Announcement of Opportunity
Centre for Doctoral Training (CDT)

Deadline for Outline Proposals: 16:00 Thursday 25 April 2019
Deadline for Full Proposals: 16.00 Thursday 8 August 2019

Summary

1. NERC supports Centres for Doctoral Training (CDT) to provide focussed investment into areas of priority to address training needs within the NERC remit.

2. Proposals are sought to host a new CDT specialising in the following priority area: Earth Observation: Data for Earth systems.

3. Funding for eight studentships will be awarded per annum for three years of new student intake (i.e. 24 studentships in total) from the start of the academic year 2020/21.

4. An expectation of the CDT is that NERC funding will be used to leverage additional investment (either cash or in-kind support) from multiple stakeholders.

5. The UK Space Agency will provide additional support to the CDT. Up to £8K per year will be made available for the successful CDT to enable students to participate in added-value activities, including placements e.g. with the European Space Agency (ESA), short courses, attending conferences and supporting attendance at satellite mission launches.

6. This opportunity is open to organisations eligible for NERC research grant funding, i.e. applicants based in UK Higher Education Institutions (HEIs), NERC research centres, and Independent Research Organisations (IROs) approved by the Research Councils.

7. NERC recognises the value of delivering studentships in partnership. NERC encourages proposals that demonstrate cross-disciplinary working, including across departmental boundaries within organisations, or between organisations. Partnerships with end-users (businesses, government departments and other civil society organisations) are strongly encouraged.

8. This call has a two-stage application process.

9. The closing date for outline proposals, to be submitted via email, is 16:00 on Thursday 25 April 2019.
10. Following an outline assessment panel, successful outline applications will be invited to submit a full proposal.

11. Full proposal applications must be submitted via the Research Councils' Joint electronic-Submission system (Je-S). The deadline for submission of full proposals is 16.00 Thursday 8 August 2019.

CDT priority area scope

Background

12. Earth Observation (EO) uses measurements from satellites, aircraft, drones and ground-based instruments to monitor and assess the natural and human environment and its dynamics. EO is becoming increasingly sophisticated with the deployment of new satellites and development of instruments. Not only are data more accessible and voluminous, but the combination of high signal quality, high temporal frequency and high spatial resolution is unprecedented and game changing to the scientific community. The UK, largely through the European Space Agency (ESA) is at the forefront of major EO advances such as the Copernicus programme; Sentinel-1 in particular has set a high benchmark for future satellite radars. The ESA open data policy strongly encourages scientific and commercial exploitation of the data.

13. Current satellite systems including Copernicus satellites promise long (multi-decadal) global, comparable, time series of data essential for understanding global environmental change, including climate change as well as providing the foundations for operational and commercial services. Upcoming satellite missions such as Biomass, SWOT and MicroCARB will enable the continuity of these data and allow critical gaps in our understanding of the Earth’s system to be addressed. The UK science base needs to continue to provide the leading evidence and retain and develop the skill set to lead and direct the next phase of the Copernicus space component as well as wider missions, working, for example, within programmes and with the European Space Agency in areas such as polar science (e.g. polar ice thickness and extent), land surface processes (e.g. land temperature) and climate change (e.g. carbon dioxide).

14. Climate is a particular focus for this call and applicants should use both current and future satellite missions as a basis for formulating CDT proposals. EO is an important tool in helping us to understand and predict future climate change. Upcoming satellite missions will generate new data for climate science. The Biomass mission will provide data on the amount of biomass and carbon stored in forests enabling us to increase our knowledge of the role forests play in the carbon cycle. The Surface Water and Ocean Topography (SWOT) mission will measure the elevation of water in major lakes, rivers and wetlands as well as ocean features which will help us to assess water resources on land, track regional sea level changes, monitor coastal processes, and observe small-scale ocean currents and eddies. The MicroCARB mission will monitor and characterize CO₂ surface fluxes.
as these ESA funded missions applicants may also wish to consider non-ESA missions such as those funded by NASA, NSF and JST. In order to maximise the long-term usage of data from these and other relevant satellite missions it is crucial to develop researchers who have the relevant skills and expertise to understand, manage and utilise the data. It is through collaborative science across land, ocean, atmosphere and climate that the next generation digital environment, will be developed. The primary data sources for these will be satellite data from Copernicus and wider EO platforms; the skills set is required now for NERC scientists to understand this data and gain both knowledge and products from it. The successful CDT will be expected to demonstrate their ability to mitigate against potential changes in respect to satellite and data access through the EU and should seek to inform the students of the issues and implications of the potential or actual changes, such that the community is best placed to maintain its leading role going forward.

15. EO is an essential component of NERC’s funding, cutting across the full breadth of NERC science. EO increasingly features in strategic research programmes including ‘Air Pollution and Human Health’, ‘Changing Arctic Ocean’, ‘Sustaining Water Resources’, ‘Understanding El Niño Events’, ‘Latin American Biodiversity Programme’, ‘Science for Humanitarian Emergencies and Resilience’, ‘Colombia Bio’ to name a few. EO underpins around 10% of our active grant portfolio equating to a total award value over £50 million. Furthermore, NERC supports substantial long-term EO research and monitoring across the UK through its national capability funding to research centres such as the NERC Centre for Earth Observation (NCEO), NERC Centre for Atmospheric Science (NCAS) and National Oceanographic Centre (NOC). As part of NERC’s strategic vision to fund facilities that align to a strong current and future demand from the environmental science community, NERC has committed funding of two earth observation facilities over the next five years. These are the NERC Earth Observation and Data Acquisition Analysis Service (NEODAAS) and the Field Spectroscopy Facility (FSF) and we would encourage applicants to engage with these providers from the outset. NERC also provides funding for the Centre for Environmental Data Analysis (CEDA) which also hosts and manages JASMIN, the NERC data analysis environment.

16. NERC led EO climate data is supporting work with Defra in agriculture, peatlands, habitats and flooding. In addition we are working with BEIS on UK greenhouse gas inventories and global carbon monitoring. UK scientists work closely with the European Centre for Medium Range Weather Forecasting (ECMWF) which runs the Copernicus Climate and Atmosphere Services from the UK. It is important for the strength of the UK science base that the ECMWF continues to operate from the UK bringing close collaboration and skills alongside UK expertise.

Training remit

17. Satellite EO offers many potential benefits for society, however, data are currently being underutilised. Training individuals with the skill set required to adequately and effectively evaluate, manipulate, combine and interpret these data, especially in the use of climate data for earth systems, will be critical for scientific discovery, opening new markets for
satellite enabled services, supporting the development and export of new EO technologies, and developing the UK’s position as a global hub for trusted EO data products.

18. The skills to access and utilise EO platforms such as Copernicus, gives us the ability to observe the UK, its overseas territories and its global interests. The NERC research community needs the capability to use EO data that is global to deliver the environmental advances that are evidential for climate policy, climate services, green finance addressing questions raised by IPCC 1.5C assessment report.

19. The UK Space Innovation and Growth Strategy set out an ambitious target of growing the UK’s share of the global space market from 6.5% to 10% by 2030. The Innovation and Growth Space Action Plan identified climate services as a UK priority, and the long-term involvement in, and utilisation of, Copernicus is a cornerstone of that plan. Achieving this target could deliver up to £400 billion worth of new exports and up to 100,000 skilled jobs. The report indicated that the highest growth space markets over the next two decades would be in “space-based services and applications using space data, services and infrastructure”. However the 2016 House of Commons Select Committee Inquiry into Satellites and Space identified that skills shortages, particularly in big data processing and analytics, have acted as a barrier for the uptake of space services across Government and the public sector and when small companies are starting up. Putting the UK at the forefront of the Artificial Intelligence (AI) and data revolution remains high on the Government’s agenda, with the Industrial Strategy White Paper citing growing AI and the data-driven economy as one of its four Grand Challenges.

20. To fully benefit from the technological advances and data availability from satellites, especially in the use of climate data for earth systems, and applying them effectively requires a comprehensive training programme that includes the following areas:

- Fundamental understanding of the principles of remote sensing and satellite EO (physics, signal and image processing, pattern recognition, applied statistics, calibration and validation)
- Numerical skills to develop novel approaches for evaluating, manipulating and analysing multi-dimensional data, including machine learning and AI, such as:
  - Big data processing and management
  - Mathematical and physical modelling
  - Algorithm design
  - Data assimilation, visualisation and interpretation
- Computer programming and software development

21. The successful CDT must build a programme of training which prepares students for the range of careers in this area they may wish to enter. This programme should equip students with strong leadership and management skills as well as the ability to communicate effectively across discipline boundaries and with users of research, and
understanding of the implications of their work for translation into business, policy and practical use.

22. Training provided by the CDT must be within the NERC remit, and relevant to NERC’s strategy but may include training at the interface between environmental sciences and other disciplines, where the solutions to many major research and innovation challenges exist. Training delivered by this CDT must align with the area specifically outlined in this call but may build on existing training infrastructure where applicable, and engagement with other relevant research council CDTs/Doctoral Training Partnerships (DTPs) and their end-user networks is strongly encouraged.

**Call requirements**

**Collaboration with end-users**

23. Collaboration with end-users, in the broadest sense, is vital for delivery of excellent multidisciplinary training and for framing research questions to ensure production of research outputs of direct relevance and practical use to the end-user community. Collaboration with end-users must therefore form a significant and central part of the CDT’s training programme – at both the design and delivery stage – and successful proposals will demonstrate clearly how students will benefit from engagement with multiple types of end-user organisations, on both an individual and a cohort level.

24. Applicants must ensure that a number of the studentships offered by the CDT are ‘collaborative’ or ‘CASE’ studentships and must embed collaboration with end-users through mechanisms in addition to CASE (e.g. placements, training courses, site visits) within their wider training programme. Applicants must demonstrate clearly within their proposals how this will be achieved.

25. An expectation of the CDT is that NERC funding will be used to leverage additional investment (either cash or in-kind support) from multiple stakeholders. Proposals must:

   i. evidence a track record of collaborative working;
   ii. outline a strategy for engaging with multiple stakeholders in industry, policy making, regulation and society to nurture additional investments; and
   iii. detail how working with these stakeholders will add value to the CDT and to the studentships, e.g. through placement and future employment opportunities.

**Research capacity**

26. Applicants must provide evidence within their proposals that they offer sufficient high-quality research capacity to deliver training in the areas specified in the remit of the priority area.
**Legacy and impact**

27. CDTs are supported with the intention of developing a legacy of training excellence from a directed NERC investment. Proposals must demonstrate consideration of the legacy and impacts of the CDT beyond the lifetime of NERC investment.

**Management**

28. The CDT will need to have strong leadership and management. It should have both a lead operational manager and steering committee. The steering committee should have representation from all the CDT partner organisations hosting PhD students and relevant end-user organisations. It will have overall responsibility for the effective governance of the CDT and its relationship with NERC and provide a strategic needs framework to aid the prioritisation and development of PhD projects.

29. The CDT must be able to demonstrate that robust and transparent governance arrangements are in place, which may include formal partnership agreements, communication plans and systems for monitoring the CDT’s overall progress and success. NERC strongly encourages applicants to involve CDT students in the governance structure and management/delivery of activities within the CDT.

**Widening participation**

30. NERC wants to ensure that it supports the most talented students whatever their background and regardless of where and when they undertook their first degree. To ensure that this happens, we require:

   - Selection processes to be open and transparent and enable the potential of the candidate to be assessed whether they are applying on a full or part-time basis, whether they have prior research training or not, and regardless of their demographic.
   - All studentships to be available on a full- or part-time basis and the availability of part-time awards must be clearly set out when advertising funding opportunities. Applicants must indicate within the full proposal if it is not possible to offer part-time training across all pathways and provide reasoning for this.
   - Opportunities for NERC-funded studentships to be actively publicised both within and beyond the host Research Organisations.

31. We expect applicants to think imaginatively and demonstrate in their proposals that they have considered how they will contribute to the widening participation agenda and promote postgraduate research to a diverse base of talented graduate students across the UK.

**Funding**

32. NERC will award eight notional studentships per annum for three years. A notional studentship consists of sufficient funds to meet the annual RCUK minimum stipend and fee
levels, plus additional research and management costs as outlined below, for four full years of PhD study; it is expected that individual students will undertake training over a variety of timeframes (between three and four years as appropriate, depending on the discipline, project and the student’s experience/knowledge) and there will not necessarily be a 1:1 ratio of notional studentships to individual students supported by a CDT training grant.

33. Indicative funding total per notional doctoral studentship (based on Research Council minima 2019/20):

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Stipend</td>
<td>£60,036</td>
</tr>
<tr>
<td>Fees</td>
<td>£17,308</td>
</tr>
<tr>
<td>Research Training Support Grant</td>
<td>£11,000</td>
</tr>
<tr>
<td>Management Costs</td>
<td>£1,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£89,844</strong></td>
</tr>
</tbody>
</table>

34. The CDT will have flexibility in how it uses the funding (subject to the normal training grant terms and conditions), as long as the minimum notional numbers of students are supported per annum.

35. The UK Space Agency will provide additional support to the CDT. Up to £8K per year will be made available for the successful CDT to enable students to participate in added-value activities, including placements e.g. with the European Space Agency (ESA), short courses, attending conferences and supporting attendance at satellite mission launches. Applicants to this call must outline how they will utilise this additional funding.

**Reporting**

36. There will be mandatory annual reporting requirements for the CDT in addition to the standard studentships information captured through the Je-S Studentship Details Portal (SDP). This information will be used by NERC to report on the success of our training investments to government and other partners. Information provided will also be used to provide assurance that the CDT is being managed appropriately and is progressing in accordance with its original funding proposal, the NERC Training Strategy and the aims and expectations outlined in this Announcement of Opportunity document. This additional reporting will take the form of an annual return. Indicative reporting headings include:

i. Information regarding the student population – demographics, application information, etc.

ii. Information regarding additional partner engagement, collaborations and co-funding

iii. CASE partner engagement

iv. Student Research outputs

v. Cohort Specific Training Progress and Development updates

vi. Information regarding supervisor training and professional development

vii. Any structural and managerial changes that have occurred within the CDT.
The CDT will also be expected to respond to other reporting requirements when requested.

**Application process**

**Eligibility**

37. This opportunity is open to organisations eligible for NERC research grant funding, i.e. applicants based in UK Higher Education Institutions (HEIs), NERC research centres, and Independent Research Organisations (IROs) approved by the Research Councils.

38. Each CDT must include an accredited higher education PhD awarding body.

39. Organisations ineligible for NERC research grant funding may act as partners in proposals and information regarding the nature of this collaboration must be included within the proposal.

**Outline proposals**

40. Applicants are asked to submit an outline proposal in the first instance.

41. Outline proposals must be submitted by email to NERC Research Careers using the form provided on the NERC website and in Annex A by 16:00 GMT Thursday 25 April 2019. Applications received that do not use this form and/or those submitted after the deadline will be excluded from this call.

42. Outline proposals that do not follow the formatting and page limit requirements within the forms will be excluded from this call.

43. All outline proposals must use the form provided on the NERC website and in Annex A. The Case for Support section of the form must not exceed 5 pages of A4 in single-spaced typescript of minimum font size 11 point (Arial or other sans serif typeface of equivalent size to Arial 11), with margins of at least 2cm. Please note that Arial narrow, Calibri and Times New Roman are not allowable font types and any proposal which has used any of these font types within their submission will be rejected. References and footnotes should also be at least 11 point font and should be in the same font type as the rest of the document. Headers and footers should not be used for references or information relating to the scientific case. Embedded diagrams or pictures or numerical formulae may contain text that is smaller than 11 point but applicants should ensure that the font is legible. Text in tables and figure labels not within embedded diagrams should be at least 11 point.

44. Applicants will need to provide details under the following headings:
   i. Research Excellence
   ii. Training Excellence
   iii. Multidisciplinary Training Environment
iv. Partnership Operational Management (Quality Assurance and Attracting Excellent Students)

45. Applicants are strongly encouraged to include a high-level vision statement for their CDT within the Case for Support section of their outline proposal.

46. No other attachments will be accepted, including letters of support. Links to websites will be ignored. Applicants are not required to demonstrate any agreed or expected in-kind support or additional funding at the outline proposal stage, although a clear strategy for engagement with multiple stakeholders should be presented.

Full proposals

47. Following the outline proposal assessment process, applicants will be notified whether they have been invited to submit a full proposal for this funding opportunity. Feedback from the outline proposal assessment process will be provided following the announcement of invitations to submit full proposals.

48. All full proposals must use the form provided on the NERC website and in Annex B. The Case for Support section of the form must not exceed 14 pages of A4 in single-spaced typescript of minimum font size 11 point (Arial or other sans serif typeface of equivalent size to Arial 11), with margins of at least 2cm. Please note that Arial narrow, Calibri and Times New Roman are not allowable font types and any proposal which has used any of these font types within their submission will be rejected. References and footnotes should also be at least 11 point font and should be in the same font type as the rest of the document. Headers and footers should not be used for references or information relating to the scientific case. Embedded diagrams or pictures or numerical formulae may contain text that is smaller than 11 point but applicants should ensure that the font is legible. Text in tables and figure labels not within embedded diagrams should be at least 11 point.

49. Applicants will need to provide details under the following headings:
   i. Research excellence
   ii. Training excellence
   iii. Multidisciplinary Training Environment
   iv. Partnership Operational Management (Quality Assurance and Attracting Excellent Students)

50. At the full proposal stage, applicants must provide evidence of any financial or in-kind commitment agreed by partners. This may take the form of a statement in the Case for Support or a signed letter of support. Only letters of support outlining agreed commitments (financial or in-kind) to the CDT will be accepted at the full proposal stage – no other attachments will be accepted. Links to websites will be ignored.

51. Full proposals must be submitted using the Research Council’s Joint Electronic Submission
System (Je-S) by 16:00 GMT Thursday 8th August 2019. Applicants should select Proposal Type – ‘Studentship Proposal’ and then select the Scheme – ‘Doctoral Training’ and the Call – ‘CDT August 2019’.

52. Please note that on submission to council ALL non-PDF documents are converted to PDF, the use of non-standard fonts may result in errors or font conversion, which could affect the overall length of the document. Additionally where non-standard fonts are present, and even if the converted PDF document may look unaffected in the Je-S System, when it is imported into the Research Councils Grants System some information may be removed. We therefore recommend that where a document contains any non-standard fonts (scientific notation, diagrams etc.), the document should be converted to PDF prior to attaching it to the proposal.

53. To use the Je-S system, the Research Organisation must be registered as a Je-S user. Full details are available on the Je-S website. Further information can also be obtained by contacting the Je-S Helpdesk by email or by telephone on 01793 444164.

54. Applicants must ensure that their proposal is received by NERC by 16:00 on the closing date. They should leave enough time for their application to pass through their organisation’s Je-S submission route before this date. Any proposal that is received after the closing date, is incomplete, or does not meet NERC’s eligibility criteria, will be returned to the applicant and will not be considered.

55. A single proposal should be submitted from the administrative lead partner for each of the outline and full proposal application stages.

Assessment process

56. Both the outline and full proposals will be assessed by a peer review assessment panel, consisting of international experts supplemented by member(s) of the NERC Training Advisory Board (TAB). The assessment process for both panels is provided below:

Outline proposals

57. The assessment criteria and scoring definitions to be used by the assessment panel for both outline and full proposals are given in Annexes C & D. Applicants will not be invited to present or attend an interview at the outline proposal stage of the application process.

58. Outline proposals will be assessed against four criteria: Research Excellence, Training Excellence, Multidisciplinary Training Environment and Partnership Operational Management. These criteria will be weighted as shown in Table 1.
Table 1. CDT Proposal Scoring System.

<table>
<thead>
<tr>
<th>CDT Assessment Criteria</th>
<th>Weighting</th>
<th>Score</th>
<th>Overall Excellence Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Research Excellence</td>
<td>25%</td>
<td>/10</td>
<td>= 0.25 x Score</td>
</tr>
<tr>
<td>2. Training Excellence</td>
<td>25%</td>
<td>/10</td>
<td>= 0.25 x Score</td>
</tr>
<tr>
<td>3. Multidisciplinary Training Environment</td>
<td>25%</td>
<td>/10</td>
<td>= 0.25 x Score</td>
</tr>
<tr>
<td>4. Partnership Operational Management</td>
<td>25%</td>
<td>/10</td>
<td>= 0.25 x Score</td>
</tr>
<tr>
<td>Overall Grade Excellence Score</td>
<td>100%</td>
<td>/10</td>
<td>Sum</td>
</tr>
</tbody>
</table>

59. Following the outline proposal assessment panel meeting, feedback will be provided on all outline proposals and successful applicants will be informed if they have been invited to submit full proposals.

**Full proposals**

60. The assessment criteria and scoring definitions to be used by the assessment panel for both outline and full proposals are given in Annexes C & D. The full proposal assessment process includes an applicant presentation and interview with the assessment panel.

61. NERC will try to provide early notice of an invitation to attend, but applicants should note that the assessment panel meeting is currently planned for the week commencing 23 September 2019.

62. Full proposals will be assessed against the same four criteria as the outline proposals, using the same weighting (Table 1).

63. Following the full proposal assessment panel meeting, feedback for all full proposals will be provided.

**Timetable**

64. Overview of the competition timetable:
   - 25 April 2019: Closing date for outline proposals.
   - w/c 27 May 2019: Outline proposal Assessment Panel meeting.
   - 8 August 2019: Closing date for full proposals.
   - w/c 23 September 2019: Assessment Panel meeting, with applicant interviews.
   - w/c 7 October 2019: Decision communicated to applicants.
   - September 2020: First CDT studentships commence.

65. For further information please contact NERC Research Careers.
**Annex A: Outline Proposal – Application Form and Case for Support Form**

**NERC, Polaris House, North Star Avenue, Swindon, Wiltshire, United Kingdom, SN2 1EU**

**Telephone: +44 (0) 1793 411500**

**Web**

---

**COMPLIANCE WITH THE DATA PROTECTION ACT 1998**

In accordance with the Data Protection Act 1998, the personal data provided on this form will be processed by NERC, and may be held on computerised database and/or manual files. Further details may be found in the guidance notes.

---

**Centre for Doctoral Training OUTLINE PROPOSAL**

**Administrative Lead Partner** (This is the organisation that will receive the funding for the CDT from NERC, and will be the main point of contact between the two bodies).

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Internal Research Organisation Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division or Department</td>
<td></td>
</tr>
</tbody>
</table>

**Lead Applicant** (The individual should be from the Administrative Lead Partner and be the administrative lead/head of the CDT).

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Division or Department</th>
<th>CDT Role</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hosting Partner** (Please only include HEI or Research Organisation partners that will be acting as hosts for CDT students. Other partners should be mentioned within the Case for Support as appropriate).

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Division or Department</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Title [up to 150 characters]**

---

---
Centre for Doctoral Training – Outline Proposal Case for Support

Please justify and evidence your proposal using the following headings:

- Research Excellence
- Training Excellence
- Multidisciplinary Training Environments
- Partnership Operational Management

This Case for Support must be completed on standard A4 sized paper in single-spaced typescript of minimum font size 11 point (Arial or other sans serif typeface of equivalent size to Arial 11), with margins of at least 2cm. Please note that Arial narrow, Calibri and Times New Roman are not allowable font types and any proposal which has used either of these font types within their submission will be rejected. References and footnotes should also be at least 11 point font and should be in the same font type as the rest of the document. Headers and footers should not be used for references or information relating to the scientific case. Embedded diagrams or pictures or numerical formulae may contain text that is smaller than 11 point but applicants should ensure that the font is legible. Text in tables and figure labels not within embedded diagrams should be at least 11 point. Applicants referring to websites should note that referees may choose not to use them.

This Case for Support section must NOT exceed 5 sides of A4.
Annex B: Full Proposal – Application Form and Case for Support Form

In accordance with the Data Protection Act 1998, the personal data provided on this form will be processed by NERC, and may be held on computerised database and/or manual files. Further details may be found in the guidance notes.

Centre for Doctoral Training FULL PROPOSAL

Administrative Lead Partner (This is the organisation that will receive the funding for the CDT from NERC, and will be the main point of contact between the two bodies.).

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Internal Research Organisation Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division or Department</td>
<td></td>
</tr>
</tbody>
</table>

Lead Applicant (The individual should be from the Administrative Lead Partner and be the administrative lead/head of the CDT).

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Division or Department</th>
<th>CDT Role</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hosting Partner (Please only include HEI or Research Organisation partners that will be acting as hosts for CDT students).

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Division or Department</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Title [up to 150 characters]

CDT Summary [maximum 4000 characters with spaces]
Please provide a summary of the proposed training in terms appropriate for a general audience, including details on what will make your training offer unique and what its impact will be.
Centre for Doctoral Training – Full Proposal Case for Support

Please justify and evidence your proposal using the following headings:

- Research Excellence
- Training Excellence
- Multidisciplinary Training Environments
- Partnership Operational Management

This Case for Support must be completed on standard A4 sized paper in single-spaced typescript of minimum font size 11 point (Arial or other sans serif typeface of equivalent size to Arial 11), with margins of at least 2cm. Please note that Arial narrow, Calibri and Times New Roman are not allowable font types and any proposal which has used either of these font types within their submission will be rejected. References and footnotes should also be at least 11 point font and should be in the same font type as the rest of the document. Headers and footers should not be used for references or information relating to the scientific case. Embedded diagrams or pictures or numerical formulae may contain text that is smaller than 11 point but applicants should ensure that the font is legible. Text in tables and figure labels not within embedded diagrams should be at least 11 point. Applicants referring to websites should note that referees may choose not to use them.

This Case for Support section must NOT exceed 14 sides of A4.
### Annex C: Proposal Assessment Criteria

The assessment criteria that will be used to assess proposals are:

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Key aspects for an outstanding CDT</th>
<th>Factors and Evidence that might be discussed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Research excellence (25%)</td>
<td>The training and training environment must include scientifically excellent and original research within NERC’s remit, and specifically within the remit of the call. Critical mass of relevant researchers/teams/projects within the specific remit of the call to allow students to be supported effectively and sufficiently exposed to excellent research and researchers in the relevant areas.</td>
<td>Number of active NERC-funded research projects and PIs at host RO’s, specifically within the remit of the call. REF 2014 profiles (where relevant). Standing in the appropriate academic community – national, international etc. Institutional commitment to research excellence, specifically within the remit of the call. Amount of NERC and Research Council research income in research areas specific to the call.</td>
</tr>
<tr>
<td>2. Training excellence (25%)</td>
<td>Students are part of an active research and training community and managed as a cohort. Excellent scientific training and transferable/professional skills development opportunities. Excellent training and support for supervisors. Challenging and relevant, but feasible, projects. Co-development of projects and training programmes with end-users to ensure research and skills are tailored to their needs from the outset. Timely access to world-class facilities, direct experience of cutting-edge</td>
<td>Integration of students into the relevant teams/projects/departments/schools. Mechanisms for supervision, supervisor training, and monitoring of both student and supervisor. How generalist and specialist development needs of individual students will be identified and addressed. Personal/professional/career learning and development that students will receive. Collaborative opportunities and end-user engagement in training programmes – which may include training delivery, internships, industrial placements, overseas studies, and co-supervisory arrangements if appropriate. Mechanisms to ensure the development of independent researchers and world-leading scientists.</td>
</tr>
<tr>
<td>Techniques, Technologies and up to date methodologies.</td>
<td>Access to, and encouragement of, peer-to-peer learning and support.</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Completion rates, publication and first destination data for students hosted within CDT institutions.</td>
<td>Employability of graduates.</td>
<td></td>
</tr>
<tr>
<td>Leveraged support for the CDT (either in-kind or financial).</td>
<td>Mechanisms to ensure students have access to the opportunities available through the additional support offered by the UK Space Agency.</td>
<td></td>
</tr>
</tbody>
</table>

### 3. Multidisciplinary Training Environments (25%)

**Training is embedded in multidisciplinary research environments.**

Excellent opportunities to network with researchers and students from other disciplines.

Excellent opportunities for collaborative projects involving end-user partners, including CASE studentships, internships/placements, and end-user co-supervision.

End user engagement in all aspects of training, from individual projects to cohort-level specialist and transferrable skills training: Students will gain value from interaction with a wide range of end-users and leave equipped with skills applicable to the environment sector and relevant to policymakers and regulators, industry and business, and NGOs and charities.

How students will be made aware of the context of their research and how it relates to other disciplines, and its application outside of academia.

Supervisory or wider advisory team engagement in research outside the relevant discipline(s).

Ability to expose students to different disciplines via, for example:

- Interaction with cohorts from different disciplines beyond the CDT through transferrable skills training, seminars/conferences and networking opportunities.
- Placing students within multidisciplinary research teams.
- Opportunities to attend specialist training courses in other disciplines where appropriate.
| 4. Partnership Operational Management (25%) | Robust and transparent governance arrangements and strategy for managing partnerships between or within organisations. |
| | Well-considered mechanism for planning, managing and monitoring training. |
| | Agreement by all parties of a robust mechanism for aligning ways of working and sharing resources and finances between different organisations (including non-academic partners). |
| | Clear strategy for engagement with end-users, appropriate to the scope of the CDT, in all aspects of training from the outset of the CDT. |
| | Well-defined legacy of the CDT beyond the lifetime of any NERC investment, including research and training outcomes and impacts, and opportunities to maximise NERC’s investment. |
| | Good consideration of the widening participation agenda and robust mechanisms to promote postgraduate research to a diverse base of talented graduate students across the UK, with all studentships offered on a full- or part-time basis through an open and transparent selection process. |
| | Systems and processes for assessing the suitability of supervisors and projects. |
| | Competitive mechanisms for awarding studentships within the CDT. |
| | Contribution to the widening participation agenda. |
| | Strategy for engaging with end-users. |
| | Excellent students – processes for student recruitment (ensuring the best-fit students are recruited), induction, progression, monitoring and submission. |
| | Arrangements for returning accurate and timely data on studentships to NERC. |
| | Mechanisms for improving and maintaining submission rates. |
| | Establishing cohorts beyond the NERC funded students by using the CDT as a magnet/nucleus for research and training activities. |
| | Robust quality-assurance procedures and structures. |
| | Development and demonstration of Success Stories. |
| | Arrangements in place for management of data generated by studentship projects. |
| | Mitigation plans for potential changes in satellite and data access as a result of changes to the political landscape. |
# Annex D: Overall Excellence Score Definitions

<table>
<thead>
<tr>
<th>Score</th>
<th>Usual Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Excellent quality proposal</strong></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>The proposal is outstanding and represents world-leading standards. Highest priority for funding.</td>
</tr>
<tr>
<td>9</td>
<td>The proposal is excellent and represents world-class standards. Very high priority for funding.</td>
</tr>
<tr>
<td>8</td>
<td>The proposal is very good and contains aspects of excellence. High priority for funding.</td>
</tr>
<tr>
<td><strong>Good quality proposal</strong></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>The proposal is good and is internationally competitive. Should be funded if possible.</td>
</tr>
<tr>
<td>6</td>
<td>The proposal is good and on the borderline between nationally and internationally competitive. Potentially fundable.</td>
</tr>
<tr>
<td>5</td>
<td>The proposal is good and has some merit but is not at the leading edge. It is suitable for funding in principle but in a competitive context is not a priority.</td>
</tr>
<tr>
<td><strong>Potentially useful proposal</strong></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The proposal is good and has some merit, but has a number of weaknesses. Not recommended for funding.</td>
</tr>
<tr>
<td>3</td>
<td>The proposal is satisfactory. It would provide something useful, but fails to provide reasonable evidence and justification for funding. Not recommended for funding.</td>
</tr>
<tr>
<td><strong>Unacceptable proposal</strong></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The proposal is weak, and has only a few strengths. Not suitable for funding.</td>
</tr>
<tr>
<td>1</td>
<td>The proposal is unsatisfactory and is unlikely to train students successfully. Not suitable for funding.</td>
</tr>
<tr>
<td>0</td>
<td>For special cases, e.g. flawed in approach, subject to serious difficulties, does not address operational risks, sufficiently un-clearly written so it cannot be properly assessed, or outside of NERC remit.</td>
</tr>
</tbody>
</table>