favourable conservation status within their natural range

8.0 CONCLUSION

A Preliminary Roost Assessment, Daytime Bat Walkover Survey and Emergence Surveys were carried out at the proposed development site in May 2026 to determine the baseline use of the site by bats including species present, activity levels, important bat habitats and landscape connectivity.

Somerton House and the associated outbuildings were determined as having moderate suitability for roosting bats during the Preliminary Roost assessment due to a number of potential entry/exit points and contained crevices offering suitable features for roosting bats.

During the emergence surveys carried out 1 no. of Common Pipistrelle was observed likely emerging from the outbuildings to the rear of Somerton House and 1no. of Common Pipistrelle and 1no. Soprano Pipistrelle were observed emerging from the rear of Somerton House.

Based on these observations it was concluded that the proposed development could have a significant impact on bats roosting within the structures, in the absence of appropriate mitigation measures.

A Derogation Licence under Regulation 54 of the European Communities (Natural Habitats) Regulations 1997 will be required from the National Parks and Wildlife Services prior to the commencement of any proposed works.

Measures have been outlined to mitigate potential impacts associated with the proposed development ensuring there will be no adverse effect on the conservation status of the local bat population.

It is considered that provided the mitigation measures outlines are properly implemented there is no potential for significant impacts on local bat populations as a result of the proposed development.

9.0 REFERENCES

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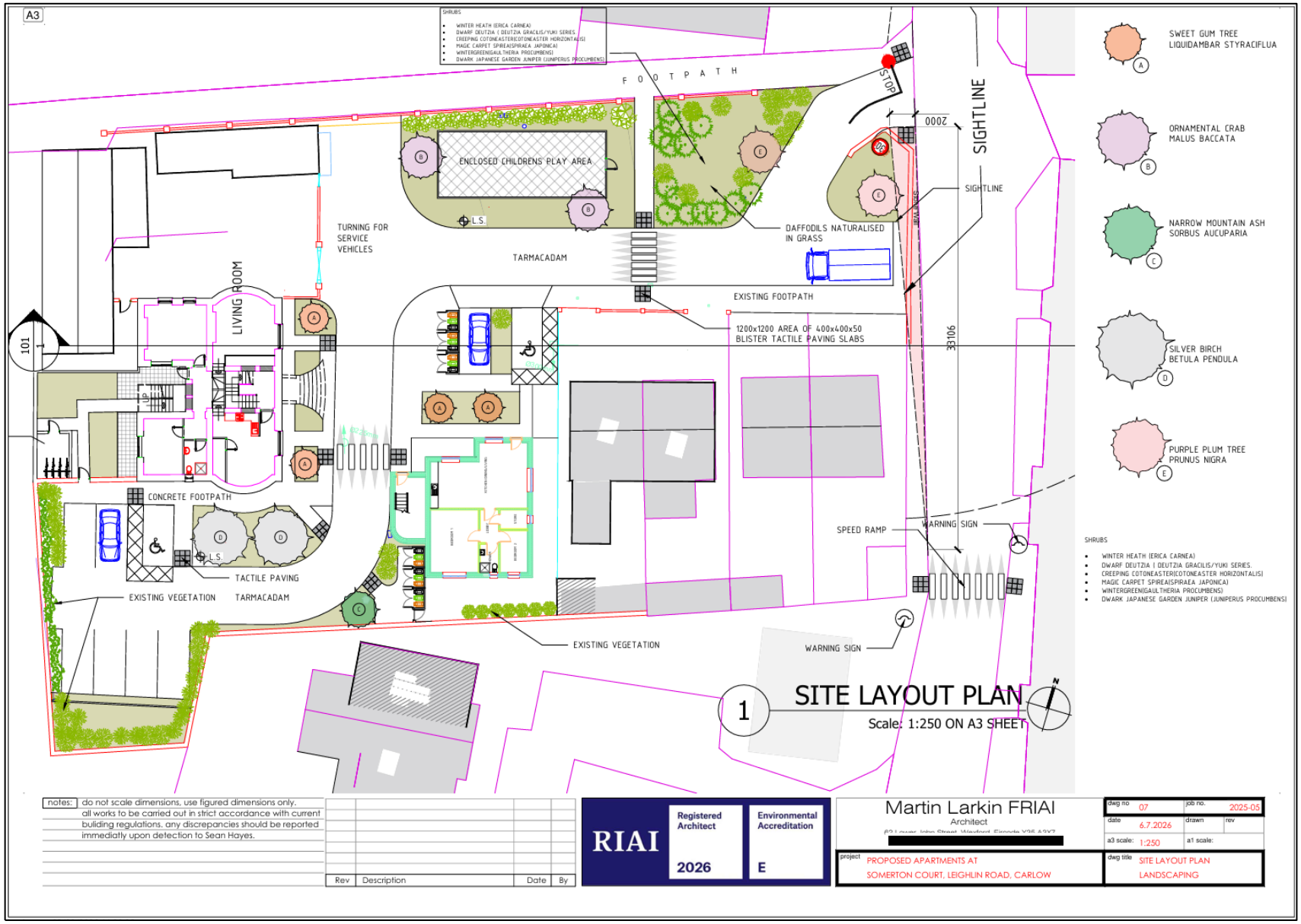
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APPENDIX A

PROPOSED SITE LAYOUT AND LANDSCAPE PLAN


A3
SHRUBS
WINTER HEATH (ERICA CARNEA)
DWARF DEUTZIA (DEUTZIA GRACILIS/YUKI SERIES
CREEPING COTONEASTER(COTONEASTER HORIZONTALIS)
MAGIC CARPET SPIREA(SPIRAEA JAPONICA)
WINTERGREEN(GAULTHERIA PROCUMBENS)
DWARK JAPANESE GARDEN JUNIPER (JUNIPERUS PROCUMBENS)
FOOTPATH
STOP
SIGHTLINE
2000
ENCLOSED CHILDRENS PLAY AREA
L.S.
TURNING FOR SERVICE VEHICLES
TARMACADAM
DAFFODILS NATURALISED IN GRASS
EXISTING FOOTPATH
1200x1200 AREA OF 400x400x50 BLISTER TACTILE PAVING SLABS
LIVING ROOM
101
33106
CONCRETE FOOTPATH
TACTILE PAVING
EXISTING VEGETATION
TARMACADAM
SPEED RAMP
WARNING SIGN
EXISTING VEGETATION
WARNING SIGN
SWEET GUM TREE
LIQUIDAMBAR STYRACIFLUA
ORNAMENTAL CRAB
MALUS BACCATA
NARROW MOUNTAIN ASH
SORBUS AUCUPARIA
SILVER BIRCH
BETULA PENDULA
PURPLE PLUM TREE
PRUNUS NIGRA
SHRUBS
WINTER HEATH (ERICA CARNEA)
DWARF DEUTZIA (DEUTZIA GRACILIS/YUKI SERIES.
CREEPING COTONEASTER(COTONEASTER HORIZONTALIS)
MAGIC CARPET SPIREA(SPIRAEA JAPONICA)
WINTERGREEN(GAULTHERIA PROCUMBENS)
DWARK JAPANESE GARDEN JUNIPER (JUNIPERUS PROCUMBENS)
1
SITE LAYOUT PLAN
Scale: 1:250 ON A3 SHEET
notes: do not scale dimensions, use figured dimensions only.
all works to be carried out in strict accordance with current buliding regulations. any discrepancies should be reported immediatly upon detection to Sean Hayes.
Rev Description Date By
RIAI Registered Architect 2026 Environmental Accreditation E
Martin Larkin FRIAI
Architect
dwg no 07
job no. 2025-05
date 6.7.2026
drawn
rev
a3 scale: 1:250
a1 scale:
project PROPOSED APARTMENTS AT SOMERTON COURT, LEIGHLIN ROAD, CARLOW
dwg title SITE LAYOUT PLAN LANDSCAPING