Bat Derogation Licence Application

Foynes to Limerick Road (incl. Adare Bypass)

September 2025

Prepared for:

Comhairle Cathrach & Contae **Luimnigh**

Limerick City & County Council

CIEEM REGISTERED PRACTICE 2025-2026

O'DONNELL ENVIRONMENTAL

Summary

Project: Foynes to Limerick Road (including Adare Bypass)

Report by: Tom O'Donnell BSc (Hons) MSc CEnv MCIEEM.

Statement of Competence: O'Donnell Environmental is an independent environmental consultancy established by Tom O'Donnell BSc (Hons) MSc CEnv MCIEEM in 2019. O'Donnell Environmental is a Chartered Institute of Ecology and Environmental Management (CIEEM) 'Registered Practice' which demonstrates our commitment to high professional standards, accountability and the delivery of the best outcomes for biodiversity and our Clients.

Tom O'Donnell is a Chartered Environmentalist and a full member of the Chartered Institute of Ecology and Environmental Management. He was awarded a BSc in Environmental and Earth System Science [Applied Ecology] in 2007 and an MSc in Ecological Assessment in 2009, both from UCC. Tom has over 10 years professional experience in the environmental industry, including working on projects such as windfarms, overhead power lines, roads, cycleways and residential developments. Tom is licensed by NPWS for roost disturbance (Ref: DER/BAT 2023-16) and to capture bats (C25/2023).

Colm Breslin BSc (Hons) is a Qualifying member of the Chartered Institute of Ecology and Environmental Management. He was awarded a BSc in Biological, Earth and Environmental Sciences [Ecology and Environmental Biology] in 2023 from UCC. Colm has experience in habitat mapping, bat activity surveys and preliminary roost assessments for a variety of windfarm and residential developments. Colm is licenced by NPWS for roost disturbance (Ref: DER/BAT 2025-108), to capture bats (C03/2025), and to photograph bats (009/2025).

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1 Introduction

O'Donnell Environmental Ltd. were commissioned by Limerick City and County Council to undertake environmental pre-construction surveys relating to the approved Foynes-to-Limerick Road (including the Adare Bypass) (An Bord Pleanála references 306146-19; 306199-19). The proposed road development is 35km in length and consists of 15.6km length dual carriageway from Foynes to Rathkeale (Section A,C), 1.9km length single-carriageway link between Ballyclogh and Askeaton (Section B), 17.5km length of new motorway from Rathkeale to the existing motorway network at Attyflin (Section D), and heavy goods vehicle service area near Foynes.

Bat roosting was previously identified within structures present within the footprint of the current scheme during surveys carried out for the EIAR (Bat Eco Services, 2019). As part of the EIAR a derogation licence (Licence No. DER/BAT 2019-128) was obtained for (a) roost disturbance and (b) damage or destruction of breeding sites or resting places which has now expired. A new derogation licence was sought and obtained for these structures (Licence No. DER/BAT 2024-152) following updated surveys undertaken by O'Donnell Environmental during 2024. All relevant structures within the Adare Bypass section have now been demolished and licence return supplied to NPWS.

The subject of this derogation licence pertains to a disused cottage located within the approved road scheme corridor of Section B (see **Figure 1**; **Plate 3.1**). The disused cottage was subject to the previously expired DER/BAT 2019-128 derogation, but was not included within the updated DER/BAT 2024-152 derogation as no works were proposed in this area at the time. The disused cottage was previously surveyed as part of the EIAR and confirmed as a satellite roost for small numbers of Soprano Pipistrelle (see Table 9 of Bat Eco Services, 2019).

All specified ecological services were carried out in accordance with best practice, in terms of survey effort, seasonality and compliance with cognisance of relevant guidance documents.

Surveys were carried out by O'Donnell Environmental in 2025 and built upon previous surveys carried as part of the original EIAR:

- Environmental Impact Assessment Report (AECOM, 2019).
- Four Season Bat Survey Report (Bat Eco Services, 2019).

All the above relevant environmental documents are available at:
https://www.foyneslimerick.ie/copy-of-volume-2-drawings

2 Methodology

Dedicated pre-construction bat surveys were undertaken on the disused cottage within Section B of the road scheme (Ch. 0+250; see **Table 2.1**) during the active bat season 2025 in accordance with the requirements for pre-demolition surveys set out in O'Donnell Environmental's scope and Section 7.8 of Chapter 19 of the EIAR "*Re-survey structures / buildings in question prior to demolition to determine if bats are present*". Mitigation measures for bats are outlined in full in the 'Four Season Bat Report' as appended to the EIAR (Bat Eco Services, 2019; see EIAR Appendix 7.1).

Surveys aimed to validate the results of previous surveys undertaken as part of the original planning application, specifically in relation to structures identified within the road scheme boundary and therefore subject to demolition. Pre-construction bat surveys consisted of a mixture of daytime building assessments, passive monitoring, DNA analysis of bat droppings and dusk emergence surveys following industry best practice and standards (Collins, 2023; NRA, 2005; 2006).

All surveys were carried out in accordance with industry standard best practices, including the following:

- Bat Conservation Trust guidelines Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th edition (note that the guidelines were recently updated to 4th edition) (Collins, 2023).
- Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes (NRA (now TII), 2005b).
- Guidelines for the Treatment of Bats during the Construction of National Road Schemes (NRA (now TII), 2006b).
- Bat Mitigation Guidelines for Ireland (Marnell et al., 2022).

Table 2.1 – Bat structure surveyed.

Ref.	Chainage	Latitude	Longitude	Comment
S01	11+900	52.60205	-8.98511	Disused Cottage

2.1 DESK STUDY

A desktop review of publicly available relevant data was undertaken on the National Biodiversity Data Centre (NBDC) and National Parks & Wildlife Service (NPWS) websites to identify any rare or protected species records located within the relevant national grid squares encompassing the site.

The NBDC was reviewed for relevant bat data, specifically i) existing species records for the 10km square in which the study site is located (R35) and ii) an indication of the relative importance of the wider landscape in which the study site is located, based on Model of Bat Landscapes for Ireland (Lundy et al., 2011). In the latter, the index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats.

Designated international and national nature conservation sites within the wider hinterland of the proposed redevelopment were identified through a desktop review. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) form part of a European

Conservation network known as Natura 2000 sites. SACs are designated under the EU Habitats Directive [1] while SPAs designated under the EU Birds Directive [2]. Nationally designated conservation sites include Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs). While NHAs are legally protected by the Irish Wildlife Acts (1976 as amended), pNHAs are not.

2.2 DAYTIME ASSESSMENT

Daytime assessments consisted of exterior and interior assessments on 28th July and 19th August 2025. The surveys aimed to identify any evidence of the presence of roosting bats, and to assess the suitability of the structures for roosting bats. Daytime visual surveys help to determine the appropriate survey effort required during nighttime emergence or re-entry surveys. Where evidence of bat roosting was identified, droppings were collected and sent of DNA analysis to confirm species identification in the absence of observed individuals.

2.3 PASSIVE BAT MONITORING

Passive bat monitoring was carried out within the structure using a WA Song Meter Mini full-spectrum detector between 28th July and 19th August 2025 for a total of 22 survey nights. The detector was sited proximal to evidence of bat roosting identified within the southern loft and pointed towards the suspected entry/exit point. Bioacoustic analysis of bat sonograms was carried out according to the parameters set out in Russ (2012; 2021) and Middleton et al. (2014). Kaleidoscope Pro software was used to aid analysis and all calls were manually verified.

2.4 EMERGENCE SURVEYS

Two emergence surveys were conducted on the disused cottage during summer 2025 (see **Table 2.2** below). For emergence surveys, surveyors were positioned to maximise views of the structures, in combination with night vision aids (NVAs) following best practice guidelines (Collins, 2023). Particular attention was applied to any identified access/egress points noted during previous daytime visual roost assessments. Guide IR Pro 19 thermal imaging cameras and Nightfox infrared camera were positioned to optimise views of structures, following Collins (2023). Echolocation recordings were made on handheld Echo Touch Meter Pro 2 and Anabat Scout full spectrum recorders. Additionally, WA Song Meter Mini full-spectrum detectors were placed within the viewsheds of night vision aids to correlate any potential emergence with echolocation data. Surveys were carried out during suitable weather conditions. See **Plates 2.1 - 2.2** for views of thermal camera perspectives.

Table 2.2 Emergence Survey Methodology Summary

Ref.	Survey Date	From - To Times	Sunset Time	Weather
S01	28th July 2025	21:20 – 23:00	21:34	F2-4, 3 Oktas, 13°C, no rain
	19th August 2025	20:40 – 22:20	20:52	F2, 6 Oktas, 14°C, light rain

[1] Council Directive 92/43/EEC on the conservation of natural habitats and wild flora and fauna, as amended by Council Directive 97/62/EC.

[2] Directive 2009/147/EC (Birds Directive) on the conservation of wild birds (the codified version of Council Directive 79/409/EEC as amended).

Plate 2.1 Thermal perspective overlooking the front/western aspect of the derelict cottage (S01) with surveyors in background.

Plate 2.2 Thermal perspective overlooking the northern aspect of the derelict cottage (S01).

2.5 SURVEY LIMITATIONS

Full site and building access was supplied by the Client. All relevant structures were surveyed according to industry best-practice and standards (Marnell et al. (2022), Collins (2023) and NRA, (2005;2006)). Surveys took place between July and August inclusive during the optimal survey period, when maternity roosting is most easily identified.

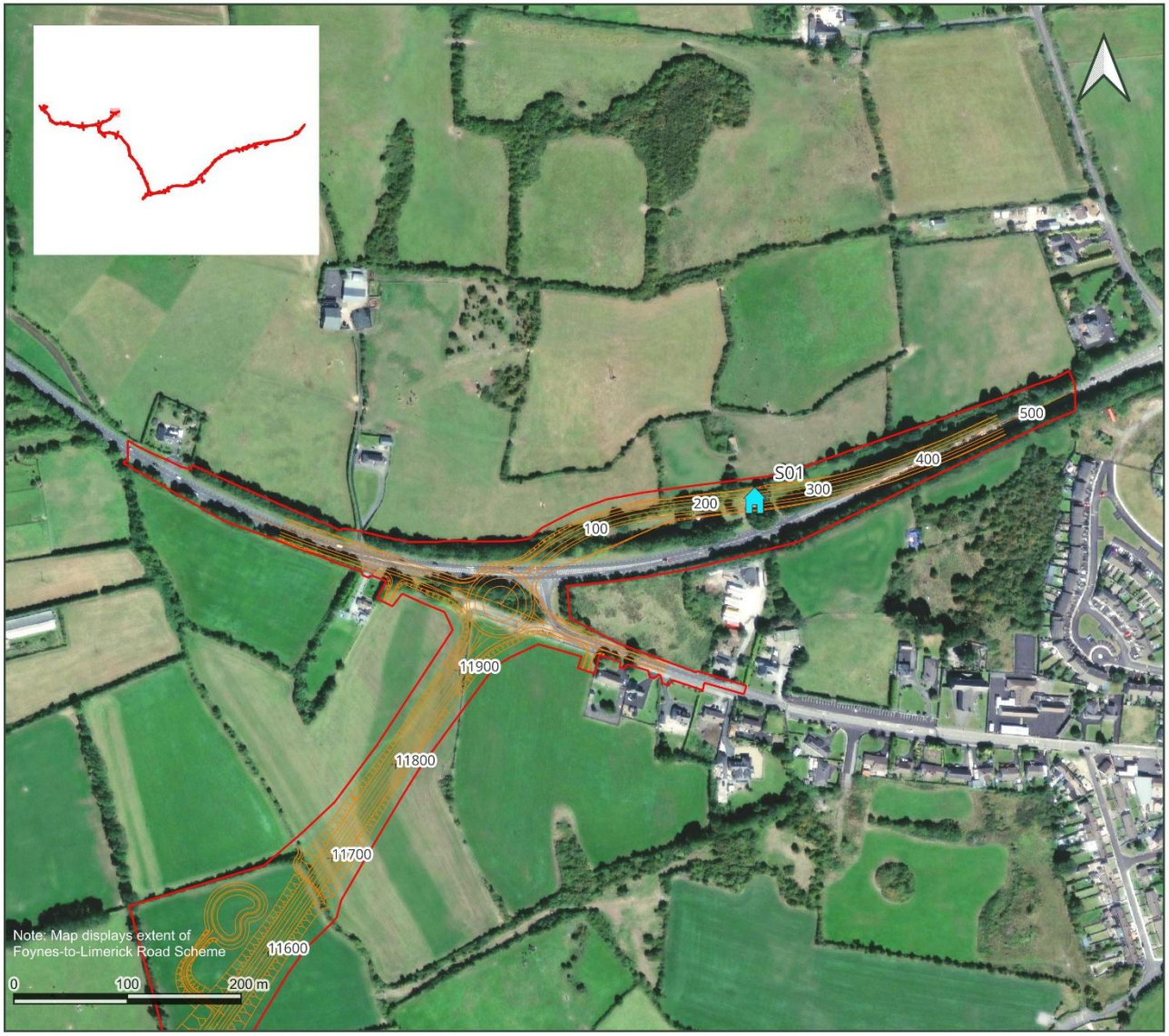

Figure 1
Bat Survey Methodology

Project:
Foynes to Limerick Road
(incl. Adare Bypass)

Prepared for:
National Parks and Wildlife Services

Colm Breslin BSc (Hons)
D: 28/08/2025

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Legend
- LMA
- Bat Structures
- Scheme Design

3 Results

The disused cottage is located within Section B of the proposed road corridor by Askeaton (see **Figure 1**) and is currently adjacent to the Askeaton Bypass (N69). The cottage is bounded by mature treelines consisting primarily of non-native Leyland Cypress which provides suitable light and noise buffers from the national road. The surrounding landscape is characterised by intensive pastoral farming and poor quality hedgerows, although localised areas of higher quality woodland, scrub and surface water features are present also. Askeaton town is located adjacent to the disused cottage and presents an abundance of roosting opportunities in the form of residential dwellings.

3.1 DESK STUDY

Surveys carried out as part of the original EIAR (Bat Eco Services, 2019) identified satellite roosting by two Soprano Pipistrelles returning to the roof of the disused cottage at dawn.

National Biodiversity Data Centre holds previous records of bat presence from within the 10km square (R35) in which the proposed site is located. These records are for the following six species:

- Common Pipistrelle (*Pipistrellus pipistrellus*).
- Soprano Pipistrelle (*Pipistrellus pygmaeus*).
- Leisler's Bat (*Nyctalus leisleri*).
- Daubenton's Bat (*Myotis daubentonii*).
- Natterer's Bat (*Myotis nattereri*).
- Brown Long-eared Bat (*Plecotus auritus*).

All bat species in an Irish context are of 'Least Concern' within Marnell et al. (2019). The most recent Article 17 report (NPWS, 2019) states the conservation status of all bat species are 'favourable', with the exception of Lesser Horseshoe Bat which is 'inadequate and declining' due to declines in Limerick and North Kerry populations specifically.

The overall bat suitability index value (45.22) according to 'Model of Bat Landscapes for Ireland' (Lundy et al., 2011) suggests the landscape in which the proposed site is located is of high suitability for bats in general. Species specific scores are provided in **Table 3.1**. Lesser Horseshoe Bat is assigned a score of '34' due to the presence of suitable landscape features and being located within their known range. The nearest available roost record within the NPWS database for this species is approximately 3.8km southeast of the disused cottage. Surveys undertaken by the NPWS between 1997 and 2014 revealed a maximum count of 50 individuals for that location.

Table 3.1 - Suitability of the study area for the bat species according to 'Model of Bat Landscapes for Ireland' (Lundy et al., 2011).

Common name	Scientific name	Suitability index
All bats		*45.22*
Soprano pipistrelle	*Pipistrellus pygmaeus*	47
Brown long-eared bat	*Plecotus auritus*	64
Common pipistrelle	*Pipistrellus pipistrellus*	51

Lesser horseshoe bat	*Rhinolophus hipposideros*	34
Leisler's bat	*Nyctalus leisleri*	53
Whiskered bat	*Myotis mystacinus*	31
Daubenton's bat	*Myotis daubentonii*	42
Nathusius pipistrelle	*Pipistrellus nathusii*	33
Natterer's bat	*Myotis nattererii*	52

Source: https://maps.biodiversityireland.ie/Map. Accessed 28/08/2025.

3.2 DAYTIME ASSESSMENT

The disused cottage is composed of two distinct sections that are connected through interior spaces. The main section (north) is composed of blockwork walls and synthetic tile roof with chimney. All windows have been boarded up but gaps are present. The roof presents multiple gaps through degraded mortar on ridge tiles, loose replaced synthetic slate, and gaps in the leadwork surrounding the chimney. The interior of the main section is composed of a ground floor and enclosed attic space with open access hatch. The ground floor and attic space were heavily cobwebbed throughout (see **Plate 3.5**). An inaccessible void is present between the tiles and underlay. No evidence of roosting bats was evident within the main section.

The adjoining section (south) is composed of timber construction with roofing composed of thin lead sheeting. This sheeting is peeling in multiple sections which provides clear access/egress (see **Plate 3.3**). The apex of this roof structure showed a clear open entryway approximately 30mm diameter also (see **Plate 3.2; 3.6**). The interior of the adjoining section was similarly heavily cobwebbed.

A small number of relatively fresh bat droppings were identified suspended near the apex in cobwebs near the previously described apex entryway. These droppings were collected and sent for DNA analysis with Surescreen Scientifics. Testing results confirmed these droppings were attributed to Soprano Pipistrelle (see **Appendix A**).

The initial internal inspection of both sections disturbed a large number of cobwebs. Repeat internal inspections following a period of approximately 3 weeks showed abundant cobweb reformation throughout, indicating a general lack of internal flight. Additionally, no new bat droppings were recorded on repeat inspection.

A lone-standing mobile home is located adjacent to the disused cottage (see **Plate 3.7; 3.8**). No evidence of bat roosting, historic or contemporary was associated with this structure.

Overall, the disused cottage (S01) is considered of 'high' suitability for roosting bats following Collins (2023) and was not accessible to Lesser Horseshoe Bat at the time of surveys.

Plate 3.1 View of disused cottage.

Plate 3.2 Close-up view of disused cottage, showing two distinct roofing styles. External view of access/egress near interior bat droppings shown in red arrow.

Plate 3.3 View of lead roofing of southern adjoining section.

Plate 3.4 Interior view of northern main section, showing enclosed attic space.

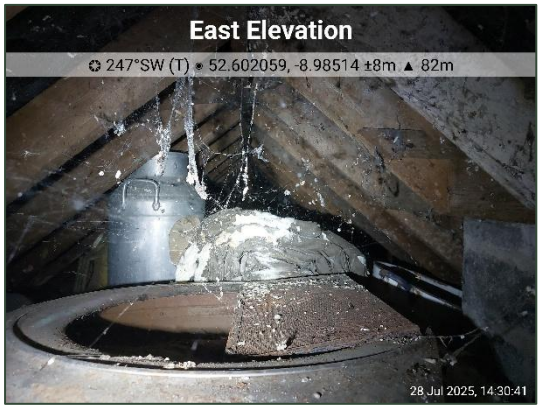

Plate 3.5 View of enclosed attic space within main section. Note heavy cobwebbing throughout.

Plate 3.6 Location of bat droppings (red circle) and access/egress point (red arrow) in roof apex of southern section.

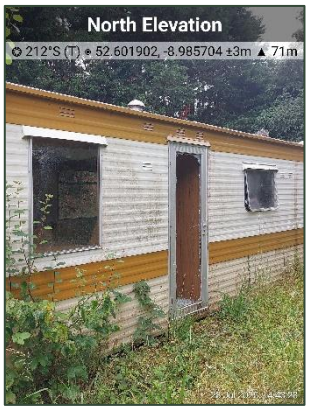

Plate 3.7 View of mobile home.

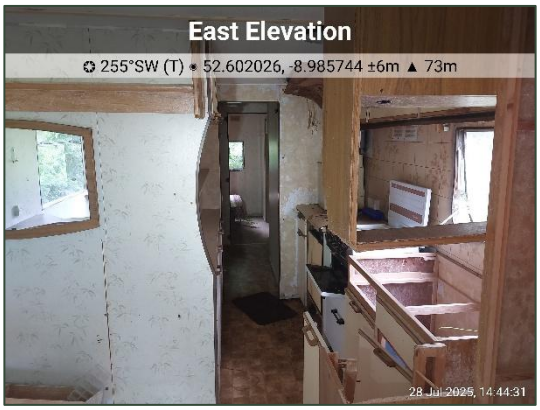

Plate 3.8 Interior view of mobile home.

3.3 PASSIVE MONITORING

A total of 81 registrations across three species were recorded on the detector placed internally proximal to the droppings and apex access/egress location. A portion of these registrations are considered to have occurred outside of the structure. No registrations were recorded during daylight hours.

The majority of registrations were attributed to Soprano Pipistrelle (see **Table 3.2** for full results). While most of these registrations comprised weak intensity calls, indicating they originated from bats outside the structure, a small portion were of higher intensity which indicates roosting by Soprano Pipistrelle within the structure. No higher intensity calls were recorded on the same nights as the emergence surveys.

Small numbers of Common Pipistrelle registrations were recorded also, but were of weak intensity, indicating they originated from outside the structure and thus roosting by this species is not confirmed.

Leisler's Bat were recorded on a small number of occasions. However, considering the strength of this species' echolocation pulses, and location of the detector facing towards the identified access/egress location, it is not considered that Leisler's Bat is roosting within the structure.

The Annex II species Lesser Horseshoe Bat was not recorded.

Table 3.2 – Passive monitoring results from interior detector.

Survey Date	Common Pipistrelle	Soprano Pipistrelle	Leisler's Bat	Grand Total
28/07/2025	1	5	0	6
29/07/2025	0	8	0	8
30/07/2025	0	15	0	15
31/07/2025	2	1	0	3
01/08/2025	0	0	0	0
02/08/2025	1	5	0	6
03/08/2025	0	1	0	1
05/08/2025	0	1	0	1
06/08/2025	0	2	0	2
07/08/2025	0	3	0	3
08/08/2025	1	1	0	2

09/08/2025	0	2	0	2
10/08/2025	0	1	2	3
11/08/2025	0	2	0	2
12/08/2025	0	3	1	4
13/08/2025	0	3	0	3
14/08/2025	0	2	3	5
15/08/2025	1	0	5	6
16/08/2025	0	2	1	3
17/08/2025	0	0	1	1
18/08/2025	0	2	2	4
19/08/2025	0	1	0	1
Grand Total	**6**	**60**	**15**	**81**

3.4 EMERGENCE SURVEYS

Emergence surveys were conducted on the disused residence on two occasions within the maternity season. Both survey nights were characterised by generally low levels of bat activity. No emergences were recorded on both survey nights.

The initial survey night on 28th July 2025 presented minimal bat activity. No emergences were recorded during this survey. The earliest registrations recorded on this night were attributed to Leisler's Bat approximately 15 minutes after sunset, followed by Soprano and Common Pipistrelles in small numbers approximately 30 minutes after sunset. Individuals were observed commuting east to west from offsite. Considering the density of structures within nearby Askeaton town to the east, it is considered that roosting occurs within the locality of the disused cottage. Of the recorded bat activity, this was not sustained throughout the survey night and declined sharply approximately 40 minutes after sunset. Individuals were observed largely commuting over the site from the east, or foraging locally for short periods before leaving shortly after.

No emergences were recorded on this night on the second survey on the 19th August 2025, but exhibited relatively higher levels of bat activity. Activity was similarly limited to Common Pipistrelle, Soprano Pipstrelle and Leisler's Bat. Early night commuting behaviour (approximately 20-30 minutes after sunset) was observed coming from offsite from the east and travelling west. Some foraging behaviour was observed from a few individuals but was not sustained beyond 60 minutes after sunset.

3.5 SUMMARY OF RESULTS

The structure proposed for demolition was previously identified as a satellite roost for small numbers of Soprano Pipistrelle (2 individuals) within the original EIAR (Bat Eco Services, 2019). Repeat surveys undertaken by O'Donnell Environmental in 2025 consisted of daytime assessments, DNA analysis, passive monitoring and emergence surveys. Considering all the results, roosting by small numbers of Soprano Pipistrelle was re-confirmed. Roosting within the disused cottage is characterised by occasional use by small numbers or individual bats. While the structure possesses suitability for maternity roosting, no evidence of such was identified. Lesser Horseshoe Bat was not recorded during the course of surveys.

4 Mitigation

Mitigation measures have been included in the EIAR (AECOM, 2019), Four Seasons Bat Report and previous Derogation Licence Application (Bat Eco Services 2019).

In relation to bats, these measures which will be delivered consist mainly of:

- Bat boxes and rocket boxes on trees to be retained or proximal to attenuation ponds and other suitable habitat.
- Bat roosts which will be incorporated into bridge structures during construction.
- Landscaping measures to protect and enhance landscape connectivity.

The measures for structures confirmed as bat roosts and with potential to support roosting bats are summarised as follows. See **Appendix B** for full details.

- Demolition plan for each structure to ensure safe removal of bats.
- Seasonal demolition restrictions.
- Provision of alternative roosting locations prior to demolition.
- Re-survey structures in advance of demolition.
- Slow dismantling of structures dependant on the structure type (e.g. structures with roofs, stone structures/ruins)
- Ongoing monitoring.

In relation to replacement roosts, bat boxes are proposed (as outlined in EIAR). All tree-mounted bat boxes have been installed throughout the entire 35km road scheme. An additional two bat boxes will be installed adjacent to the disused cottage specifically (see **Figure 2**). Rocket boxes will be installed adjacent to attenuation ponds once they have been constructed. Further bat boxes will be incorporated within bridge structures during the construction phase.

Plate 4.1 - Examples of Bat Boxes installed along the scheme.

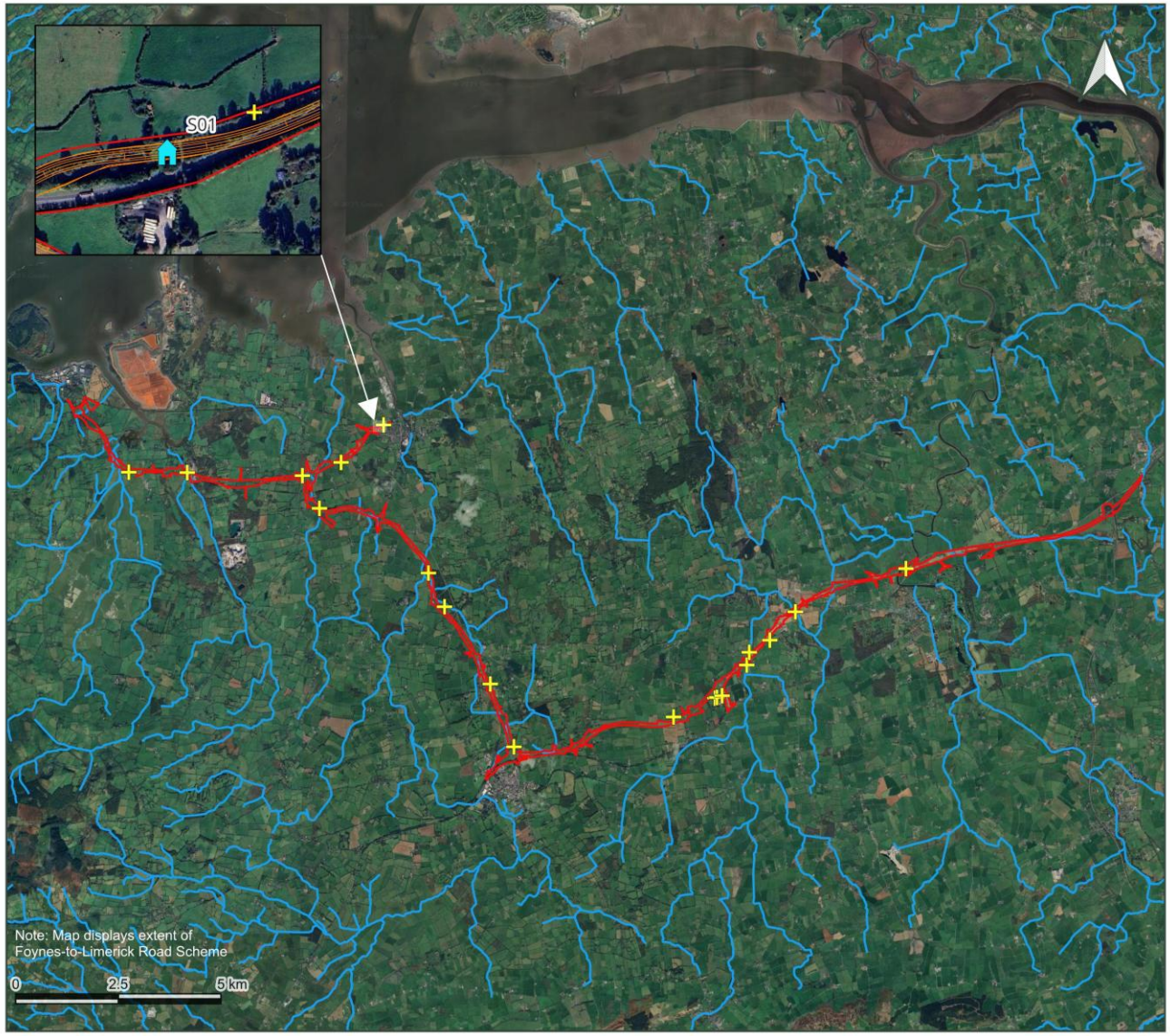

Figure 2
Bat Box Locations

Project:
Foynes to Limerick Road (incl. Adare Bypass)

Prepared for:
National Parks and Wildlife Services

Colm Breslin BSc (Hons)
D: 08/09/2025

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Legend
- LMA
- Scheme Design
- Bat Structures
- Bat Box Locations

5 Derogation Licence Application

Bespoke mitigation measures have been outlined in the EIAR (AECOM, 2019), the appended Four Season Bat Survey Report and Derogation Licence Application (Bat Eco Services, 2019). The measures outlined in **Appendix C** will be implemented on structures that have been confirmed as bat roosts or possess the potential for bat roosting.

A number of measures are already included in the design of the project which are intended to minimise disturbance impacts to bats, no additional measures are considered feasible in terms of further reducing the impact of the scheme on bat species locally. Please refer to **Section 4** above.

A derogation license is requested for the proposed works. Please see information below in regard to responses to the three tests which will be considered during the derogation license decision making process.

5.1 TEST 1 – REASON FOR DEROGATION

The reason for the current derogation is contained within Option 2(c) "*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*"

The discussed disused cottage is located within the bounds of the approved Foynes-to-Limerick road scheme and conflicts with the construction phase, thus requiring demolition and disturbance/loss of known bat roosts. As such, a derogation licence is required to facilitate demolition works. The previous derogation licence for relevant structures, which has since expired, is shown in **Appendix C** below. The disturbance/loss of known bat roosts cannot be avoided or mitigated entirely due to the conflict between structure placement and the road scheme design.

The approved road scheme comprises a significant national infrastructural development and is thus of considerable economic importance. The scheme is designed to facilitate efficient and effective transport links in the Munster region, improving connectivity between Foynes Port, Limerick and the surrounding areas. The project aims to improve the surrounding urban environments and increase road capacity, reducing journey times and improving safety for road users.

5.2 TEST 2 – ABSENCE OF ALTERNATIVE SOLUTIONS

Alternative solutions are considered below and detailed as to their suitability.

5.2.1 Alternative 1 – Do Nothing

Under a do-nothing scenario the approved Foynes-to-Limerick road scheme surrounding the cottage will not be constructed. This will result in the retention of the disused cottage and associated non-significant roost of Soprano Pipistrelle (maximum 2 individuals). While suitable in the short-term at least, the do-nothing scenario is not considered viable in the medium-long term. The absence of this portion of the road-scheme will result in adjacent sections of new roadway becoming non-viable due to lack of viable connection.

This solution was not considered suitable, and alternative options are required.

5.2.2 Alternative 2 – Redesign the Road Scheme

The second alternative considered was a redesign of the approved road scheme. This may take the form of circumnavigating the road around the cottage outside of the current redline boundary, or altering the road levels such that it "bridges" over the cottage. As discussed above, the development has already been granted approval and will require the project to go back to planning for this change, resulting in considerable delays to the overall development and may result in the loss of approved funding should the construction timeline fall outside predetermined timeframes. While outside the scope of such a report, there are likely to be considerations from a road safety perspective (sightlines etc.) with regard to any changes in road levels and angles that may render these alternative unsuitable. Additionally, alternative designs such as bridging over may result in the shielding of the disused cottage from sunlight and thus render the thermal profile of the structure sub-optimal for bat species.

This solution was not considered suitable, and alternative options are required.

5.2.3 Alternative 3 – Alternative Non-maternity Roosting Locations

The final alternative considered the planned demolition of the disused cottage as assessed within the original EIAR (AECOM, 2019) and appended bat survey report (Bat Eco Services, 2019). As discussed in mitigation measures outlined in **Section 4** above, the EIAR stipulated an extensive network of bat box installations throughout the road scheme in order to cater for the loss of non-maternity roosts contained within trees and structures (see **Figure 2**). This is considered sufficient mitigation given the nature of roosting observed within the disused cottage. An additional pair of bat boxes are proposed to be installed adjacent to the disused cottage in order to provide suitable alternative roosting locations for the small number of Soprano Pipistrelle identified within.

Alternative 3 was considered the most suitable option in this instance.

5.3 TEST 3 – IMPACT OF A DEROGATION ON CONSERVATION STATUS

Disturbance/loss of confirmed bat roosts cannot be avoided as the location of structures and the road scheme alignment conflict. No significant/maternity roosting was identified within any of the disused cottage, although periodic day roosting of small numbers/individuals of Soprano Pipistrelle were identified.

Soprano Pipistrelle within an Irish context are considered of 'Least Concern' (Marnell et al., 2019). The most recent Article 17 report (NPWS, 2019) states the conservation status of Soprano Pipistrelle are 'favourable'. The roosting observed within the disused cottage appears to be on an inconsistent/periodic basis by small numbers of a widespread and common species. Considering no individuals were recorded emerging from the disused cottage or observed within on both survey dates, the maximum number of two individuals originally recorded within the appended EIAR bat survey report (Bat Eco Services, 2019) is applied to this derogation on a precautionary basis.

The mitigation stipulated within the original EIAR for bat species is summarised in **Section 4** above and detailed in **Appendix B** below. The extensive bat box installation scheme already undertaken as part of the development, in addition to an extra pair of bat boxes to be installed adjacent to the disused cottage, are considered sufficient to effectively offset the loss of non-significant/maternity roosting as a result of the demolition of the disused cottage. Further bat boxes will be incorporated within bridge structured during the construction phase. The EIAR mitigation (**Appendix B**) additionally stipulates required steps within the demolition plan.

Lesser Horseshoe Bat was not recorded within the structure, or during the course of passive and active surveys. Curraghchase Wood SAC is the only SAC of relevance for Lesser Horseshoe Bat in proximity to the proposed structure demolitions, located approximately 6.4km east of the disused cottage. It is concluded that no roosting by Lesser Horseshoe Bat is present within the disused cottage, or significant landscape usage within the immediate environs and as such there will be no direct impacts on the SAC.

Considering the above, the proposed derogation is not considered to be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates (Soprano Pipistrelle in this instance) at a favourable conservation status in their natural range.

5.4 MONITORING

Measures in relation to monitoring and demolition are stipulated fully within the EIAR bat survey report (excerpt contained within **Appendix B**). The proposed demolition of the disused cottage will be immediately preceded by a dusk emergence survey. Following the confirmed egress, exclusion will take place in the form of one-way tubes and strong interior lighting as an additional deterrent for re-entry. Demolition works will be conducted slowly under the supervision of the named bat-licensed Ecologists. Two bat boxes will be additionally installed on an adjacent treeline (see **Figure 2**) prior to demolition as suitable alternative roosting location.

All bat boxes detailed within **Figure 2** will be subject to monitoring in subsequent years in order to detail species presence and degree of usage.

6 References

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Appendix A - DNA Analysis (S01)

Folio No:	3966-2025
Purchase Order:	202227
Contact:	O'DONNELL ENVIRONMENTAL LTD
Issue Date:	26.08.2025
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Biological Report

Technical Report

SureScreen Scientifics

Folio No: 3966-2025
Purchase Order: 202227
Contact: O'DONNELL ENVIRONMENTAL LTD
Issue Date: 26.08.2025
Received Date: 12.08.2025

SureScreen Scientifics

Biological Sample Analysis

Summary

Most biological materials (tissue, feces, hair, blood, etc.) contain small amounts of DNA from the organism of which it originated. Using molecular methods such as PCR (polymerase chain reaction) and DNA sequencing, SureScreen Scientifics are able to analyze an unknown sample to determine which species the sample originates from our methods are optimized for the detection of species including bats (over 92% of bat species worldwide can be identified including all 18 UK bat species), mammals; bees, wasps & hornets; birds; fish; plants (from roots, leaves, stem and even dried wood) and many more species.

Results

Lab ID	Site Name	OS Reference	Sample Type	Species Name	Match(%)
B5291	Askeaton - Ftl	52.60203, -8.98516	Bat Dropping	Soprano pipistrelle (Pipistrellus pygmaeus)	100.00

Genetic Sequence
TTTGGAACTGACTGGTTCCACTTATGATCGGAGCCCCCGACATGGCCTTTCCTCGTATAAATAATATGAGTTTCTGA
CTTCTGCCCCCTTCTTTTCTACTACTACTAGCCTCATCTATAGTGGAAGCGGGAGCGGGTACGGGCTGAACAGTCT
ATCCCCCTCTAGCAGGAAATCTAGCTCA

Matters affecting result: none
Reported by: Consuela Sopronyi

Approved by: Lauryn Jewkes

Folio No:	3966-2025
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SureScreen Scientifics

Methodology

Once samples have arrived in the laboratory, the DNA is isolated using a commercial DNA extraction kit. Using PCR, DNA (if present within the sample) is amplified using universal molecular markers designed to amplify a short fragment of the DNA of the target species group (i.e. mammal, fish, arthropod, reptile, plant etc.). If amplification is successful, the resulting DNA sequence is revealed using a process known as Sanger Sequencing in order to obtain the genetic sequence of the mitochondrial gene within the sample. The sequence results are aligned against a library of known reference sequences using bioinformatics software, which enables us to determine which species the DNA sequence from the sample matches with, informing the species identity and sequence similarity (match %).

If the initial analysis is unsuccessful, the entire process is repeated up to two additional times with a fresh reserve sample (if available) in order to obtain a species identification. If no DNA is detected after three attempts, then we can be confident that any further analysis of the sample will likely also fail to result in species identification.

Interpretation of Results

Sample Type:

The sample you send to us can come from a variety of sources. Fecal, dropping, urine, hair, blood, carcass (skin, flesh, bone), gamete, plant matter or unknown biological material all contain DNA that we can test for in order to identify the species of origin.

Genetic Sequence:

The unique DNA sequence obtained from the sample.

Match (%):

How closely matched the DNA sequence from your sample is to the sequences within our reference database. This can be interpreted as a score of result accuracy, with the maximum score of 100% indicating an exact match of the sample to the indicated species' reference sequence. Lower scores (80-99%) indicate some variation between the sample and reference sequence, likely due to natural variation between individual genetic sequences and/or systematic variations generated through the sequencing process. Scores below 80% similarity should be interpreted with care and can indicate part degraded or part contaminated samples.

Inconclusive Result:

Degraded sample:

DNA is degraded and we are unable to determine species identification due to degradation of sample DNA. This can happen either before sample collection (old samples, exposure to UV etc.) or after sample collection if stored for long periods before analysis or not handled correctly.

Inhibited/contaminated sample:

We are unable to determine species identity due to contamination or the suspected presence of large quantities of PCR inhibitors. Contamination sources can originate from other species which could have come into contact with the samples, or human contamination during sample collection.

Alternative Result:

Sometimes, for targets such as bat dropping analysis, other mammalian species such as rodents are detected. We find this to be a common occurrence as some bat droppings can be similar in appearance to rodent droppings. Although sometimes unexpected, repeat analyses in these cases would likely return the same results.

Appendix B - EIAR Bat Mitigation Measures

4. Bat Mitigation Measures

This Section details the mitigation measures that have been prescribed for the construction phase of the proposed development in section 4.1, with respect to buildings / structures that have been identified as known / potential bat roosts. Mitigation in the form of alternative roosting sites are outlined in section 4.2.

4.1 Building / Structure Surveys

For each of the buildings / structures identified above as known / potential bat roosts, the Contractor shall prepare a demolition plan to ensure the safe removal of bats, with following considered:

- Undertake demolition works outside the main summer season (avoid May to August) and avoid cold winter months (December and January);
- Provide alternative roosting sites prior to demolition within areas of the proposed development which will not be impacted by construction. The type of alternative roosts depends on the roost types recorded. The roosts types recorded were satellite or nights roosts. Alternative roosts include the erection of double-chamber rocket bat boxes (free standing structures) at numerous locations along the length of the proposed road development. Bat tubes will also be installed as part of culvert and bridges proposed as part of the development. One rocket bat box per structure to be removed, is recommended and is listed in Table 2.
- Re-survey structures / buildings in question prior to demolition to determine if bats are present. Undertake a dusk and dawn survey and internal inspection of the structure as deemed appropriate by the bat specialist.
- The demolition plan will involve a series of steps in order to reduce the suitability of the structure as a roost site (i.e. partial removal of roof, clearance of vegetation, dismantling of sections (by hand) and supervision by a bat specialist).

In consultation with the demolition contractor, a slow dismantling of structures will be undertaken. The dismantling will change the internal environment of the areas where bats have been found roosting by changing the internal temperature and increasing light level.

General scope of a demolition plan would include the following:

A) Buildings with roofs:
   - Prior to demolishment, undertake dusk / dawn surveys to determine if the buildings are being used by bats.
   - During the daytime, remove sections of the roof structures to increase lighting and reduce temperatures within and adjacent to buildings used by roosting bats. The ridge tiles and a selection of main roof tiles / slates will be removed in the presence of a bat specialist and removal will be undertaken by hand (with each tile / slate checked for clinging bats).
   - The building / structure is left open overnight.
   - Undertake dusk / dawn surveys to determine if the buildings are being used by bats.
   - Examination of internal spaces to ensure that no bats are present during demolition the following day.
   - Removal of remaining sections, in the presence of a bat specialist.

B) Stone structures / ruins

- Undertake dusk / dawn surveys to determine if the buildings are being used by bats.
- Examine the stonework crevices with an endoscope to determine if bats are present. Crevices found to have bats present should be marked as shown in Plates 2a and b.
- Each crevice that is deemed empty should be blocked up with bubble wrap to prevent bat entering until the structure is to be demolished. Alternatively, once sections of the structure are deemed bat free, wrap in hessian material (see Plates 5a and b) to prevent bats from roosting in the walls post-inspection.
- Once the ruin is deemed bat free, remove in the presence of a bat specialist.

Plates 5a, b Crevices containing bats circled in water-based red paint

Plates 6a, b Example of hessian material curtains for sealing bridge arches

C) Farm Buildings (i.e. corrugated iron barns)

Note: This refers to the farm buildings i.e. Building No. 8 in Table 1, which is a large corrugated barn with timber partitions (including insulation) and roof insulation where *Pipistrellus* droppings were recorded. The following steps are recommended for this type of structure:

- Undertake dusk / dawn surveys to determine if the buildings are being used by bats.
- Remove the timber and insulation partitions by hand in the presence of a bat specialist.
- Check any potential crevices with an endoscope.
- Remove sections of the corrugated sheets to change the internal temperature of the building and leave overnight.
- Undertake a Dawn survey and if deemed bat free, remove the remaining structure.

4.2 Alternative Roosting Sites

Table 2, below, provides a list of compensatory bat roosting sites which have been included in the mitigation measures for the proposed road development. Those which are in the vicinity (i.e. within 1km) of the above-stated structures to be demolished) are highlighted in green.

Note: The location of alternative roosts is limited to lands within the proposed road development.

Table 2 **Alternative roosting sites recommended in mitigation measures for proposed road development. Sites highlighted in green shall be located within 1km of the buildings / structures containing known / potential bat roosts to be demolished (i.e. Structures 1, 7, 8 and 9).**

Chainage	Roost type	Description
2+150	Two no. bat tubes	Tubes to be installed in culvert, FRC2
2+200	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
3+400	Two no. bat tubes	Tubes to be installed in mammal and bat underpass, MU 3.4
3+900	Two no. bat tubes	Tubes to be installed in mammal and bat underpass, MU 3.9
4+450	Two no. bat tubes	Tubes to be installed in river bridge, FRC5
4+600	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
5+000	Two no. bat tubes	Tubes to be installed in mammal and bat underpass, MU 5.0
7+170	Two no. bat tubes	Tubes to be installed in culvert, FRC6
7+250	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
10+150	Two no. bat tubes	Tubes to be installed in culvert, FRC7
10+300	Four no. bat tubes	Tubes to be installed in bridge, FRC8
10+900	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
10+950	Two no. bat tubes	Tubes to be installed in bridge, FRC9
11+300	Four no. bat tubes	Tubes to be installed in bridge, RB01

20+400	Two no. bat tubes	Tubes to be installed in mammal and bat passage, MU 20.4
20+850	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
20+970	Two no. bat tubes	Tubes to be installed in culvert, FRC11
22+950	One no. rocket bat box	Box to be installed on suitable mature tree in woodland
24+050	Four no. bat tubes	Tubes to be installed in bridge, RVB01
24+350	Two no. bat tubes	Tubes to be installed in culvert, FRC14
24+500	Two no. bat tubes	Tubes to be installed in culvert, FRC15
24+800	One no. rocket bat box	Box to be installed on suitable mature tree in woodland
24+950	Two no. bat tubes	Tubes to be installed in bridge, FRC16
25+050	One no. rocket bat box	Box to be installed on suitable mature tree in woodland
25+700	Two no. bat tubes	Tubes to be installed in farm underpass, UP06
26+150	Two no. bat tubes	Tubes to be installed in farm underpass, UP07
26+300	Two no. bat tubes	Tubes to be installed in culvert, FRC24
26+750	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
27+000	Two no. bat tubes	Tubes to be installed in bridge, UB04
28+200	Two no. bat tubes	Tubes to be installed in bridge, FRC26
28+400	Two no. rocket bat boxes	Box to be installed in vicinity of proposed attenuation pond
29+150	Two no. bat tubes	Tubes to be installed in farm underpass, UP09
50+750	Two no. bat tubes	Tubes to be installed in bridge, M21-C1
51+050	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
51+300	Two no. bat tubes	Tubes to be installed in mammal and bat underpass, MU 51.3
51+850	Two no. bat tubes	Tubes to be installed in farm underpass, UP10
52+150	Two no. bat tubes	Tubes to be installed in farm underpass, UP11
53+745	Two no. bat tubes	Tubes to be installed in mammal and bat underpass, MU 53.7
53+800	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
54+300	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
56+575	Two no. bat tubes	Tubes to be installed in bridge, M21-C3
57+350	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
58+000	Two no. bat tubes	Tubes to be installed in bridge, RB02
58+175	Two no. bat tubes	Tubes to be installed in bridge, RVB02

58+200	One no. rocket bat box	Box to be installed in vicinity of proposed attenuation pond
59+250	Two no. bat tubes	Tubes to be installed in bridge, RVB03
60+950	Two no. bat tubes	Tubes to be installed in bridge, RVB04
61+250	Three no. rocket bat boxes	Boxes to be installed on suitable mature trees in vicinity of proposed attenuation pond
61+250	Two no. bat tubes	Tubes to be installed in bridge, RB03
62+500	One no. bat box	Box to be installed in vicinity of proposed attenuation pond

4.3 Monitoring

Implementation of the mitigation measures will be monitored by a competent, qualified and experienced ecologist at intervals during the initial years of operation of the development to ensure successful implementation.

All data should be submitted to Bat Conservation Ireland for their bat database.

Appendix C - Previous Derogation Licence

An Roinn Cultúir,
Oidhreachta agus Gaeltachta
Department of Culture,
Heritage and the Gaeltacht

Licence No.: DER/BAT 2019 – 128

EUROPEAN COMMUNITIES (BIRDS AND NATURAL HABITATS) REGULATIONS, 2011 (S.I. No 477 of 2011)

DEROGATION LICENCE

Granted under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011, hereinafter referred to as "the Habitats Regulations".

Licence

The Minister for Arts, Heritage and the Gaeltacht, in exercise of the powers conferred on her by Regulation 54 of the Habitats Regulations hereby grants to **Roughan & O'Donovan, Consulting Engineers, Arena House, Arena Road, Sandyford, Dublin 18**, supervised by **Dr Tina Aughney, Bat Eco Services, Ulex House, Drumheel, Lisduff, Virginia, Co. Cavan. A82 XW62** or another suitably qualified agent, a licence in respect of the following **bat species**:

- **common pipistrelle** — ***Pipistrellus pipistrellus***
- **soprano pipistrelle** — ***Pipistrellus pygmaeus***

. This licence authorises the following:

(a) roost disturbance;

(b) damage or destruction of breeding sites or resting places;

("the authorised action(s)").

This licence is subject to the terms and conditions set out overleaf.

National Parks & Wildlife Services
LICENCE

Terms and Conditions

1. This licence is granted solely to allow the activities specified in connection with **Foynes to Limerick Road (including Adare Bypass)**, for **Roughan & O'Donovan**.

2. All activities authorised by this licence, and all equipment used in connection herewith, shall be carried out, constructed and maintained (as the case may be) so as to avoid unnecessary injury or distress to any species of **BAT**.

3. This licence may be modified or revoked, for stated reasons, at any time.

4. The mitigation measures outlined in the application report (**2019 NPWS Derogation Licence Application, Dr Tina Aughney, Bat Eco Services, 4. Bat Mitigation Measures**), together with any changes or clarification agreed in correspondence between NPWS and the agent or applicant, are to be fully and strictly carried out. Strict adherence must be paid to all the proposed measures in the application.

5. All sites must be surveyed immediately prior to demolition.

6. Demolition works should happen outside the main summer season, avoiding May to August and cold winter months (December and January).

7. The works will be supervised by a licensed bat specialist **agent.**

8. This licence shall be produced for inspection on a request being made on that behalf by a member of An Garda Síochána or an authorised NPWS officer appointed under Regulation 4 of the Habitats Regulations.

9. The local National Parks and Wildlife Service District Conservation Officer **Stefan Jones** **stefan.jones@chg.gov.ie**, **0761-002649** or **086-8074628** should be contacted prior to the commencement of any activity, and if bats are detected on site during the course of the work, under the terms of this licence.

10. A report shall be submitted to Wildlife Licensing Unit, National Parks and Wildlife Service Department of Culture, Heritage and the Gaeltacht, R. 2.03, 90 North King Street, Smithfield, Dublin 7, D07 N7CV on completion of the actions which this licence authorises, describing the activities carried out in pursuance of this licence.

Gerry Leckey
(a person authorised by the Minister to sign on her behalf)

18/11/2019

Wildlife Licensing Unit
National Parks and Wildlife Service
Department of Culture, Heritage and the Gaeltacht
R. 2.03
90 North King Street
Smithfield
Dublin 7
D07 N7CV

National Parks & Wildlife Services
LICENCE

NOTES (1 to 2).

- This licence is granted for the period specified and subject to compliance with the conditions specified. Anything done other than in accordance with the terms of this licence may constitute an offence.

- This licence applies to **bats** and to no other species.

O'DONNELL ENVIRONMENTAL

info@odonnellenviro.ie