

NERC Red-ALERT CDT: Student Application 2025/26

Before you begin:

Thank you for your interest in studying for your PhD with the NERC Red-ALERT Centre for Doctoral Training.

The deadline for applications is 23:59 on Tuesday 7th January 2025.

You can save the form and complete in stages BUT after you submit you cannot go back to edit or change your answers. **IMPORTANT** - Download and save a copy of your application form directly after you submit your answers - you have only 15 minutes to do this.

After the application closing date the project lead supervisor will contact you to arrange an interview if you meet their criteria, to discuss the project and your application. This will take place within two weeks of the closing date, and can be arranged either in-person or over Teams.

The Lead supervisor of your project(s) will be sent a copy of this application form before that meeting (less the E&D section). After the initial project supervisor interviews, supervisors will then put forward their first choice candidate for interview by the central Red-ALERT CDT panel.

Candidates will be shortlisted on the basis of this application form against the following criteria:

- Proven academic quality: normally evidenced by an excellent performance at first degree and/or Master's level, but may also be demonstrated by a record of relevant professional practice;
- Research potential: evidenced through application responses and supported by performance in research projects at first degree and/or Master's level, or another form of dedicated preparation for research;
- Personal motivation and commitment: evidenced through application responses, by enthusiasm for the project area, and in relation to career goals.

If you are shortlisted for the CDT central interviews you will be contacted by the Red-ALERT Hub at the University of Bath .

Please note: This application is for the studentship, known as an 'Offer of Funding'. If you are successful at interview you will also need to apply for

admission, known as an 'Offer to Study', from your chosen University/Universities by completing their institutional application process.

** Indicates required question*

1. **Email ***

Contact Details:

This information is being collected to enable CDT and University administrators and your potential supervisors, to contact you.

2. **1. First Name:**

3. **2. Preferred Name:**

4. **3. Surname:**

5. **4. Email Address:**

6. **5. Telephone Number:**

7. **6. House Name/Number:**

8. **7. Address Line 2:**

9. **8. Address Line 3:**

10. **9. Town/City:**

11. **10. Country:**

12. **11. Postcode /Area Code:**

13. **12. Is this the address you would like all correspondence to be sent?**

Mark only one oval.

Yes

No (please supply alternative address in the section below)

14. **13. Provide your alternative address for correspondence here:**

Mode of Study:

This section will be removed before the form is sent to the Red-ALERT CDT supervisors for shortlisting.

15. **14.** Do you plan to study full-time or part-time?

Project Information:

The Red-ALERT CDT are currently advertising 25 projects and will award up to a maximum of 16 studentships. We encourage applicants to apply for up to 2 projects, although this is not compulsory. This is so that if your first choice project is allocated to someone higher up the shortlisting rankings than yourself, then you may be offered an interview for your second choice instead

16. **15.** Please select your **FIRST CHOICE** project from the list below:

Tick all that apply.

- BATH - Source attribution and early warning of water-borne pathogens using hybrid-capture sequencing.
- BATH - High-fidelity water quality and hydrological modelling of emerging contaminants in rivers.Option 2
- BATH - Water-based early warning systems for public and environmental health diagnostics.
- BATH - Detection of pathogens in rivers with a smart multimodal sensor array module integrated in an autonomous robot platform.
- BATH - A generic low-cost lab-on-chip platform for detection of eDNA strands.
- BATH - Autonomous Real-Time Mapping of Water Quality in Rivers using Dipping Sensors from Aerial Drones.
- BATH - Tire Particles and River Health: Investigating Ecological Risks in the Cam and Wellow Catchments.
- BATH - Microbial Source Tracking for Antimicrobial Resistance and Pathogens in Aquatic Ecosystems.
- BANGOR - Far-Infrared (FIR) detection of Volatile Organic Compounds (VOCs) in Combined Sewage Overflow (CSO) monitoring.
- BANGOR - Effects of livestock excreta management and extreme weather events on the viability and transfer of pathogens to watercourses.
- BANGOR - Human Pathogen Detection in the Environment using Integrated Quantum Nanodiamond Sensors.
- BANGOR - Quantifying Vehicle-Derived Microplastics in the Environment: Sources, Sinks, and Water Quality Impact.
- BANGOR - Spatial and Temporal Dynamics of Antimicrobial Resistant Organisms in Freshwater Ecosystems.
- BANGOR - Salmon Disease Omics (SalDiOmics) - Developing a novel genomic toolkit to understand the spatio-temporal dynamics of freshwater salmonid disease.
- BANGOR - Mobile genetic elements landscape in planktonic and sedimental microbiomes of Conwy catchment.
- CARDIFF - Linking the changing chemical environment to biological recovery across formerly industrial rivers.
- CARDIFF - Otters versus gadgets: how does passive sampling compare with sentinel species monitoring for evaluation of freshwater pollution?
- CARDIFF - Nano-virus: Developing novel real-time rapid and sensitive detection of viruses in water and wastewater.
- CARDIFF - Next-generation biomonitoring using environmental DNA to diagnose and manage freshwater ecosystem health.

- EXETER - Do pollutant from wastewaters accumulating in aquatic invertebrates affect breeding success of insectivorous birds.
- EXETER - Does Large Wood in River Restoration Improve Water Quality and Ecological Health?
- EXETER - Development of automated, inline sensors for real-time monitoring of metal pollutants in freshwater environments.
- EXETER - Investigating the biological and chemical factors that contribute to the emergence of pathogenic *Vibrio* species
- EXETER - Carbon and particulate cycling in river systems in the Anthropocene.
- EXETER - Understanding the consequences of environmentally relevant chemical mixtures to freshwater invertebrates: a holobiome approach.

17. **16. Please select your **SECOND CHOICE** project from the list below: ***

Tick all that apply.

- BATH - Source attribution and early warning of water-borne pathogens using hybrid-capture sequencing.
- BATH - High-fidelity water quality and hydrological modelling of emerging contaminants in rivers.Option 2
- BATH - Water-based early warning systems for public and environmental health diagnostics.
- BATH - Detection of pathogens in rivers with a smart multimodal sensor array module integrated in an autonomous robot platform.
- BATH - A generic low-cost lab-on-chip platform for detection of eDNA strands.
- BATH - Autonomous Real-Time Mapping of Water Quality in Rivers using Dipping Sensors from Aerial Drones.
- BATH - Tire Particles and River Health: Investigating Ecological Risks in the Cam and Wellow Catchments.
- BATH - Microbial Source Tracking for Antimicrobial Resistance and Pathogens in Aquatic Ecosystems.
- BANGOR - Far-Infrared (FIR) detection of Volatile Organic Compounds (VOCs) in Combined Sewage Overflow (CSO) monitoring.
- BANGOR - Effects of livestock excreta management and extreme weather events on the viability and transfer of pathogens to watercourses.
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- EXETER - Do pollutant from wastewaters accumulating in aquatic invertebrates affect breeding success of insectivorous birds.
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- EXETER - Development of automated, inline sensors for real-time monitoring of metal pollutants in freshwater environments.
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- EXETER - Carbon and particulate cycling in river systems in the Anthropocene.
- EXETER - Understanding the consequences of environmentally relevant chemical mixtures to freshwater invertebrates: a holobiome approach.
- NO SECOND CHOICE

Academic Qualifications & Experience:

18. **17.** Please list all of your A-Level subjects with grades:

19. **18.** Please provide details of your first degree, e.g. University of Sheffield: Biology (BSc) Hons 2:1. If you are currently completing a first degree programme, please provide your year average grades to date, e.g. University of Sheffield: Biology (BSc) 1st yr - 64; 2nd yr 67. If you hold an EU degree, please also indicate its equivalent UK degree classification - check here on the [conversion table](#): *

20. **19.** If applicable, please provide details of your Masters degree. If you are currently completing your Masters degree programme, please provide your year average grades to 14 / 30 date, e.g. University of Sheffield: Psychology (MSc) Average of 2 modules completed to date, 71. If you hold an EU degree, please also indicate its equivalent UK degree classification:

21. Please provide scanned copies of your degree certificate(s) and transcript: *

Files submitted:

22. **20.** The Centre for Doctoral Training should bring together different academic disciplines. To help us monitor the background of applicants please select the most appropriate discipline for yourself based on recent study/experience. (Taken from HESA [JACS 3.0](#)):

23. **21.** Please outline any other relevant academic or professional training or experience you have gained [up to 200 words]:

24. **22.** Please outline any relevant prizes, awards or funding you have received [up to 100 words]:

Personal Motivation and Commitment:

Evidenced through your application responses, particularly your enthusiasm for the project area(s) and how you see it relating to your career goals.

25. **23.** In a maximum of 300 words (combined) please explain why you have:
a) applied to study for a PhD b) chosen your specific project(s).

a) Why you have chosen to study for a PhD:

26. **b) chosen your specific project(s):**

27. **24.** Please outline any relevant periods of paid or unpaid employment [up to 100 words]:

28. **25.** Please provide the names and contact emails of 2 referees, and their ^{*} relationship to you.

Any Further Information:

29. **26.** Please provide any relevant information not previously covered (completion of this section is not essential) [up to 100 words]:

Equality and Diversity Monitoring:

This section will be removed before the form is sent to NERC Red-ALERT Supervisors for shortlisting.

The following is being collected for equality and diversity monitoring purposes only and is required by the Natural Environment Research Council; an aggregated and anonymised summary of all applicants will be presented to the Management Group after the recruitment process is complete. Your responses will be deleted once analysis has taken place.

There is an option of 'prefer not to say' if you do not wish to disclose such information.

30. **27.** Please select your age category?:

Mark only one oval.

- 24 or under
- 25-29
- 30-34
- 35-39
- 40-44
- 45-49
- 50-59
- 60 or over
- Unspecified
- Prefer not to say

31. **28.** Do you have any dependents?:

Mark only one oval.

- Yes
- No
- prefer not to say

32. **29.** Do you have a disability as defined by the [Equality Act 2010](#)?:

Mark only one oval.

- Yes
- No
- Prefer not to say

33. **30.** What is your Ethnicity?:

Mark only one oval.

- White Irish
- Other White Background
- Black Caribbean
- Black African
- Other Black Background
- Indian
- Pakistani
- Bangladeshi
- Chinese
- Other Asian Background
- Mixed White & Black Caribbean
- Mixed White & Black African
- Mixed White & Asian
- Other Mixed Background
- Other Background
- Prefer not to say

34. **31. Gender Identity:** *

Mark only one oval.

- Male
- Female
- Non-Binary
- Not listed
- Prefer not to say

Advertising:

35. **32. How did you hear about this opportunity?:**

Tick all that apply.

- Email from NERC Red-ALERT forwarded by my University (Bath, Bangor, Cardiff or Exeter)
- Email from the project supervisor directly
- Red-ALERT Webpage
- FindaPhD.com
- Via link from another website
- Personal recommendation ie. from a friend or colleague
- Social Media
- University Careers Service
- Other

Data Protection:

If you are applying for a place on a collaborative programme of doctoral training provided by Bath University or any other university, research organisations and/or partners, please be aware that your personal data will be used and disclosed for the purposes set out below.

Your personal data will always be processed in accordance with the [GDPR 2018](#).

Bath University (“University”) will remain a data controller for the personal data it holds, and other universities, research organisations and/or partners (“HEIs”) may also become data controllers for the relevant personal data they receive as a result of their participation in the collaborative programme of doctoral training (“Programme”).

Application Process:

During the application process, the University may need to share some of your personal data with third parties to be able to administer your application, carry out interviews and select candidates. These are not limited to, but may include disclosures to:

- The selection panel and/or management board or equivalent of the relevant Programme, which is likely to include staff from one or more other HEIs or research organisation.
- Administrative staff at one or more other HEIs or research organisation participating in this Programme.

Such disclosures will always be kept to the minimum amount of personal data required for the specific purpose. Your sensitive personal data may need to be shared in certain circumstances, but only where strictly necessary. By applying for a place you hereby consent to your data being processed and shared in this way.

Successful Application:

If your application is successful and you become a student on our Programme, the University may need to make further disclosures of your personal data throughout your time on

the programme to ensure the effective management of your studies and comply with its obligations to funders. These disclosures may include, but are not limited to disclosures: within the group of HEIs to the Programme; to other collaborative parties to the relevant Programme, e.g. industrial sponsors and/or collaborators, supervisors from other HEIs, Research Councils (as funders of 25 / 30 the Programme); to external examiners. Other disclosures may be made where it is necessary for the administration of your studies.

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