

## Bat Fauna Impact Assessment for a Proposed Residential Development at Leopardstown Road, Dublin 18.



**12<sup>th</sup> February 2025**

**Prepared by:** Bryan Deegan (MCIEEM) of Altemar Ltd.  
**On behalf of:** Dun Laoghaire Rathdown County Council

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<b>Document Control Sheet</b>			
Client	Dun Laoghaire Rathdown County Council		
Project	Bat Fauna Impact Assessment for a proposed Residential Development at Leopardstown Road, Dublin 18.		
Report	Bat Fauna Impact Assessment		
Date	12 <sup>th</sup> February 2025		
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Draft 01	Bryan Deegan	Gayle O'Farrell	24 <sup>th</sup> October 2024
Final	Bryan Deegan	Gayle O'Farrell	12 <sup>th</sup> February 2025

# Summary

<b>Structure/features:</b>	A currently occupied dwelling and detached garage are present on site. The survey area consists primarily of grassland, woodland, scrub, treelines and hedges.
<b>Location:</b>	Leopardstown Road, Dublin 18.
<b>Bat species in the site outline:</b>	None Roosting. Leisler's Bat ( <i>Nyctalus leisleri</i> ) and Soprano Pipistrelle ( <i>Pipistrellus Pygmaeus</i> ) foraging noted onsite.
<b>Proposed work:</b>	Residential Development.
<b>Impact on bats:</b>	<p>As there are no confirmed bat roosts onsite bat roost on site, a derogation licence is also not required for the proposed felling of trees or demolition of onsite structures. However, patches of ivy growing on trees to be felled as part of the proposed development (northwest of site) are of low-moderate bat roosting potential. A pre-construction inspection of these trees must be carried out by a suitably qualified ecologist to ensure that there are no bat roosts present prior to the commencement of works. Further, a pre-construction assessment of all structures to be demolished must 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, the species seen to occur onsite and in the surrounding area should persist. The impact of the proposed development on bats will be Low Adverse/Site/Negative/Not Significant/long term.</p>
<b>Surveys by:</b>	Jeff Boyle, Jack Doyle and Gayle O'Farrell
<b>Survey dates:</b>	17 <sup>th</sup> September 2024, 27 <sup>th</sup> September 2024, and 16 <sup>th</sup> October 2024

## Description of the Proposed Project

Planning permission is being sought by Dun Laoghaire Rathdown County Council, for a Residential Development, on a site located at Leopardstown Road, Dublin 18.

The development will consist of 80 no. residential units together with associated infrastructure including open space and car/cycle parking and is a mixture of duplexes and apartments in 2 no. blocks ranging in height from three to six stories.

The proposed site outline and site plans are seen in Figures 1 & 2.

## Landscape

The landscape strategy for the proposed development has been prepared by RMDA to accompany this planning application. The proposed landscape plan is demonstrated in Figure 3.

## Arborist

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

*'The proposed development will require the removal of 9 trees, 3 hedges, and half the wild/scrub vegetation to the north-west of the site. The trees being removed are of moderate quality (category B trees) and are mostly early mature.*

*The hedges being removed are in various conditions, however all of those being removed were assessed as having low Arboricultural value. The majority of the hedges being removed contain non-native species such as Griselinia (*Griselinia littoralis*) and California pivet (*Ligustrum ovalifolium*). A section of the scrub vegetation to the north-west of the site will be impacted to facilitate the development. Approximately 580m<sup>2</sup> will be removed to facilitate the proposed building. Approximately 800m<sup>2</sup> of the scrub vegetation will remain. The area which is to be removed is of the lowest Arboricultural value as the young scrub trees such as sycamore and willow are largely situated to the north-most section of the site. Briars, bindweed, garden escapes, and young saplings are the majority of what is contained in this area which will be removed.'*

The arborist constraints and impact plans are demonstrated in figures 4 & 5.



0 50 100 150 200 m

Project: Residential Development  
 Location: Leopardstown Rd, Dublin 18  
 Date: 11<sup>th</sup> February 2025  
 Drawn By: Gayle O'Farrell (Altamar)

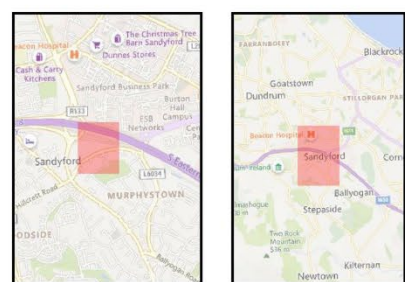


Figure 1. Proposed site outline and survey area.



**Notes:**  
 Do not scale from this drawing. Use figured dimensions in all cases.  
 Verify dimensions on site and report any discrepancies to the Architect immediately.  
 This drawing is to be read in conjunction with the Architect's Specification.  
 If this drawing is copyright and may only be reproduced with the Architect's permission.

**Drawing Notes:**  
 OBI Licence No. CYAL50273835  
 Map Sheets Ref. 3465-04, 3465-05  
 Centre Coordinates: 718924, 725855

— Site Ownership Line  
 — Site Boundary Line

N

Rev	Date	By	Description
1			Issue for Information
2			Issue for Approval
3			Issue for Construction

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Client Details:  
 Dun Laoghaire-Rathdown County Council

Project Details:  
 Proposed Residential Development,  
 Leopardstown Road

Drawing Title:  
 Site Layout Plan, Proposed

Job No:	P24-0200	Sheet Size:	A1	Scale:	As Indicated
Issue Date:	Feb 2025	Drawn By:	D. Reilly	Reviewed By:	R. Ourn

Stage: P3 Planning Application

Project / System / Detail / Date / Issue / Type / Originator / Revision Number / Revision	WRO-02-SW-ZZZ-DR-RAU-AR-1002	P3 S-3
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Figure 2. Proposed Site Layout Plan



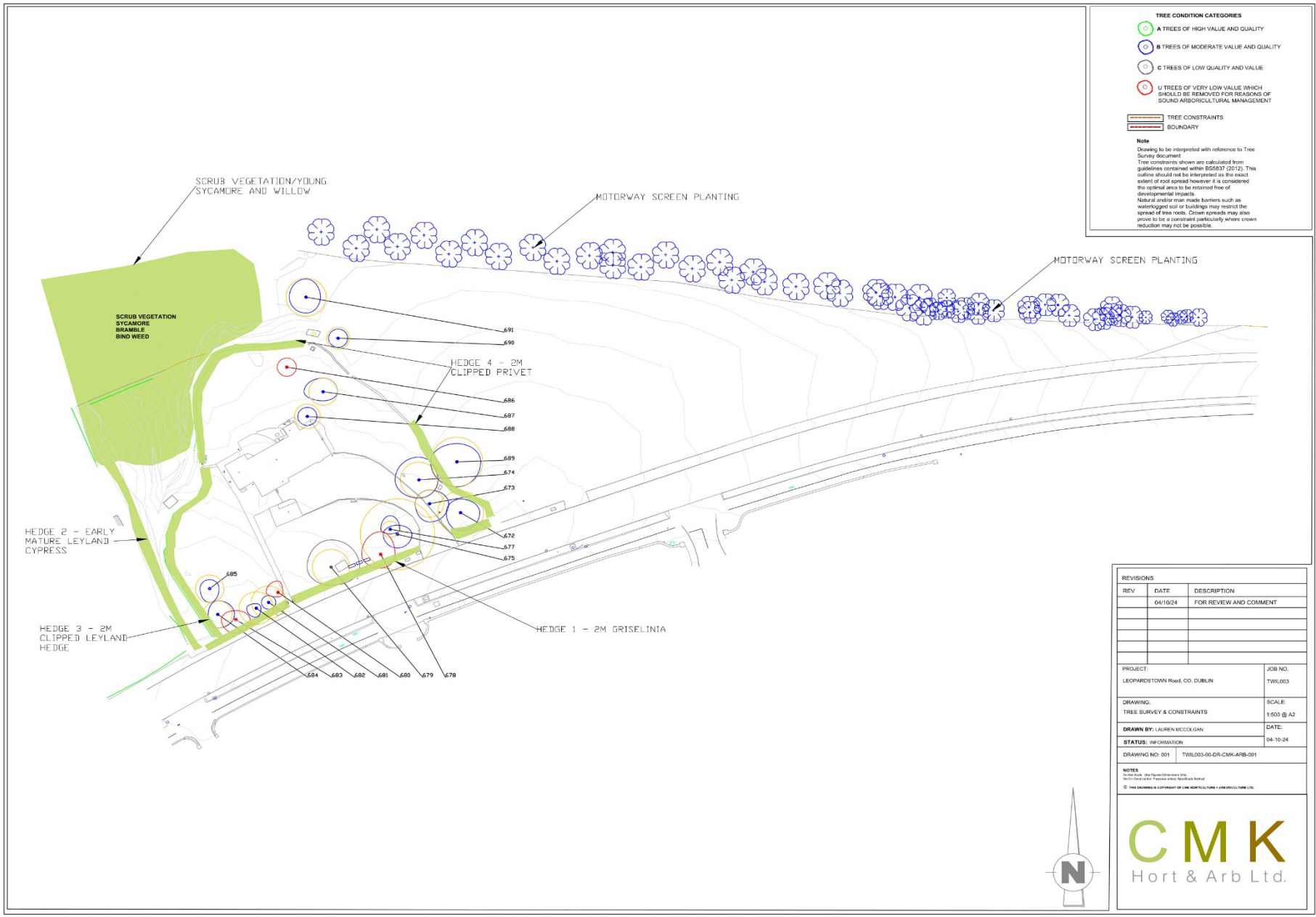


Figure 4. Proposed Tree Survey & Constraints Pan







Figure 6. Proposed Tree Protection Plan

## Lighting

A Public Lighting Report has been prepared by Fallon Design Ltd. to accompany this planning application. Consultation took place between the Fallon Design and Altemar to provide bat foraging areas with reduced light spill and low-level light fittings. The result of this consultation is reflected in the Public Lighting Report:

### ***'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 lighting strategy for the proposed development complies with bat lighting guidelines and is set to 2700K. The public lighting layout is demonstrated in figure 7.

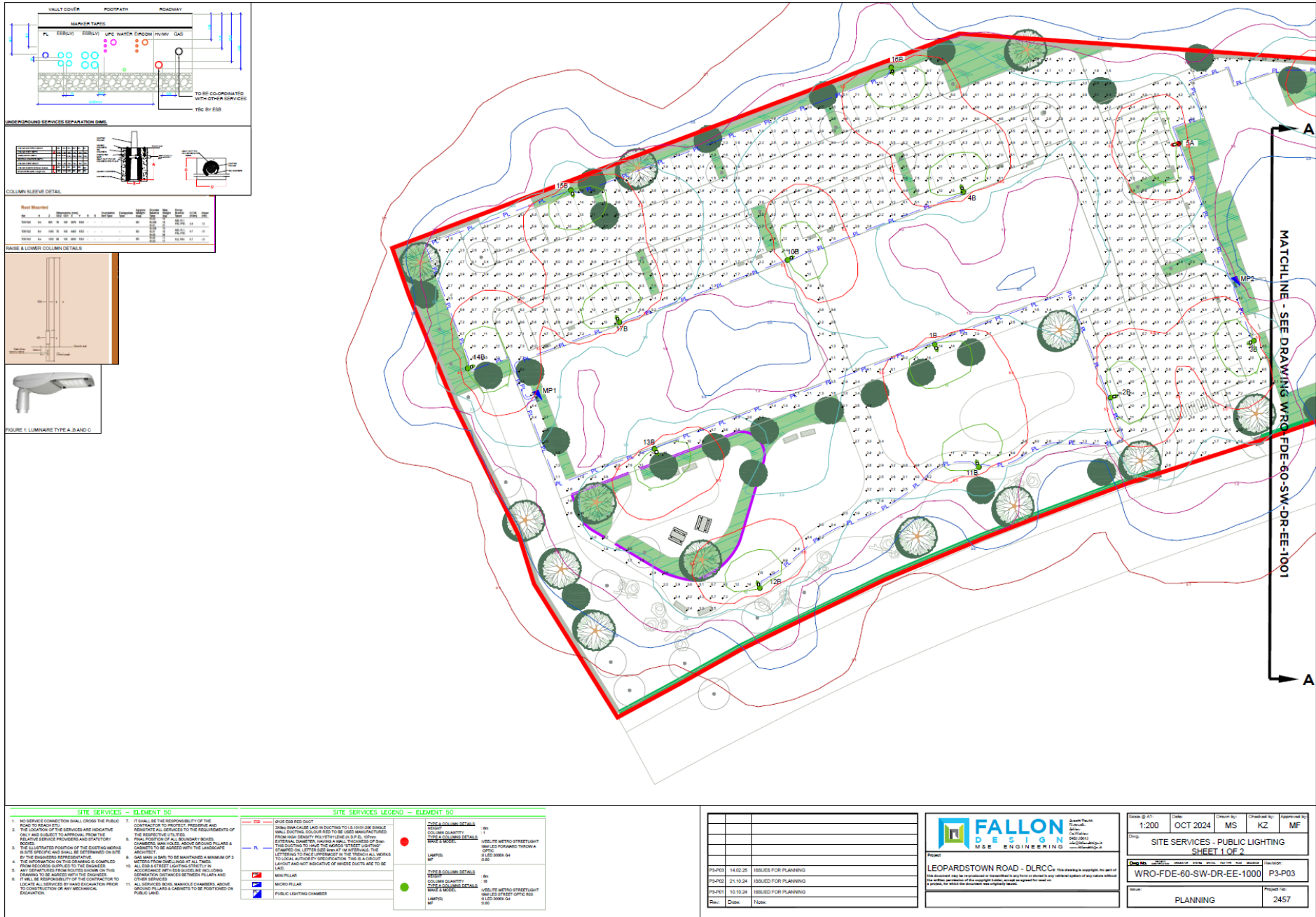


Figure 7. Site services – public lighting layout (Sheet 1 of 2)



## Competency of Assessors

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, Jeff Boyle and Jack Doyle of Altemar.

Gayle O’Farrell (BSc (Hons.) Agri-Environmental Sciences) has experience carrying out a range of breeding/wintering bird assessments, bat detection through static detector surveys, dusk emergence, and dawn re-entry surveys, terrestrial non-avian mammal surveys, flora and habitat mapping.

Jeff Boyle (BSc Environmental Management) is skilled in bat detection through static detector surveys, dusk emergence, and dawn re-entry surveys. He 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.

Jack Doyle (MSc Sustainable Environments) has carried out a wide range of flora and fauna surveys and produced ecological assessments on numerous residential, commercial, and infrastructure projects across Ireland. These include breeding ornithological surveys, roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, and habitat identification.

## 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.

## Bat Survey

This report presents the results of two handheld emergent and detector surveys (17<sup>th</sup> & 27<sup>th</sup> September 2024) undertaken by Jeff Boyle and Gayle O'Farrell, and a building inspection survey (16<sup>th</sup> October 2024) undertaken by Jack Doyle. Both of the buildings that are proposed for demolition on site were examined for signs of bat roosting and foraging. Bat detector and emergent detector survey used an Echo Meter Touch 2 Pro in addition to a *Batbox Duet* heterodyne/frequency division detector to determine bat activity.

## 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

The emergent / detector surveys on the 17<sup>th</sup> & 27<sup>th</sup> September 2024 were within the active bat season and the transects covered the entire site multiple times during the night. Weather conditions were good with mild temperatures of 10°C after sunset. Winds were light and there was no rainfall. 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.

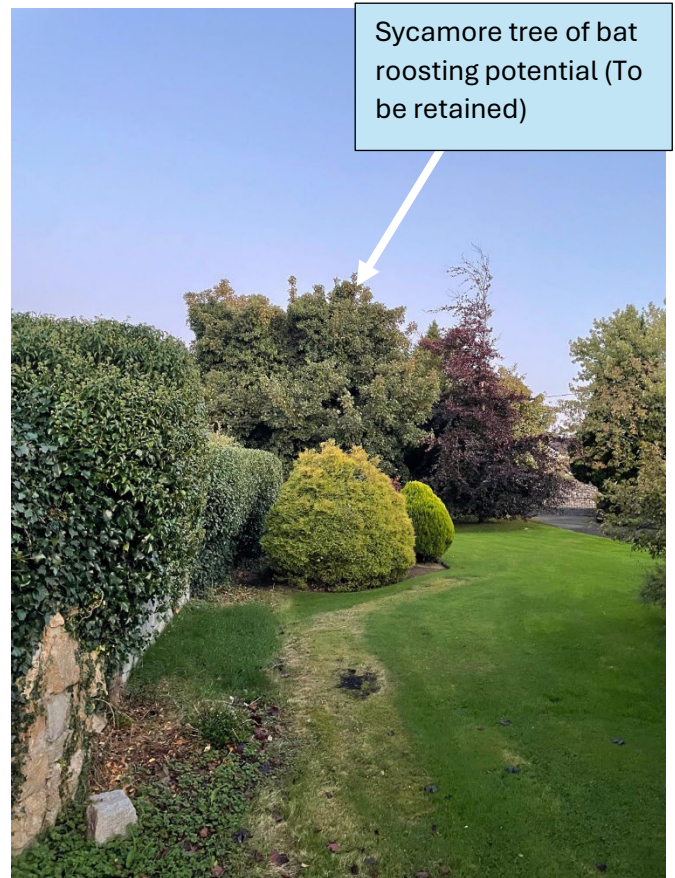
# Survey results

## Trees as Potential Bat Roosts.

A ground level roost assessment was carried 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 features located within the site that are of low-moderate roosting potential, including patches of ivy growing on juvenile trees in the north-western portion of the site (Plate 1) and the large Sycamore tree adjacent to the current driveway entrance (Plate 2). However, no confirmed bat roosts were noted in these identified features during the ground level roost assessment. It should be noted that the identification of features of bat roosting potential onsite informed the emergent / detector surveys.



**Plate 1.** Ivy-clad trees in northwestern portion of the site



**Plate 2.** Pocket of trees at driveway entrance

## Buildings as Potential Bat Roosts.

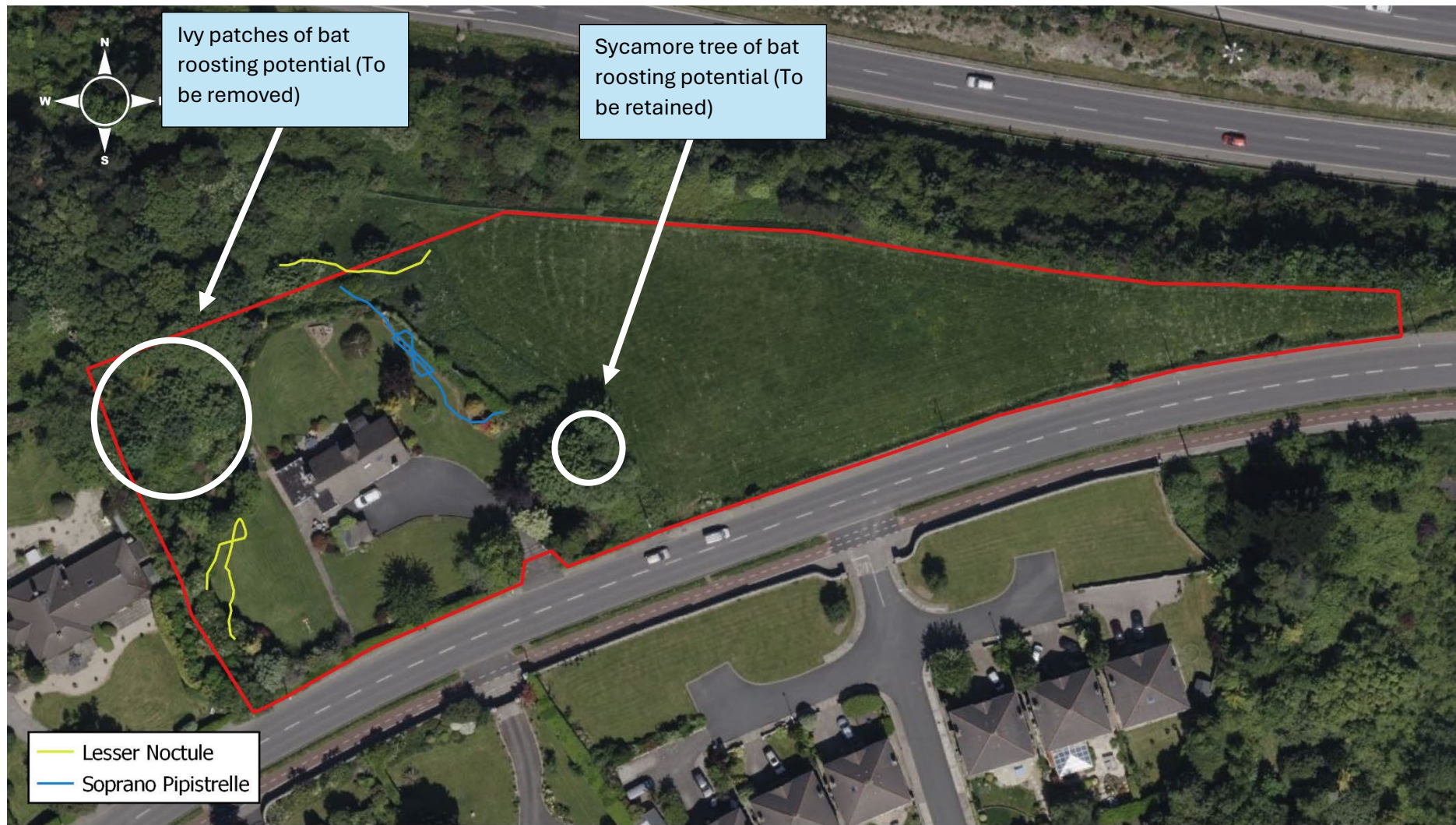
The interior of the buildings to be demolished was inspected for evidence of bat activity. No evidence of bat activity was noted within the buildings on site. The exterior of the onsite buildings was also inspected for bats. Buildings affected by the proposed development (house and detached garage), were of low bat roosting potential. It should be noted that the attic space is converted and is currently inhabited by the homeowners.



## Emergent / Detector Surveys.

At dusk, bat emergent and detector surveys were carried out onsite using an *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.

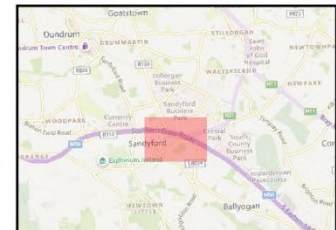
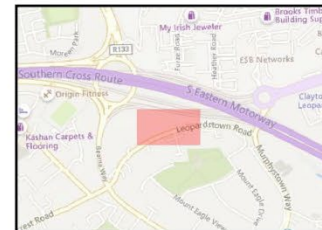
No bats were recorded emerging from any trees or structures on site. Soprano pipistrelle (*Pipistrellus pygmaeus*) and Lesser Noctule (*Nyctalus leisleri*) foraging activity was observed along the eastern wall boundary and along the southwestern site boundary. Leisler Bat (*Nyctalus leisleri*) were also noted foraging along the woodland to the north of the site (see Figure 7). Mild light pollution was noted onsite from the adjacent M50 motorway (north) and Leopardstown Road (south).



— Lesser Noctule  
— Soprano Pipistrelle

0      30      60      90      120 m

Project: Residential Development  
 Location: Leopardstown Road, Dublin 18  
 Date: 11<sup>th</sup> February 2025  
 Drawn By: Gayle O'Farrell (Altemar)



**Figure 9.** Bat Foraging/Flight Paths and areas of roosting potential

## 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<sup>2</sup> grid (Reference grid O12X) encompassing the study area reveals that four of the nine known Irish species have been observed locally (Table 1). The National Biodiversity Data Centre’s online viewer was consulted to determine whether there have been recorded bat sightings in the wider area. This is visually represented in Figures 10-12. The following species were noted in the wider area: Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Brown Long-eared Bat (*Plecotus auritus*), Daubenton’s Bat (*Myotis daubentonii*), Nathusius’s Pipistrelle (*Pipistrellus nathusii*), and Lesser Noctule (*Nyctalus leisleri*).

Table 1. Status of bat species within a 2km<sup>2</sup> grid encompassing the subject site (Reference No. O12X)

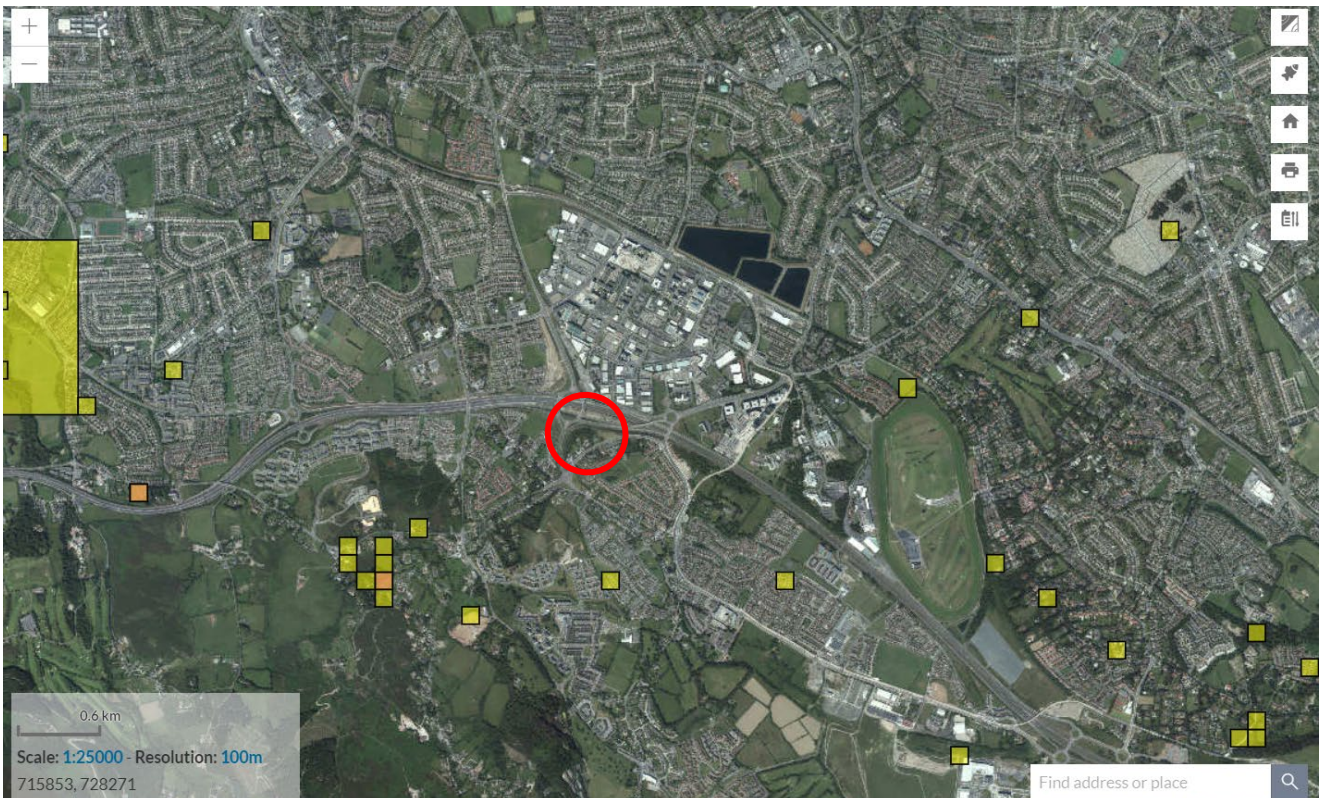
Species name	Record count	Date of last record	Note
Brown Long-eared Bat ( <i>Plecotus auritus</i> )	2	08/06/2010	National Bat Database of Ireland
Common Pipistrelle ( <i>Pipistrellus pipistrellus sensu stricto</i> )	5	11/08/2021	National Bat Database of Ireland
Lesser Noctule ( <i>Nyctalus leisleri</i> )	3	08/06/2010	National Bat Database of Ireland
Soprano Pipistrelle ( <i>Pipistrellus pygmaeus</i> )	3	11/08/2021	National Bat Database of Ireland



Figure 10. Brown Long-eared Bat (*Plecotus auritus*) (purple), Daubenton’s Bat (*Myotis daubentonii*) (yellow) and both Brown Long-eared Bat and Daubenton’s Bat (orange) (Source NBDC) (Approximate proposed site location – red circle).



**Figure 11.** Common pipistrelle (*Pipistrellus pipistrellus*) (purple), Soprano pipistrelle (*Pipistrellus pygmaeus*) (yellow) and both Common and Soprano Pipistrelle (orange) (Source NBDC) (Approximate proposed site location – red circle).



**Figure 12.** Nathusius's Pipistrelle (purple) and Lesser Noctule (*Nyctalus leisleri*) (yellow) (Source NBDC) (Approximate proposed site location – 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 low-moderate bat roosting potential located to the northwest of the site. No confirmed bat roosts were recorded in any onsite tree, structure, or vegetation. No bats were observed emerging from any of the onsite structures, trees, or vegetation. As a result, no confirmed bat roosts will be impacted by the proposed development. Therefore, a NPWS derogation licence is not required. Foraging activity of two relatively common bat species (Lesser Noctule & Soprano Pipistrelle) were noted on site. Foraging activity was concentrated to treelines and hedges throughout the proposed site outline 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, notably to the northwest of the site. However, it should be noted that minimal bat activity was recorded in this area during the emergent / detector surveys. Lighting during construction and operation could potentially lead to impacts on foraging, however the lighting has been designed to minimise light spill onto woodland. It should be noted that there is existing public lighting and spill from the M50 north of the site. It would be expected that bats would continue to forage on site.

## 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.’*

As no confirmed bat roosts were recorded onsite, there is no requirement for a *National Parks and Wildlife Service* derogation licence application to allow the planned works. However, onsite structures will be demolished and trees/vegetation of low-moderate bat roosting potential will be removed to facilitate the proposed development. Further, increased lighting onsite during construction and operation has the potential to impact on bat foraging activity. The following mitigation will be carried out:

- A pre-construction assessment of buildings on site will be carried out. If bats are found a Derogation Licence will be sought and conditions applied.
- A Pre-Construction inspection for bat roosts will be carried out by a suitably qualified ecologist in trees of bat roosting potential prior to site clearance works. If bats are found a Derogation Licence will be sought and conditions applied.
- Lighting at all stages will be done sensitively on site with no direct lighting of treelines and hedges.
- Lighting will comply with bat lighting guidelines
- A post construction lighting assessment will be carried out by the project ecologist.
- 3 Bat boxes will be placed on site in consultation with the project ecologist.

## Predicted Residual Impact of Planned Development on Bats

As there are no confirmed bat roosts onsite bat roost on site, a derogation licence is also not required for the proposed felling of trees or demolition of onsite structures. However, patches of ivy growing on trees to be felled as part of the proposed development (northwest of site) are of low-moderate bat roosting potential. A pre-construction inspection of these trees must be carried out by a suitably qualified ecologist to ensure that there are no bat roosts present prior to the commencement of works. Further, a pre-construction assessment of all structures to be demolished must 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, the species seen to occur onsite and in the surrounding area should persist. The impact of the proposed development on bats will be Low Adverse/Site/Negative/Not Significant/long term.

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