

Job Description

Role Title:	Postdoctoral Research Fellow in Bioacoustics
Faculty:	Faculty of Science, Engineering and Environment
Reference:	MPF1020
Grade:	Grade 7
Full or Part time:	Full Time – 18 months Fixed Term, expected start date 1 March 2027
Hours:	1.0 FTE/36.25
Reports to:	Dr Amy Leedale
Responsible for:	No direct reports

Overview

This is an exciting post-doctoral opportunity to join a highly innovative project investigating the impacts of drone noise on wildlife. The successful candidate will develop novel approaches for assessing the responses of avian assemblages to drone noise, combining passive acoustic monitoring with controlled sound exposure experiments.

The postholder will be work closely with international collaborators on the *Toolkit for Noise and Societal Impact Assessment of U-Space-Enabled Drone Operations (TUNED)* project, led by Prof. Antonio J Torija Martinez, and co-funded by the European Union under Grant Agreement No. 101287704 and supported by the SESAR Joint Undertaking and its founding members. The successful candidate will work as part of a leading consortium including Technical University of Delft, Eurocontrol and several key players in the field of advanced air mobility.

The TUNED project aims to develop new tools to understand and manage the environmental and societal impacts of expanding drone operations. Using empirical field data, machine learning and representative case studies, TUNED will model drone noise across urban, peri-urban and rural environments and assess the effects of drone noise on people and wildlife. These innovations will deliver a step-change in how the noise impacts of drone operations are assessed, giving operators and policymakers stronger evidence to reduce disturbance to communities and the natural environment.

We are seeking to appoint a highly motivated and independent researcher to lead empirical fieldwork and develop analytical pipelines for the annotation and parameterisation of large acoustic datasets, integrating field experiments, bioacoustic monitoring and machine-learning approaches to species classification. This is a unique opportunity to lead the development of cutting-edge bioacoustic approaches for assessing wildlife responses to emerging sources of anthropogenic noise.

The contract is fixed term for 18 months, with an expected start date 1 March 2027

The postholder will work across the Acoustics Innovation Institute and the Environmental Research and Innovation Centre (ERIC) at the University of Salford. The Acoustics Research Centre is one of the largest acoustics research groups in Europe, providing an internationally recognised environment for interdisciplinary research in sound and acoustics. Prof. Torija Martinez is leading research in drone noise internationally, and is the chair of the Quiet Drones international conference series. ERIC brings together researchers working across biodiversity, ecology, evolution and environmental science, providing a collaborative, interdisciplinary research environment and access to state-of-the-art facilities and equipment to support innovative bioacoustic research.

The postdoctoral researcher will be primarily supervised by Dr Amy Leedale, Lecturer in Zoology in the Department of Health, Community and Life Sciences at the University of Salford. Dr Leedale is a behavioural ecologist specialising in field-based bioacoustics and the study of animal communication, with research spanning biodiversity monitoring, invasive species and anthropogenic impacts on wildlife. The postholder will work closely with colleagues across the Acoustics Research Centre and ERIC, contributing to an interdisciplinary research programme at the interface of acoustics, ecology and environmental science.

Role Purpose

The role is for a postdoctoral research fellow to carry out ecological research and bioacoustic analyses for the TUNED project. The role involves independent travel to remote field locations without public transport access.

Specific objectives are to:

- Design and conduct field experiments assessing how birds respond to drone noise across different habitats.
- Collect and analyse passive acoustic data before, during and after controlled noise exposure.
- Quantify changes in species composition, vocal behaviour and bioacoustic indices in response to noise exposure.
- Identify species- and community-level indicators of disturbance and characterise thresholds of noise sensitivity.
- Translate novel, robust evidence on avian responses to drone noise into species- and community-level assessment criteria for the TUNED framework.

Principal Duties & Responsibilities

You will contribute to original research within the established TUNED project plan, including:

- Coordinate with international consortium partners for noise related research.
- Assist the Project Coordinator and the WP6 leadership team in delivering activities under WP6.2: Noise Impacts on Wildlife.

In order to support your career development, you will be involved in leadership and management activities.

Specific responsibilities are:

- Conduct research following the project plan, and produce deliverables according to set deadlines;
- Lead research, under the supervision of the Project Coordinator and WP6 leadership team;
- Liaise with the Project Coordinator and other members of the project team to report progress and steer the project;
- Liaise with project partners to maximise impact of the research;
- Disseminate research outputs both in peer-reviewed journals and national/international conferences;
- Participate in ongoing research activities in collaboration with the Project Coordinator and other members of the research team;
- Respect the highly confidential nature of the material and ensure confidentiality;

Generic Duties

- Perform any other duties appropriate to the grade as may be required by the Head of School/Head of Division etc.
- Comply with the personal health and safety responsibilities specified in the University Health and Safety policy.
- To engage with the University's commitment to put our students first and deliver services which are customer orientated, represent value for money and contribute to the financial and environmental sustainability of the University when undertaking all duties and aspects of the role.
- Advance equality, support our work towards eliminating unlawful discrimination, foster an inclusive study and work environment for students, staff and visitors in accordance with our public sector equality duties and university policy.

This role detail is a guide to the work you will initially be required to undertake. It may be changed from time to time to meet changing circumstances. It does not form part of your Contract of Employment.

Person Specification

The successful candidate should demonstrate the following, which are 'Essential' **(E)** or 'Desirable' **(D)**, **(P)** = Presentation.

Qualifications

- A degree or Master's degree in biological sciences, wildlife conservation, ecology, zoology, environmental science, acoustics or a related discipline. **(E)**
- A PhD in bioacoustics, ecoacoustics, ecology, conservation, zoology or a related discipline, or be close to completing one, with a realistic and demonstrable likelihood of submitting the thesis in 2026. **(E)**

Background and Experience

- Experience of conducting high-quality research in bioacoustics, ecoacoustics or the effects of anthropogenic noise on wildlife. **(E)**
- Experience of collecting, managing and analysing passive acoustic monitoring data. **(E)**
- Experience of ecological fieldwork, including the deployment and maintenance of acoustic recording equipment. **(E)**
- Experience of designing and conducting field or controlled experiments to assess animal responses to sound. **(D)**
- Experience of identifying bird species from acoustic recordings or using automated species classification tools. **(D)**
- Experience of publishing research in peer-reviewed journals. **(D)**

Knowledge

1. In-depth knowledge of passive acoustic monitoring, acoustic measurements and signal processing techniques. **(E) (P)**
2. Knowledge of statistical methods for analysing ecological experiments and repeated acoustic observations. **(E)**
3. Detailed knowledge of experimental methods for investigating wildlife responses to anthropogenic noise. **(D) (P)**
4. Knowledge of bird vocalisations, soundscape analysis and acoustic measures of biodiversity. **(D) (P)**
5. Knowledge of the potential impacts of anthropogenic noise on wildlife. **(D)**

Skills and Competencies

1. Excellent written and spoken English, with the ability to present research findings clearly and discuss methods and results with colleagues and TUNED partners. **(E) (P)**
2. Ability to plan and carry out fieldwork safely and deliver research outputs within agreed timescales. **(E)**
3. Ability to manage field recordings, data analysis and reporting concurrently, prioritising tasks to meet deadlines. **(E)**
4. Strong skills for processing and analysing acoustic data, for example in R or Python. **(E) (P)**
5. Willingness to learn new bioacoustic, analytical and experimental methods. **(E)**
6. Ability to work collaboratively with researchers from different disciplines and liaise effectively with project partners. **(E)**
7. Ability to take initiative and contribute to the design and delivery of independent research. **(D)**
8. Ability to support or supervise students and junior researchers. **(D)**