

# Fumbling in the dark

## Effectiveness of bat mitigation measures on roads

Roads have the potential to impact on bat populations negatively by acting as barriers, reducing habitat suitability near roads, and inducing increased mortality rates due to collisions with road traffic. The requirement for mitigation strategies for bats is therefore essential when upgrading or/and expanding infrastructures, particularly as all bat species are protected by the European Habitats Directive. A wide range of measures has been employed by the European road authorities to mitigate or compensate for the negative impacts of roads on bat populations, but only few of the measures that are constructed have been adequately tested.

It is for this reason that the Conference of European Directors of Roads has commissioned a consortium consisting of Aarhus University, University of the Basque Country, Flagermus Forskning og Rådgivning, Grontmij A/S & Jasja Dekker Dierecologie, to identify appropriately efficient and cost-effective mitigation measures for bats.

### What we will do

The project will run from 2014-2016. In that time, we will:

- Identify mitigating measures used across Europe where bats are a target species and their maintenance procedures, cost and risks.
- Evaluate the effectiveness of mitigation measures for bats, of multi-species fauna passages, and of multi-functions passages.
- Evaluate of the effectiveness of other road technical structures which might improve structures functionality as passages for bats.
- Identify and evaluate of the effectiveness of measures to reduce fragmentation effects and compensate for habitat degradation in relation to road infrastructures, e.g. bat boxes.



Additionally, an experimental field study to examine the effectiveness of hop-over sections at roads will be performed, and important themes for further research on bats and roads will be identified.

### **We need your help**

To collect the most up-to-date information on bat mitigation measures and other potential beneficial technical road structures that have been constructed on roads across Europe, maintenance procedures, and references on studies on bats' use of mitigating measures, we need your help. There is much experience with mitigation measures across Europe, but often there is little time to write up those experiences. To allow stakeholders to share those experiences, we will hold a questionnaire survey.

The questionnaire will be distributed to National Road Authorities and relevant researchers, consultants and organisations, e.g. members of the Infra Eco Network Europe (IENE), national representatives, experts in the Advisory committee of EUROBATS, and members of BatLife-Europe.

**If you are involved in mitigation measures for bats or even have written up your work, in a paper, report or article, please approach one of the members of the project consortium.**

### **Dissimination of results**

The project will result in a state of the art guideline for bat mitigations in Europe for end-users, such as national road authorities, nature agencies, and infrastructure developers.

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Commissioned by

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