

ALTEMAR

Marine & Environmental Consultancy

Bat Fauna Impact Assessment for a development at Scholarstown House,
Scholarstown Road, Dublin 16, D16 E2H9.



19th October 2022

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

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Document Control Sheet

Client	Emmaville Limited		
Project	Bat Fauna Impact Assessment for a development at Scholarstown House, Scholarstown Road, Dublin 16, D16 E2H9.		
Report	Bat Fauna Impact Assessment		
Date	19 th October 2022		
Version	Author	Reviewed	Date
Draft 01	Bryan Deegan	Jack Doyle	11 th October 2022
Planning	Bryan Deegan		19 th October 2022

SUMMARY

- Structure:** The site consists of the existing Scholarstown House dwelling, disused metal barns and associated outbuildings.
- Location:** Scholarstown House, Scholarstown Road, Dublin 16, D16 E2H9
- Bat species present:** Foraging activity was relatively low. Lesser Noctule (*Nyctalus leisleri*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) bats noted foraging within the subject site. No roosts were present on site.
- Proposed work:** Proposed development of apartments.
- Impact on bats:** No confirmed bat roosts will be lost. The proposed development will change the local environment as outbuildings and barns are to be demolished, trees are to be felled and new structures are to be erected. The development is likely to displace bats from foraging at the site during construction and operation. Based on the small number of common species found using the site, the displacement from this site will not have any significant effect on local bat populations. It should be noted that the St. Colmcille's Community School is located to the south of the site and has significant floodlighting. It is also currently undergoing development just outside the site boundary. The proposed development is not in proximity to sensitive bat areas. The potential for collision risk and impact on flight paths in relation to bats is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats.
- Survey by:** Bryan Deegan (MCIEEM)
- Survey dates:** 8th and 21st September 2022. Internal inspections of the barns and outbuildings were carried out on the 8th September while internal inspections of the house were carried out on the 21st September 2022.

Receiving Environment

Background

Emmaville Limited intend to apply for: Permission for development at this site: Scholarstown House, Scholarstown Road, Dublin 16, D16 E2H9.

The development will consist of:

- a) The demolition of the 4 no. existing shed structures on site within the curtilage of the protected structure;
- b) The retention and conversion of Scholarstown House (Protected Structure) into two no. units comprised of 1 no. 2-bed and 1 no. 3-bed units served by private open space in the form of ground floor terraces. The proposed works to Scholarstown House include but are not limited to internal re-configuration; the re-location of the staircase to its original location within the house; the removal of non-original features including the closing up of non-original openings; and the creation of a new door opening within the existing alcove, and the blocking up of a window opening both located on the northern elevation.
- c) The construction of a 5-storey apartment block containing 74 no. apartment units comprised of 32 no. 1-bed apartments, 33 no. 2-bed apartments, and 9 no. 3-bed apartments all served by private open space in the form of balconies and/or ground floor terraces.
- d) The proposed development also includes 100 sq.m of residential amenities and facilities consisting of but not limited to a reception, communal amenity room and parcel room.
- e) The development will be served by a total of 40 no. car parking spaces including 8 no. EV parking spaces and 183 no. cycle parking spaces accessed via a new pedestrian and vehicular access off Orlagh Grove with the existing entrances on Scholarstown Road and Orlagh Grove being re-configured to provide for pedestrian and cycle access.
- f) The development will also consist of all ancillary development works required to facilitate the development including but not limited to, plant rooms, a substation, bin stores, landscaping, boundary treatments and lighting.

The development to be applied for includes a building on the South Dublin County Council Record of Protected Structures: Scholarstown House (RPS Ref: 322).

The proposed site outline, location, and layout plan are demonstrated in Figures 1 & 2.

Landscape

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



0 25 50 75 100 m

Project: Scholarstown House
Location: Scholarstown Road, D16
Date: 12th October 2022
Drawn By: Bryan Deegan (Altemar)

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Marine & Environmental Consultancy

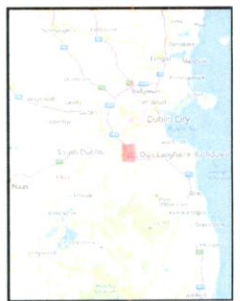
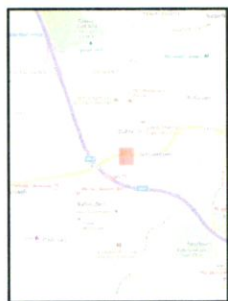


Figure 1. Outline of proposed site.

The drawings of this drawing have been prepared by C+WOBRIEN ARCHITECTS in accordance with the provisions of the Planning and Building Acts 2000-2022 and the Planning and Building Regulations 2002-2022. The drawings are the property of C+WOBRIEN ARCHITECTS and shall remain the property of C+WOBRIEN ARCHITECTS. No part of these drawings shall be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of C+WOBRIEN ARCHITECTS.



LEGEND

[Red line]	SITE BOUNDARY OUTLINED IN RED
[Red 'X']	LOCATION OF SITE BOUNDARIES
[Blue dashed line]	OWNERSHIP AREA (EOP, ECF, EAF, EBF)
[Blue solid line]	EXISTING BOUNDARY WALLS
[Blue dashed line]	BOUNDARY TO BE MATCHED
[Blue solid line]	EXISTING BOUNDARY WALL
[Red arrow]	ENTRANCE
[Green arrow]	ACCESSIBLE CAR PARKING SPACES
[Green box]	CAR PARKING SPACES
[Green box]	PROPOSED MEDIAN GREEN ROOF
[Green box]	LEVELS
[Green box]	GROUND FLOOR LEVELS
[Green box]	PROPOSED GROUND LEVELS
[Green box]	EXISTING GROUND LEVELS
[Green box]	PROPOSED PHE POINT

NOTES

- Read in conjunction with Land Available.
- Car Park, Access & Elevation.
- Refer to the relevant Planning and Building Acts and Regulations.
- Refer to the relevant Planning and Building Acts and Regulations.
- Refer to the relevant Planning and Building Acts and Regulations.
- Refer to the relevant Planning and Building Acts and Regulations.

PT1 17/10/2022 ISSUED FOR PLANNING AM
 No. 204 1044 1044
PLANNING
 EMMAVILLE LTD
 SCHOLARSTOWN HOUSE D16

PROPOSED SITE LAYOUT PLAN

CS	AM	A1	1-500	03/05/2022
PE2/025				
PE2/025-CWO-ZZ-DR-A-003D				

C+WOBRIEN ARCHITECTS
 No. 1, Shelburne Quay, Dublin 7, D07 T8RH
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 Dublin 1, London 1, Warsaw 1, Manchester 1, Amsterdam 1, Brussels 1



1. PROPOSED SITE LAYOUT PLAN
 1:500

Figure 2. Site layout plan

LEGEND

SOFTLANDSCAPE

Existing Trees to be retained

Existing Trees to be removed

Proposed Standard Street Tree: RB, 18-20m high, 4.25-6 m dia
 The "Acer Campylophyllum"
 T1 - Quercus robur
 T2 - Quercus petraea
 T3 - Quercus agrifolia

Proposed Open Space Tree: OF, 14-16m high, 4.25-6 m dia
 S1 - Acer platanoides
 S2 - Acer negundo
 S3 - Acer saccharinum
 S4 - Acer glabrum
 S5 - Acer spicatum
 S6 - Acer rubrum
 S7 - Acer pennsylvanicum
 S8 - Acer dasycarpum
 S9 - Sorbus domestica
 S10 - Sorbus aucuparia

Proposed Formal Hedging
 H1 - Hedgerow, 1.5m high, 100m long
 H2 - Hedgerow, 1.5m high, 100m long
 H3 - Hedgerow, 1.5m high, 100m long

Boundary Screen
 BS1 - Hedgerow, 1.5m high, 100m long
 BS2 - Hedgerow, 1.5m high, 100m long
 BS3 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST1 - Hedgerow, 1.5m high, 100m long
 ST2 - Hedgerow, 1.5m high, 100m long
 ST3 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST4 - Hedgerow, 1.5m high, 100m long
 ST5 - Hedgerow, 1.5m high, 100m long
 ST6 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST7 - Hedgerow, 1.5m high, 100m long
 ST8 - Hedgerow, 1.5m high, 100m long
 ST9 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST10 - Hedgerow, 1.5m high, 100m long
 ST11 - Hedgerow, 1.5m high, 100m long
 ST12 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST13 - Hedgerow, 1.5m high, 100m long
 ST14 - Hedgerow, 1.5m high, 100m long
 ST15 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST16 - Hedgerow, 1.5m high, 100m long
 ST17 - Hedgerow, 1.5m high, 100m long
 ST18 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST19 - Hedgerow, 1.5m high, 100m long
 ST20 - Hedgerow, 1.5m high, 100m long
 ST21 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST22 - Hedgerow, 1.5m high, 100m long
 ST23 - Hedgerow, 1.5m high, 100m long
 ST24 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST25 - Hedgerow, 1.5m high, 100m long
 ST26 - Hedgerow, 1.5m high, 100m long
 ST27 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST28 - Hedgerow, 1.5m high, 100m long
 ST29 - Hedgerow, 1.5m high, 100m long
 ST30 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST31 - Hedgerow, 1.5m high, 100m long
 ST32 - Hedgerow, 1.5m high, 100m long
 ST33 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST34 - Hedgerow, 1.5m high, 100m long
 ST35 - Hedgerow, 1.5m high, 100m long
 ST36 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST37 - Hedgerow, 1.5m high, 100m long
 ST38 - Hedgerow, 1.5m high, 100m long
 ST39 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST40 - Hedgerow, 1.5m high, 100m long
 ST41 - Hedgerow, 1.5m high, 100m long
 ST42 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST43 - Hedgerow, 1.5m high, 100m long
 ST44 - Hedgerow, 1.5m high, 100m long
 ST45 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST46 - Hedgerow, 1.5m high, 100m long
 ST47 - Hedgerow, 1.5m high, 100m long
 ST48 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST49 - Hedgerow, 1.5m high, 100m long
 ST50 - Hedgerow, 1.5m high, 100m long
 ST51 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST52 - Hedgerow, 1.5m high, 100m long
 ST53 - Hedgerow, 1.5m high, 100m long
 ST54 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST55 - Hedgerow, 1.5m high, 100m long
 ST56 - Hedgerow, 1.5m high, 100m long
 ST57 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST58 - Hedgerow, 1.5m high, 100m long
 ST59 - Hedgerow, 1.5m high, 100m long
 ST60 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST61 - Hedgerow, 1.5m high, 100m long
 ST62 - Hedgerow, 1.5m high, 100m long
 ST63 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST64 - Hedgerow, 1.5m high, 100m long
 ST65 - Hedgerow, 1.5m high, 100m long
 ST66 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST67 - Hedgerow, 1.5m high, 100m long
 ST68 - Hedgerow, 1.5m high, 100m long
 ST69 - Hedgerow, 1.5m high, 100m long

Boundary Screen and Specimen Trees
 ST70 - Hedgerow, 1.5m high, 100m long
 ST71 - Hedgerow, 1.5m high, 100m long
 ST72 - Hedgerow, 1.5m high, 100m long

C 11/10/22
 B 10/10/22
 A 09/10/22

AMENDMENT

DATE

SCALE

DRAWN

CHECKED

DATE

SCALE

DRAWN

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CUNNAME STRATTON REYNOLDS

LAND PLANNING & DESIGN

100 BURNING TREE
 3 MILL BURNING TREE PLACE DUBLIN 2
 TEL: 01 967 04 15 FAX: 01 661 0431
 EMAIL: info@burningtrees.ie

PROJECT:	SCHOLARS TOWN HOUSE, D19	DATE:	SEP 2022
DRAWN:	LANDSCAPE MASTERPLAN	SCALE:	1:250(A3) / 1:500(B3)
CHECKED:		DRAWN:	FDL
		CHECKED:	LC
		DRAWING NO.:	22159-2-100

Figure 3. Proposed overall landscape plan.



This drawing is to be read in conjunction with the attached schedule of work and reports made to this project.
It is the responsibility of the client to ensure that the information contained herein is accurate and that any changes to the information contained herein are made in accordance with the relevant legislation and standards.
The information contained herein is for the use of the client only and is not to be used for any other purpose without the written consent of the author.

BSES37: 2012 Tree Categorisation:

	Category 1 (Green) Trees with a canopy spread of less than 10m and a height of less than 10m.
	Category 2 (Blue) Trees with a canopy spread of less than 10m and a height of 10m to 15m.
	Category 3 (Orange) Trees with a canopy spread of 10m to 15m and a height of 10m to 15m.
	Category 4 (Red) Trees with a canopy spread of 15m or more and a height of 15m or more.

MEK

	Red Delineation The proposed work area as defined in the schedule of work.
	Blue Delineation The proposed work area as defined in the schedule of work.
	Orange Delineation The proposed work area as defined in the schedule of work.
	Grey Delineation The proposed work area as defined in the schedule of work.

T2

	Tree 1 Tree to be removed in preparation for development.
	Tree 2 Tree to be removed in preparation for development.
	Tree 3 Tree to be removed in preparation for development.
	Tree 4 Tree to be removed in preparation for development.

Site boundary

	Site boundary
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Tree Removals Plan

Client:	Scholiarstown House
Contract No.:	EMMAVILLE/17/001
Contract Date:	21/05/2017
Contract Value:	€11,000.00
Contract Status:	Completed
Contract Reference:	EMMAVILLE/17/001

Emmaville Ltd

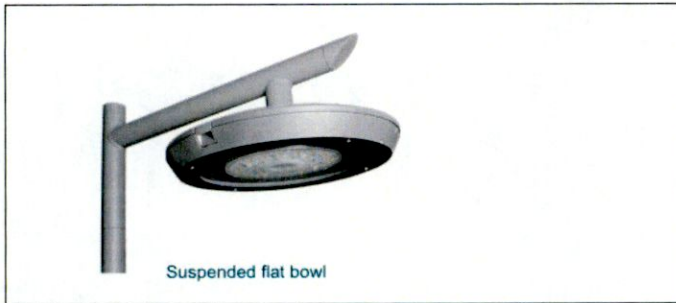
Company No.:	12345678
Company Name:	EMMAVILLE LTD
Company Address:	123 Main Street, Dublin, Ireland
Company Website:	www.emmaville.com

CHARLES MCCORKELL
ARBORICULTURAL CONSULTANCY

Figure 4. Tree removals plan (Grey, orange and blue- to be removed)

Lighting

An External Lighting Study has been prepared by Marson Consulting Engineers to accompany this planning application. This report details the following lighting strategy for the subject site:



Suspended flat bowl

DESCRIPTION

Product name	ITEM 500
Housing	Die cast aluminium
Plates	SMOOTH, HONEYCOMB or TRAJD plate
Bowl	Thermally tempered and screen printed flat glass (VPC) Deep clear polycarbonate bowl (PHC), optional internal diffuser
Finish	Polyester powder coating, any colour available
Mechanical impact protection code	IK 10
Ingress Protection	IP66 Extruded silicone gasket Cable gland with anchoring device Breathing system with activated carbon filter
Mounting	LTO 60: Directional covering lateral top for Ø 60 mm, SM: Suspended with a threaded Nipple Ø 27 pdg (G3/4") and Ø 34 pdg, SR: Suspended with swivel joint,
Electrical class	I or II
Ambient temperature	- 40°C to + 55°C

MAINTENANCE

Maintenance	The luminaire cover can be opened without tools using the 2 flaps. The luminaire is held in the open position by a safety stay. Quick electrical disconnection without tools. Circuit board removable onsite without tools. Access to the LED sources after removal of the bowl.
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LED SOURCES

Sources	BLS Strips (8 to 72 LED)
Colour temperature (K)	BLS Strips: 2700 K (others upon request)
CRI	> 70 (others upon request)
Luminaire SDCM	<4
LED lifetime	L90 > 100 000 h

Optics and light distribution options

Photobiology RG1 (3000 K)

MAXIMUM PERFORMANCES (SEE ANNEX FOR ALL LED MODULES OPTIONS)

2700 K	ITEM 500 - BLS (36 LED)		
	Flux ^(A) at 700 mA (lm)	Power ^(B) (W)	Efficiency (lm/W)
	9061	75	121

(A) Output flux from the luminaire at commissioning (including thermal and optical yields compared to the Flux from sources) for given optics, maximal current and ambient temperature 25°C, as per IEC 62717 and IEC 62722 standards
(B) Total power absorbed by the luminaire including all electrical equipment, as per IEC 62717 and IEC 62722 standards.

DRIVER

Power	230 V / 240 V - 50 Hz / 60 Hz / pSurge protection 10Kv
Brand	Philips Xitanium Full Prog or OSRAM 4 DIM - D4i option (SR and DEXAL)
Power factor	90% minimum
Total harmonic distortion	15% max
Current	Dimmable current up to 1000 mA
Lifetime	10% failure at 100 000 hours
Control	DALI or 1-10V

SMARTLIGHTING (OPTIONS)

Smart-ready®	Pre-configuration, to connect communicating systems with Sensor Ready drivers, to a base in compliance with ZHAGA Book 18.
Standalone solutions	Dimming calculator from 2 to 5 slots (Dimming 5, POLEDRIVE or POLEDRIVE Bluetooth) Motion sensor (Motion, Motion P, Motion DALI, MD) Motion sensor combined with dimming calculator (Motion P, Motion 5, MD) Constant Light Output (CLO) Adjustable driver (POLEDRIVE)
Local Network	Luminaires group: detection through ZIGBEE 3.0 communication protocol or pilot wires.
Telemangement	WIZARD - ECLATEC

STANDARDS / MARKING / CERTIFICATIONS

Compliance	CE marking requirements: - Directive 2014/35/EU, Low voltage Directive - Directive 2014/130/EU Electromagnetic Compatibility - Directive 2011/65/EU Restriction of Hazardous substances (RoHS) - Directive 2009/125/EC Ecodesign requirements
NF EN 13201	In accordance with the lighting calculations issued.
REACH	Products conformity regulatory management of chemicals
WEEE	(Waste Electrical and Electronic Equipment) Manufacturer involvement

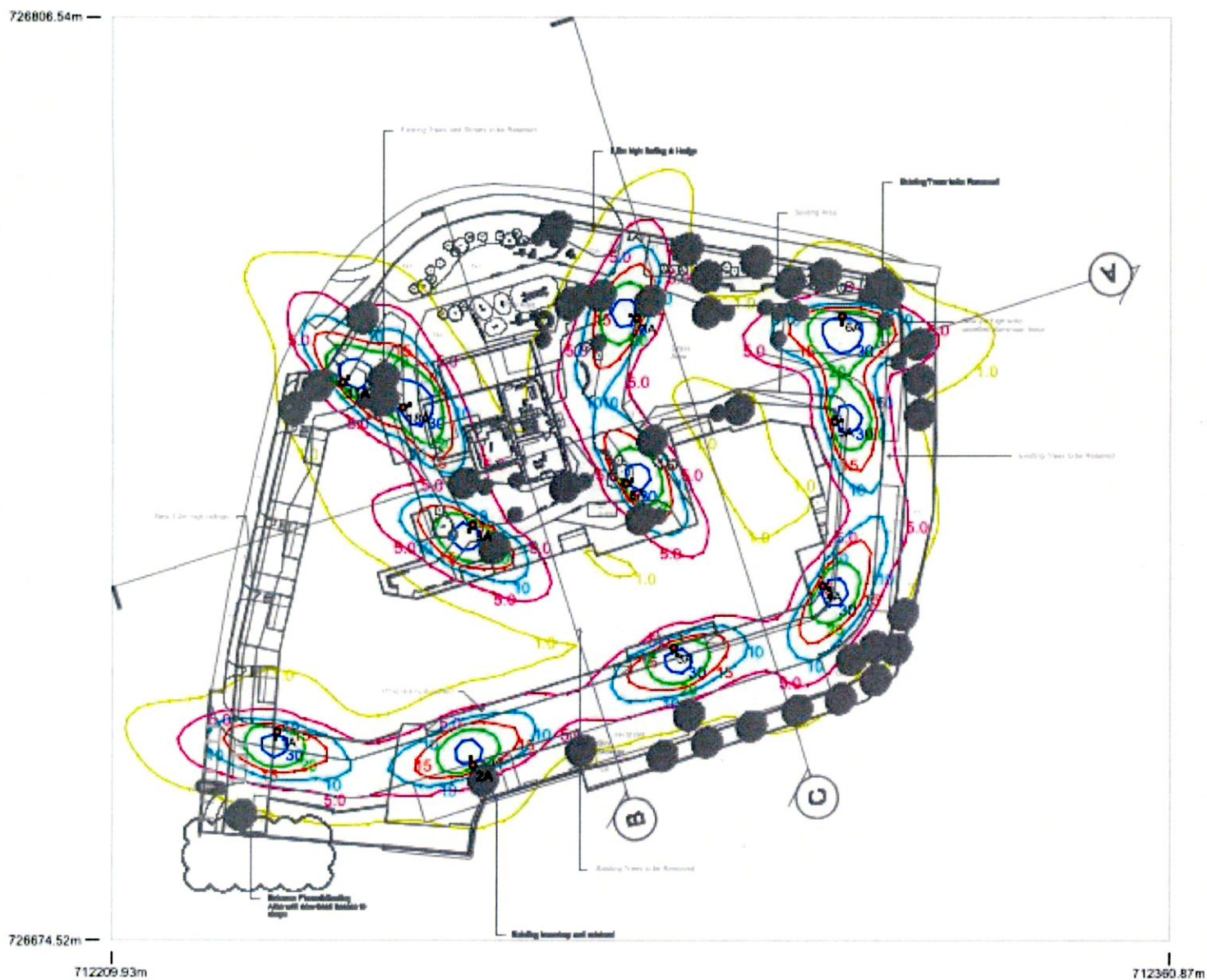
WARRANTY

According to our general sales conditions

Altamar had input into the lighting design. Further, this report details that the columns will be 6m in height. Lighting will be warm at 2700°K in order to comply with bat lighting guidelines. The proposed Horizontal Illuminance (lux) grid for the subject site is demonstrated in Figure 5. As seen in Figure 4 a central portion of the site will be lit less than 1 Lux. It should be noted that spill in the vicinity of the perimeter treelines is also low. It would be expected that bat foraging would continue on site.

Horizontal Illuminance (lux)

Grid 1



Results

Eav	11.70
Emin	0.21
E _{max}	44.51
E _{min} /E _{max}	0.00
E _{min} /E _{av}	0.02

Figure 5. Proposed Horizontal Illuminance (lux) Grid

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 27 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).

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 site visits by Bryan Deegan (MCIEEM) on the 8th and 21st September 2022. Bat emergent and detector surveys were carried out on both dates. The internal and external inspection of outbuildings and sheds was carried out on the 8th September 2022 and the internal and external inspection of house was carried out on the 21st September 2022. 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.’

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. No evidence of bats or bat roost were identified in any of the onsite trees. A derogation license is therefore not required for the removal of trees on site. However, the several mature trees of bat roosting potential are noted on site (Table 1). These include trees heavily clad in ivy and trees with features such as cracks and hollows that could be used by bats as roost habitats. Prior to felling/works on the trees these trees will need to be inspected for bats/bat roosts.

Table 1. Trees of bat roosting potential.

Tree No.	Species	Feature	Status
T29	<i>Cupressus macrocarpa</i> (Monterey cypress)	Broken branches and dead wood. Areas of bark	Low to medium potential. To be removed.
T42	<i>Acer pseudoplatanus</i> (Sycamore)	Broken/dead wood and hollow. Ivy	Low to medium potential. To be retained but works proposed.
T54-T59	<i>Populus nigra 'Italica'</i> (Lomardy Poplar)	Dense Ivy	Low to medium potential. To be removed.
T62-T63	<i>Acer pseudoplatanus</i> (Sycamore)	Dense Ivy	Low to medium potential. To be removed.

Buildings as potential bat roosts.

An internal and external assessment was carried out of all buildings on site. No evidence of bat roosting was noted within or external to the buildings. No bats, evidence of bats or a bat roost were identified in any of the onsite buildings. A derogation license is therefore not required for the removal of buildings on site.

Emergent/detector surveys.

Emergent/detector surveys were carried out by Bryan Deegan on the 8th September 2022 and 21st September 2022.

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 10°C, after sunset. Winds were light and there was no rainfall. Insects were observed in flight during both surveys.

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.

At dusk, bat detector surveys were carried out onsite 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.

A single Lesser Noctule (*Nyctalus leisleri*) bat was noted on both nights foraging briefly over the grassland area to the south east of Scholarstown house in the vicinity of the treeline. A single Soprano Pipistrelle (*Pipistrellus pygmaeus*) was observed briefly to the west of Scholarstown house on the 21st of September 2022. No bats were observed emerging from onsite trees or structures on or proximate to the subject site.

It should be noted that the site is brightly lit from the north and west from street lights on Scholarstown Road and Orlagh Grove respectively and from the south from the community school which includes works from a development that is currently being built.

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 O12I) encompassing the study area reveals that two of the nine known Irish species have been observed locally (Table 1). 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 5 - 8. The following species were noted in the wider area: Daubenton's Bat (*Myotis daubentonii*), Brown Long-eared Bat (*Plecotus auritus*), Natterer's Bat (*Myotis nattereri*), Whiskered Bat (*Myotis mystacinus*), Lesser Noctule (*Nyctalus leisleri*), Nathusius' Pipistrelle (*Pipistrellus nathusii*), and Soprano Pipistrelle (*Pipistrellus pygmaeus*) (Figures 5 - 8).

Table 1: Status of bat species within a 2km² grid encompassing the subject site (Reference no. O12I)

Species name	Record count	Date of last record
Lesser Noctule (<i>Nyctalus leisleri</i>)	1	24/05/2007
Pipistrelle (<i>Pipistrellus pipistrellus sensu lato</i>)	2	21/10/2010



Figure 5. Brown Long-eared Bat (*Plecotus auritus*) (yellow), Daubenton's Bat (*Myotis daubentonii*) (purple), and both Brown Long-eared Bat and Daubenton's Bat (orange) (Source: NBDC) (Site – red circle)

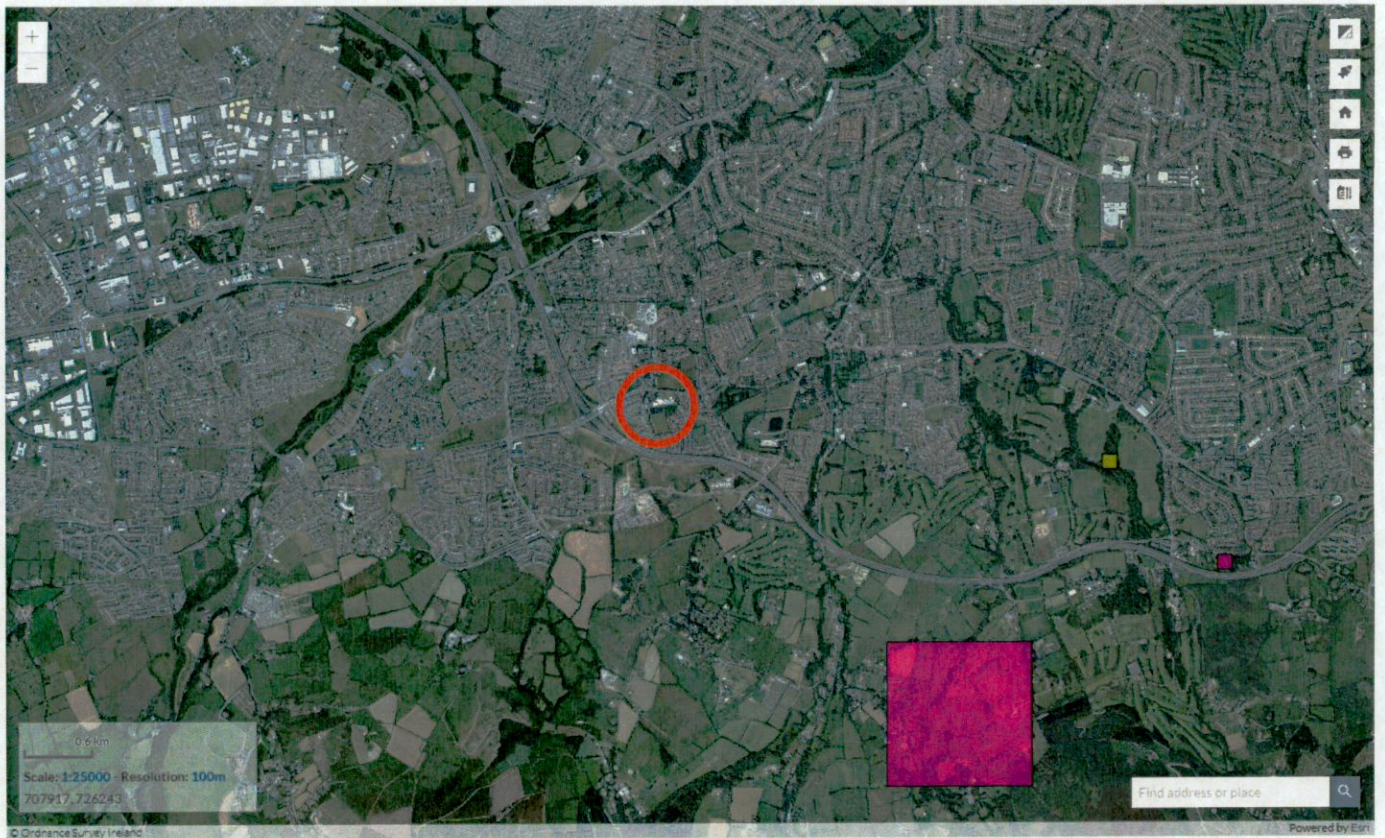


Figure 6. Whiskered Bat (*Myotis mystacinus*) (yellow), Natterer's Bat (*Myotis nattereri*) (purple), and both Whiskered Bat and Natterer's Bat (orange) (Source: NBDC) (Site – red circle)

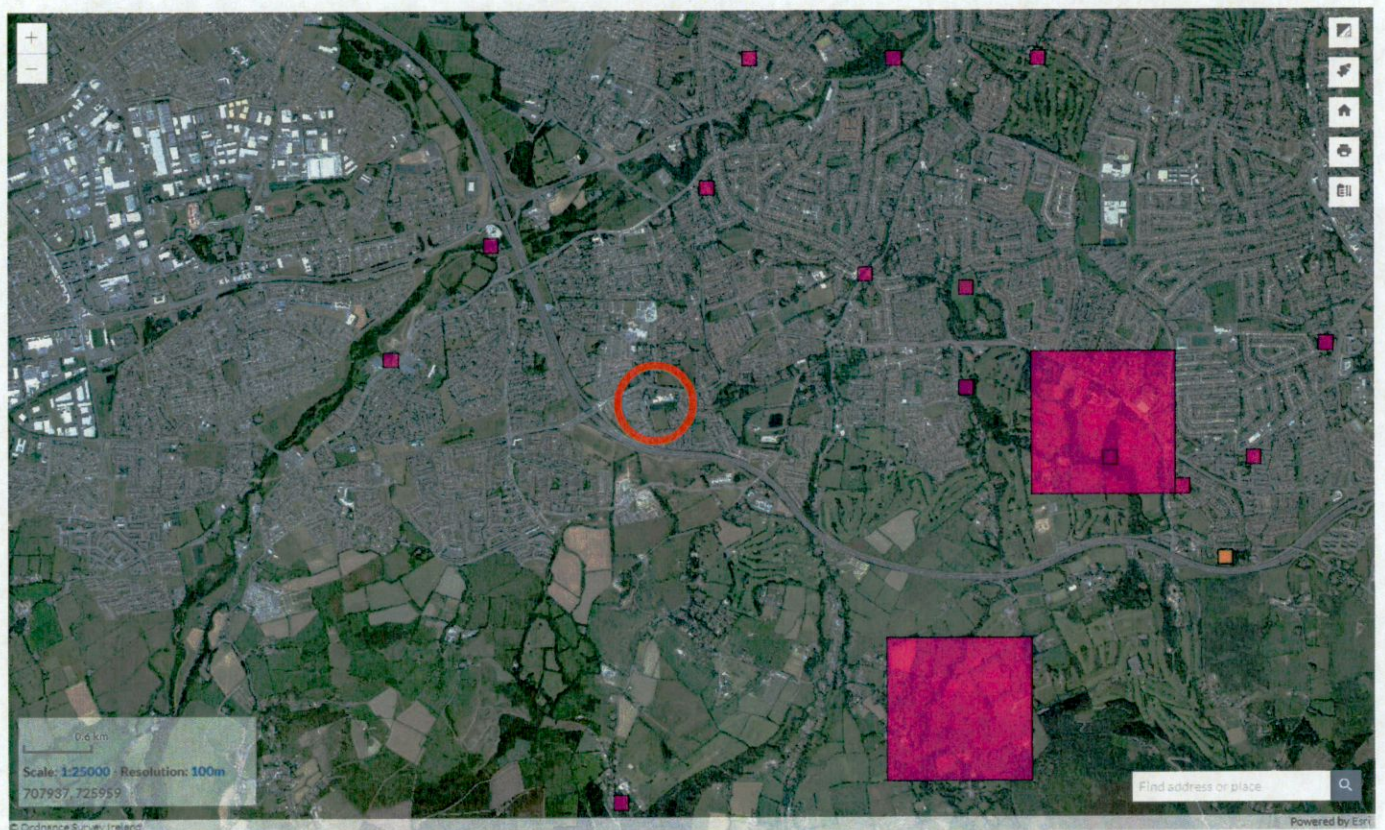


Figure 7. Lesser Noctule (*Nyctalus leisleri*) (purple), Nathusius' Pipistrelle (*Pipistrellus nathusii*) (yellow), and both Lesser Noctule and Nathusius' Pipistrelle (orange) (Source: NBDC) (Site – red circle)



Figure 8. Soprano Pipistrelle (*Pipistrellus pygmaeus*) (purple) (Source: NBDC) (Site – red circle)

Evaluation of Results

The bat surveys comply with bat survey guidance documentation including Marnell et al (2022) and Collins (2016). No bats were observed emerging from trees or buildings on site. No evidence of bats roosting in buildings was noted. Minor bat activity was noted on site by Soprano Pipistrelle and Lesser Noctule bats. The site is of relatively low importance to the local bat population.

Potential Impact of the development on Bats

No confirmed bat roosts will be lost. The proposed development will change the local environment as outbuildings and barns are to be demolished, trees are to be felled and new structures are to be erected. The development is likely to displace bats from foraging at the site during construction and operation. Based on the small number of common species found using the site, the displacement from this site will not have any significant effect on local bat populations. It should be noted that the St. Colmcille's Community School is located to the south of the site and has significant floodlighting. It is also currently undergoing development just outside the site boundary. The proposed development is not in proximity to sensitive bat areas. The potential for collision risk and impact on flight paths in relation to bats is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats. Bat foraging would be expected to continue on site albeit at a lower level until landscaping matures.

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.'*

However, no bats were noted roosting on site. The level of activity on site is low with common bat species transiting through the site. As a result, the following mitigation will be implemented:

- Lighting at all construction stages should be done sensitively on site with no direct lighting of hedgerows and treelines.
- A post construction bat survey and light spill assessment will be carried out to ensure compliance with the lighting plan.
- A pre construction bat roosting inspection will be carried out on all trees listed in Table 1 and all buildings on site, prior to the commencement of works. A derogation license will be applied for from NPWS if bats are to be found during the future inspection. All works will be carried out in compliance with NPWS conditions if bats or bat roosts are found during pre-commencement inspections.

Predicted Residual Impact of Planned Development on Bats

The present survey found no evidence of roosting bats in any onsite tree or structures, therefore the proposed development will not result in the loss of any bat roost as no bats are roosting onsite. The proposed development will change the local environment as existing buildings are to be demolished and vegetation removed. There would be expected to be a short to medium term reduction in foraging until the landscaping and in particular the trees within the landscaping proposal mature. Based on the small number of common species found using the site the displacement from this site it will not have any significant effect on local bat populations, and that any such effect will be only significant at the local level. The external lighting for this development has been designed to achieve the performance requirements as set out in the Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland, 2010) and Bats and Lighting in the UK – Bats and the Built Environment Series (Institute of Lighting Professionals, September 2018). All lighting is set at 2700°K in compliance with bat lighting guidelines. In the medium-long term bat foraging would be expected to continue on site and no significant effect on bats would be foreseen.

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