Bat Derogation Licence Application Supplementary Report

Proposed development at Bective Demesne,
Bective, Co. Meath.

Compiled by: Veon Ecology,
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Client: Bective Stud Ltd.

Project Title: Bat Derogation Licence Application

Report Title: Supplementary Report

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1. Introduction

Veon Ecology has been commissioned to prepare this report in support of an application for a derogation licence under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011. This licence is sought to permit the disturbance of bat roost(s) at Bective Demesne, Bective, Navan, Co. Meath.

The proposed development is for a Five-Star Hotel Development and includes the reinstatement and change of use of the derelict Bective House and ancillary structures and the addition of new extensions to the rear, to form the hotel. The project also includes reinstatement of the derelict South Gate Lodge and upgrading of the south access driveway (Between Bective House and South Gate Lodge). Existing farming and equestrian activities will remain in situ in the overall land holding of 71.39ha.

This report provides details of surveys undertaken by Bat Eco Services between 2020 and 2021 to assess whether the buildings, trees and surrounding environment were suitable for use by roosting bats, as well as any potential implications of the construction and/or operation of the proposed development on bat activity and habitation. The report also outlines the proposed mitigation strategy for bats, as required. The success of this strategy will be measured by the avoidance of mortality of any bat species and the minimisation of disturbance to bat roosts and habitat degradation during the construction phase of the proposed development.

Bat Eco Services surveyed the Bective Courtyard in 2020. The Bective Courtyard comprises a two-storey structure with numerous rooms. The roof of this building is largely intact, making it more suitable as a roosting site for bats compared to Bective House. As a result, evidence of a larger number of bats roosting in specific sections/rooms was recorded. All accessible rooms within Bective Courtyard were examined for evidence of bat usage on the 20th and 21st of May 2020. In summary, bat droppings from three bat species were recorded throughout the building: *Pipistrellus* spp., brown long-eared bat, and *Myotis* spp. The Bective Courtyard was considered to have high suitability for roosting bats.

A derogation licence is requested to allow works to proceed. Bats were carefully considered in all aspects of the design process, and as a result there is an extensive array of bat mitigation measures and compensatory measures outlined in this report and the accompanying bat reports prepared by Bat Eco Services.

1.1 Aim of this Report

This report forms part of the derogation licence application under Regulation 54 to the National Parks and Wildlife Service (NPWS).

The report contains the following information:

- Explanation as to why the derogation licence sought is the only available option for works and no suitable alternative exists as per Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations (see **Section 1.5**).
- Evidence that actions permitted by a derogation licence will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations (see **Section 4**).
- Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere (see **Section 4**).

1.2 Derogation Application Area

The subject site is part of the Bective Demesne (see **Figure 1.1**), located south of the M3 between Trim and Navan along the River Boyne. Bective House is centrally situated within the Demesne, accessible via Balgill Road. The Demesne is 8.2 km from Navan via the R161 and 9 km from Trim.

Bective House, Bective Courtyard, and the stable yard are located at the centre of the Demesne, between the North Gate Lodge and South Gate Lodge, along the north bank of the River Boyne. Bective House consists of a main two-storey pitched roof structure with adjoining smaller two-storey courtyard buildings arranged around four sides. One corner bay represents a later addition to the house.

Bective House and Courtyard are the principal focus of the proposed Five-Star Hotel development. The proposal involves the redevelopment of the entire structure of Bective House and Courtyard.

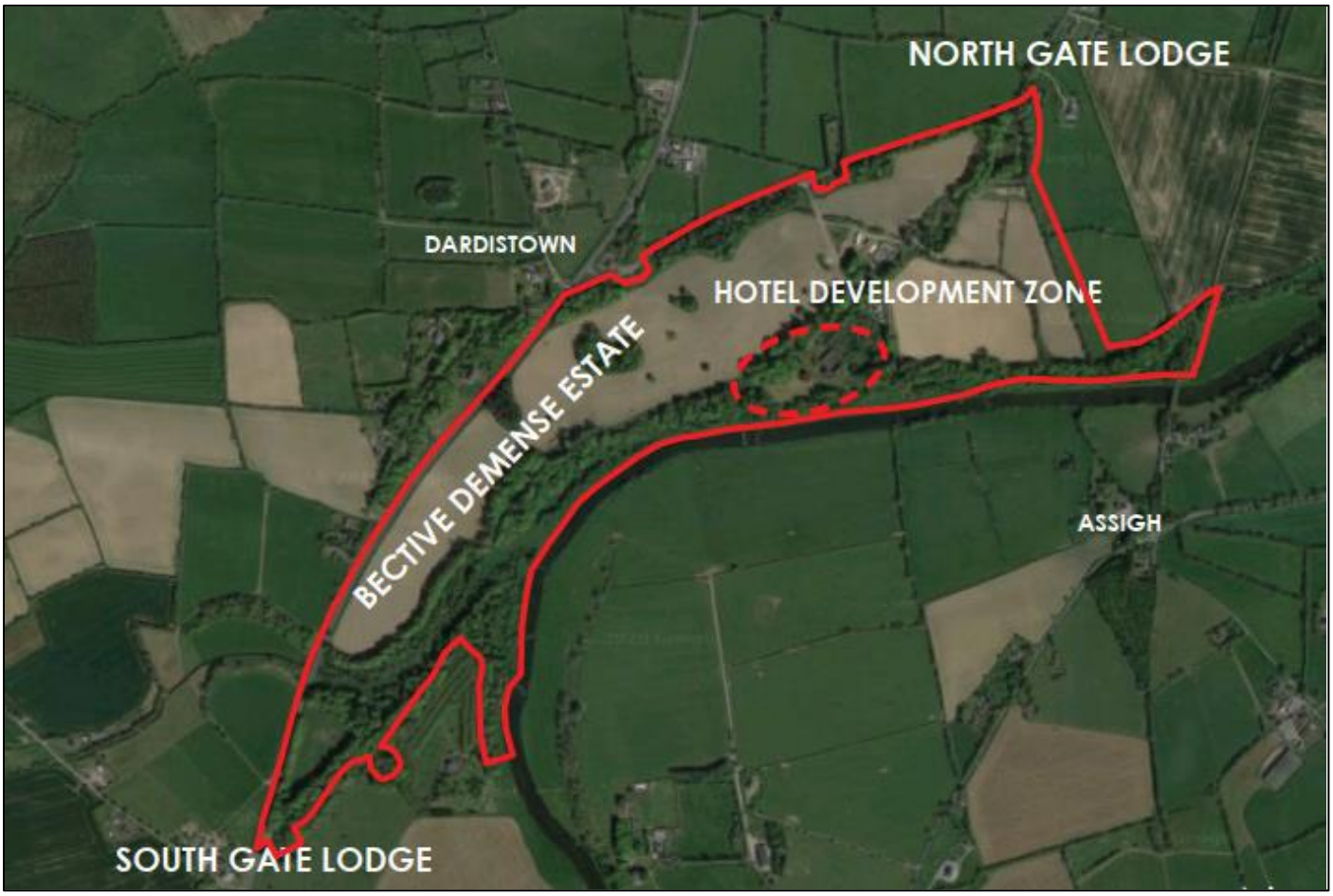

Figure 1.1: Derogation Application Location Map (proposed development area).

1.3 Author Statement

Veon Ltd. staff adhere to the Code of Professional Conduct/Code of Practice for the Chartered Institute of Ecology and Environmental Management (CIEEM).

This report has been prepared by David McGillycuddy of Veon Ltd., and reviewed for quality assurance purposes by Donnachadh Powell of Veon Ltd.

David McGillycuddy, ACIEEM, AEnvCW, is a Project Ecologist with Veon Ltd. (Veon Ecology). David has over 8 years of experience in ecological research, consultancy, teaching and assessment. He is skilled in delivering various environmental projects and producing ecological reports, including Biodiversity Action Plans (BAP), Natura Impact Statements (NIS), Ecological Impact Assessments (EcIA), Environmental Impact Assessments (EIA) and related documents.

The reviewer, Donnachadh Powell, is a Lead Ecologist with Veon Ltd. (Veon Ecology) and holds a BSc (Hons) in Ecology and Environmental Biology. Donnachadh is a Qualifying Member of CIEEM with extensive experience in conducting surveys and performing data analyses to support ecological and environmental projects, including EIA, EcIA and NIS. He is skilled in the practical implementation of biodiversity management and conservation projects and is proficient in the use of various software tools, including GIS and Kaleidoscope Pro.

We confirm that the professional judgement expressed herein is the true and bona fide opinion of our professional ecologists. The information provided is accurate as of the issue date of this report and has been prepared in accordance with the CIEEM Code of Professional Conduct ('the Code').

1.4 Proposed Personnel for Inclusion on Derogation Licence

Outlined below are the personnel responsible for administering and implementing the derogation licence being applied for. These individuals will ensure its full implementation, including taking full responsibility for compliance with the mitigation strategy and any conditions attached to the derogation licence as issued.

The client, Bective Stud Ltd., will have overall responsibility for managing the licence. Veon Ltd. will act as the scientific agent identified on the derogation licence and will oversee the works associated with the proposed development. As such, should the derogation licence be granted by the NPWS, there may be the need for an update/change to the personnel listed/associated with this derogation licence during its lifetime.

Any changes in personnel associated with this derogation licence will be notified in writing to the NPWS by Bective Stud Ltd. for amendment.

Proposed Lead Bat Ecologist – Donnachadh Powell

Donnachadh Powell will lead the Veon Ecology bat mitigation strategy and monitoring program for the duration of the licence. He will be assisted and supported by the qualified and experienced personnel listed below, as required:

- Pascal Mc Kenna – Head of Division, Veon Ecology
- David McGillycuddy – Project Ecologist, Veon Ecology

1.5 Determining the need for a Derogation Licence

Veon Ltd. is submitting this application under Regulation 54 of the European Communities (Birds and Habitats) Regulations 2011 (S.I. 477 of 2011) for a derogation licence to permit activities that would otherwise contravene the protections outlined in Regulations 51, 52, and 53 of the same Regulations. This application specifically relates to a bat derogation licence to facilitate the proposed works while ensuring compliance with all relevant legislative and conservation requirements.

The determination of whether a derogation licence is required involves consideration of three key tests:

1. **Reasons for seeking derogation:** To ascertain whether the licence is to be granted for one of the purposes specified in the Regulations;
2. **There is no satisfactory alternative:** To ascertain whether there are no satisfactory alternatives to the activity proposed (that would avoid the risk of offence); and
3. **Favourable Conservation Status:** That the licencing of the activity will not be detrimental to the maintenance of the population of the species concerned at a Favourable Conservation Status (FCS).

Once the proposed activity has been evaluated through a risk assessment and the above tests, the regulator may decide to:

- Refuse the licence;
- Grant the licence without requiring mitigation; or
- Grant the licence with conditions, restrictions, or requirements, which typically include specified mitigation measures.

1.5.1 Test 1 – Reason for seeking derogation

The derogation is being sought on the basis that the proposed development site contains a bat roost(s), and the proposed works will likely result in the loss of the roost site, and have the potential to result in the mortality and/or disturbance of bats or their roosts, which would contravene the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) if carried out without a derogation licence.

The derogation is sought under Regulation 54(2) (a) and (c), which state:

- *"In the interests of protecting wild flora and fauna and conserving natural habitats."*

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

1.5.2 Test 2 – There is no Satisfactory Alternative

The proposed development of the Bective 5-Star Hotel, including the reinstatement and change of use of Bective House and associated structures, is essential for the long-term conservation and adaptive reuse of these historic buildings. In the absence of this development, there is a risk of further deterioration of Bective House and Courtyard, both of which are currently in a state of disrepair.

The development will also contribute to the local economy by creating jobs and increasing tourism potential in the area, while ensuring the protection and maintenance of the surrounding environment. Given the unique nature of the buildings and their historical significance, there are no satisfactory alternatives that would enable the same level of conservation, public benefit, and long-term sustainability.

1.5.3 Test 3 – Favourable Conservation status

This application addresses potential impacts on the local bat population and/or their roosts arising from the proposed works at Bective Demesne, Bective, Navan, Co. Meath. The strategy outlined in this report includes measures to avoid and minimise disturbance to bats. In light of the size of the roost(s) identified, the nature and setting of the proposed development, the mitigation strategy proposed (see **Section 4**) along with the fact that the bat species are well established in the area and currently classified as 'Least Concern', it can be concluded that, with the implementation of the proposed mitigation measures, the development will not have a detrimental impact on the maintenance of the local bat population. Therefore, this will ensure that the national population remains at a favourable conservation status within their natural range.

2. Species Status

The animal species listed in Annex IV of the EU Habitats Directive that occur in Ireland include the otter, all bats, all cetaceans (whales and dolphins), marine turtles, the natterjack toad and the Kerry slug. Each of these species is strictly protected in Ireland, and any person who deliberately captures, kills or disturbs a specimen in the wild, who deliberately destroys or takes their eggs from the wild, or who damages or destroys a breeding site or resting place of such an animal, is guilty of an offence.

Table 2.1 provides a summary of the Annex IV species that may be present within or near the proposed project site.

Table 2.1: Annex IV species that may be found within or near the Derogation Licence application area.

Annex IV species	
Species Name	**Species Information**
Otter *Lutra lutra*	The otter is listed on Annex II and Annex IV(a) of the EU Habitats Directive (92/43/EEC). The Annex II listing requires Member States to designate Special Areas of Conservation (SACs) for the protection of the species and 45 SACs in Ireland have been listed for this species, among other interests. Annex IV protects the otter and its breeding sites and resting places throughout the country, inside and outside the SAC network.
Bats	There are 9 species of bat recorded as resident in Ireland. All are listed on Annex IV of the EU Habitats Directive; one of them, the lesser horseshoe bat *Rhinolophus hipposideros*, is also listed on Annex II and 41 SACs have been designated for the protection of this species. In addition to the nine resident species, two vagrant species have been discovered in recent years, in Wicklow and Wexford. These are the Brandt's bat *Myotis brandtii* and the greater horseshoe bat *Rhinolophus ferrumequinum*. These bats are also on Annex IV and are strictly protected in Ireland. Internationally, many bat populations are in decline, hence their listing in the Habitats Directive.

There are nine species of bat known to breed in Ireland, while two other species have been recorded on a single occasion (**Table 2.2**). All nine resident bat species in Ireland are classified as "Least Concern" in the Ireland Red List No. 12: Terrestrial Mammals[1].

Table 2.2: Bat species in Ireland: status and distribution.

Bat species in Ireland		
Species Name	**Status**	**Distribution**
Common pipistrelle *Pipistrellus pipistrellus*	Resident - Least concern	Widespread
Soprano pipistrelle *Pipistrellus pygmaeus*	Resident - Least concern	Widespread
Nathusius' pipistrelle *Pipistrellus nathusii*	Resident - Least concern	Widespread
Leisler's bat *Nyctalus leisleri*	Resident - Least concern	Widespread
Brown long-eared bat *Plecotus auritus*	Resident - Least concern	Widespread
Whiskered bat *Myotis mystacinus*	Resident - Least concern	Widespread
Natterer's bat *Myotis nattereri*	Resident - Least concern	Widespread
Daubenton's bat *Myotis daubentonii*	Resident - Least concern	Widespread
Lesser horseshoe bat *Rhinolophus hipposideros*	Resident - Least concern	Restricted to the western seaboard
Brandt's bat *Myotis brandtii*	Vagrant – not evaluated	Single confirmed record from Co. Wicklow
Greater horseshoe bat *Rhinolophus ferrumequinum*	Vagrant – not evaluated	Single confirmed record from Co. Wexford

[1] Marnell, F., Looney, D. & Lawton, C. (2019) Ireland Red List No. 12: Terrestrial Mammals. National Parks and Wildlife Service, Department of the Culture, Heritage and the Gaeltacht, Dublin, Ireland.

3. Potential Impacts

Bat fauna within the survey area will be affected by both the construction phase and operational phase of the proposed development. The proposed development will result in the extensive redevelopment/renovation of the following buildings: Bective House, Bective Courtyard. As a consequence, the proposed works will result in the loss of a number of confirmed bat roosts and temporary disturbance to additional confirmed bat roosting.

Without bat mitigation measures, the proposed development will have an overall Major impact on local bat populations. According to Bat Eco Services (2020)[2] the following impact assessments have been determined:

- Loss of maternity roosts affecting whiskered bat is assessed as a *Permanent Significant Negative Effect*.
- Loss of maternity roosts affecting brown long-eared bat is assessed as a *Permanent Moderate Negative Effect*.
- Loss of satellite and/or day/night roosts affecting bat species is assessed as a *Permanent Slight to Moderate Negative Effect*.
- Habitat loss (potential roosting/foraging/commuting habitat) affecting all bat species is assessed as a *Permanent Slight to Moderate Negative Effect*.
- Loss of PBRs (potential bat roosts) affecting all bat species is assessed as a *Permanent Slight Negative Effect*.
- Disturbance and/or displacement affecting all bat species during the construction phase is assessed as a *Short-term Slight to Moderate Negative Effect*.

The operation of the proposed development will also impact on local bat populations by:

- Increasing the level of lighting;
- Increasing the level of human activity (i.e. noise level).

[2] Bat Eco Services (2020) Bat assessment of proposed development at Bective Demesne, Bective, Co. Meath. Unpublished report prepared for John Fleming Architects.

4. Mitigation Measures

To reduce the potential impact of the proposed development on local bat populations, extensive bat compensatory and mitigation measures are required. The proposed development of Bective House and Bective Courtyard will result in the loss of two maternity roosts for two bat species (whiskered bat and brown long-eared bat) as well as numerous satellite and day/night roosts for an additional four species of bat.

Given the scale of renovation work proposed for Bective House and Bective Courtyard (including the Original Outhouse Building) and the extent of the proposed development in this area, retaining bat roosts in their current locations is not considered feasible or suitable for the long-term conservation of local bat populations. Therefore, alternative roosts are proposed as a mitigation and compensatory measures. Due to the fact that bats are a protected mammal group, the loss of a bat roosts of this level of importance means that alternative roosts constructed must provide "like for like" (Kelleher & Marnell, 2006). Additionally, an NPWS Derogation Licence must be obtained before any works commence.

Renovation of Bective Courtyard

In consultation with the architects and building contractors, a plan will be developed to ensure that renovation work does not harm bats residing in the structure.

Works can only be undertaken outside the maternity season (no works during May to August) and with permission granted under an NPWS Derogation Licence for the destruction of bat roosts. The Bat House has already been constructed and is in place, ensuring alternative roosting sites are available prior to the commencement of works on this building.

The general steps to ensure that Bective Courtyard rooms are bat free include the following steps. However, a more detailed work plan will be required, and this will need to be drawn up with the contractor as the current state of Bective House allows bats to enter from numerous points (e.g. open windows, broken doors and holes in the roof) and fly into sections of Bective Courtyard.

- A work plan will be drawn up to ensure that bats are not harmed during renovation works. Supervision will be undertaken by the bat specialist. This work plan will be undertaken in consultation with NPWS.
- A Tool Box talk will be provided by the bat specialist to ensure that the contractor and staff are aware of their obligations in relation to bats.
- Ivy on the external walls of the courtyard should be removed in the autumn months and left on the ground for 24 hrs to allow any residing bats to exit safely.
- Any exposed external and internal walls must be inspected for bats before any repointing work begins. Once deemed bat-free, crevices should be temporarily filled with materials such as bubble wrap or tightly covered with hessian to prevent bats from re-entering before repointing is completed.
- Each room will need to be made bat-free prior to any works and once the rooms are deemed bat free, these will need to be closed in order to prevent bats re-entering once works start. Such a procedure will include checking all of the door frames, window frames, exposed plaster work etc. and then covering entry points (e.g. open doorways) with a temporary material like hessian. These works should only be undertaken post-roof works as the current state of the roof of Bective House will allow bats to enter at will.
- Particular attention will be required to ensure that the two spaces where maternity roosts are present are bat-free prior to works. An exclusion procedure will be necessary and can only be undertaken now that the Bat House has been constructed and is operational, and with the appropriate NPWS Derogation Licence. The bat specialist will develop a detailed exclusion procedure, which will be implemented in collaboration with the contractor and under the bat specialist's supervision. NPWS will be consulted throughout this process.

Renovation of Bective House

In discussion with the architects and contractors, a plan will be required to renovate this building without causing harm to residing bats.

Works can only be undertaken outside the maternity season (no works during May to August) and only with permission granted under an NPWS Derogation Licence in relation to the destruction of bat roosts. The Bat House has already been constructed and is ready to support displaced bats prior to any works being undertaken on these buildings.

The general steps to ensure that the buildings are bat free include the following steps. However, a more detailed work plan will be required, which will need to be drawn up with the contractor, as the current state of Bective House allows bats to enter from numerous points (e.g. open windows, broken doors and holes in the roof).

- A work plan will be drawn up to ensure that bats are not harmed during renovation works. Supervision will be undertaken by the bat specialist.
- A Tool Box talk will be provided by the bat specialist to ensure that the contractor and staff are aware of their obligations in relation to bats.
- Ivy on the external walls should be removed in the autumn months and left on the ground for 24 hrs to allow any residing bats to exit safely.
- Removal of roof will be supervised by the bat specialist.
- Any exposed external and internal walls will need to be checked for residing bats prior to any re-pointing. Once the crevices are deemed bat-free, they should be temporarily filled with bubble wrap, for example, until re-pointing work is undertaken. Alternatively, the walls should be tightly covered with hessian material to prevent bats from entering crevices during re-pointing works.
- Each room will need to be made bat-free prior to any works. Once the rooms are deemed bat-free, they will need to be sealed to prevent bats from re-entering after works commence. This procedure will include checking all door frames, window frames, exposed plasterwork, etc., and then covering entry points (e.g., open doorways) with temporary material such as hessian. These works should only be undertaken after roof works, as the current state of the roof at Bective House allows bats to enter freely.
- Demolition of the modern section of Bective House will require specific measures, in consultation with the contractor. This section should not be demolished during the summer months (May to August) and should only proceed now that the Bat House has been completed. The following general steps should be taken:
    - The roof is removed by hand and left exposed overnight (Day 1).
    - Any crevices will be examined by the bat specialist on Day 2. A piecemeal demolition of the walls will then be undertaken under the supervision of the bat specialist. Any bats encountered will be safely removed by the bat specialist.

Alternative Bat Roost – Bat House

A Bat House has been constructed to facilitate maternity roosting requirements primarily for whiskered bats and brown long-eared bats. This Bat House compensates for the loss of maternity bat roosts resulting from the proposed renovation works at Bective House and Courtyard. Additional satellite roosting features have been incorporated into the structure to accommodate the remaining bat species recorded during surveys of both Bective Courtyard and Bective House.

Figure 4.2: Bective Bat House (Source: Bat Eco Services (2022)[3]).

The Bat House was completed prior to the renovation of the Bective House and Courtyard buildings to ensure alternative roosting opportunities were available in advance of the works. Monitoring will be required to evaluate the success of the Bat House as a roosting site for whiskered bats and brown long-eared bats.

[3] Bat Eco Services (2022) Construction of bat house at Bective Demesne, Bective, Co. Meath. Unpublished report prepared for John Fleming Architects.

Monitoring in General

Monitoring is recommended during both the construction and post-construction phases of the project. In brief, the following aspects should be addressed:

- Monitoring of the Bat House should be conducted over a period of 5 years to assess its continued success. This should include winter checks (once per year) and summer surveys (two internal surveys and one emergence survey per summer). Temperature data loggers installed in the Bat House should be maintained throughout this period.
- Inspection of bat boxes within one year of erection of bat box scheme/rocket box. Register bat box scheme with Bat Conservation Ireland. This should be undertaken for a minimum of 2 years. This will involve a daytime inspection of the bat boxes using an endoscope and thermal imagery scope.
- Monitoring of any bat mitigation measures. All mitigation measures should be checked to determine that they were successful. A full summer bat survey is recommended post-works (within 2 years of the completion of the project).

If proposed bat mitigation measures are strictly adhered to, the potential impact of the proposed development is likely to be reduced from Major to Moderate impact.

Lighting Plan

Luminaire design is extremely important to achieve an appropriate lighting regime. Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires. This is taken from the most recent BCT Lighting Guidelines (BCT, 2018).

- All luminaires used will lack UV/IR elements to reduce impact.
- LED luminaires will be used due to the fact that they are highly directional, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (<2700 Kelvins will be used to reduce the blue light component of the LED spectrum).
- Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Column heights should be carefully considered to minimise light spill. The shortest column height allowed should be used where possible. Ballard lighting should be considered for pedestrian and greenway areas, if deemed necessary.
- Only luminaires with an upward light ratio of 0% and with good optical control will be used.
- Luminaires will be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting will be set on motion-sensors and short (1min) timers.
- As a last resort, accessories such as baffles, hoods or louvres will be used to reduce light spill and direct it only to where it is needed.

The lighting plan for the proposed development should strictly follow the above guidelines, and these measures should be implemented during both the construction and operation phases of the development.

5. Conclusion

This application relates to specific impacts on bats and/or their roosts resulting from the proposed development at Bective Demesne, Bective, Navan, Co. Meath. Mitigation measures detailed in **Section 4** of this report have been designed to minimise potential impacts on bats during the works, following industry-standard guidance on bat mitigation strategies.

Taking into account the roosts identified at Bective House and Courtyard, the current conservation status of bat species in Ireland as *Least Concern*, and their widespread distribution and stable populations nationally, it can be concluded that the implementation of the measures outlined in **Section 4** will ensure that the proposed development does not negatively affect the maintenance of the local bat population at a favourable conservation status within their natural range.

Overall, with full and proper implementation of the mitigation and compensatory measures the residual impacts of the proposed development in relation to roosting sites will be *Medium-term, Slight to Moderate Negative Effects*. With full and proper implementation of the mitigation and compensatory measures the residual impacts of the proposed development in relation to commuting and foraging habits, will be *Medium-term, Slight to Moderate Negative Effects*.