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Marine & Environmental Consultancy

Bat Fauna Impact Assessment for a Proposed Large-Scale Residential Development (LRD) at Winterwood, Carpenterstown Road, Dublin 15.

14th February 2025

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Winterwood Developments Limited

Altemar Ltd., 50 Templecarrig Upper, Delgany, Co. Wicklow [redacted]
Directors: Bryan Deegan and Sara Corcoran
Company No.427560 VAT No. 9649832U
www.altemar.ie

Document Control Sheet			
Client	Winterwood Developments Limited		
Project	Proposed Large Scale Residential Development (LRD) at Winterwood, Carpenterstown Road, Dublin 15.		
Report	Bat Fauna Impact Assessment		
Date	14th February 2025		
Version	Author	Reviewed	Date
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SUMMARY

Structure:	The site consists of a large house with front and rear gardens that include treelines, scrub, amenity grassland
Location:	Winterwood, Carpenterstown Road, Dublin 15
Bat species present:	Soprano pipistrelle and Common pipistrelle
Proposed work:	Large-Scale Residential Development (LRD)
Impact on bats:	A single soprano pipistrelle bat roost is located within a poplar tree along the western boundary treeline. This treeline is proposed for retention and is within an area of low lighting on site. As there are no confirmed bat roosts in any trees proposed for felling or buildings on site, a derogation licence is not required for the proposed felling of trees or demolition of onsite structures. However, trees of moderate bat roosting potential are proposed for felling as part of the proposed development. A pre-construction inspection of these trees must be carried out by a suitably qualified ecologist to ensure that there is no bat roosts present prior to the commencement of works. Further, a pre-construction assessment of all structures to be demolished will be undertaken by a suitably qualified ecologist prior to the commencement of works. The likelihood bat collision is not significant as the materials proposed are generally solid and would have good acoustic properties to reflect echolocation signals. As a result, the buildings would be clearly visible to bat species. Works on site will result in a short-term modification of the site in the vicinity of the existing foraging areas. Increased lighting onsite during construction and operation has the potential to impact on foraging activity of bat species recorded onsite. Following implementation of a sensitive lighting strategy (in compliance with bat lighting guidelines) in consultation with an ecologist, in addition to mitigation, the species seen to occur onsite and in the surrounding area should persist. The impact of the proposed development on bats will be Moderate Adverse/Site/Negative/Not Significant/long term. <u>Potential Impacts in the absence of mitigation: Neutral / Not significant / long-term</u>.
Surveys by:	Frank Spellman & Gayle O'Farrell (Altemar)
Survey dates:	25th July 2024 and 15th August 2024

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 30 years of experience providing ecological consultancy services in Ireland. He has extensive experience in carrying out a wide range of bat surveys including dusk emergence, dawn re-entry and static detector surveys. He also has extensive experience reducing the potential impact of projects that involve external lighting on Bats. Bryan trained with Conor Kelleher author of the Bat Mitigation Guidelines for Ireland (Kelleher and Marnell (2022)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Marnell, Kelleher and Mullen (2022), Bat Mitigation Guidelines for Ireland V2 (which update and replace the Bat Mitigation Guidelines for Ireland published in 2006).

The surveys for this site were undertaken by Gayle O'Farrell and Frank Spellman of Altemar.

Gayle O'Farrell (Agri-Environmental Sciences BSc) is skilled in bat detection through static detector surveys, dusk emergence, and down re-entry surveys. She is also skilled in habitat assessment and has undertaken flora/ invasive plant species surveys to produce numerous ecological assessments on a range of residential and commercial projects.

Frank Spellman (MSc Zoology, BSc Zoology) has extensive experience in carrying out a wide range of fauna surveys as both a sub-contractor and employee for environmental consultancies and organisations in Ireland and the US. These include both roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, breeding/wintering bird surveys, freshwater ecology surveys as well as flora/invasive plant surveys. Frank has been lead surveyor on numerous development projects within Ireland carrying out full avian/non-avian mammal, wintering bird and breeding bird assessments.

Legislative Context

Wildlife Act 1976 (as amended by, inter alia, the Wildlife (Amendment) Act 2000).

Bats in Ireland are protected by the Wildlife (Amendment) Act 2000. Based on this legislation it is an offence to wilfully interfere with or destroy the breeding or resting place of any species of bat. Under this legislation it is an offence to "*Intentionally kill, injure or take a bat, possess or control any live or dead specimen or anything derived from a bat, wilfully interfere with any structure or place used for breeding or resting by a bat, wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose. "*

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora has been transposed into Irish Law, including, via, *inter alia*, the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). See Art.73 of the 2011 Regulations which revokes the 1997 Regulations.

Annex II of the Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) lists animal and plant species of Community interest, the conservation of which requires the designation of Special Areas of Conservation (SACs); Annex IV lists animal and plant species of Community interest in need of strict protection. All bat species in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is protected under Annex II which related to the designation of Special Areas of Conservation for a species.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), all bat species are listed under the First Schedule and, pursuant to, *inter alia*, Part 6 and Regulation 51, it is an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat particularly during the period of breeding, hibernating or migrating;
- Damage or destroy a breeding site or resting place of a bat;
- Keep, sell, transport, exchange, offer for sale or offer for exchange any bat taken in the wild.

Project Description

'*Winterwood Developments Limited, intend to apply to Fingal County Council for permission for development for a Large-Scale Residential Development (LRD) on a site of approx. 1.76ha on lands at Winterwood, Carpenterstown Road, Dublin 15, D15 YH4C.*

The development will consist of 180 no. residential units ranging in height from 2 to 6 storeys, all boundary treatment and landscaping works, site services connections and all site development works to include:

a) The Construction of 32 no. 2 storey houses (16 no. 4 bed semi-detached units, 12 no. 2 bed mid-terrace units; and 4 no. 2 bed end of terrace units),
b) 148 no. apartment units in the form of 3 no. new apartment buildings as follows:
- *Block C (6 storeys) comprising 62 no. apartments (32 no. 2 bed units and 30 no. 1 bed units)*
- *Block D (6 storeys) comprising 43 no. apartments (23 no. 2 bed units and 20 no. 1 bed units)*
- *Block E (6 storeys) comprising 43 no. apartments (23 no. 2 bed units and 20 no. 1 bed units)*
- *70 no. 1 bed units, 94 no. 2 bed units, and 16 no. 4 bed units),*

c) Total Public Open Space (approx. 2,276 sqm) and Communal Open Space 957 sqm.
d) The development will be served via a new vehicular access via Carpenterstown Road.
e) Surface parking is proposed for the apartments units. A Total of 60 no. car parking spaces is proposed to include 12 no. EV charging spaces and 3 no. accessible spaces. In addition, 6 no motorcycle spaces are proposed.
f) A total of 313 no. bicycle spaces are proposed in the form of 229 no. long stay bicycle spaces 84 shortterm stay visitor parking.
g) 1 no. ESB substation at surface level.
h) *All associated site development works, services provision, infrastructural and drainage works, internal access roads, home zones, cycle and pedestrian infrastructure, bin stores, car and bicycle parking, public lighting, communal open spaces, private open space in the form of gardens, terraces and /or balconies, landscaping and boundary treatment works.*'

The survey area, site outline, location, and layout plan are shown in Figures 1-3.

Landscape

A Landscape Design Statement Report has been prepared by RDMA Landscape Architects to accompany this planning application. The proposed landscape masterplan is demonstrated in Figure 4.

Figure 1. *Site outline*

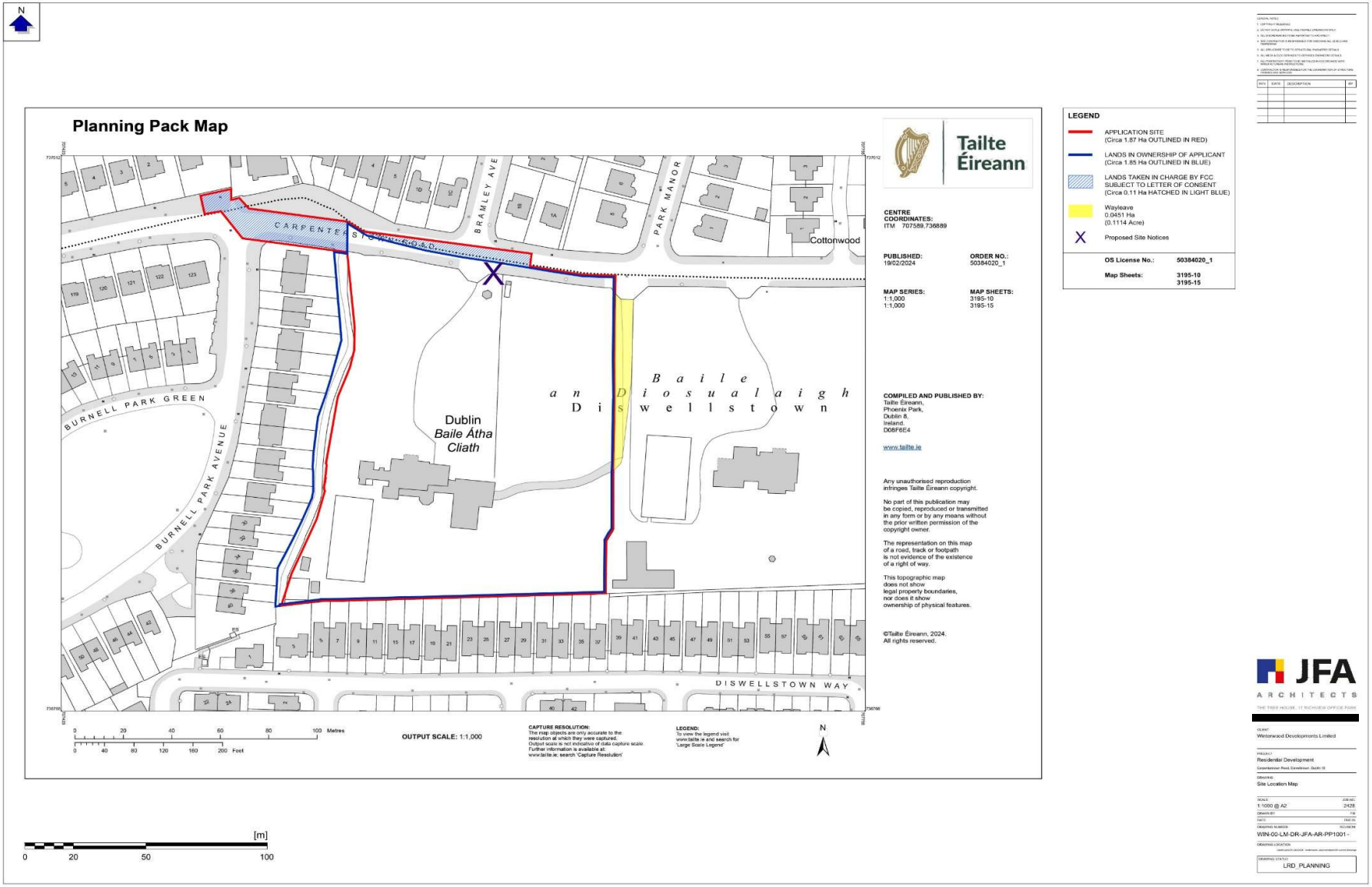

Figure 2. *Site location map*

Figure 3. *Proposed Site Plan Layout*

Figure 4. Landscape Masterplan.

Arborist

An Arboricultural Impact Assessment has been prepared by CMK Hort + Arb Ltd. to accompany this planning application. The report concludes the following in relation to trees on site:

'Summary

The proposed development required the removal of 157 trees and 12 tree groups. Of the 169 trees and groups to be removed, 1 tree is of high quality and value (A Category), 7 trees are of moderate quality and value (B Category), 103 trees and 12 groups of trees are of low quality and value (C Category), and 46 trees are of poor quality (U Category).

The proposed development requires a large number of trees to be removed. These trees are mainly of low quality and limited public amenity value. It is recognised that their loss will have an impact on the visual appearance of the site from Carpenterstown Road and on the local canopy cover; however, given the species type and quality of the trees, the majority are unsuitable for retention within a large residential development.

To mitigate the loss of trees, a detailed landscape proposal has been prepared as part of the planning application and includes new high-quality tree and hedgerow planting. Given the site's change of use, replacing like for like in terms of canopy cover is unlikely to be achievable; however, the new planting will be more suitable to the new development and have a positive impact on its visual appearance.

In conclusion, the proposed development is achievable in both Arboricultural terms and in relation to local planning policy as it relates to trees. Tree impacts have been assessed, and tree protection measures have been specified in accordance with best practice and are sufficient to safeguard retained trees during the proposed works.'

The Tree Constraints Plan & Protection Plan are demonstrated in Figures 5 & 6.

Figure 5. *Tree Impacts Plan*

Figure 6. *Tree Protection Plan*

Lighting

A public lighting report has been prepared by Fallon Design M & E Engineering to accompany this planning application. The report outlines the following:

'Ecological Impact Design Considerations:

Careful consideration has been given to the design of Public Lighting with regard to the existing natural habitat and the wildlife. The chosen luminaire Veelight Tech Series has a full cut off lantern type, that offers with a G6 Glare rating and no upward light making it dark sky friendly.

- *An inbuilt multi step dimming program within this luminaire allows for night time hours to be dimmed by up to 25%. This means during peak hours of nocturnal foraging, feeding and activity the adjacent public lighting can be further designed to minimize impact on the local wildlife.*
- *The colour rendering of the selected light fitting is 2700k making the LED fittings a warmer light, helping to further minimize the impact on the local wildlife.*
- *Greater energy savings will also result using the inbuilt multi-step dimming program during late hours of darkens along the public lighting spaces.*
- *Unnecessary light spill controlled through a combination of directional lighting and luminaire optics design.*
- *No floodlighting will be used on the scheme.*

The public lighting design references the following documents and best practice guides as outlined below:

- *Bats and Lighting in the UK – Bats and the Built Environment Series (Institute of Lighting Professionals, September 2011;*
- *Guidance Notes for the Reduction of Obtrusive Light GN01 (Institute of Lighting Professionals, 2011.*
- *Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland);*
- *The Eurobats Mitigation of Lighting Document*

The public lighting plan complies with bat lighting guidelines and is set to 2700^{o}K. The lighting layout is demonstrated in Figure 7.

Figure 7. *Public Lighting Layout*

Bat Survey

This report presents the results of site visits by Frank Spellman and Gayle O'Farrell on the 25th July and 15th August 2024. A bat emergent/detector survey and internal building inspection was carried out on both occasions. Trees and buildings on site were examined for bat roosting potential.

Survey Methodology

As outlined in Marnell et al. 2022 '*The presence of a large maternity roost can normally be determined on a single visit at any time of year, provided that the entire structure is accessible and that any signs of bats have not been removed by others. However, most roosts are less obvious. A visit during the summer or autumn has the advantage that bats may be seen or heard. Buildings (which for this definition exclude cellars and other underground structures) are rarely used for hibernation alone, so droppings deposited by active bats provide the best clues. Roosts of species which habitually enter roof voids are probably the easiest to detect as the droppings will normally be readily visible. Roosts of crevice-dwelling species may require careful searching and, in some situations, the opening up of otherwise inaccessible areas. If this is not possible, best judgement might have to be used and a precautionary approach adopted. Roosts used by a small number of bats, as opposed to large maternity sites, can be particularly difficult to detect and may require extensive searching backed up by bat detector surveys (including static detectors) or emergence counts.'* In relation to the factors influencing survey results the guidelines outlines the following *'During the winter, bats will move around to find sites that present the optimum environmental conditions for their age, sex and bodyweight and some species will only be found in underground sites when the weather is particularly cold. During the summer, bats may be reluctant to leave their roost during heavy rain or when the temperature is unseasonably low, so exit counts should record the conditions under which they were made. Similarly, there may be times when females with young do not emerge at all or emerge only briefly and return while other bats are still emerging thus confusing the count. Within roosts, bats will move around according to the temperature and may or may not be visible on any particular visit. Bats also react to disturbance, so a survey the day after a disturbance event, may give a misleading picture of roost usage.'*

The survey involved the methodologies outlined in Collins (2016) which included the roost inspection methodologies i.e. external methodology outlined in section 5.2.4.1 and the internal survey outlines in section 5.2.4.2 of the guidelines. In addition, the methodologies for Presence absence surveys (Section 7) was carried out for dust emergent surveys.'

As outlined in Collins (2016) 'The bat active period is generally considered to be between April and October inclusive (although the season is likely to be shorter in northern latitudes). However, because bats wake up during mild conditions, bat activity can also be recorded during winter months.'

Survey constraints

Emergent/detector surveys were carried out on the 25th July 2024 by Frank Spellman and on the 15th August 2024 by Frank Spellman and Gayle O'Farrell.

The detector surveys were undertaken within the active bat season and the transects covered the entire site multiple times during the night. Weather conditions were good with mild temperatures greater than 12°C after sunset. Winds were light and there was no rainfall during the site. Insects were observed in flight during the survey.

As outlined in Collins (2016) in relation to weather conditions '*The aim should be to carry out surveys in conditions that are close to optimal (sunset temperature 10°C or above, no rain or strong wind.), particularly when only one survey is planned…. Where surveys are carried out when the temperature at sunset is below 10°C should be justified by the ecologist and the effect on bat behaviour considered.*' There were no constraints in relation to the surveys carried out. All areas of the site were accessible, and weather conditions were optimal for bat assessments.

Survey Results

Trees as potential bat roosts.

A ground level roost assessment was carried out and used to examine the trees on site for features that could form bat roosts. Potential roosting features include heavy ivy growth, broken limbs, areas of decay, vertical or horizontal cracks, cracks in bark etc. All trees on site were assessed for bat roosting potential. There are a number of trees on site of bat roosting potential.

Buildings as potential bat roosts.

The house on site is considered of low to moderate bat roosting potential. The interior of the buildings to be demolished was inspected for evidence of bat activity. No evidence of bat activity was noted within the buildings on site. The exterior of the buildings was also inspected for bats.

Emergent/detector surveys.

At dusk, a bat detector survey was carried out onsite using a*n Echo meter touch 2 Pro and a Bat box duet* detector to determine bat activity. Bats were identified by their ultrasonic calls coupled with behavioural and flight observations.

Two bat species were noted on site (Figure 8):

- Soprano pipistrelle *(Pipistrellus pygmaeus)*
- Common pipistrelle *(Pipistrellus pipistrellus)*

A single Soprano pipistrelle was observed emerging from the western boundary treeline. Foraging activity of Common pipistrelle *(Pipistrellus pipistrellus)* and Soprano pipistrelle *(Pipistrellus pygmaeus)* was also noted on site, concentrated to the west of the site and north of the house. The removal of the trees on site will result in a loss of foraging areas.

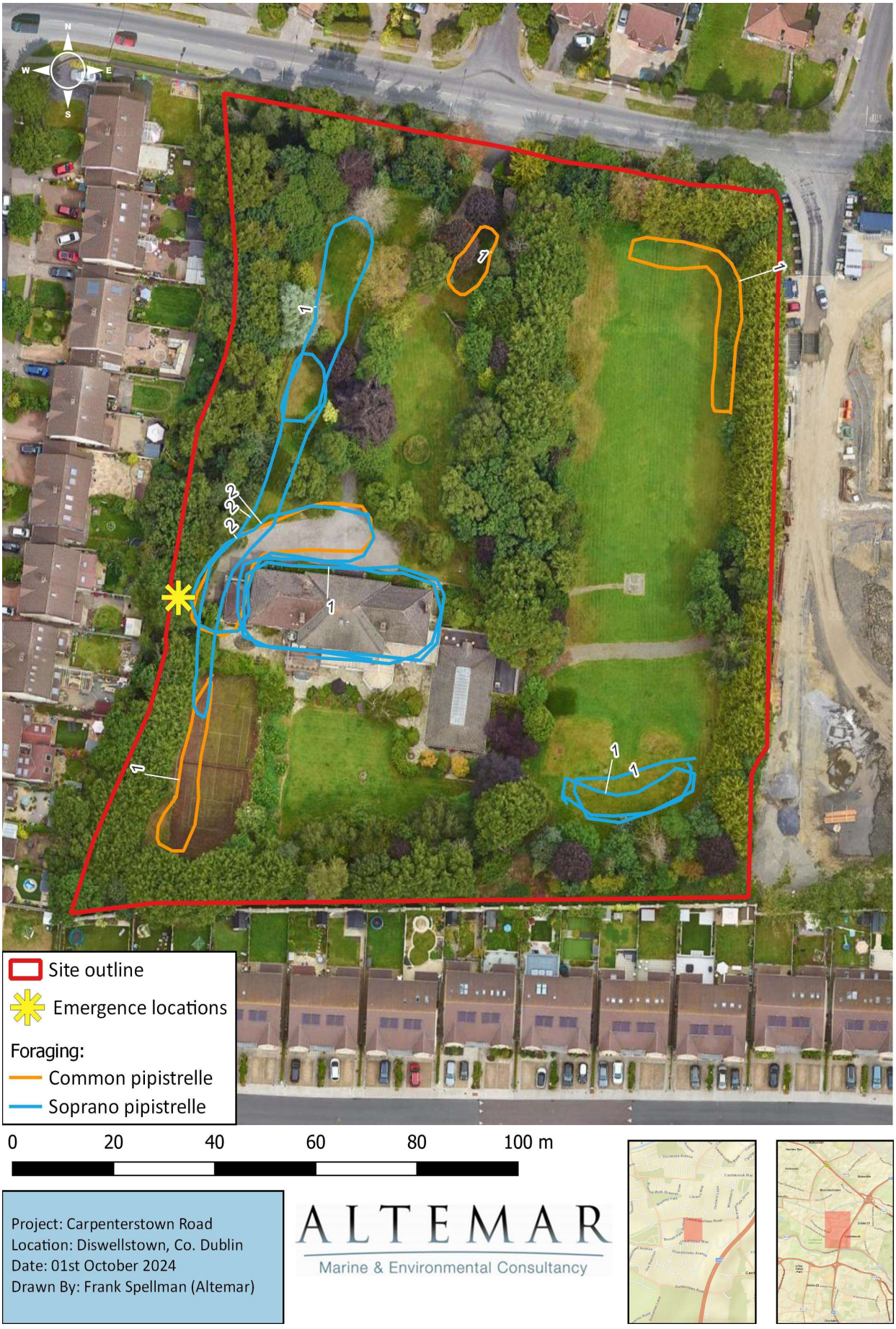

Figure 7. *Bat activity recorded*

Bat Assessment Findings

Review of local bat records

The review of existing bat records (sourced from Bat Conservation Ireland's National Bat Records Database) within a 2km^2 grid (Reference grid O03T) encompassing the study area reveals that seven of the nine known Irish species have been observed locally. The National Biodiversity Data Centre's online viewer was consulted in order to determine whether there have been recorded bat sightings in the wider area. This is visually represented in Figures 9-11.

Table 1. Bat species recorded within a 2km^2 grid (Reference grid O03T)

Species Name	Record Count	Date of Last Record	Designation
Brown Long-eared Bat *(Plecotus auritus)*	1	02/05/2022	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Common Pipistrelle *(Pipistrellus pipistrellus sensu stricto)*	17	02/05/2022	
Daubenton's Bat *(Myotis daubentonii)*	5	02/05/2022	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Lesser Noctule *(Nyctalus leisleri)*	6	02/05/2022	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Nathusius's Pipistrelle *(Pipistrellus nathusii)*	3	02/05/2022	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Pipistrelle *(Pipistrellus pipistrellus sensu lato)*	5	24/08/2007	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Soprano Pipistrelle *(Pipistrellus pygmaeus)*	15	02/05/2022	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts

Figure 8. Common Pipistrelle (*Pipistrellus pipistrellus*) (purple) and Daubenton's bat (*Myotis daubentonii*) (yellow) and both (orange), Source: NBDC, site: red circle

Figure 9. Soprano pipistrelle (*Pipistrellus pygmaeus)* (purple) and Lesser noctule/Leisler's bat *(Nyctalus leisleri) (yellow)* and (orange), Source: NBDC, site: red circle

Figure 10. Brown Long-eared Bat *(Plecotus auritus)* (purple) and Nathusius's Pipistrelle *(Pipistrellus nathusii)* (yellow) and both (orange), Source: NBDC, site: red circle

Potential Impact of the development on Bats

The proposed development will change the local environment as the existing onsite structures will be demolished and new structures are to be erected. Trees and vegetation will also be removed to facilitate the proposed development, including trees and vegetation of moderate bat roosting potential located on site. A single soprano pipistrelle roost located along the western treeline boundary will be retained on site. No confirmed bat roosts were recorded in any onsite trees proposed for felling, structure, or vegetation. Therefore, a NPWS derogation licence is not required. Foraging activity of two relatively common bat species (Common Pipistrelle & Soprano Pipistrelle) were noted on site. Foraging activity was concentrated to treelines and hedges throughout the proposed site outline and north of house where large numbers of insects were swarming in the sheltered conditions. The removal of trees, hedgerows and scrub on site will result in reducing the sites foraging potential across the site. Lighting during construction and operation could potentially lead to impacts on foraging, however the lighting has been designed to minimise light spill onto the western treeline boundary, and no lighting is proposed within public open space. It would be expected that bats would continue to forage on site with the implementation of the sensitive lighting strategy.

Mitigation Measures

As outlined in Marnell et al. (2022) "*Mitigation should be proportionate. The level of mitigation required depends on the size and type of impact, and the importance of the population affected.*" In addition, as outlined in Marnell et. al (2022) '*Mitigation for bats normally comprises the following elements:*

- *Avoidance of deliberate, killing, injury or disturbance – taking all reasonable steps to ensure works do not harm individuals by altering working methods or timing to avoid bats. The seasonal occupation of most roosts provides good opportunities for this*
- *Roost creation, restoration or enhancement – to provide appropriate replacements for roosts to be lost or damaged*
- *Long-term habitat management and maintenance – to ensure the population will persist*

- *Post-development population monitoring – to assess the success of the scheme and to inform management or remedial operations.'*

The following mitigation will be put in place:

- A pre-construction inspection of trees to be felled will be carried out.
- A pre-construction inspection of buildings to be demolished will be carried out.
- Lighting at all stages will be done sensitively on site with no direct lighting on perimeter treelines and will comply with the sensitive public lighting design. Lighting will follow the Bat Conservation Ireland "Bats & Lighting Guidance Notes for: Planners, engineers, architects and developers (December 2010).
- Lighting will comply with bat lighting guidelines with no lighting directed onto boundary treelines.
- A post construction lighting assessment will be carried out by the project ecologist.
- 8 Bat boxes will be placed on site in consultation with the project ecologist.
- A post construction bat assessment will be carried out and submitted to the County Council for review, to ensure the sucessful implementation of the mitigation measures.

Predicted Residual Impact of Planned Development on Bats

The proposed development will change the local environment as new lights and structures are to be erected and the existing vegetation will be removed. A Soprano Pipistrelle (*Pipistrellus pygmaeus*) bat roost is located within a tree along the western boundary of the site. However, this treeline is proposed for retention. Foraging activity on site may be reduced due to the presence new buildings and lighting. It would be expected that, with a sensitive public lighting strategy, foraging activity will continue on site. A pre-construction inspection will be carried out on onsite trees and buildings with bat roosting potential that are to be removed. The proposed development will result in a long term/moderate adverse/not significant/negative impacts on bats.

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