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NATURAL ENVIRONMENT RESEARCH COUNCIL

C-CLEAR

NERC Doctoral Training Partnership

Student Handbook, V.1

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Table of Contents

1. Introduction	3
2. Doctoral Training Partnerships (DTPs) and the Natural Environment Research Council (NERC).....	4
3. What is the Cambridge Climate Life and Earth (C-CLEAR) DTP?	4
4. Research themes and governance	6
5. CASE studentships.....	7
6. Placements.....	8
7. DTP funding for students.....	8
8. What does it mean to be a member of the DTP?	9
9. Wellbeing and Support from the DTP	10
10. Training	11
11. Annual reporting	13

1. Introduction

Welcome to the Cambridge Climate Life and Earth (C-CLEAR) Doctoral Training Partnership. This document aims to provide some basic information about the aims and scope of the DTP, and about how it operates. It will also direct you to other resources that give you more information about how NERC and the host institutes operate, and about training possibilities. If neither the handbook nor the DTP website at <http://nercdtp.esc.cam.ac.uk> give you the information you need, don't hesitate to contact us.



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2. Doctoral Training Partnerships (DTPs) and the Natural Environment Research Council (NERC)

Studying for a PhD provides students with an opportunity to carry out independent study and to get involved in specialised academic research. PhD training should also be multidisciplinary, and lead to improved future career prospects, in whatever sector that career may be. Recognising this, UK research councils allocate a significant fraction of their funds for doctorates through the doctoral training partnerships (DTP) system, which promotes collaborative and multidisciplinary training within consortia of research institutions. The aim of the Natural Environment Research Council (NERC) DTPs, as stated on the NERC website, is to “provide excellent postgraduate research opportunities within the NERC science remit as well as varied professional and technical skills and personal development training.”

The NERC is the UK's largest funder of independent environmental science, training and innovation, delivered through universities and research centres. The DTPs funded by NERC support a nominal 235 students in 2019-20 across the country in 17 separate DTPs. The University of Cambridge is a major recipient of NERC grant funding, and numerous departments across the university have researchers within the NERC remit. The British Antarctic Survey (BAS), also situated in Cambridge, is a NERC institute. The DTP award to Cambridge and BAS covers a nominal 12 students per year.

Studentships funded by DTPs should fit within the NERC remit: “NERC's remit includes terrestrial, marine, freshwater, science-based archaeology, atmospheric and polar sciences, and Earth observation. (NERC) scientists study and monitor the physical, chemical and biological processes on which our planet and life itself depends” (from the NERC website). NERC's strategy currently focusses on 3 societal challenges: benefiting from natural resources; resilience to environmental hazards; managing environmental change.

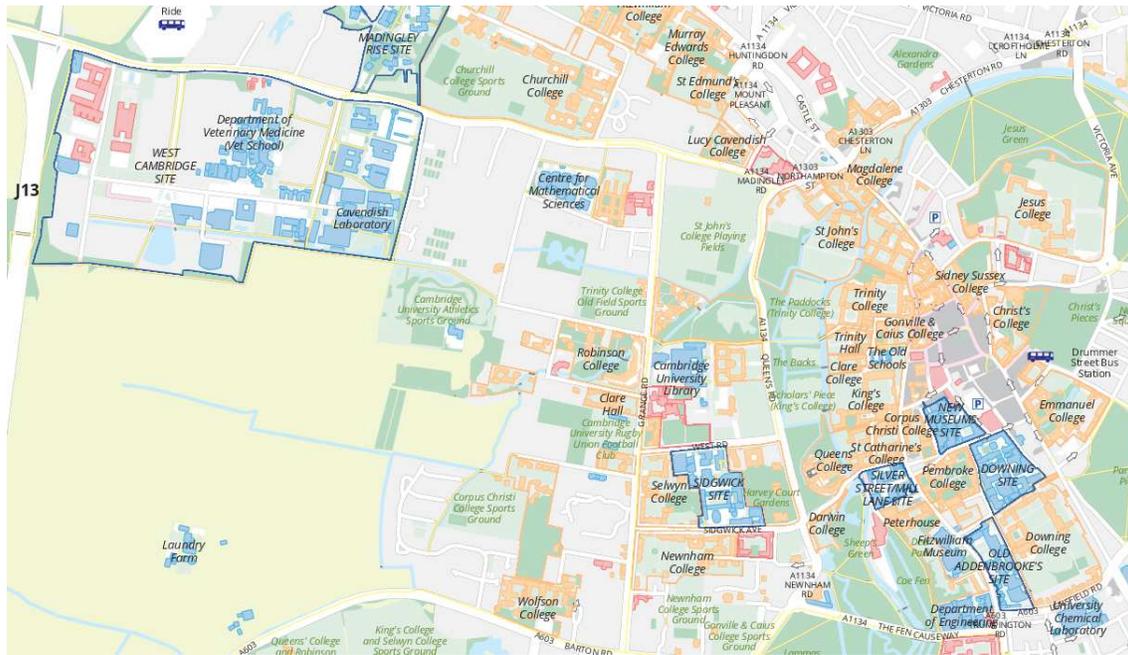
3. What is the Cambridge Climate Life and Earth (C-CLEAR) DTP?

The Cambridge DTP comprises leading Cambridge University research departments together with the British Antarctic Survey (BAS). Cambridge and BAS have an exceptional pool of talented researchers working right across the NERC remit, and this is the basis for our DTP. The DTP is embedded in a pre-eminent research university with a vibrant culture and a tradition of cross-disciplinary and multi-disciplinary research. Cambridge attracts outstanding applicants to its degree programs and produces graduates who assume leading roles in industry, academia and government. The partner departments each include a much wider cohort of Ph.D. students funded by various means. They provide a diverse research environment which supports specialist training needs while the DTP, drawing on the wider

resources of the University, ensures that students acquire essential transferable and professional skills.

The departments that can host students within the C-CLEAR DTP are:

- Archaeology
- Chemistry
- DAMTP (Applied Mathematics & Theoretical Physics)
- Earth Sciences
- Genetics
- Geography (including the Scott Polar Research Institute (SPRI))
- Plant Sciences
- Zoology
- British Antarctic Survey



All the components of the DTP are within easy reach, which is important where students are co-supervised, as well as for attending seminars and training events. Archaeology, part of Earth Sciences, Genetics, Geography and Plant Sciences are all in the Downing Site (bottom right of map), with Zoology nearby in the New Museums Site. Chemistry is a 2 minute cycle ride to the south, with SPRI next door. DAMTP is at the Centre for Mathematical Sciences (top centre of map). The Bullard Labs (part of Earth Sciences) is at the “Madingley Rise” site (top left), while BAS is located nearby, in one of the buildings coloured pink on the map in the West Cambridge site, next to “J13”. The furthest locations (Chemistry and BAS) are a 15-20 minute cycle ride apart. There are buses from the city centre that end up at the car

park/bus centre opposite BAS - both the Madingley Road Park and Ride, and the cheaper university-subsidised U service.

In addition to the host partners, C-CLEAR has links to partners across four membership networks, representing the industrial, policy and conservation sectors:

- **Centre for Science and Policy (CSaP)**, with a network of over 200 policy fellows – individuals in influential policy positions who have spent time in Cambridge interacting with academics: www.csap.cam.ac.uk.
- **Cambridge Network**, a cross-sector organisation with 1200 members ranging from small start-ups and charities to major employers that brings people together from business and academia, to share ideas, encouraging collaboration: www.cambridgenetwork.co.uk.
- **Cambridge Cleantech**, a specialised umbrella organisation with 400 members supporting the growth of environmental goods and services in the Greater Cambridge area: www.cambridgecleantech.org.uk.
- **Cambridge Conservation Initiative (CCI)**, a unique collaboration between the University of Cambridge and leading biodiversity conservation organisations, including the Royal Society for the Protection of Birds, and Fauna and Flora International: www.cambridgeconservation.org.

These network partners will be involved in co-designing and supervising many PhD projects, ensuring a significant number of projects with an applied character. Individual partner organisations may fund or co-fund studentships in the NERC remit and take part in CASE or other collaborative studentships (discussed later). A number act as training partners, or are simply available to provide advice and potentially placements and experience.

4. Research themes and governance

The DTP is organised around three major research themes: Climate Change and Environmental Processes, Solid Earth and Geological Hazards, and Biology and Conservation. Each theme has a theme panel, which conducts the recruitment process for that theme each year, and also advises the DTP Management Committee on other matters. There are usually 3 core members of each theme panel in each academic year (generally distributed across partner departments). Membership is reviewed each year and adjusted to spread the load of work while still retaining experience.

The DTP is administered by a Chair (the current interim Chair is Prof Marie Edmonds, Earth Sciences) assisted by academic Leads for Recruitment, Training, External Partners and Welfare and Progress, along with a BAS Liaison. The DTP is staffed by a part time Administrator (currently Yvonne Gibbs) and Training Facilitator (currently Kathleen McDougall), both hosted in Earth Sciences.

The operation of the DTP is overseen by a management committee, which meets in Michaelmas Term and again in Easter Term. Membership of the Cambridge NERC C-CLEAR DTP Management Team is:

- DTP Director
- Leads for Recruitment, Training, External Partners, and Welfare and Progress
- BAS Liaison
- Core members of each of the three DTP Theme Panels
- DTP Administrator and Training Facilitator
- 3 student representatives (the aim is to have one from each year and from each theme)
- Representatives of departments not otherwise included above

The DTP is guided by an Advisory Council, which meets in the autumn, and includes representatives from non-academic partners, Chair of the Cambridge BBSRC DTP, Prof Bill Sturges (ARIES DTP), and two senior Cambridge academics within the NERC remit but not directly involved in C-CLEAR.

There is also a Training Committee, which meets termly, and consists of the Chair, Deputy Chair, Training Facilitator, Administrator and a number (currently 4) of ordinary members (chosen from potential supervisors), plus 1-2 student representatives.

5. CASE studentships

“CASE studentships (Collaborative awards in science and engineering) provide doctoral students with a first-rate, challenging research training experience within the context of a mutually beneficial research collaboration between academic and non-academic partner organisations” (from the NERC website). The non-academic partner may be from industry, business, public bodies or the third sector, so long as the organisation is not eligible to receive NERC funding directly.

NERC encourages studentships to involve a CASE partner and indeed requires that at least 25% of a DTP’s nominal studentships have a CASE component. NERC requires the CASE partner to supplement the studentship by paying at least £1000 per year to the lead Research Organisation for the duration of the studentship, and to meet the extra expenses incurred by students visiting and working in their establishments. They are also expected to contribute in cash or in kind towards necessary materials. The student must spend between three and eighteen months in total with their CASE partner in a workplace outside the academic environment.

A CASE studentship is generally focussed on a problem with a direct application, which might be to a commercial opportunity, a policy goal or a societal need. It provides the

student with additional facilities and a little extra funding, as well as a broader experience. It should generally provide the non-academic partner with assistance in researching a problem relevant to their organisation, as well as access to the intellect of the student and the academic supervisor.

6. Placements

Each year, NERC and UKRI advertise policy internships – essentially 3 months working with a government or other policy section related to science. All students are encouraged to apply for these (and similar opportunities) but you should talk first to your supervisor to make sure they are happy that this is the right moment. You will also need a signature from the DTP, so contact us in good time before the deadline too. If you are successful, then your studentship can be extended for 3 months and it is essential that you also notify your department so that this extension can be arranged.

7. DTP funding for students

NERC, through the DTP, provides, for each studentship:

- University fees
- Stipend (living expenses)
- Research Training Support Grant (RTSG)
- Management fee

EU students who do not qualify as home students can be paid only a fees-only award, which means that they do not receive a stipend.

According to UKRI, the National Minimum Doctoral Stipend for 2019/20 is £15,009/year, and this is what will normally be paid to students. Although the Cambridge PhD is a 3 year course, many students exceed this and the NERC DTP provides funding for 3.5 years. However, the expectation is that all students will aim for submission of their thesis early in their 4th year. There are no DTP funds available to fund students who have not submitted after their 42nd month (except those with agreed extensions due to e.g. internships, sick leave, parental leave). Students who complete before month 42 may, under UKRI rules, be paid until the end of the quarter in which they submit, provided they are still working on material relevant to their PhD.

The RTSG is £11,000 for the full length of the studentship, and is intended to cover items like laboratory consumables, travel (e.g. to conferences and fieldwork), and training costs. The DTP retains £1,000 of this for centrally organised training costs, and the remaining amount (£10,000) is transferred at the start of the studentship to the host department, along with the fee and stipend. Each department may have different policies about how this

RTSG is used: some may simply state that each student has the same amount and delegate spending to the supervisor, while others may administer the funds centrally so that students with more costs receive more than the nominal amount and vice versa. Students should check this with their supervisor and department. Non-specialised computer equipment should not be purchased with RTSG.

For students hosted by BAS, the funds are transferred to the department where the student is registered, who are then invoiced by BAS for the funds to be held there.

Other funding information:

The C-CLEAR grant reference number is NE/S007164/1.

Publications and other forms of media communication, including media appearances, press releases and conferences, must acknowledge the support received from the research council, quoting the grant reference number if appropriate. Please ensure that journal publications include an acknowledgement in the standard format agreed by funders and publishers as below:

“This work was supported by the Natural Environment Research Council grant number NE/S007164/1”.

For more information on publication of work and open access please visit the NERC website: <https://nerc.ukri.org/funding/next/publicationofwork/>.

8. What does it mean to be a member of the DTP?

If you are funded fully or partly by the DTP then you are a DTP student, and also a NERC student (Note: the DTP must be covering at least 50% of eligible costs). This comes with some privileges and requirements.

In Cambridge we are fortunate that there are several other sources of funding, such as the Gates Foundation, Cambridge Trust, and college funds; additionally, students arrive with funds from other sources such as foreign government fellowships. Students with any source of funding who are within the DTP (i.e. NERC) remit will be part of the “DTP cohort”, which is about double the size of the DTP-funded group (i.e. the cohort is about 30-40 students per year). They will be eligible to receive information from the DTP and to attend most of the DTP-organised events. However, they do not have the same obligations, for example for NERC administrative purposes, and are not required to complete the DTP training planner (see later).

9. Wellbeing and Support from the DTP

As a postgraduate student, you are part of a department, a DTP (if you are DTP-funded) and a college. Your department will have processes in place to provide a committee of advisors/friends, to check your progress, pay your stipend, etc. In some departments there may be extensive training requirements, in others less so, in which case you will rely more on the DTP. In many cases the cohort of departmental students may roam much wider than the NERC remit and provide you with a stimulating network in addition to that of the DTP. Finally, the department and its parent faculty will be responsible for arranging your exam and making sure you receive your degree! The department is primarily responsible for your progress – however if you have problems with training, research progress, supervision or any other aspects of your PhD please do talk to us at the DTP as we may be able to offer alternative support, and we need to be aware of problems that might delay or even derail your studentship.

Your college may be your home and social centre. There will also be processes there to offer you pastoral support, and to advise you if you feel you need extra support, or have difficulties within your department.

The DTP recruited you, will ensure you are being offered the variety of training you need, and will host cross-DTP events which will provide you with another network. The DTP is ultimately responsible to NERC for the funds supporting you, so we will occasionally have to ask you to come to obligatory events, to carry out admin tasks required by NERC, etc. We are happy to act as an additional source of help and advice if you are not getting what you need from your department. The DTP has a Welfare and Progress Lead, Dr Alex Piotrowski, who is available to discuss any issues that may arise.

We hope that students and supervisors will find their activities funded by the DTP to be rewarding and enjoyable. However, if you are having problems and doubts, do come and talk to us. We may be able to help and we certainly need to know if your circumstances change. Your supervisor and department are the first port of call, but we are happy to act as a backstop for problems that persist, and for enquiries.

Useful contacts:

- C-CLEAR Welfare and Progress Lead: Dr Alex Piotrowski (amp58@cam.ac.uk) or another member of our team.
- Cambridge Disability Research Centre: www.disability.admin.cam.ac.uk
- University Counselling Service: www.counselling.cam.ac.uk
- University Careers Service: www.careers.cam.ac.uk

10. Training

Training is a crucial part of your PhD experience. It can be considered in two parts: firstly, the training you need to execute your project and secondly the training that will enhance your suitability for whatever you do after your PhD. Because your studentship is immersed in an academic environment, it's easy to forget that many students, even if they go on to a postdoctoral position, will end up working outside academia, for example in industry, as entrepreneurs, or in other professions.

We therefore believe that you should leave the DTP with:

- Scientific training to enable you to be an independent scientist in your discipline
- An appreciation of a wider multidisciplinary area of research
- Personal and professional skills

Cambridge offers a huge range of training opportunities, and a main role of the DTP is to help you navigate and find what you need. Training will be available from:

- The DTP centrally
- Your department (and, where relevant, BAS)
- Your college
- The university through the central Researcher Development Programme and other providers like, for example, the University Computing Service or the Careers Service. The Researcher Development Programme's website (www.rdp.cam.ac.uk) is a central port of call for links to other training providers in Cambridge, as well as providing information about their own courses and programmes.
- Outside providers, including other DTPs and NERC centres

Like other DTPs, we offer a wide range of generic training and some of this is delivered to the whole cohort at the start. The way that we manage this is to:

- 1) Provide the DTP students with **customised training guidance**
- 2) Provide a range of **basic and specialised courses** that respond specifically to the C-CLEAR DTP students' needs
- 3) Provide students with **information on courses** available within and outside Cambridge on a regular basis to make sure they don't miss opportunities

To help us provide students with customised training guidance, DTP students are asked to fill in a spreadsheet-based tool, developed from Vitae's Researcher Development Framework, but simplified and modified to suit students and particularly our students. Students are introduced to the training needs review during an initial induction weekend at the very start of their time in Cambridge. Each student completes this spreadsheet, known

as the training planner, in the first term and then updates it at the end of each academic year when they also have to complete a training log (according to departmental timetables).

The planner takes around 30-60 minutes to complete, and allows students to identify the areas where they lack skills or require training. The Training Facilitator (with help from the training committee) will assess each planner and, in the first term and at the end of the first year, the Coordinator will provide each student with personalised advice, pointing them at suitable courses to meet their identified needs, and assessing their progress so far. A lighter touch assessment of planners will be carried out in later years of each studentship.

The areas of skill and training covered by the planner are:

- Academic
- Ph.D.
- Research
- Professional
- Personal
- Career
- Enterprise

It is recommended that each student gains 20 “credits” each year (i.e. 60 in total) where a credit represents roughly half a day of training. Credits can be gained from courses, as well as from activities such as attending a conference and preparing a poster, although students are expected to gain a balance of credits across different areas of training and the nature of training activity will vary over the duration of the PhD.

The DTP also organises a range of other events in response to needs identified year-on-year. From time to time we have the chance to bid for funds for Innovation activities.

The C-CLEAR training programme will comprise four components:

- 1) **Our Advances in Climate, Life and Earth Sciences Programme** will immerse students in the latest scientific advances and encourage them to develop interdisciplinary approaches to solving problems we face today. The programme begins with a residential two-day induction. Subsequent sessions will run regularly on Tuesday afternoons, 2-4pm in Harker II, Earth Sciences, unless otherwise specified.
- 2) **The Professional and Transferable Skills Programme** will provide training that is explicitly targeted to meet the needs of environmental sciences, enabling our PhD students to leave academia with the skills they need in their future careers.
- 3) **Our Specialist Research Skills Programme** will direct individual students to appropriate specialist courses in Cambridge and elsewhere, aiming to build upon their existing expertise by delivering targeted training.

- 4) Finally, all students will be given the opportunity to take **work placements** of up to three months in industry, government or the voluntary sector.

During term time, the DTP issues the whole DTP cohort with a regular e-Bulletin approximately once a month, together with short training updates outside term time. This lists a variety of training events and opportunities, starting with DTP events, then events in Cambridge and finally training available outside Cambridge.

There is a huge range of fascinating seminars in Cambridge every week, accessible through talks@cam (www.talks.cam.ac.uk). Students are strongly encouraged to sign up to receive alerts for interdisciplinary seminar series in Cambridge such as those of:

- Cambridge Centre for Climate Science (CCfCS): 2-3 events per term across climate sciences
- Conservation Research Institute (UCCRI) – early career programme with weekly events
- Earth Science and Bullard seminars
- Quaternary Discussion Group (QDG): late Thursday afternoon seminars during term
- Centre for Atmospheric Science seminars
- Many guest speakers at BAS (only a 15-minute cycle ride from other departments)

The C-CLEAR DTP has formed an alliance with the ARIES DTP (centred at UEA in Norwich). The alliance is called CADA (C-CLEAR ARIES Doctoral Alliance). We aim to share best practice, to organise occasional joint events, and for some events organised by C-CLEAR to invite ARIES students and vice-versa. One particular event is an annual joint student symposium, scheduled to be held at the Natural History Museum in London on 25 March 2020.

11. Annual reporting

NERC requires all students (as also recipients of their grants) to enter data each year in its “Researchfish” database. The main things that need to be entered are publications and success stories. NERC will contact each student who needs to do this (1st years are exempted), and we (the DTP) will remind you. Please do this task. If there is nothing to report you **must** submit a NULL return, doing this is quick and easy. If you don’t do it, both you and the department could be penalised, and it could reflect badly on the DTP when we apply for renewal.

Each summer, we have to complete an annual report. We try to do this mainly using your training logs, so please submit this on time. However, we are likely to mail you, asking you to tell us about success stories (such as papers you have published or major public engagement achievements). Please reply as it really helps to have these stories to hand, and we don’t have access to what you entered in Researchfish.