

# Non-ASPAs animal use: Project proposal Form

*Guidance for users - delete this box*

This template is intended to help you develop a form for non-ASPAs project review that will meet the needs of your establishment, its culture and the people and bodies working within it. **This form can be used by AWERBs, subgroups, research integrity bodies, or any other committee reviewing non-ASPAs animal use.** Please edit it as necessary. Feedback and examples of any (blank) forms you develop would be very welcome at [animalsinscience@rspca.org.uk](mailto:animalsinscience@rspca.org.uk)

## Background

The University of Mercia has a local Animal Welfare and Ethical Review Body (AWERB) which is a requirement for all establishments that use animals in research regulated by the Animals (Scientific Procedures) Act 1986 (ASPAs). The AWERB reviews all projects involving animals, from a local perspective to ensure that animal use is carefully considered and justified, and that the 3Rs, replacement, reduction and refinement, are fully implemented.

The AWERB's Non-ASPAs Subcommittee also reviews and makes decisions on any proposal for research involving animals that is not regulated by the ASPAs. In such cases, the AWERB will need to satisfy itself that such projects are ethically acceptable to the University, that all relevant regulations are complied with, and that all potential harms to animals are reduced to a minimum.

This form is designed to help you identify and minimise any ethical and/or welfare issues associated with your project involving animals. Even if your work is not regulated by the ASPAs, our Culture of Care applies to all animal-related activities.

Our aim is to support you in creating a project that is both scientifically valuable and ethically sound. We believe every animal has intrinsic worth, and we are committed to avoiding harms, and improving welfare, within all our animal use.

Please be open and transparent in your answers. Think of this as a conversation to ensure your project aligns with our shared ethical principles. If you have any questions, don't hesitate to reach out. We are here to help.

# 1. Project overview

Project title: <a href="#">Helping badgers cross the road: How habitat loss due to road building affects local wildlife families</a>	
Applicant name(s), role(s) and qualifications:	
<a href="#">Dr Remy Rattus (Lead researcher) - PhD in Urban Ecology</a> <a href="#">Paul Mustelid (Field researcher) - MSc in Sustainable Food Systems</a>	
Department: <a href="#">Centre for Ecology and Conservation</a>	
Proposed start date:	<a href="#">1st April 2026</a>
Proposed end date:	<a href="#">31st March 2028</a>
Collaborators (if any)	<a href="#">Highways UK and The Mercia Wildlife Trust</a>
Please list the guidelines, standards, or professional body statements you will follow. <i>E.g. International Society for Applied Ethology (ISAE), The Association for the Study of Animal Behaviour (ASAB), The American Veterinary Medical Association (AVMA) Guidelines.</i>	
<a href="#">Welsh Badger Trust Guidelines on Best practice for Developers and Ecologists</a> <a href="#">The Mammal Society Code of Best Practice for Badger Surveys and Handling</a>	

# 2. Aims and objectives

Please explain the aims of your project, referring where appropriate to relevant previous research.
<a href="#">When we build new roads or houses, we break up the woods where badgers live. This is called habitat destruction. We want to see if the remaining "islands" of forest are inhibiting badger populations from finding mates (i.e. disrupting population dynamics).</a>

Please explain the proposed benefits and justification for the research.

The data will contribute to the evidence base for "Green Bridges" or "Badger Tunnels." If we can prove that road building is having a negative effect on badger behaviour and welfare, we can encourage developers to adapt their plans, including building badger crossings or tunnels. This keeps badgers off the road (also reducing car accidents) and keeps the population safer and genetically healthy.

Please list the species, life stages and number of animals you propose to use. Indicate if any of these have any special protection or endangered status.

European Badger (*Meles meles*), adults and independent cubs.  
40 individuals across 4 different sites.  
Protected under the Protection of Badgers Act 1992

Why is it necessary to use animals?

The objective is to understand the specific dispersal patterns of the local badger population in response to recent road developments. This requires data on the movements and genetic relationships of the actual animals living in this landscape, which cannot be simulated by computer models without baseline data.

However, we have replaced the traditional method of 'capture-mark-recapture' (which involves trapping and handling) with remote DNA sampling. This allows us to study the animals' genetics and movements without any direct interaction or physical restraint.

What kind of methods/approaches will be used? For example, simple observational studies, manipulation of the environment or training animals. Please provide brief details and Standard Operating Procedures (SOPs) where available.

We will use passive hair trapping. Small open-ended tubes with adhesive sticky pads will be pegged securely into the ground along established badger runs. As the badger passes the device, a small sample of guard hair is pulled loose by the adhesive. This process is minimally invasive and does not involve physically restraining the animal. Samples will be collected daily for DNA microsatellite analysis.

Please provide information on proposed methods for statistical analysis, including justification for sample size.

We performed a power analysis using previous dispersal data and consulted with the University's Department of Statistics. On that basis, we propose a sample size of N=10 per clan (40 total).

### 3. Animal welfare considerations

What physiological and behavioural effects might the proposed procedures have on the animals? Is there any potential to cause anxiety, stress or otherwise compromise the animals' fitness or wellbeing? Even 'subthreshold' procedures that do not require regulation under ASPA can cause some harm to animals, so please include any potential welfare considerations that you can think of.

The badger is likely to feel anxious due to the presence of humans. Although, the animals are never captured, handled, or restrained. The primary potential source of stress is human presence when setting and pre-baiting the hair traps. To minimise this, we will only check traps during daylight hours when badgers are underground and asleep. They may sense the removal of the guard hairs but this should cause no more than momentary irritation.

Provide details on how you have considered the application of each of the 3Rs (Replacement, Reduction, Refinement). How did you search for and consider alternatives<sup>1</sup>; how did you optimise numbers and experimental design; how did you think about the animals' experiences and find ways to reduce suffering and improve welfare?

Replacement - We conducted a formal search using the NC3Rs (National Centre for the 3Rs) and PubMed databases (Search terms: badger dispersal, eDNA). Dr. Remy Rattus will conduct a six-monthly technology review to assess emerging "In-Silico" models and AI-driven photogrammetry. Should a validated method for measuring population dynamics (with opportunities to also gain data on weight, and health status) via 3D camera traps become available during this two-year project, we will submit an amendment to transition away from hair trapping.

Reduction - By focusing on 4 specific 'zones' near the road, we have reduced the total study population from an initial 100 animals to just 40. Also, to prevent other researchers needing to capture these same animals, all data will be offered to The Mercia Badger Trust and Highways UK databases.

Refinement - We have completely refined the study by eliminating live capture. By switching to remote DNA sampling, we have reduced the physiological stress of trapping and the risks associated with physical restraint. We obtain the necessary population data (identity and location) without ever touching the animals.

---

<sup>1</sup> This term is used to refer to non-animal methods and approaches which avoid animal use. These can include cell cultures, or tissues, taken from humans and kept alive in vitro - but some of these may require growth media containing serum derived from animals, which can present ethical and animal welfare concerns.

How will you assess the animals' welfare when carrying out these procedures? What indicators of anxiety, stress or distress will you monitor and at what level of distress will you stop a procedure? What recording systems will you use?

We will use remote trail cameras (without flash) pointed at the hair traps to monitor badger interaction with the devices. We will review footage to ensure the hair traps are releasing easily and not causing the animals to recoil or alter their behaviour. If any signs of aversion or injury are detected on camera, the traps will be removed immediately.

What will happen to the animals used at the end of the study?

No animals are kept or rehomed. No animals are ever removed from the wild.

Do you have contingency plans in case animals need veterinary treatment/euthanasia?

We have an emergency agreement with the Welsh Wild Vet Clinic. If we find a sick or injured animal, we have a transport crate and a first-aid kit on-site which we would use in consultation with the Clinic.

If your project involves fieldwork with wild animals (e.g. drones, traps, tagging), how will you ensure these activities minimally disturb, stress, or interfere with their natural behaviours and/or impact on non-target animals?

The project uses passive hair traps (open-ended tubes with adhesive pads) which do not capture or restrain the animal, preventing stress or injury. Although the traps cannot be locked, non-target interference is minimised through specific design choices: tubes have a 25-30cm diameter to exclude large animals while remaining too open to attract small nesting mammals; traps are placed on active badger runs where badgers are dominant; and adhesive pads are positioned on the upper inner surface to brush against a badger's back, allowing small mammals like mice or voles to pass underneath without contact. We will take care to minimise disturbance to non-target animals when setting the hair traps during the day.

Who will have day-to-day responsibility for the animals? Please also provide emergency contact details.

Primary: Paul Mustelid: 07700900888  
Secondary: Remy Rattus : 07700900999

Where will the research be carried out? If animals are removed from the wild, please describe methods of capture, transport, housing and care including diet, group size, frequency of monitoring, enclosure dimensions and enrichment. Please also provide information as to what animal handling training you have had (or will have).

Pengelli Forest

Animals are not removed from their habitat. There is no housing or long-term care required.

Do you require a licence to carry out your research? For example, Natural England fishing or trapping licences?

Badgers: survey or research licence (A25)

## 4. Declaration

I confirm that the information provided is accurate to the best of my knowledge. I will follow agreed protocols and uphold high standards of animal welfare throughout this project.

Applicant signature

*Paul Mustelid*

.....

Date of application

*6 October 2026*

.....

**Please note the committee may ask for further clarification or explanation before making a decision on the project.**