



southern scientific
services ltd.

Application for Derogation Licence

Supporting Document

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25P-055

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Contents

1. Introduction	3
1.1 Objective of the proposed works	3
1.2 Survey team members and relevant experience	3
2. Background to proposed activity	3
3. Proposed Activity to be covered by derogation.....	3
2. Ecological survey and site assessment	4
2.1 Aim of Survey	4
2.2 Site location	4
2.3 Relevant legislation	5
2.4 Bats in the local area	6
2.5 Methodology	8
2.5.1 Preliminary roost assessment (PRA).....	8
2.5.2 Dusk emergence survey.....	8
2.5.3 Bat activity survey.....	8
2.6 Results.....	9
2.7 Discussion	9
2.8 Mitigation	12
2.9 Conclusion	17
3. Evidence to support the derogation tests	17
3.1 Test 1 – Reason for derogation	17
3.2 Test 2 – Absence of alternative solutions.....	18
3.3 Test 3 – Impact of derogation on conservation status	18
4. Monitoring the impacts of the derogations	20
5. References	21
Appendix I Maps & Figures	22
Appendix II.....	29

1. Introduction

1.1 Objective of the proposed works

The proposed development intends to demolish the existing dwelling house and construct 85 residential units, (37 houses/48 apartments), 1 pre-school, refuse and bicycle stores, and all associated roads and site services at "The Parsonage", Bell Height, Kenmare, Co. Kerry.

1.2 Survey team members and relevant experience

Team Member	Relevant Experience
Colette Murray	Colette has a BSc (Hons) degree in Zoology received from University College Cork (UCC) as well as a Master's Degree in Marine Biology, also from UCC. Colette has undertaken and led several bat surveys around Munster for a variety of projects. Colette currently holds derogation licences relating to Lesser horseshoe bat, Common pipistrelle and Soprano pipistrelle roosts.
Róisín Ní Dhonobháin	Róisín has a BSc (Hons) degree in Zoology received from Trinity College, Dublin. Róisín has carried out and led a number of bat surveys including emergence surveys, transect surveys as well as static surveillance. Róisín has a Certificate of Bat Acoustics Analysis from Batability and is proficient in analysing bat acoustics using Kaleidoscope Pro software.

2. Background to proposed activity

Southern Scientific Services Ltd (SSSL) was commissioned by Davide Mosca Design to carry out a bat survey and impact assessment at Dromineer, Co. Tipperary. The purpose of the survey was to assess all buildings and structures within the site to determine whether they support bat roosts and to assess the site's overall suitability in terms of foraging and commuting bats.

3. Proposed Activity to be covered by derogation

The planning application requests permission to demolish the existing dwelling house and construct 85 residential units, (37 houses/48 apartments), 1 pre-school, refuse and bicycle stores, and all associated roads and site services at "The Parsonage", Bell Height, Kenmare, Co. Kerry.

2. Ecological survey and site assessment

2.1 Aim of Survey

This Bat Impact Assessment includes an internal survey for evidence of roosting bats, an emergence survey and a bat activity survey. The data collected will establish whether any bats are using the structure or the surrounding area, and to identify and implement measures to ensure that bats are not impacted by this proposed development.

2.2 Site location



Figure 1 Site Location

The proposed development site (“site”) is located at The Parsonage, Bell Height, Kenmare, Co. Kerry, approximately 250m south of Kenmare town. The site has a coastal location being 450m northeast of Kenmare pier and is accessed via the N71. It comprises an existing residential property with rear garden and large agricultural site to the west of the rear garden which is comprised of improved agricultural grassland. The residential property is unoccupied and appears to have been vacant for some time. The rear garden is overgrown and disused. There is also a small disused outdoor building to the side of the property. The agricultural field to the rear is accessed via a private road off the Pier Road, Kenmare (Figure 1).

The site is bounded to the north by adjacent residential properties and to the east by the N71. The site is bounded to the south initially by a private road, residences, outbuildings and garden and then by marine habitat being approximately 250m from the coastline. To the west, the site is bounded by a stone wall and then agricultural land.

An old high stone wall bounds most of the site. Established hedgerows/treelines can be found on the northern, southern and western boundaries of the site.

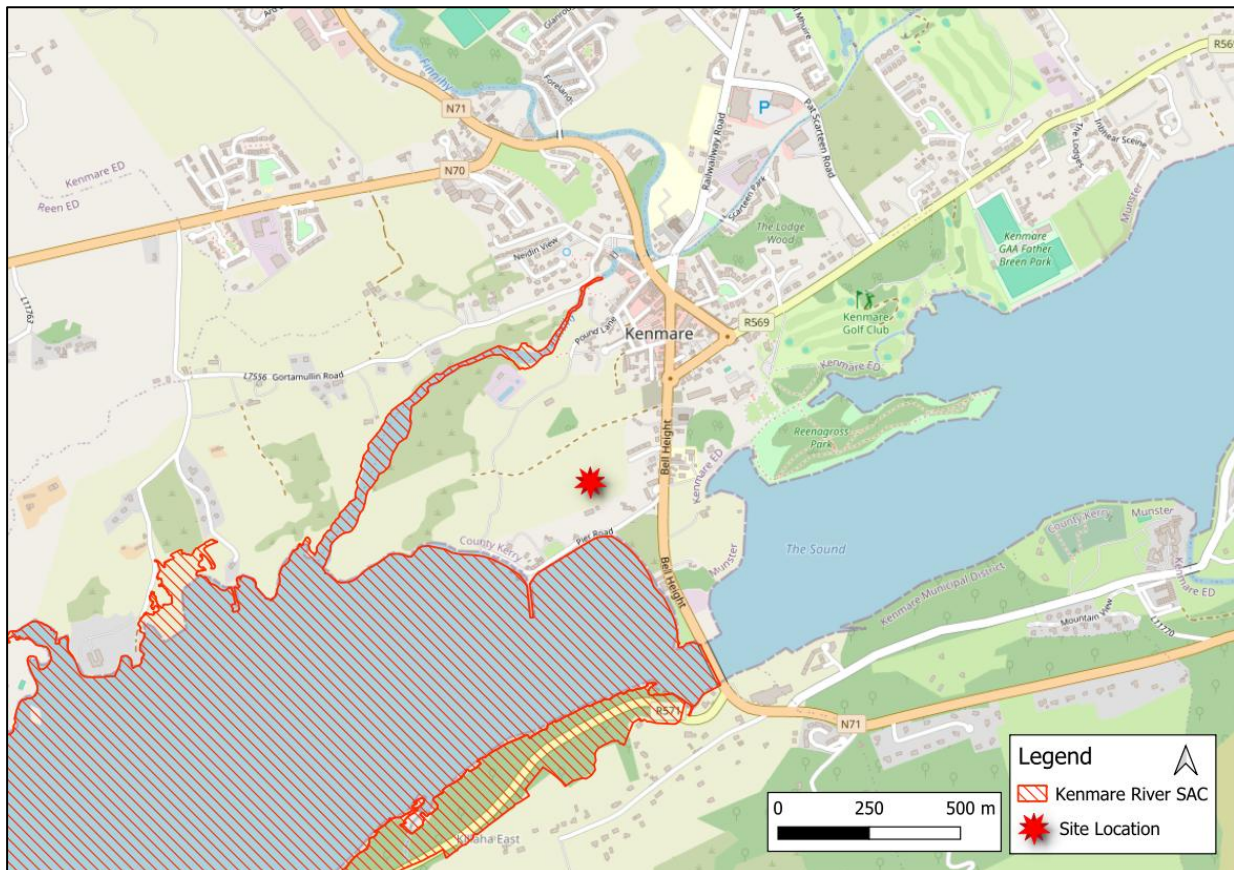


Figure 2 Location of the site in relation to nearby European Sites

2.3 Relevant legislation

At both the European Union and Irish levels, bats are protected under a range of legislation aimed at conserving their populations and habitats. At the EU level, bats are protected under the *EU Habitats Directive (92/43/EEC)*, which designates bats as a species of European importance. Annex IV of the Directive lists all bat species as "strictly protected," prohibiting the capture, killing, or disturbance of bats, as well as the destruction of their breeding and resting sites. In Ireland, this is transposed into national law through the *Wildlife Act 1976* (and its amendments) and the *European Communities (Birds and Natural Habitats) Regulations 2011*. These laws require developers and landowners to ensure that

any activities or projects do not harm bats or their habitats, and they mandate environmental assessments for any proposed development that may impact bat species.

Ireland's nine species of bats are all Red Data listed and receive protection through the Wildlife Act (1976 & 2000) and Annex IV of the EU Habitats Directive, under which it is an offence to intentionally disturb, kill or injure a bat or its resting place. This protection, therefore, encompasses the protection of bat habitats (Marnell, Kingston and Looney, 2009). This includes roost sites such as cavities in trees, cracks and crevices in buildings, both derelict and in use. Lesser Horseshoe Bats are further protected under this act being an Annex II species. Annex II of the EU Habitats Directive lists animal and plant species of community interest that require the designation of Special Areas of Conservation (SAC's).

A total of 41 SAC's have been designated for the Lesser Horseshoe Bat, with 9 of these also selected for the Annex I habitat, "Caves Not Open to the Public" (*8310), this habitat is integrally linked to Lesser Horseshoe Bat as part of the habitat for the species.

2.4 Bats in the local area

An ecological desktop assessment was undertaken on the 3rd of May 2024. The aim of this was to investigate existing documentation and data containing information on previous bat sightings, protected sites for bat species, and the Bat Habitat Suitability Index. Information was sourced from several online sources which included:

- National Parks and Wildlife Service Maps & Databases (www.npws.ie).
- National Biodiversity Data Centre (<https://maps.biodiversityireland.ie>).
- Bat Habitat Suitability Index Maps (Lundy et al., 2011);
- Aerial photography and 1:50000 mapping.

The Bat Habitat Suitability Index provides maps that detail the suitability of habitats in Ireland for bats. It helps to predict where bat species might occur (Lundy et al., 2011). The maps are constructed using 5km grid squares from the OSI National Grid and these grid squares are given a Bat Habitat Suitability Index. The index for this is seen below with green least suitable and red most suitable.

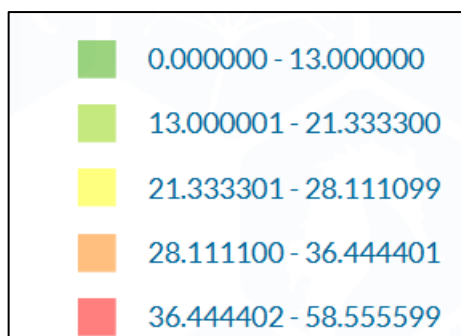


Figure 3: Bat Habitat Suitability Index

The area around the proposed development at “The Parsonage”, Bell Height, Kenmare, Co. Kerry has an overall Bat Suitability Index of 40.33 for all bat species. This score indicates a high suitability for bats in the general area. The Habitat Suitability Indices score for each of these species is shown below:

Table 1: Bat habitat suitability index.

Common Name	Scientific Name	Habitat Suitability Index
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	44
Brown long-eared bat	<i>Plecotus auritus</i>	57
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	46
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	74
Lesser noctule	<i>Nyctalus leisleri</i>	43
Whiskered bat	<i>Myotis mystacinus</i>	24
Daubenton's bat	<i>Myotis daubentonii</i>	32
Nathusius's pipistrelle	<i>Pipistrellus nathusii</i>	1
Natterer's bat	<i>Myotis nattereri</i>	42

In addition, records from the National Biodiversity Data Centre were assessed for the 1km & 2km grid square that contains the site. This search revealed that the following bats were recorded within the 2km grid square; Brown Long-eared Bat (*Plecotus auritus*), Common Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Lesser horseshoe bat (*Rhinolophus hipposideros*), Lesser Noctule (*Nyctalus leisleri*), Natterer's Bat (*Myotis nattereri*), Soprano Pipistrelle (*Pipistrellus pygmaeus*).

A bat survey report (dated September 2005) and an Ecological Impact Assessment (dated 23rd May 2018) had previously been prepared for this site. These reports had the following findings in relation to bats;

- The following bat species were detected in the area: Brown Long-eared Bat (*Plecotus auritus*), Common Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Lesser Noctule (*Nyctalus leisleri*), Natterer's Bat (*Myotis nattereri*), Soprano Pipistrelle (*Pipistrellus pygmaeus*).

- The EclA recorded Brown Long-eared Bat (*Plecotus auritus*), Common Pipistrelle (*Pipistrellus pipistrellus*), Lesser Noctule (*Nyctalus leisleri*), Soprano Pipistrelle (*Pipistrellus pygmaeus*).
- The disused dwelling and nearby detached shed were both inspected for evidence of roosting bats. But no evidence of roosting bats was found.
- No evidence of roosting bats in the trees within the survey area were found during either survey.
- The report references a number of Lesser horseshoe bat roosts within 1km of this site. This includes a number of summer roosts. Therefore, this site is within the 2.5km foraging range of Lesser horseshoe bats.

2.5 Methodology

The basic methodology was that described by Kelleher & Marnell (2006) and Collins (2023). The field surveys were comprised of 3 parts: a preliminary roost assessment (PRA), a dusk emergence survey and a bat activity survey.

2.5.1 Preliminary roost assessment (PRA)

A PRA is a detailed inspection of the exterior and interior of a structure to look for features that bats could use for entry/exit and roosting and to search for signs of bats. The aim of this survey is to determine the actual or potential presence of bats and the need for further survey and/or mitigation. Evidence of bats might include live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or squeaking noises.

2.5.2 Dusk emergence survey

Bat emergence surveys were conducted on two occasions, 8th May 2024 and 10th May 2024, by ecologists Diarmuid O'Leary and Kate Handel from Southern Scientific Services Ltd. The purpose of these surveys was to determine whether any bat species were roosting in the building proposed to be demolished. This involved the deployment of surveyors to observe, listen for and record bats in flight. Surveyors should be in position 15 minutes before sunset and remain in position for 1.5 to 2 hours after sunset. During this time surveyors will record bat numbers, species and activity type.

2.5.3 Bat activity survey

Given the time of year, the external habitats surrounding the building were also surveyed following both emergence surveys where surveyors walked the site with bat detectors to identify potential foraging areas and commuting routes. Additionally, a bat activity survey was carried out on 10th June 2024 by

the same ecologists, with the assistance of a conservation ranger from the National Parks and Wildlife Service (NPWS).

2.6 Results

Field surveys were comprised of 3 parts: a preliminary roost assessment (PRA), a dusk emergence survey and a bat activity survey. All surveys were carried out in conditions that are considered optimum for bat surveys in accordance with BCT guidelines (Collins, 2023).

The Landscape Conservation for Irish Bats dataset (accessed 3rd May 2024) indicated that the area around this site was of high favourability to most of the resident bat species. The area was considered most favourable for Lesser horseshoe bat (*Rhinolophus hipposideros*) and Brown long-eared bat (*Plecotus auritus*).

During the emergence surveys no bats were observed exiting from within the residential structure. A solitary Common pipistrelle bat (*Pipistrellus pipistrellus*) was observed on both occasions exiting ivy growing externally on the building (see site photos).

Following the emergence survey on the 8th of May, a solitary Lesser horseshoe bat was recorded along the southern boundary of the site, adjacent to the woodland area south of the development site (see figure 2). This bat was only recorded once during this survey shortly after sunset. No Lesser horseshoe bats were detected during the subsequent emergence survey on the 10th of May and the bat activity survey on the 10th of June.

Bat activity was noticeably low during the activity survey, in June, despite the optimal weather conditions with only a very small number of pipistrelles recorded (see table 2 below).

Table 2: Bat species recorded

Bat species	Common Pipistrelle	Soprano Pipistrelle
Number of passes of each species.	5	2

2.7 Discussion

Male Common pipistrelle bats roost singly or in small groups in the summer (Lundberg and Gerell, 1986). This roost would not be considered a maternity roost due to the small number of individuals recorded. Common pipistrelle maternity colonies typically hold 20 to > 1000 individuals (Collins, 2023). Given only

one Common pipistrelle was seen emerging on both evenings, in May, it is likely to be a day roost or satellite roost for a solitary male bat. These roosts are found mainly within buildings, usually out of sight in crevices, with roost selection strongly influenced by temperature (Davidson-Watts 2007). The ivy on the residential building on site, would not be considered optimal roosting conditions for a maternity roost, due to the lack of space and security.

During the activity survey, Common pipistrelle, Soprano pipistrelle and Lesser horseshoe bats were recorded commuting/foraging within the site boundaries. The majority of bat activity was recorded in close proximity to the hedgerow/treeline located on the southern boundary of the agricultural field. This was also the area in which a solitary Lesser horseshoe bat had been recorded following the emergence survey. An area of woodland is present just beyond the southern boundary of the site. This vegetation has the potential to be important for Lesser horseshoe bats, due to the species high echolocation frequency they need to commute and forage by following linear features (*Vincent Wildlife Trust Ireland*). Therefore, they do not forage over open areas. Hedgerows/treelines elsewhere on site are less well-vegetated and, therefore, less suitable for foraging/commuting Lesser horseshoe bats. However, given the proximity to known Lesser horseshoe bat roosts it can be assumed that the species utilises all hedgerows/treelines within the development site. Although only 3 species were recorded during the activity surveys, NBDC records from 1 km and 2 km grid squares indicate that at least 7 species have the potential to use the site for foraging/commuting, however, the site in general would be classed as moderately suitable for bat species in terms of foraging/commuting habitat due to the continuous hedgerow/treelines present on site that are connected to foraging habitat in the wider landscape (BCT, 2023). Results of the handheld bat detector survey indicate that given the low level of activity, the majority of the site is not used for extensive foraging for any bat species including Lesser horseshoe bat. It is likely mainly used sporadically by a small number of individual bats, primarily pipistrelle species to commute to more favourable habitat.

It should be noted that each bat pass does not correlate to an individual bat but is representative of bat activity levels. Some species, such as the pipistrelles, will continuously fly around a habitat and therefore it is likely that a series of bat passes within a similar time frame is one individual bat. On the other hand, Leisler's bats tend to travel through an area quickly and, therefore, an individual sequence or bat pass is more likely to be indicative of individual bats. It should also be noted that Lesser horseshoe bat detection using handheld detectors is much more difficult due to their quiet and one-directional calls in comparison to other species and, therefore, may be under-represented in this survey.

Given the record of a Lesser horseshoe bat on site during an activity survey, the presence of moderately suitable foraging/commuting habitat, the presence of a small Common pipistrelle roost on site, the close proximity to the Kenmare River SAC, for which Lesser horseshoe bat is a Qualifying Interest, the close proximity to known Lesser horseshoe bat roosts as well as NDBD records of several bat species within the 1 km and 2 km grid , it can be concluded that there is potential for adverse impacts on bat species, including Lesser horseshoe bat, as a result of the proposed development without appropriate mitigation. This relates to direct removal of roosting habitat within the derelict building as well as potential disturbance of foraging/commuting bats along the hedgerows/treelines on site as a result of external lighting during both the construction and operational phases.

2.8 Mitigation

Given the proximity of this project to the Kenmare River SAC (002158) of which Lesser horseshoe bat is a qualifying interest as well as proximity to known Lesser horseshoe bat roosts, there is potential for the hedgerows and treelines bordering the site to be used as commuting routes and foraging routes. Given the low level of Lesser horseshoe bat activity, the probability of impact is low however, the following mitigation is recommended (precautionary principle applied).

Subject of Mitigation Measures	Measure	How the measure will avoid/prevent/reduce impacts	Confidence in the likely success of the measure	Timescale for Implementation	Monitoring requirements
Bat flight paths	Retain the hedgerows and treelines bordering the site.	This area is the most favourable foraging and commuting habitat for Lesser horseshoe bats and other bat species. Retention will preserve existing commuting and foraging routes as well as allowing the establishment of such routes in the future.	Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are proven technologies/methods.	Measures will take place in advance of the construction phase and will continue during the operational phase.	These control measures will be implemented and regularly inspected by the Environmental Officer. The contractor will be responsible for the regular maintenance of these controls. The effectiveness of these controls will be regularly monitored by the project Ecologist and the Environmental Officer.
Roosting bats.	Works on the building are not to take place between March 31 st and September 30 th .	There are Common pipistrelle bats roosting in the building. Bats can be found roosting in summer roosts between this time period. Working	Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are	Measures will take place in advance of, during and to the end of the	The contractor will be responsible for the regular maintenance of these controls. The effectiveness of these controls will be

		outside of this timeframe will allow the bats to have left the building and moved to a winter hibernation roost.	proven technologies/methods.	construction phase.	regularly monitored by a suitably qualified ecologist.
Roosting bats.	A derogation license will be required in order to carry out works on the building.	As this building is a confirmed roost of an Annex IV species a derogation license will be required from National Parks and Wildlife Services (NPWS) to allow works to take place on the building.	Required by Law.	This license is to be applied for and received prior to any works on the building commencing.	The works are to be supervised by a suitably qualified bat ecologist. On completion of the works a report is to be submitted to NPWS detailing results of applied mitigation measures. This is to be done by a suitably qualified ecologist.
Roosting bats.	A bat emergence survey is to be carried out prior to works on the building commencing.	This is to ensure that the bats have left the roost so that no bats will be harmed or disturbed by these works.	Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are proven technologies/methods.	Prior to works commencing.	This is to be carried out by a suitably qualified ecologist.
Roosting bats.	Bat boxes are to be installed on exterior walls of buildings adjacent to the site boundary. These bat boxes are to be optimised for use by Common pipistrelle bats in consultation with an ecologist and/or NPWS, Type A and C from the Bat Conservation Ireland Bat Box Information Leaflet should be erected	This will provide roosting for Common pipistrelle bats that had previously been roosting within the building.	Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are	These boxes are to be installed following the completion of works.	These boxes and their positioning on the building are to be approved by a suitably qualified ecologist.

	https://www.batconservationireland.org/wp-content/uploads/2013/09/Leaflet_3_batboxes.pdf		proven technologies/methods.		
Bat flight paths	Some trees require minimal branch trimming as part of the proposed development. Any branches will be clean cut to prevent disease and encourage healthy re-growth. Any gaps within the treeline should be planted with suitable native species such as Hawthorn, Blackthorn and native Holly.	These measures will enhance the existing treeline, improve connectivity providing improved conditions for foraging and commuting bats, particularly Lesser horseshoe bat.	Measures prescribed are best practice and are proven technologies/methods.	Measures will take place in advance of the construction phase and will continue during the operational phase.	These measures are to be implemented by a suitably qualified tree surgeon. The Environmental Officer will be responsible for supervising these measures. The effectiveness of these controls will be regularly monitored by the project Ecologist and the Environmental Officer.
Lighting	The Lighting Plan submitted along with the planning application should be adhered to in full. This Lighting Plan took into account the following recommendations based on the bat surveys carried out: Light should only be erected where it is needed, illuminated during the period it will be used, and at the level that enhance visibility. All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used. LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability. A warm white light source (2700 Kelvin or lower) should be adopted to reduce blue light component. Light sources should feature peak	The proposed development will result in an increase of introduced light to the site both during construction and once operational. Bat species, in particular Lesser horseshoe bat, are sensitive to light pollution and so the implementation of these mitigation measures will ensure that light pollution will not have a negative impact on any bats in	Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are proven technologies/methods.	Measures will be in place during the design phase from the commencement of the construction phase and will continue during the operational phase.	These control measures will be implemented and regularly inspected by the Contractor/Environmental Officer. The contractor will be responsible for the regular maintenance of these controls. The effectiveness of these controls will be regularly monitored by the project Ecologist and the Environmental Officer.

	wavelengths higher than 550 nm to avoid the component of light most disturbing to bats. Use the lowest levels of lighting permitted for health and safety. Direct light away from the SAC and hedgerow/treeline bordering the site, where possible. Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill. Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges. Low level lighting less than 1 m should be used (including columns) as it is the higher projecting lighting that is of concern, so the traditional high level street lighting is to be avoided. Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered. Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt. Where appropriate, external security lighting should be set on motion sensors and set to as short as possible a timer (1-2 minutes approximately) as the risk assessment will allow. Reduce light spill so that light reaches only areas needing illumination. Shielding or cutting light can	the area, including Lesser horseshoe bat.			
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	be achieved through the design of the luminaire or with accessories, such as hoods, cowls, louvres and shields to direct the light. From May to September inclusive construction works are not to take place from dusk to dawn. Artificial lighting is to be kept to an absolute minimum during this time. Limit the times that lights are on to provide some dark periods for wildlife.				
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2.9 Conclusion

The proposed development intends to demolish the existing dwelling house and construct 85 residential units, (37 houses/48 apartments), 1 pre-school, refuse and bicycle stores, and all associated roads and site services at "The Parsonage", Bell Height, Kenmare, Co. Kerry. Southern Scientific Services Ltd was commissioned by Davide Mosca Design to undertake a Bat Impact Assessment (BIA) to determine if bats were using the site and to propose measures to prevent any disturbance or negative impacts from the proposed development. The assessment included both bat emergence and activity surveys, conducted during the optimal survey period (May to September).

The desktop study, along with consultation with NPWS, identified that the site is within the 2.5km foraging range of several Lesser horseshoe bat roosts. The emergence surveys on 8th and 10th May 2024 revealed a solitary Common pipistrelle exiting ivy on the exterior. This observation, along with available literature, suggests that this was likely a solitary male, and the ivy would not be suitable for a maternity roost. However, since a small roost was discovered, a derogation licence will be required before the roost can be removed as part of the proposed development.

Although bat activity was low during the activity survey, a single Lesser horseshoe bat was recorded along the southern boundary of the site, adjacent to an area of woodland to the south. Commuting/foraging habitat on site is considered moderate for all bats due to the continuous nature of the hedgerow/treelines that connect to areas of high-quality foraging habitat in the wider landscape. Given the close proximity to the Kenmare River SAC, for which Lesser horseshoe bat is a Qualifying Interest, the close proximity to known Lesser horseshoe bat roosts as well as NDBD records of several bat species within the 1 km and 2 km grid, it can be concluded that there is potential for light disturbance of commuting/foraging bat species, including Lesser horseshoe bat, as a result of the proposed development.

The mitigation provided in Section 2.8 will ensure that bat populations in the area are not adversely impacted as a result of the proposed development.

3. Evidence to support the derogation tests

3.1 Test 1 – Reason for derogation

The proposed development intends to demolish the existing dwelling house and construct 85 residential units, (37 houses/48 apartments), 1 pre-school, refuse and bicycle stores, and all associated roads and site services at "The Parsonage", Bell Height, Kenmare, Co. Kerry. Southern Scientific Services Ltd was

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Due to the nature of the proposed development, the building will need to be completely demolished and retention of the roost in-situ is not possible. However, these species are very common throughout Ireland and have proven to be highly resilient to human activity and very adaptable. Removal of this roost and replacement with a bat box is not expected to impact the local population. Additionally, retention of mature trees on site as well as implementation of the recommended lighting will prevent disturbance of any other bat species using the area.

3.2 Test 2 – Absence of alternative solutions

Do Nothing:

The building will be retained in derelict condition, hindering the progress of the development. Without maintenance, it is expected that the building will eventually become unsuitable for bat roosting due to its continued deterioration over time.

Proceed without mitigation:

Commencing the project without implementing the suggested mitigation could result in direct harm and/or disturbance to Common pipistrelle bats that are currently using the ivy on the external walls of the building as a roost. Additionally, other bat species foraging around the development site, such as those listed in Section 2.6, could be disturbed as a result of a removal of habitat and/or implementation of unsuitable lighting.

3.3 Test 3 – Impact of derogation on conservation status

Male Common pipistrelle bats roost singly or in small groups in the summer (Lundberg and Gerell, 1986). This roost would not be considered a maternity roost due to the small number of individuals recorded.

Common pipistrelle maternity colonies typically hold 20 to > 1000 individuals (Collins, 2023). Given only one Common pipistrelle was seen emerging on both evenings, in May, it is likely to be a day roost or satellite roost for a solitary male bat. These roosts are found mainly within buildings, usually out of sight in crevices, with roost selection strongly influenced by temperature (Davidson-Watts 2007). The ivy on the residential building on site, would not be considered optimal roosting conditions for a maternity roost, due to the lack of space and security.

During the activity survey, Common pipistrelle, Soprano pipistrelle and Lesser horseshoe bats were recorded commuting/foraging within the site boundaries. The majority of bat activity was recorded in close proximity to the hedgerow/treeline located on the southern boundary of the agricultural field. This was also the area in which a solitary Lesser horseshoe bat had been recorded following the emergence survey. An area of woodland is present just beyond the southern boundary of the site. This vegetation has the potential to be important for Lesser horseshoe bats, due to the species high echolocation frequency they need to commute and forage by following linear features (*Vincent Wildlife Trust Ireland*). Therefore, they do not forage over open areas. Hedgerows/treelines elsewhere on site are less well-vegetated and, therefore, less suitable for foraging/commuting Lesser horseshoe bats. However, given the proximity to known Lesser horseshoe bat roosts it can be assumed that the species utilises all hedgerows/treelines within the development site. Although only 3 species were recorded during the activity surveys, NBDC records from 1 km and 2 km grid squares indicate that at least 7 species have the potential to use the site for foraging/commuting, however, the site in general would be classed as moderately suitable for bat species in terms of foraging/commuting habitat due to the continuous hedgerow/treelines present on site that are connected to foraging habitat in the wider landscape (BCT, 2023). Results of the handheld bat detector survey indicate that given the low level of activity, the majority of the site is not used for extensive foraging for any bat species including Lesser horseshoe bat. It is likely mainly used sporadically by a small number of individual bats, primarily pipistrelle species to commute to more favourable habitat.

It should be noted that each bat pass does not correlate to an individual bat but is representative of bat activity levels. Some species, such as the pipistrelles, will continuously fly around a habitat and therefore it is likely that a series of bat passes within a similar time frame is one individual bat. On the other hand, Leisler's bats tend to travel through an area quickly and, therefore, an individual sequence or bat pass is more likely to be indicative of individual bats. It should also be noted that Lesser horseshoe bat detection using handheld detectors is much more difficult due to their quiet and one-directional calls in comparison to other species and, therefore, may be under-represented in this survey.

Given the record of a Lesser horseshoe bat on site during an activity survey, the presence of moderately suitable foraging/commuting habitat, the presence of a small Common pipistrelle roost on site, the close proximity to the Kenmare River SAC, for which Lesser horseshoe bat is a Qualifying Interest, the close proximity to known Lesser horseshoe bat roosts as well as NDBD records of several bat species within the 1 km and 2 km grid , it can be concluded that there is potential for adverse impacts on bat species, including Lesser horseshoe bat, as a result of the proposed development without appropriate mitigation. This relates to direct removal of roosting habitat within the derelict building as well as potential disturbance of foraging/commuting bats along the hedgerows/treelines on site as a result of external lighting during both the construction and operational phases.

The mitigation provided in Section 2.8 will ensure that bat populations in the area are not adversely impacted as a result of the proposed development.

4. Monitoring the impacts of the derogations

Derogations require the submission of a report to the NPWS on the activity carried out and details of numbers and species affected. To this effect, a report will be prepared addressing all conditions specified in the derogation licence, confirming that all mitigation measures were adhered to and implemented as specified in Section 2.8. A repeat bat activity survey will be carried out at a suitable time of year to establish whether bats are roosting in the bat box and investigate whether bat activity has changed around the site during the operational phase of the development.

5. References

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Appendix I Maps & Figures



Figure 2: Site boundary with location of LHB.

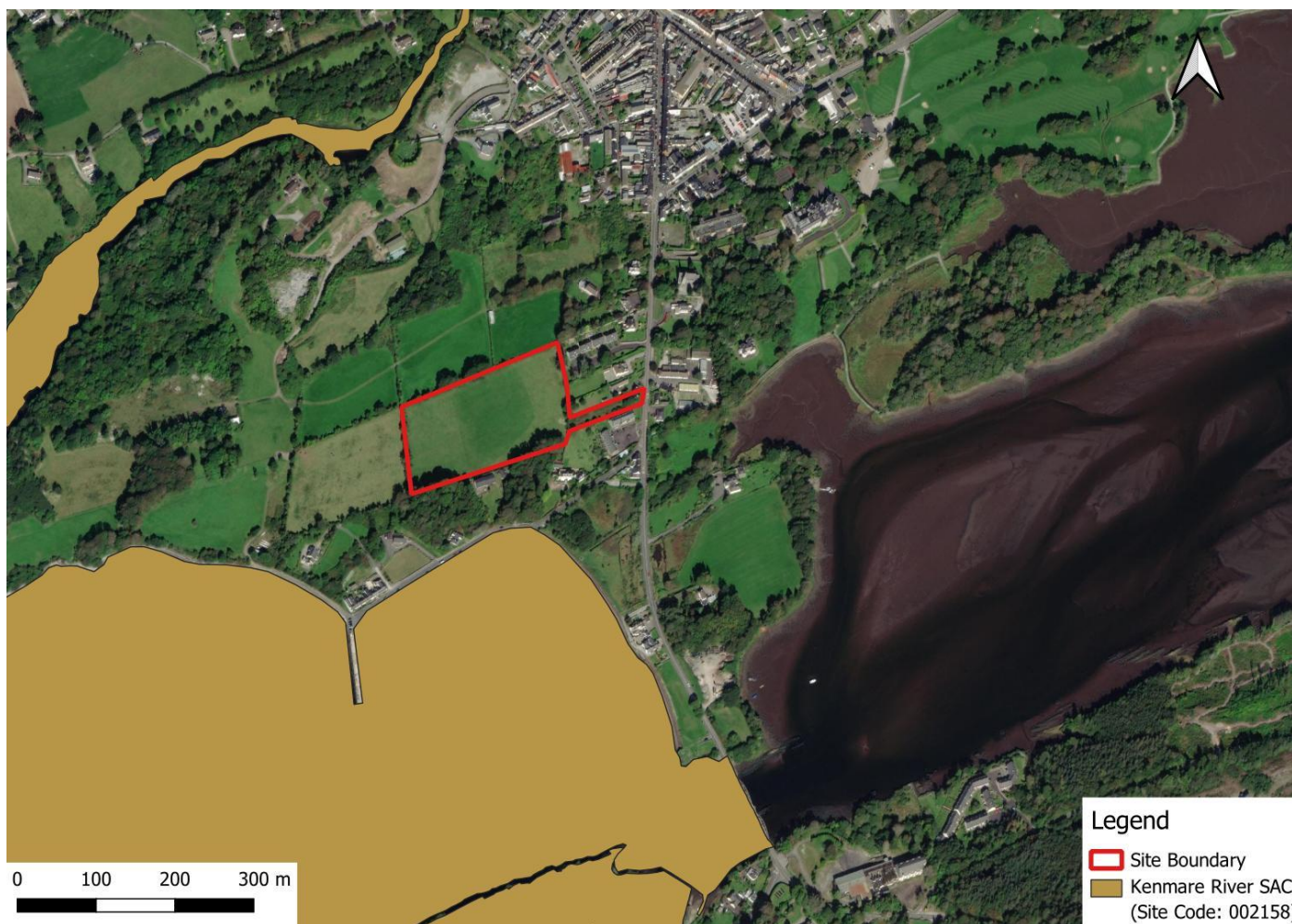


Figure 3: Site location in relation to SAC

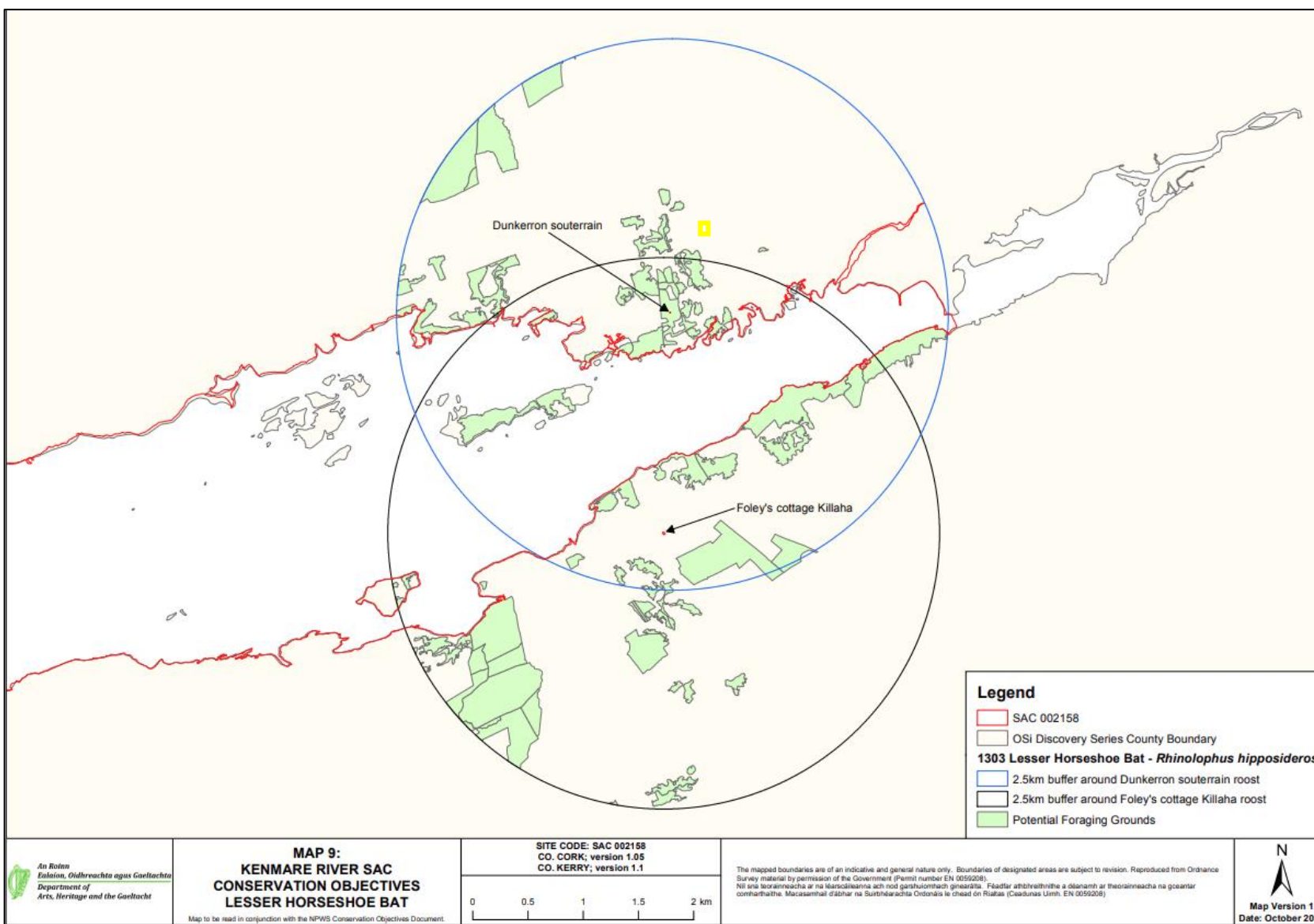


Figure 4: Map 9 of NPWS conservation series 2013 detailing LHB roosts and foraging ranges. (project site yellow square).



Figure 5: Ivy from which Common Pipistrelle emerged



Figure 6: Site overview facing west.



Figure 7: Site overview facing North.



Figure 8: Area in which the Lesser horseshoe bat was recorded.

Appendix II

Site layout plan.

