APPLICATION FOR DEROGATION LICENCE TO CONDUCT REPAIR WORKS TO ASHROE BRIDGE, CO. LIMERICK.

SUPPORTING INFORMATION

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1. INTRODUCTION

The objective of the proposed repair works at Ashroe Bridge is to maintain the structure in sound structural condition and fit for purpose ie to allow traffic to travel safely over the structure. The proposed work is being conducted as part of Limerick County Council's annual bridge maintenance program. Punch Consulting Engineers, Limerick are designing and supervising the project. The works will be conducted by Cumnor Construction, Blarney, Co. Cork.

Ashroe Bridge was surveyed for bats on 7th May 2025. Approximately 15 Daubenton's bats *Myotis daubentonii* were recorded in a crevice under the southern arch. This number of bats would indicate that this is a maternity roost of bats.

Dr Caroline Shiel has over 30 years' experience of bat surveys for academic and commercial purposes. She has a PhD in "*Diet, foraging and activity at the roosts of Leisler's bat*", awarded by NUI Galway. She is a founding member of Bat Conservation Ireland and is currently a director and vice-chair of the organisation. She is also a member of the Heritage Council's panel of bat experts.
She regularly carries out bat surveys throughout Ireland, particularly of masonry bridges and heritage buildings. She holds a three-year bat specialist's licence (Sections 22 & 23) from National Parks and Wildlife Service.
This application is prepared by Caroline Shiel Caroline Shiel will be the supervising ecologist on site for the duration of the works.

2. BACKGROUND

Ashroe Bridge (Grid reference: 52.684187, -8.4.7550) is a 3 span masonry arch structure carrying the L1123 local road over the River Clare in Co. Limerick. Ashroe Bridge is located 3 km south of Newport in Co. Limerick. The River Annagh flows in a south-westerly direction under the bridge.

The bridge is owned by Limerick County County Council.

3. DETAILS OF PROPOSED ACTIVITY

Ashroe Bridge requires substantial repair works including repointing of arch barrels and bridge walls. Daubenton's bats have been recorded roosting in a crevice under the southernmost arch. This crevice has been marked for retention, as well as additional suitable crevices.

Immediately prior to re-pointing works commencing in mid-September, the bridge will be resurveyed to record the roosting positions of any remaining bats. Re-pointing works will be supervised on site by Caroline Shiel to ensure that no grout enters the marked crevices.

Works proposed for Ashroe bridge

Proposed works include –
Removal of vegetation
Re-pointing and stone replacement to all elements of the bridge structure,

Repair existing anti-scour concrete skirts to the base of both cutwaters,
Repair of bases to all stonework to bases of abutments and piers,
Install a concrete saddle to southernmost arch (Arch 1) to enhance its structural integrity.
Stitching of the voussoir stones and the arch barrel (downstream elevation)
Repair of adjoining training wall to Arch 1 (downstream).

Elements of the proposed works that may affect bats are highlighted in red.

4. ECOLOGICAL SURVEYS

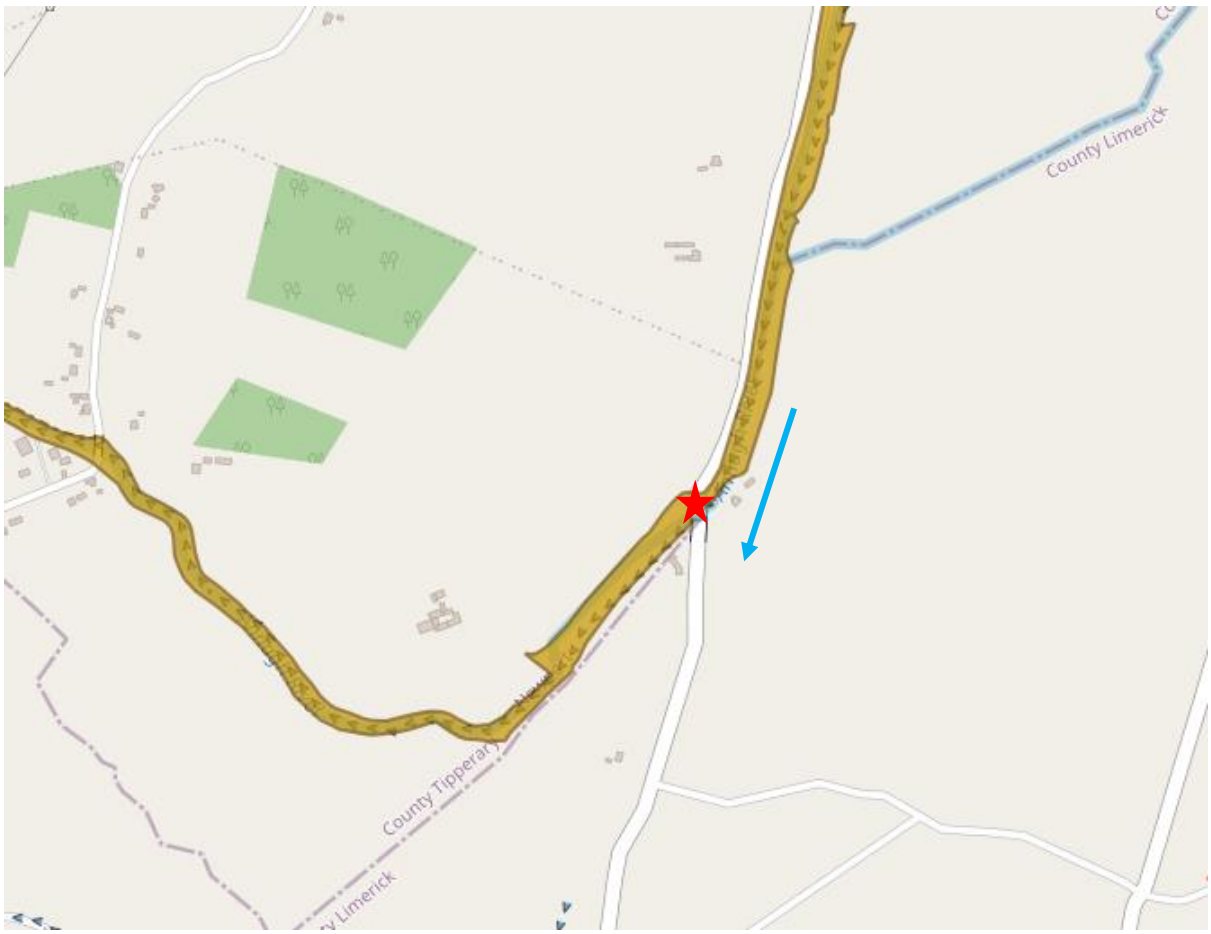

Figure 1 – location of Ashroe Bridge (red star) spanning River Annagh – a component river of Lower River Shannon SAC (brown shading)

Ashroe Bridge was surveyed for bats on 7th May 2025. A maternity colony of Daubenton's bats were recorded in the southernmost arch.

Southernmost arch = Arch 1 A total of 6 crevices were clearly marked with red paint for retention for bats, including the crevice containing the maternity roost of bats. One crevice was marked for retention under the centre arch (Arch 2) and four crevices under the northern arch (Arch 3).

On the date of the survey Arch 3 was practically dry and has a bank of silt underneath the arch.

The bridge spans the River Annagh which is a component river of Lower River Shannon SAC.

Figure 2 – showing Ashroe Bridge located in an area of mainly improved agricultural grassland

Bat surveys were conducted by wading into the river beneath each of the arches and examining the undersurface of the arches using a powerful torch. Bats were readily seen in the crevices using this methodology. It was not possible to examine the walls of the bridge due to the height of the structure.

Immediately prior to re-pointing works commencing in mid-September, the bridge will be resurveyed to record the roosting positions of any remaining bats. By mid -September, the maternity colony will have broken up but a few bats may remain roosting in the structure. Thermal scopes will be trained on both upstream and downstream elevations of Ashroe Bridge to enhance the accuracy of the pre-construction survey (Guide 19 and Guide 612).

Daubenton's bats are widespread in the area and the species has been recorded foraging on this watercourse.

Daubenton's bat is widespread throughout Ireland. Its conservation status in Ireland is of "Least Concern" (Marnell, 2019). There is no evidence of a decline in Ireland over the last 20 years (Bat Conservation Ireland data).

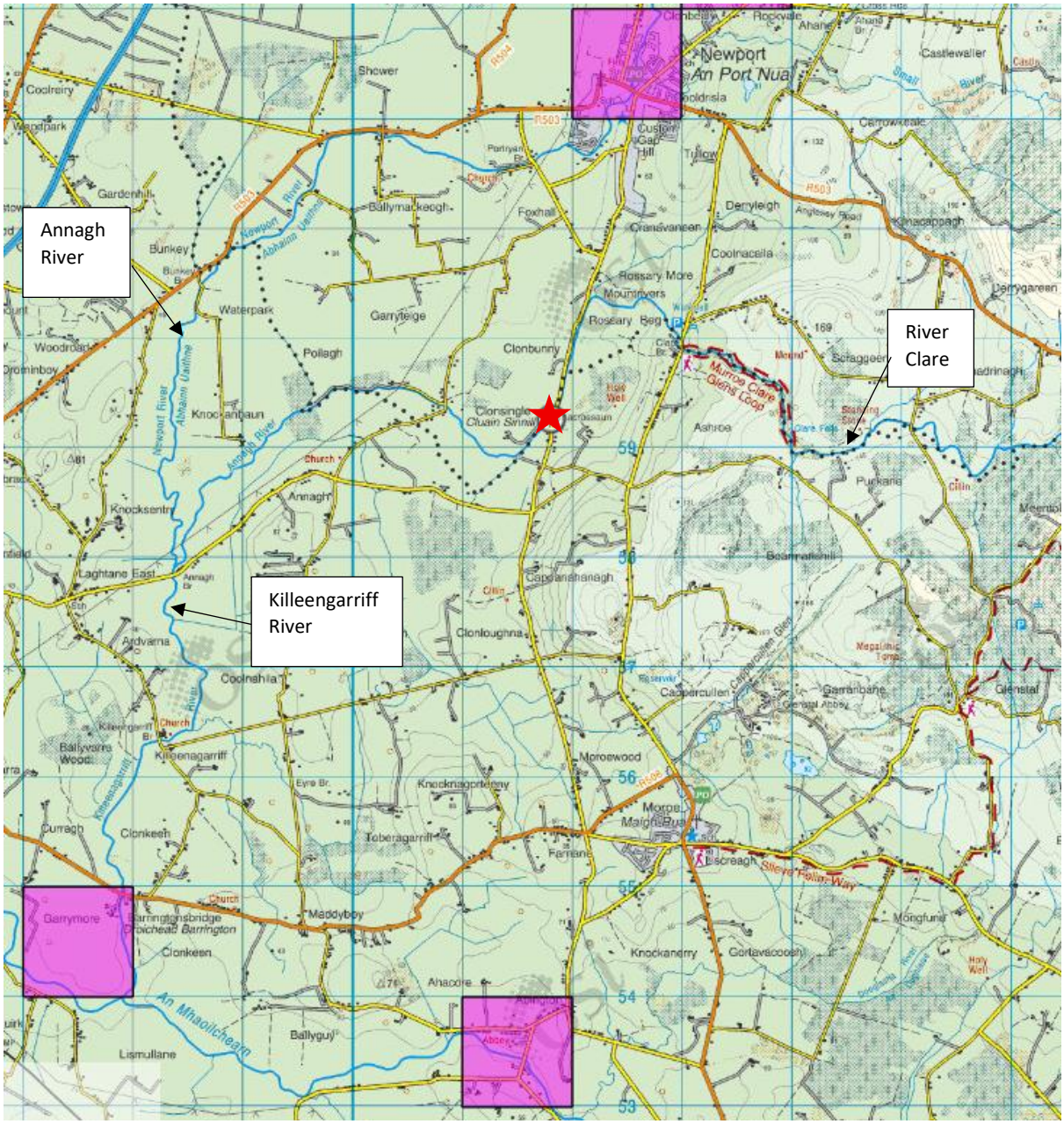

Figure 2 – showing numerous records of Daubenton's bat from along the River Annagh at Newport and Killeengarriff River (NBDC maps). Ashroe Bridge is indicated with a red star.

Photo 1 – view over Ashroe Bridge looking south

Photo 2 – watercourse upstream of bridge with floating river vegetation

Photo 3 – upstream elevation of Ashroe Bridge

Photo 4 – view under southernmost arch showing circumferential crack running around the arch barrel and the position of the nursery colony of Daubenton's bats in a void under the arch

Photo 5 – close up of void used by maternity roost under southern arch

Photo 6 – crevices marked for retention for bats under southern arch (Arch 1)

Photo 7 – crevices marked for retention under Arch 3

Photo 8 – crevices marked for retention under Arch 3

Photo 9 – access point to bridge to north of bridge

5. DEROGATION TESTS

Test 1 – Reason for the Derogation

This derogation licence application is being made under Regulation 54(2)(a-e) of the European communities (Birds and Natural Habitats) Regulations –

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

Ashroe Bridge requires significant repair works to ensure its ongoing safety for road users. It will be necessary to fit a saddle over Arch 1 to strengthen this arch. There is a deep circumferential crack running around the arch barrel approx 2m in from the downstream face. Arches and abutments require repointing to strengthen the stonework and prevent water leaking through the stonework. This repointing work can be conducted while also retaining crevices for bats to continue roosting in the structure. All crevices used by bats have been clearly marked for retention with red paint.

Test 2 – Absence of Alternative Solutions

The "Do Nothing" option is unsatisfactory because the structural integrity of the stonework of the bridge will deteriorate further until the structure becomes unsafe and the road will have to be closed. Ashroe Bridge is at least 200 years old. Routine maintenance works will be required in the future.

Alternative Solution – place Schwegler bat boxes on bridge.

It is always preferable to attempt to retain some of the original crevices being used by bats than simply fitting a bat box to the bridge structure after the works have been completed and all crevices sealed.

To date, no bat box has been confirmed to recreate the same thermal capacity, conductivity and microclimate conditions that would be found inside a bridge crevice. Bat boxes are useful in their own right but should not be seen as replacements for a lost bridge roost (Bat Workers Manual 2004). Bat boxes are also highly susceptible to human disturbance which if vandalised can have catastrophic consequences for the roosting bats.

A range of different Schwegler bat box models have been trialled at various around the country. It has been found that Daubenton's bats do not readily take to bat boxes. Most boxes placed on bridge walls were taken up by pipistrelle bats, not the target species - Daubenton's bats. Trials are ongoing on various models of bat box that ate designed to be placed under bridge arches.

There is no suitable alternative. The repair works are necessary to maintain the safety of the bridge.

Test 3 Impact of Derogation on Conservation Status

The proposed works will have no impact on the Conservation status of Daubenton's bat. Once the repointing works are completed the bats will be able to continue roosting in the retained crevices in Ashroe Bridge.

I have supervised similar works at Lacklea Bridge in Co. Donegal and Duncannon Bridge in Co. Cork where maternity colonies of Daubentons bats returned to the bridges the year following the works. Works were conducted under derogation licences.

The proposed repair works to Ashroe Bridge will not be detrimental to the maintenance of populations of this species at a favourable conservation status in their natural range as required under Section 54 (2) of the European Communities (Birds and Natural Habitats) Regulations.

6. MONITORING THE IMPACTS OF THE DEROGATION

All repointing works will be carried out under direct on-site supervision by ecologist Caroline Shiel. Ashroe Bridge will be resurveyed for bats in April/ May 2026 to ensure that the maternity colony has returned to roost in the structure. A completion report will be sent to NPWS, along with the derogation licence return.