

APPENDIX 6.2 BAT FAUNA IMPACT ASSESSMENT

Bat Fauna Impact Assessment for a proposed development at Mount Avenue, Dundalk, Co. Louth



15th October 2025

Prepared by: Frank Spellman of Altemar Ltd.
On behalf of: Grandspect Limited.

Altemar Ltd., 50 Templecarrig Upper, Delgany, Co. Wicklow. 00-353-1-2010713. info@altemar.ie
Directors: Bryan Deegan and Sara Corcoran
Company No.427560 VAT No. 9649832U
www.altemar.ie

Document Control Sheet			
Client	Grandspect Limited		
Project	Bat Fauna Impact Assessment for a proposed development at Mount Avenue, Dundalk, Co. Louth		
Report	Bat Fauna Impact Assessment		
Date	15 th October 2025		
Version	Author	Reviewed	Date
Final	Frank Spellman	Bryan Deegan	15 th October 2025

SUMMARY

Structure:	No existing structures are present within the site. The proposed development area consists mainly of arable crop fields, hedgerows, treelines, some riparian woodland and small patches of grassland and scrub.
Location:	Mount Avenue, Dundalk, Co. Louth.
Bat species present:	Common pipistrelle (<i>Pipistrellus pipistrellus</i>), Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) and Leisler's bat (<i>Nyctalus leisleri</i>).
Proposed work:	Residential development.
Impact on bats:	Following implementation of the proposed mitigation measures, landscape plan and lighting plan, no significant impact on bat foraging will occur. No impact on roosting bats or bat roosting potential is foreseen. The residual impact is considered to be low/insignificant in the short term and low/insignificant in the long term. A derogation license from NPWS is not required.
Survey by:	Bryan Deegan
Survey date:	21 st September 2024

Table of Contents

Competency of Assessor	1
Legislative Context	1
Project Description	2
Bat Survey.....	11
Survey Methodology	11
Survey Results.....	11
Trees/structures as potential bat roosts.	11
Emergent/detector surveys.....	11
Bat Assessment Findings	14
Review of local bat records	14
Evaluation of Results	16
Potential Impact of the development on Bats	16
Mitigation Measures	16
Predicted Residual Impact of Proposed Development on Bats	16
References	17

Competency of Assessor

These surveys and review were carried out 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).

This report has been carried out by Frank Spellman (MSc (Ind) Zoology, BSc Zoology). Frank 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

Planning permission is being sought by Grandspect Ltd. The development description is as follows:

The proposed development comprises 1,058no. dwellings (765no. houses, 150no. duplex units, and 143no. apartments) including 2no. duplexes with an option to accommodate a childcare facility at ground floor level; a local centre comprising ground floor retail units, a medical unit, and mobility hub; provision of a childcare facility; all in buildings ranging in height from 1 to 6 storeys. All associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works, including public, communal and private open space; public lighting; surface car parking spaces; bicycle parking; ESB substations; bin stores; provision of a foul sewage pumping station; laying a foul rising main along Castletown Road from the proposed new access to the development eastward to the Castletown Road and Bellewsbridge Road Junction. The proposed development will be accessed from two new combined vehicular, cyclist and pedestrian junction at Castletown and at Mount Avenue. A separate pedestrian and cyclist access is also provided at Mount Avenue. A Heritage Park, a playing pitch and a site reserved for a future educational/school facility are also being provided.

The proposed development is located at lands in the Townlands of Newtownbalregan, Castletown and Farrandreg, at Mount Avenue, Castletown, Dundalk, Co. Louth.'

The survey area and proposed site location, layout, landscape, arboricultural and lighting plans are demonstrated in figures 1-8.





Figure 2. Proposed site location.

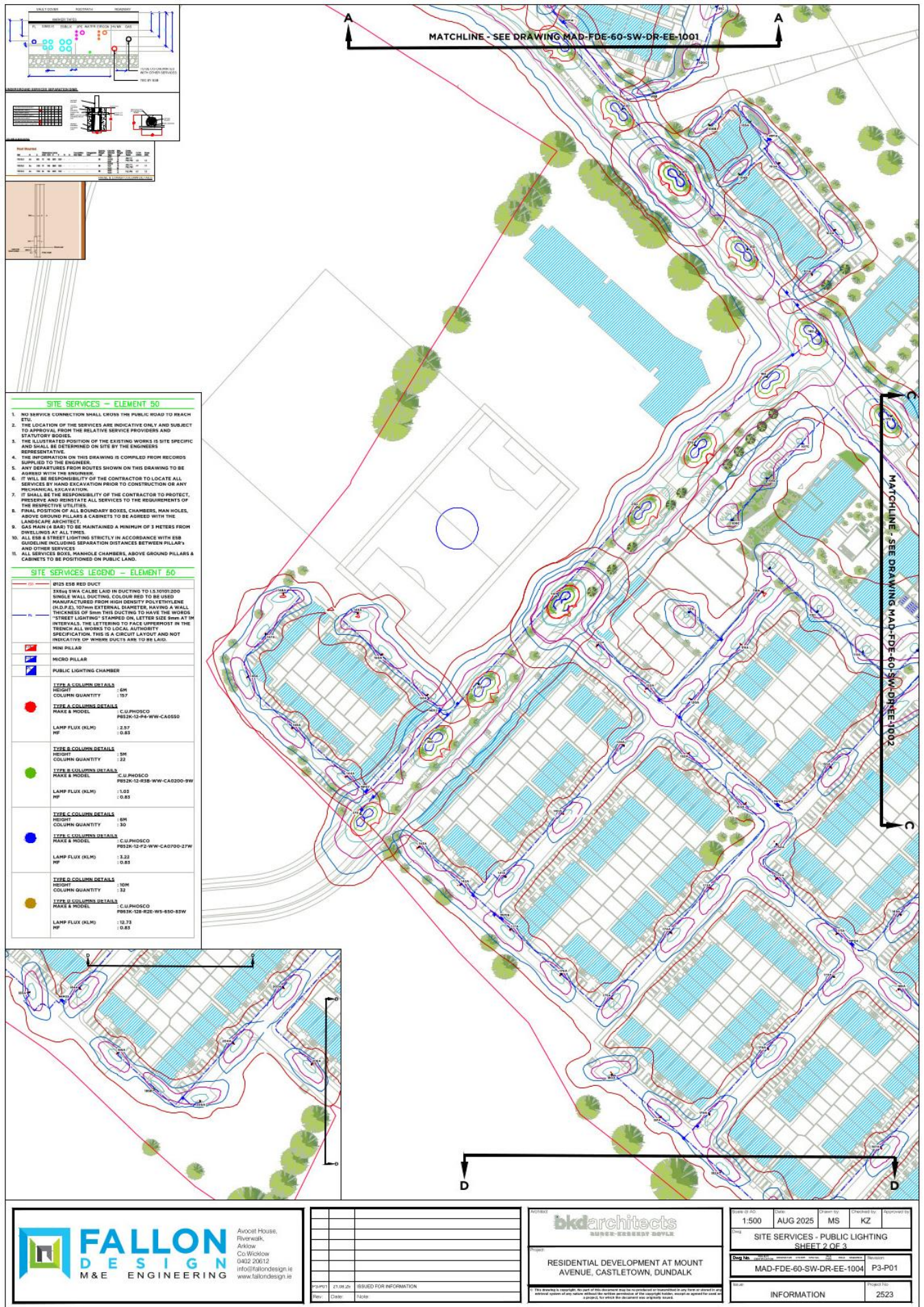


6





Figure 6. Proposed lighting strategy (1).



Bat Survey

This report presents the results of a site visit by Bryan Deegan on the 21st September 2024. A bat emergent and detector survey was carried out. Trees 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.'

A ground level roost assessment was carried upon arrival to the site and used to examine trees and structures 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, roof rafters, cracks in buildings, attic spaces, stone walls etc. No existing structures were present within the site. All trees on site were assessed for bat roosting potential, specifically for potential roosting features such as dense ivy growth, cracks, split branches, and holes/hollows. Following the emergence survey, the entire site was circumnavigated twice to assess bat foraging activity.

Survey Results

Trees/structures as potential bat roosts.

All trees except one on site were of no/negligible bat roosting potential, with little to no ivy cover and no potential roost features (cracks, holes etc.). A large mature ivy-clad ash along the south boundary of the site was considered of low roosting potential due to dense ivy cover, although no other potential roosting features such as cracks or holes were observed. The main area of roost potential was the structure of, and mature woodland surrounding, Cú Chulainn's Castle. Although not within the proposed development outline, there is potential for disturbance via lighting impacts. An emergence survey was carried in this area from the boundary of the site. No trees of medium or high bat roosting potential were noted within the survey area.

Emergent/detector surveys.

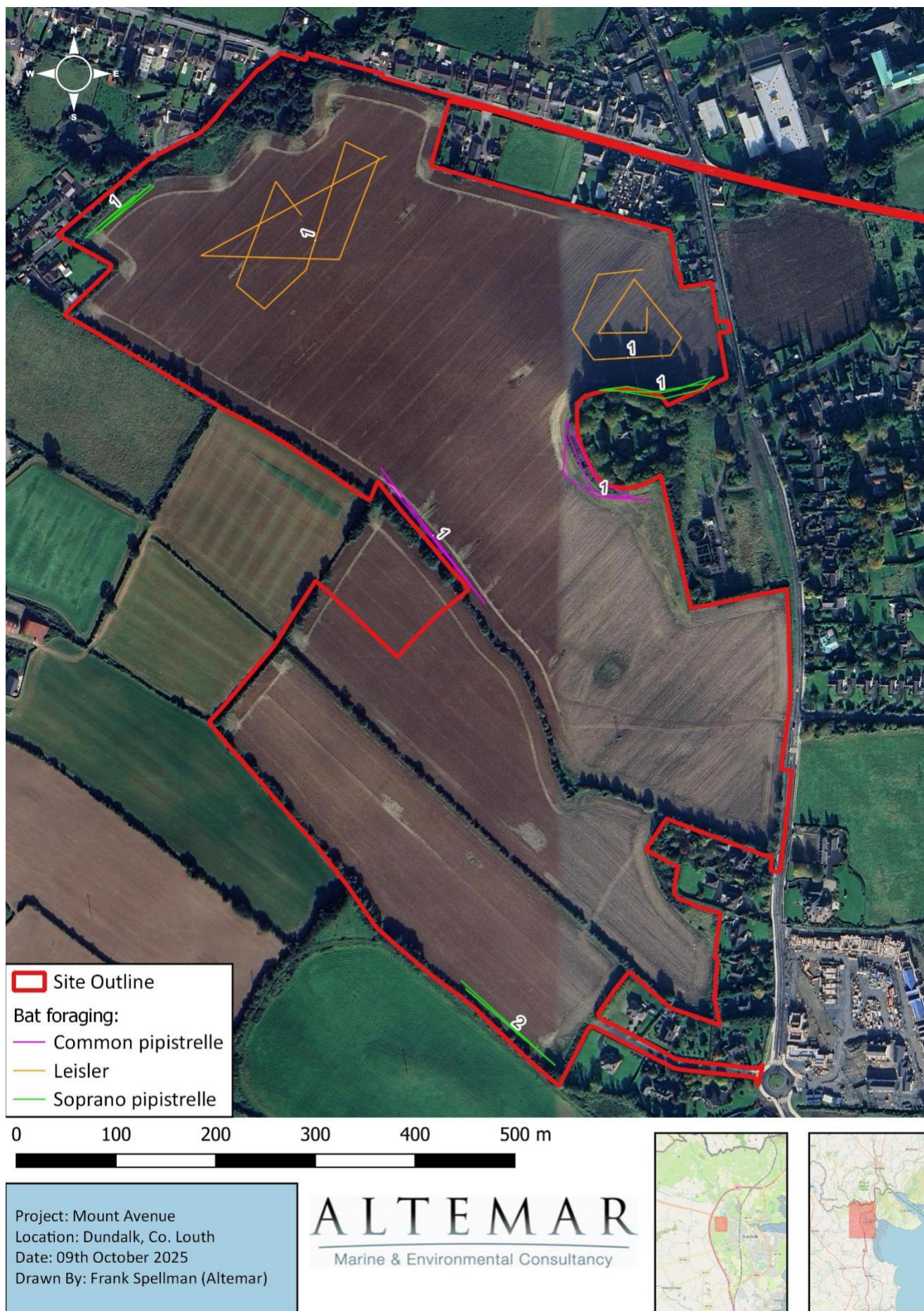
An emergent/detector survey was carried out by Bryan Deegan on the 21st September 2024.

The detector survey was undertaken within the active bat season and the transect covered the entire site after sunset. Weather conditions were good with mild temperatures greater than 10°C after sunset. Winds didn't exceed Beaufort 2. There was no precipitation during or preceding the survey. Insects were observed in flight throughout the survey area for the duration.

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 minimal constraints in relation to the survey carried out. All areas of the site were accessible, and weather conditions were optimal for bat assessments in the area surrounding the site. Winds were considered optimal for assessing foraging behaviour.

Thirty minutes prior to and 60 minutes after dusk, an emergence survey was carried out at the boundary of Cú Chulainn's Castle and woodland in the northeast of the site. Potential roosting features observed included dense ivy, cracked limbs, split trunks, and the old stone castle. Trees within this area varied from negligible-low-medium roost potential with the castle considered to be of high roosting potential. Following the emergent survey, an acoustic survey was carried out over approximately three hours throughout the survey area using an *Echo meter touch 2 Pro* detector to determine bat activity. Bats were identified by their ultrasonic calls coupled with behavioural and flight observations.

No bats were observed emerging from trees during the emergent survey period. Bat activity was relatively low on site. Soprano pipistrelle bats were recorded foraging along the south, northwest and northeast boundaries of the proposed site. Common pipistrelle was observed foraging along the west and east boundaries of the proposed site. Two Leisler's were recorded foraging over arable crop fields in the north of the site. No other bat observations were recorded. Bat observations are demonstrated in figure 9.



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 2km² grid (Reference grid J00J) encompassing the study area reveals that four known Irish species have been observed and recorded locally. The National Biodiversity Data Centre's online viewer was consulted to determine whether there have been recorded bat sightings in the wider area, of which six species were found. The location of these records are included in figures 6-8.

Table 1. Bat species recorded within a 2km² grid (Reference grid J00J) encompassing the study area

Species name	Record count	Date of last record	Title of dataset	Designation
Common Pipistrelle (<i>Pipistrellus pipistrellus sensu stricto</i>)	1	25/08/2017	National Bat Database of Ireland	
Daubenton's Bat (<i>Myotis daubentonii</i>)	43	25/08/2017	National Bat Database of Ireland	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Leisler's Bat (<i>Nyctalus leisleri</i>)	1	13/07/2008	National Bat Database of Ireland	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	2	25/08/2017	National Bat Database of Ireland	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts



Figure 10. Common pipistrelle (purple), soprano pipistrelle (yellow) and both species (orange) sightings according to the NBDC's online viewer (site location circled in yellow).



Figure 11. Leisler (purple), Daubenton's sightings (yellow) and both (orange) according to the NBDC's online



Figure 12. Brown long-eared (yellow), natterer (purple) and both species (orange) according to the NBDC's online viewer (site location circled in yellow).

Evaluation of Results

The bat surveys comply with bat survey guidance documentation including Marnell et al (2022) and Collins (2016). No bats were noted emerging from trees on site. No evidence of bat roosting within the survey area was found. No trees scheduled for removal are of bat roosting potential. Trees of low-moderate bat roosting potential in the periphery of Cú Chulainn's Castle will not be impacted by the proposed lighting or landscaping. The hedgerows, treelines and woodland boundaries along the boundary of the proposed site were identified as bat foraging corridors for common and soprano pipistrelle. Open space in the north of the site was utilised by Leisler's bat as foraging habitat. The site is likely frequented by other species including those identified in NBDC records (indicating one additional species within the surrounding areas of the site historically).

Potential Impact of the development on Bats

The proposed redevelopment has the potential to disrupt bat foraging corridors. However, due to tree protection along the main foraging corridor (vegetated site boundary), planting of native border/tree species, the lack available roosting habitat within the subject site, the retention of open spaces within the proposed design, and a lighting plan sensitive of current bat foraging corridors to be retained and adjacent features of roosting potential off site, potential impacts on bats are minimal. Following mitigation measures outlined below, it is predicted that bat foraging will persist on the site and that no significant negative impacts on bat foraging or roosting will occur as a result of the approved development.

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 specific mitigation and enhancement measure outlined below will be implemented:

- Limited use of light (< 3 lux) in open and boundary areas, with any lighting installed being directional, low/no UV components, and low temperature.
- Low, warm white colour lighting spectrum luminaires (<2700 K) will be used throughout the development, in particular areas adjacent to open and boundary areas.
- No lighting will be installed on trees, and illumination of treelines and canopies avoided.
- Ivy will be left on trees to be retained within the site.
- All lighting related to the construction phase will be turned off outside of working hours.

Predicted Residual Impact of Proposed Development on Bats

The site is not currently being used by bats for roosting due to lack of suitable habitat within the proposed site outline. The site's boundaries are currently used as a foraging corridor for two bat species. Open space within the development is used by one bat species. The proposed development is of low historic value to bat species based on historical records. Only one additional species has previously been recorded in the surrounding areas. The potential for collision risk and impact on flight paths in relation to bats is considered low due low height of the proposed new developments in relation to the surrounding landscape. Following implementation of the proposed mitigation measures and proposed landscape and lighting plans, bat foraging is predicted to persist at current levels due to retention of main foraging corridors, and incorporation of open areas, in combination with planting of linear and grouped trees in green spaces throughout the proposed development.

References

- Bat Conservation Ireland (2004)** on-going, National Bat Record Database. Virginia, Co. Cavan
- Bat Conservation Ireland (2015)** Bats and Bat Boxes, Guidance Notes for: Agri-environmental Schemes.
- The Bat Conservation Trust**, London. ISBN-13 978-1-872745-96-1
- Bat Conservation Trust (May 2022)** Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys. The Bat Conservation Trust, London.
- Boyd, I. and Stebbings, R.E. (1989)** Population changes in brown long-eared bats (*Plecotus auritus*) in Bat Boxes at Thetford Forest. *Journal of Applied Ecology* **26**: 101 - 112
- Chartered Institute of Ecology and Environmental Management (2021)** Bat Mitigation Guidelines: A guide to impact assessment, mitigation and compensation for developments affecting bats. Beta version. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018)** Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal, and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (1982)**
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) (1979)**
- Department of Housing, Planning and Local Government (December, 2018)** Urban Development and Building Heights Guidelines for Planning Authorities.
- EC Directive on The Conservation of Natural habitats and of Wild Fauna and Flora (Habitats Directive) (1992)**
- Institution of Lighting Professionals (2018)** Bats and Artificial Lighting in the UK – Bats and the Built Environment Series: Guidance Note 08/18. Institution of Lighting Professionals and the Bat Conservation Trust.
- Jefferies, D.J. (1972)** Organochlorine insecticide residues in British bats and their significance. *Journal of Zoology*, London **166**: 245 - 263
- Kelleher, C. (2004)** Thirty years, six counties, one species – an update on the lesser horseshoe bat *Rhinolophus hipposideros* (Bechstein) in Ireland – *Irish Naturalists' Journal* **27**, No. 10, 387 – 392
- Kelleher, C. (2015)** Proposed Residential Development, Church Road, Killiney, Dublin: Bat Fauna Study. Report prepared for Altamar Marine and Environmental Consultants
- Marnell, F., Kelleher, C. & Mullen, E. (2022)** Bat mitigation guidelines for Ireland V2. *Irish Wildlife Manuals*, No. 134. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland, <https://www.npws.ie/sites/default/files/publications/pdf/IWM134.pdf>
- Marnell, F., Kingston, N. and Looney, D. (2009)** Ireland Red List No. 3: Terrestrial Mammals. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin
- Racey, P.A. and Swift, S.M. (1986)** The residual effects of remedial timber treatments on bats. *Biological Conservation* **35**: 205 – 214
- Wildlife Act 1976 and Wildlife [Amendment] Act 2000.** Government of Ireland.