

**APPLICATION FOR DEROGATION LICENCE TO CONDUCT REPAIR WORKS
TO BARNAGH TUNNEL, CO. LIMERICK.**

SUPPORTING INFORMATION

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1. INTRODUCTION

The objective of the proposed repair works at Barnagh Tunnel is to maintain the structure in sound structural condition and fit for purpose ie to allow pedestrians and cyclists to pass safely through the structure. Punch Consulting Engineers, Limerick are designing and supervising the project. The works will be conducted by Cumnor Construction, Blarney, Co. Cork.

Barnagh Tunnel was surveyed for bats on 1st July 2025. A single Brown long-eared bat was recorded emerging from a crevice on the northern wall of the tunnel. Approximately 10 Common pipistrelles were recorded flying through the tunnel to commute to foraging areas.

The Brown long-eared 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).

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

Barnagh Tunnel (Grid reference: 52.419137, -9.1336191) is a 110m long former railway tunnel spanning a section of the Limerick Greenway.

The tunnel is owned by Limerick County Council.

3. DETAILS OF PROPOSED ACTIVITY

Barnagh Tunnel requires substantial repair works including repair and repointing of stonework of the arch and walls. A single Brown long-eared bat was recorded emerging from a crevice on the northern wall of the tunnel approximately 10m in from the western entrance.

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

Works proposed for Barnagh Tunnel

Proposed works include –

Repointing and stone replacement to all elements of the tunnel structure

Stitching of cracks to arch barrel

Elements of the proposed works that may affect bats are highlighted in red. See attached engineering report for further details.

4. ECOLOGICAL SURVEYS

See Attached report *Barnagh Tunnel July 2025*

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

Barnagh Tunnel requires significant repair works to ensure its ongoing safety for pedestrians and cyclists using the Limerick Greenway.

The stonework of the tunnel requires 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 will be clearly marked for retention with red paint. It was not possible to mark crevices on the date of the survey due to the presence of a heavy duty wire mesh suspended from the sides of the tunnel.

Test 2 – Absence of Alternative Solutions

The “Do Nothing” option is unsatisfactory because the structural integrity of the stonework of the tunnel will deteriorate further until the structure becomes unsafe and the greenway will have to be closed. Barnagh Tunnel 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 is recommended that 10 Schwegler wall-mounted bat shelters are mounted along the length of the tunnel.

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

Test 3 Impact of Derogation on Conservation Status

The proposed works will have no impact on the Conservation status of Brown long-eared bat. Once the repointing works are completed the bat will be able to continue roosting in the retained crevices in Barnagh Tunnel.

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

The proposed repair works to Barnagh Tunnel 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. Barnagh Tunnel will be resurveyed for bats in April/ May 2026 to ensure that the bat has returned to roost in the structure. A completion report will be sent to NPWS, along with the derogation licence return.