Innovation Placements: Open Call 2018

**Host Organisation Specifications**

NERC invites academic researchers to apply for 3 – 12 month placements at non-academic organisations. NERC has received the following placement opportunities’ specifications that may be of interest to applicants:

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</tbody>
</table>

NERC also welcomes applications that propose working with other hosts on other topics which build on Research Council funded research, and which fall within NERC remit.

All applicants are advised to discuss their application with the host organisation at the earliest possible opportunity.
Agri-Food and Biosciences Institute (AFBI)

Developing Policy and Stakeholder uptake and utilisation of Ecosystem Models

The Agri-Food and Biosciences Institute (AFBI) is offering to host placements under the NERC-funded Innovation Placements Call 2018 that will support the Agri-Food and Biosciences Institute Shellfish Management and Marine Fisheries Programmes.

The Fisheries and Aquatic Ecosystems Branch of AFBI conducts a number of projects actively developing ecosystem models for the management of coastal catchments, shellfish aquaculture carrying capacity and leading towards the ecosystem management of fisheries. Policy and industry stakeholders are often unaware of the scope and utility of these tools and how may they be applied.

The proposed placement will provide the opportunity to work alongside AFBI scientists learning approaches to developing models and the supporting science with opportunities to take part in fieldwork and site visits. In parallel to this, they will shadow policy (DAERA) and industry stakeholders (fisheries, water industry) to gain insight of their requirements for the delivery of their statutory and commercial roles.

They will aim to produce a review paper of the mechanisms for bringing these strands together and how mutual understanding may be improved. This forms a key part of improving the impact of research, which is critical for early stage researchers and provides future direction in the field.

Key details

<table>
<thead>
<tr>
<th>Duration of placement</th>
<th>9-12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment of placement applicant</td>
<td>100% within AFBI but we aim to place the individual with other Government Agencies or stakeholder groups for up 30% of the time</td>
</tr>
<tr>
<td>Location(s)</td>
<td>Agri-Food Biosciences Institute Newforge Lane Belfast BT9 5PX</td>
</tr>
<tr>
<td>Start date of project</td>
<td>1st November 2018</td>
</tr>
<tr>
<td>Completion date of project</td>
<td>30th October 2019</td>
</tr>
<tr>
<td>Expected benefits for successful placement applicant</td>
<td>Understanding of how research translates to Government Policy Departments and stakeholders. Improving the impact of research. Providing direction.</td>
</tr>
<tr>
<td>Expected outputs for host organisation</td>
<td>Better clarity of the application of science outputs by our policy and stakeholder customers</td>
</tr>
</tbody>
</table>
Placement activities

The successful applicant will be involved in a range of activities and tasks that may include:

- Working with AFBI scientists, including oceanographers, fishery scientists and modellers;
- Fieldwork on research vessels and site visits to aquaculture installations;
- Running and developing scenarios with existing models;
- Meeting and engaging with policy stakeholders.

Background information about host organisation

AFBI is a DAERA non-departmental public body (NDPB). AFBI carries out high technology research and development, statutory, analytical, and diagnostic testing functions for DAERA and other government departments, public bodies and commercial companies.

AFBI’s NDPB status enables it to be innovative and entrepreneurial in its approach to business development. AFBI is forging new partnerships with other scientific institutes and research organisations and extending the range of services it offers. This enables AFBI’s unique breadth of scientific capabilities in the areas of agriculture, animal health, food, environment and biosciences to be offered to a wider prospective national and international customer base.

The Fisheries and Aquatic Ecosystems Branch (FAEB) is one of the three national marine and freshwater science laboratories in the United Kingdom delivering scientific services and advice to the government on marine and aquatic matters. The branch delivers a wide range of statutory, research and development, monitoring and technology transfer functions in support of sustainable management of fisheries, aquatic resources and ecosystems; focussing particularly on the needs of Northern Ireland.

The branch undertakes a programme of work centred around four main science themes:

- Marine resource assessment
- Marine environmental health
- Freshwater environment and resource management
- Decision support tools
Integration of knowledge about fish stocks, their environment and the underlying processes that underpin production is crucial to our mission; only through this approach can we address emerging scientific questions and challenges facing the industry.

Delivery of the work programme critically depends on our asset base, which comprises 57 staff (17 project leaders), together with contract staff, temporary staff and students. Our physical infrastructure is well resourced, with 53m, 1,100t marine research vessel R.V. Corystes, based at the Port of Belfast, and the availability of Department of Agriculture, Environment and Rural Affairs (DAERA) facilities at the River Bush Salmon Station being key assets.

FAEB scientists have active links with many scientific organisations worldwide, but there are particularly strong links with Centre for Environment, Fisheries and Aquaculture Science (Cefas) in England, Marine Scotland and the Marine Institute in Ireland. The branch has strong representation on a number of international bodies, such as International Council for the Exploration of the Sea (ICES), including UK representation at ICES Advisory Council, the North Atlantic Salmon Conservation Organisation (NASCO) and the European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC). Most of the work conducted by the branch is in direct support of DAERA policy objectives (assigned work programme (AWP)); however significant work is carried out for the Northern Ireland Environment Agency (NIEA) and the Food Standards Agency (FSA) under service level agreements. Work is also undertaken for a wide range of customers including the Department for Environment, Food and Rural Affairs (Defra), the Loughs Agency, local harbour authorities, local and national fishery and environmental departments, fishery agencies, non-departmental public bodies (NDPBs) and industry stakeholders.

Much of our work is statutory/regulatory in nature and this forms the core long-term programme, together with our strategic long-term environmental monitoring activities. The model for providing this core service to DAERA also further builds our research capability and physical infrastructure, which greatly strengthens our science position. It has allowed us to carve a niche within the spectrum of public sector research organisations and has placed us in a good position to target emerging funding opportunities that synergise/fit with our core programme. We were thus well placed to take advantage of the increasing demands for evidence-based science in the marine and freshwater fisheries and ecosystem areas (partly driven by the changing policy landscape) by securing collaborative research funding. In return, this provided added value to the core government work. This is evident in the high and increasing trend of external (non-DAERA) income during the review period (£2.9 million to £4.6 million representing on average 53% of the expenditure).

The science activities of FAEB comprise an appropriate mix of regulatory work, research and development (R&D), monitoring and technology transfer, ensuring that our customer needs are met over a range of timescales. R&D projects on mainly applied research areas come and go on a 3-5 year cycle, with results feeding directly into our core departmental programmes (such as fish stock assessment), or back to industry via technology transfer (such as gear trials, or pilot research on new fishery opportunities).
The policy-driven and applied nature of our science programme resulted in FAEB achieving high visibility and we have ongoing and frequent interaction at ministerial level, with local politicians and at Government Assembly Committees, as well as the public through regular media interviews. Whilst we have significant output in terms of traditional measures of scientific outputs such as refereed papers and international conference attendance, the greatest share of our output is weighted towards the areas of specialist reports and technological transfer events. This accurately reflects the closeness of our branch to policy customers in DAERA and elsewhere, to the fishing industry, and other stakeholders in the marine and freshwater areas. Many of the non-refereed outputs are reports for policy customers, either on completed scientific work or to address policy development, while many are produced as part of international assessment processes as member state inputs.

Technology transfer is a highly visible part of our work and takes two main forms; firstly stakeholder events, where we meet and brief politicians, industry stakeholders, environmental non-governmental organizations (NGO), angling clubs and associations, aquaculture bodies, etc., while the other is actual transfer of technologies to industry; such as fishing gear developments.

**Application Process**

All applicants interested in undertaking a placement with AFBI are required to register their interest by contacting Dr Matthew Service by **18th May 2018** (and preferably well in advance of this deadline). Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the [Announcement of Opportunity](#).

Placements proposals must be co-developed with an AFBI member of staff. Applicants needing help with finding an appropriate member of staff should contact Dr Matthew Service or Dr Mathieu Lundy AFBI will contact applicants by the end of May 2018 to confirm whether we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4pm 4th July.

Please follow the application process outlined in the NERC Innovation Placements [Announcement of Opportunity](#) and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work.

A Letter of Support is required from Dr Matthew Service or Dr Mathieu Lundy for each placement opportunity at AFBI. Applicants who apply for this opportunity can also apply for other placements in this call.

AFBI Learning and Development Unit will issue Indemnity, Non Disclosure Agreement (NDA) and Application forms which must be returned completed prior to any decision being made. For placements of over 4 weeks a basic disclosure form must be obtained from [Access NI](#).
Contact details

For general queries about this call, please contact:

Tessa Edgecombe  
Senior Programme Manager (Innovation)  
Natural Environment Research Council  
Email: tjed@nerc.ac.uk  
Tel: 07788 190531

For technical queries regarding the content of the Placement at AFBI please contact:

Dr Matthew Service  
Matt.Service@afbini.gov.uk

Dr Mathieu Lundy  
Mathieu.Lundy@afbini.gov.uk
**Chevron**

**Chevron: Placement Opportunities**

Chevron is potentially offering to host a placement under the NERC-funded Innovation Placements Call 2018 contingent upon a topic and activities being agreed.

Potential topics include, but are not limited to: decommissioning; onshore asset retirement; AUV for sensing; drilling waste management; microseismics.

Projects are expected to start on 1 November 2018, lasting from 3 – 12 months, and be completed by 31 October 2019. Placements will be expected to spend between 80% and 100% of their time embedded in Chevron’s office in Aberdeen.

**Application Process**

Any interested applicants should contact Peter Oliver (POliver@chevron.com) by 15 May 2018 (and preferably well in advance of this deadline).

Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity. Also, be prepared to discuss how you think you could address and add value to any of the topics stated above and the particular skills and experience that you could bring to this work using either NERC- or other Research Council-funded research. A Letter of Support from the host organisation is mandatory for any proposals.

The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4 July 2018.

For general queries about this call, please contact:

Tessa Edgecombe  
Natural Environment Research Council  
Senior Programme Manager (Innovation)  
Email: tjed@nerc.ac.uk  
Tel: 07788 190531
Co-op Placement Opportunity

The Co-op is potentially offering to host a placement or placements under the NERC-funded Innovation Placements Call 2018 dependent on whether topics and activities can be agreed.

The Co-op is one of the world’s largest consumer co-operatives, owned by millions of members. We’re the UK’s fifth biggest food retailer with more than 2,500 local, convenience and medium-sized stores. We’re also:

- the UK’s number 1 funeral services provider
- a major general insurer
- a growing legal services business

Potential area(s) for projects to include:

- Initial study for natural capital approach for Co-op uniform strategy, assessing environmental impacts of, for example, natural fibres (plant/animal) versus manmade fibres from natural polymers (usually plant based) versus manmade fibres from synthetic polymers (usually petrochemical based). Taking into account factors such as use of chemicals, waste water, micro-fibre pollution and the environmental footprint of the production of different fibres etc. through the life of the end garment, and to include evaluation of textiles and clothing (particularly uniforms). The study should evaluate the practicality of different options in producing commercially viable, durable, easy-care garments, possible actions which could mitigate environmental impacts and consideration of recycled versions of the different fibres.

Projects are expected to start on 1 November 2018, lasting from 3-12 months, and be completed by 31 October 2019. Placements will be expected to spend between 80% and 100% of their time embedded in the Co-op, 1 Angel Square, Manchester, with fieldwork with our store and logistics colleagues and the garment industry (in particular our current uniform supplier) expected.

Application Process

Any interested applicants should contact Sophie Fryer (sophie.fryer@coop.co.uk) by 20th May 2018 (and preferably well in advance of this deadline).

Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity. Also, be prepared to discuss how you think you could address and add value to any of the topics stated above and the particular skills and experience that you could bring to this work using either NERC- or other Research Council-funded research within the NERC remit. A Letter of Support from the host organisation is mandatory for any proposals.

The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4 July 2018.

For general queries about this call, please contact:

Tessa Edgecombe
Natural Environment Research Council
Senior Programme Manager (Innovation)
Email: tjed@nerc.ac.uk
Tel: 07788 190531
Department for Business, Energy and Industrial Strategy (BEIS)

Environmental Impacts of Novel Low-Carbon Technology

The Department for Business, Energy and Industrial Strategy (BEIS) is offering to host placements under the NERC-funded Innovation Placements Call 2018 in order to support the Government’s goal in decarbonising the UK energy systems at the least cost to consumers.

BEIS is a new department at the heart of the Government’s agenda, with a vision of an economy that works for everyone. We are responsible for developing and delivering a comprehensive industrial strategy and leading the Government’s relationship with business; we work to tackle climate change and ensure that the country has secure energy supplies that are reliable, affordable and clean. Our role is vital to lead the Government’s vision in a context of momentous change, responding to both the short-term domestic impact of the UK’s withdrawal from the European Union and working to define the next stage.

This is an opportunity for up to three 12-month innovation placement positions within the central Technical Energy Specialists, Building Environment and Climate Science teams. Based in London, these teams use a wide variety of analysis to influence Government policy in energy and decarbonisation. In this role, you will be expected to become a vital part of our centre of technical excellence focussing on climate science and land use, renewable generation, nuclear, low-carbon heat, shale gas, geothermal gas and unconventional oil recovery. You will be expected to apply your environmental expertise across a wide range of BEIS’s activities in the formulation of strategies and policies and in the setting of levies and tariffs.

The cross-cutting nature of the role means that you will work on BEIS’s highest priority issues providing expert support for policy teams and building networks across the department. You will also develop departmental environmental best practice and capability, continuing BEIS’s leadership within this field.

Successful applicants will be involved in a wide range of activities and tasks. These could include one or more of:

- Working with the British Geological Survey to undertake environmental monitoring at the UK’s first shale gas sites.
- Analysing how the UK can meet its environmental targets for low carbon energy at minimum cost to consumers.
- Looking at the effect of offshore wind on sea bird populations and to determine whether floating wind further from the coast will reduce blade bird strikes.
- Looking at prospective geothermal energy schemes (for both home heating and electricity generation) in Cornwall and determining whether there is potential for environmental impacts during drilling and operations.
• Scoping, commissioning and project managing new research on the current state of heat emitters in homes and their compatibility with current low carbon heating options.

• Looking at sustainability of global supplies of bioenergy to the UK.

As we regularly provide technical advice to Government Ministers, good writing and communication skills are required in this position.

The placement will be expected to spend between 80% and 100% of their time embedded in the organisation in our 1 Victoria Street, London site. We offer a variety of flexible working packages including home working, flexitime and compressed hours.

The placement is expected to start on 1st November 2018 and be completed by 31st October 2019.

Application Process

All applicants interested in undertaking a placement with BEIS are required to register their interest by contacting Dr Ian Llewellyn (ian.llewellyn@beis.gov.uk) by 1st June 2018 (and preferably well in advance of this deadline). Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

Placements proposals must be co-developed with a BEIS member of staff. Applicants needing help with finding an appropriate member of staff should contact Dr Ian Llewellyn. BEIS will contact applicants by the end of June to confirm whether we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4pm 4th July, 2018.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work using NERC or other Research Council-funded research.

A Letter of Support is required from BEIS and must be signed by Dr Ian Llewellyn, Head of Technical Energy specialists. Applicants who apply for this opportunity can also apply for other placements in this call. Successful applicant will be required to undergo background checks in order to get basic security clearance for working in a Government Department.

For general queries about this call, please contact:

Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

For technical queries regarding the content of the Placement at BEIS please contact:

Dr Ian Llewellyn
Head of Technical Energy Specialists
1 Victoria Street, London SW1H 0ET
Tel: 0300 068 6944
E-mail: ian.llewellyn@beis.gov.uk
Department for Environment, Food and Rural Affairs (Defra)

Placement Opportunities with Defra

Defra is potentially offering to host a placement or placements under the NERC-funded Innovation Placements Call 2018 dependent on whether topics and activities can be agreed.

Successful applications are expected to develop evidence statements to systematically gather a snapshot of the science communities’ understanding around some of the key challenges we face in the Plant & Bee Biosecurity or Air Quality areas.

Potential topics include:

**Plant & Bee Biosecurity**

1. **Treescape Resilience:** Despite best efforts to reduce the risk of introduction of invasive pests and pathogens, it is unlikely that Government biosecurity measures will be able to keep all threats outside the UK’s border. Consequently, it is necessary to explore how we can make the UK treescape more resilient to the cumulative threats posed by pests and we would welcome an opportunity to put the concept of resilience into practice.

   **Outputs:** Evidence statement to inform advice for local authorities and woodland owners which systematically pulls together the current evidence base and which sets out key outstanding gaps and suggestions on how they can be filled to enhance our understanding.

2. **Earth Observations:** A key challenge in Government’s response to outbreaks of plant pests and diseases is the lack of knowledge of what is at risk. Recent developments in earth observation technology may provide the key to develop our understanding of the distribution of tree species across the UK.

   **Outputs:** A roadmap for the development of a UK tree species map. This would provide key information to understand what is at risk, where to look for threats as well as building our understanding of the structure of tree populations in the UK, a key driver for wider biodiversity.

3. **Early Detection:** With more than 900 pest and diseases populating the UK’s Plant Health Risk Register and experience to date suggesting that once established it is extremely difficult to eradicate introduced pests, early detection is an essential component of our defence against threats. To optimise our chances, we need to develop and deploy novel technologies (e.g. to detect Asian hornet nests or trap invasive moths and beetles ), make better use of epidemiological intelligence and consider how we can make better use of Government inspectorate services, industry networks (e.g. growers, nurseries and trade representatives) as well as citizen scientists.

   **Outputs:** An interdisciplinary evidence statement evaluating how to best deploy these resources and measure our effectiveness could transform our surveillance and monitoring approach and could support how we monitor our environment more effectively.

4. **Minimising impact:** When novel threats do establish, a key challenge for Government and landowners is how we can minimise the impacts. Generally, our options are to fell infected trees to slow down spread, treat with control options (e.g. pesticides) or explore how to mitigate impacts through tree replacement, the development of resistant or tolerant trees or (human-assisted) adaptation to a new state of the environment. The selection of optimal control options
depends amongst other factors on pest characteristics, the state of the outbreak, the effectiveness of control options, public attitudes and the resource availability.

**Outputs:** An evidence statement, providing a framework for control strategies that balances technological advances, stakeholder concerns and other factors to minimise the impact on trees, biodiversity and society. A key requirement for the framework is how we could predict and/or monitor the range of impacts of control options before we deploy them.

**Air Quality**

Air Quality remains a high profile and high priority area for Defra providing the successful applicant with an opportunity to experience an evidence-policy interface in a challenging and highly topical area. Defra will shortly be publishing its Clean Air Strategy consultation with a view to finalising it before the autumn, which aims to deliver a wide range of interventions for improving our air quality. In order to finalise the strategy and take forward the ambitious programme it contains, we need a robust and broad understanding of the current evidence position. The Air Quality team recently commissioned its first evidence statement on “Nitrogen Impacts on Terrestrial Ecosystems” and the successful applicant would develop a series of evidence statements, directly delivering at least one and co-ordinating and driving a number of others.

The topics covered by these statements will be finalised once the consultation has concluded but topics may cover a diverse range of areas, for example; impacts of exposure to VOCs on human health from different sources; source apportionment and toxicology of different components of particulate matter; review of air quality related behavioural change studies; impacts of ozone on human health and terrestrial ecosystems. We are also open to suggestions from applicants.

**Outputs:** Development of the Air Quality Evidence Statement Series.

Projects are expected to start on 1 November 2018, lasting from 3 to 12 months, and be completed by 31 October 2019. Placements will be expected to spend between 80% and 100% of their time embedded in:

- Defra’s York, Bristol or London Office’s for the Plant Health/Biosecurity projects
- Defra’s London Office for the Air Quality projects

**Application Process:**

Any interested applicants should contact

- Willem Roelofs in the Plant & Bee Health / Biosecurity evidence team ([Willem.Roelofs@defra.gsi.gov.uk](mailto:Willem.Roelofs@defra.gsi.gov.uk))
- John Newington in the Air Quality & Industrial Emissions Evidence team ([John.Newington@defra.gsi.gov.uk](mailto:John.Newington@defra.gsi.gov.uk))

by the **24th May 2018** (and preferably well in advance of this deadline).

Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the [Announcement of Opportunity](#). Also, be prepared to discuss how you think you could address and add value to any of the topics stated above and the particular skills and experience that you could bring to this work using either NERC- or other Research Council-funded research. A Letter of Support from the host organisation is mandatory for any proposals.
The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4 July 2018.

For general queries about this call, please contact:

Tessa Edgecombe
Natural Environment Research Council
Senior Programme Manager (Innovation)
Email: tjed@nerc.ac.uk
Tel: 07788 190531
**Dwr Cymru Welsh Water**

**Water Services Science Placements**

Dwr Cymru Welsh Water is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support the Water Services Science WaterSource approach to catchment management and environmental impact of our water treatment waste products.

Supplying over 800 million litres of high quality tap water to our customers every day is one of our most important responsibilities. Our drinking water supplies are sourced from more than 100 predominantly rural catchments covering almost 11,000km², most of which are not in our ownership. The placements will support:

- The development of our WaterSource approach to catchment management, which we recognise as our *first line of defence* for the protection of our drinking water supplies.
- The impact of our waste water discharges from our water treatment works to the environment and
- Investigating the environmental consequences of spreading our water treatment sludge to land

**Key details**

<table>
<thead>
<tr>
<th>Duration of placement</th>
<th>12 months</th>
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<tbody>
<tr>
<td>Commitment of placement applicant</td>
<td>Between 80% and 100% of their time embedded in the organisation.</td>
</tr>
<tr>
<td>Location(s)</td>
<td>It is envisaged that the placements will be based at our Nelson office with field work needed as and when required, depending on the project</td>
</tr>
<tr>
<td>Start date of project</td>
<td>1 November 2018</td>
</tr>
<tr>
<td>Completion date of project</td>
<td>31 October 2019</td>
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**Expected benefits for successful placement applicant**

A placement with us is an excellent opportunity to gain an understanding of the day-to-day operation of the water industry and in turn share scientific expertise in a way that influences management and thinking inside our organisation and potentially across the sector.

Previous placements with the Catchment Team at Welsh Water have included:
- Dr Rupert Perkins, Cardiff University (2016-17) *Integrated Catchment and Reservoir Systems Management*, and:
- Vanessa Banks, BGS (2016-17) *Embedding an expectation of geological and hydrogeological understanding to complement water resource catchment studies*.

**Expected outputs for host organisation**

Researchers will be expected to produce a series of outputs for communication, these will be determined at the outset of the project but could include any or all of the following:

- A synthesis report to Dŵr Cymru Welsh Water on key findings and recommendations;
- Material for the Dŵr Cymru Welsh Water website and intranet (blogs, video);
- Scientific publications
Placement activities

The successful applicant will be involved in a range of activities and tasks that may include:

- the development of our landscape scale Brecon Beacons Mega Catchment idea and associated governance structures
- behavioural change research to help us develop our PestSmart approach to pesticide use
- quantifying the costs and benefits of catchment management, and the development of Payments for Ecosystem Services (PES) catchment management schemes
- our understanding of dissolved organic matter and its impact on water treatment in a changing climate
- our knowledge of reservoir thermodynamics and the use of in-reservoir management systems
- our understanding of cryptosporidium; sources, movement in water, potential impact of climate change and the development of management tools
- the effect of chlorine, metals and suspended solids from our water treatment waste discharges to the aquatic environment
- understanding any techniques which can be employed to improve the quality of our discharges, where needed
- the environmental consequences of spreading our iron rich or aluminium rich water treatment works sludge to the land bank and other uses for our water treatment works sludge which would be more beneficial to the environment.
- Identifying key science areas of relevance and the data available to inform decisions on business needs
- Analysing and synthesising existing datasets;
- Identifying research translation opportunities and where tools may be developed to facilitate this translation

Background information about host organisation

Dwr Cymru Welsh Water keep 3 million people healthy each day with safe, reliable water, and take away waste water to clean, before returning it safely to our beautiful rivers and seas. We serve customers in most of Wales, Herefordshire and communities along the English border.

Welsh Water is different from other water or energy companies. We don’t have shareholders. This means that we’re able to keep bills down, and put every single penny we make straight back into improving the quality of drinking water and the environment – now, and for years to come.

Application Process

All applicants interested in undertaking a placement with Dwr Cymru Welsh Water are required to register their interest by contacting paul.gaskin@dwrcymru.com by 21st May 2018 (and preferably well in advance of this deadline). Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.
Placements proposals must be co-developed with a Dwr Cymru Welsh Water member of staff. Applicants needing help with finding an appropriate member of staff should contact paul.gaskin@dwrcymru.com. Dwr Cymru Welsh Water will contact applicants by the end of May 2018 to confirm whether we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4pm, 4th July, 2018.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work.

A Letter of Support is required from Paul Gaskin. Applicants who apply for this opportunity can also apply for other placements in this call.

Successful applicant will be required to undergo background checks.

**Contact details**

For general queries about this call, please contact:

Tessa Edgecombe  
Senior Programme Manager (Innovation)  
Natural Environment Research Council  
Email: tjed@nerc.ac.uk  
Tel: 07788 190531

For technical queries regarding the content of the Placement at Dwr Cymru Welsh Water please contact:

Paul Gaskin  
Research and Innovation Manager Water  
Email: paul.gaskin@dwrcymru.com  
Tel: 07778 925983
EDF Energy

EDF Energy are excited to host a placement under the 2018 NERC-funded Innovation Placements call. The placement will be expected to spend between 80% and 100% of their time embedded within the EDF Energy R&D UK Centre in London or Gloucester.

EDF Energy is one of the UK’s largest energy companies and its largest producer of low-carbon electricity. A wholly-owned subsidiary of EDF Group, one of Europe’s largest energy groups, we generate around one fifth of the UK’s electricity. Our research and development activities are an integral part of the company, creating value and supporting future growth. The environment and natural hazards team provide support to the EDF Energy Nuclear Generation teams by providing reviews of the best practice and applying new approaches in the field of natural hazard characterisation. We also work with Nuclear New Build teams to ensure an optimal design of future nuclear power plants by understanding the occurrence probability of different natural hazards and how this may alter with future climate change. We provide expertise to renewable energy teams within the UK Centre on the occurrence of extreme winds and sea states and work closely with researchers and operators within EDF group in France and China.

We are looking for researchers with expertise and interests in any of the following areas:

- **Marine ingress** - we are interested in new approaches and technologies in the area of eDNA or jellyfish liquidation to tackle issues posed by marine ingress.
- **Lightning** - we are particularly interested in potential theoretical limits on strike intensity, the effect of climate change on the future strike intensity and spatial distribution of strikes.
- **Extreme winds** - we are interested in learning more about the sting jet phenomena which cause very extreme local wind speeds.
- **Hazard combinations** - we are interested in learning more about potential hazard combinations that could affect the UK and approaches to quantify the occurrence of such events.
- **Potential physical limits** for different natural hazards (e.g. precipitation, temperature, wind speeds) and how these could be incorporated into our statistical analyses (through extreme value statistics or equivalent methods).

Candidates will be expected to disseminate information to other members of the R&D department and engineers working within Nuclear Generation and Nuclear New Build through technical reports and presentations. There will also be the chance to present work to other EDF R&D groups in France and China. The expectation is for the successful applicant to provide high quality technical R&D work which can be utilised by engineers within EDF Energy to provide a noticeable impact on current ways of working.

Any successful project will run for up to 12 months starting in on **1st November 2018**. The final project proposal will be developed in conjunction with the relevant member of the Environment and Natural Hazards group within the EDF Energy R&D UK Centre.
Application Process:

All applicants interested in undertaking a placement with EDF Energy are required to register their interest by contacting Hugo Winter (hugo.winter@edfenergy.com) by 18th May 2018 (and preferably well in advance of this deadline). When getting in contact, please provide some ideas of which topic/s you are interested in, how you could address and add value to a project on this topic and the particular skills and experience that you could bring to this work. Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

EDF Energy will decide which applicants to support, and will contact applicants by the end of May to confirm whether or not we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4th July 2018. Placements proposals must be co-developed with an EDF Energy member of staff. When developing a full application, please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. A Letter of Support is required from EDF Energy.

Applicants who apply for this opportunity can also apply for other placements in this call.

For general queries about this opportunity please contact:

Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

For technical queries regarding the content of the Placement at EDF Energy or if you are interested in developing a proposal on any of the topics above, please contact:

Dr Hugo Winter
Natural Hazards & Environment R&D Manager
Email: hugo.winter@edfenergy.com
Tel: 02089 352826
Environment Agency

Environment Agency Innovation Placement opportunities 2018

The Environment Agency are offering three placement opportunities under the NERC Innovation Placements Call 2018:

1. Application of systems based thinking into water environment and flood risk management
2. Maximising information from next generation sequencing data to inform the ecological assessment of rivers
3. Design of a long-term water monitoring network in England

Full details for each opportunity can be found on the following pages of this document.

The call opens on 11 April 2018 and closes on 4 July 2018. Placements are expected to start on 1st November 2018 and will run for three to twelve months.

Placements proposals must be co-developed with the relevant Environment Agency member of staff as detailed in the three placement opportunities. The closing date for initial enquiries to the Environment Agency is 9 May 2018.

The placements are open to any academic researchers (at any career stage from a minimum of postdoctoral level), including those with academic positions, currently employed by a university or similar research institute. For all three opportunities, please follow the eligibility criteria and application process outlined in the NERC Announcement of Opportunity.

Please use the space on the application to provide some ideas of how you could address and add value to the project and the particular skills and experience that you could bring to this work either using NERC-funded research or other Research Council funded research.

A Letter of Support is required from the Environment Agency and must be signed by Glenn Watts, Deputy Director of Research. Applicants who apply for this opportunity can also apply for other placements in this call.

For general queries about this call, please contact:
Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531
1. Application of systems based thinking into water environment and flood risk management

The Environment Agency, in partnership with Defra, is offering a placement to work at the interface between research, policy and operational activity on some of the key concepts underpinning the Defra 25 Year Environment Plan.

The placement will guide and deliver practical interpretation and demonstration of some of the key concepts in the 25 year plan as management frameworks and collaborative operational activity through the associated Pioneer Demonstration projects.

The core purpose of this placement is to identify and test how systems thinking, analysis and management can be applied into water environment and flood risk management within England. The work will focus around the Cumbria Catchment Pioneer project, but also interact with other Pioneer projects, under the Defra 25 year environment plan.

Job Description

This placement opportunity will embed a researcher into the Environment Agency and Defra to guide and work with staff from these and other organisations and stakeholders involved in the 25 year plan and the Pioneer projects. The researcher will be working primarily from the catchment and local perspective in respect of the Cumbria Pioneer delivering practical demonstration of a systems approach. Specifically the job is likely to entail:

- Setting out how and why systems based thinking, analysis and management should and could be applied into environmental and flood risk management within England.
- Setting out how this is different to current models of management, why it is (or is not) appropriate to environmental and flood risk management and the advantages it could deliver.
- Identifying current barriers to applying a systems based approach
- Working with stakeholders across the whole system to deliver a range of systems based analyses, including consideration of appropriate interventions.
- Place natural capital assessment in the context of a systems approach
- Develop and test one or a different number of options for systems governance and management.

Deliverables will include:

- A Scoping report setting out a discussion on the first two points above and a proposal for practical testing and demonstration
- Materials to inform systems analysis and outputs to illustrate the application of this analysis.
- A final report, this should include an outline description of how we move from where we are now to a more systems based approach

An outline work plan will be developed prior to the placement through collaborative working with the Royal Academy of Engineering (RAEeng) systems expert group. A final full work plan and agreed list of deliverables will be developed by the researcher with input and advice from RAEeng, the Environment Agency and Defra.
Defra 25 Year Environment Plan and Catchment Pioneers

The country’s prosperity, security and wellbeing depend on a healthy natural environment.

In recognition of this the UK Government has committed to leave the natural environment of England in a better state then it found it, within a generation. The Government has published a 25 Year Environment Plan setting out how this will be achieved. A number of ‘Pioneer projects’ have been initiated to develop, test and demonstrate some of the plan concepts.

Enactment of the plan will help embed the concept of natural capital. The plan also promotes the delivery of resilient ecosystems and more integrated, co-ordinated and consensual management across multiple actors and interests. A pre-requisite to fully delivering these aspirations is a move towards a systems based management approach. This is recognised in the plan.

Location and eligibility

The researcher will be required to spend some time with Environment Agency and Defra (and other Government departments) staff along the Thames corridor (primarily Bristol, Wallingford and London). Visits will be required to Cumbria for meetings and workshops with Environment Agency and Pioneer partner staff and stakeholders. It is likely the researcher will meet staff from the other Pioneer projects (Devon - Landscape, Humber - Marine and Manchester - Urban). The researcher will benefit from engagement with the Royal Academy of Engineering expert system group with which the Environment Agency and Defra are in collaboration in delivering this work.

Considerable practical experience of the application of systems approaches across a range of fields and working directly with a wide range of stakeholders will be required.

Application process

Placements proposals must be co-developed with an Environment Agency member of staff. Please contact:
Dr David Forrow
Email: david.forrow@environment-agency.gov.uk
Tel: 07775 817695
2. Maximising information from next generation sequencing data to inform the ecological assessment of rivers

This placement will support our work developing innovative DNA-based methods for ecological assessment. The main focus will be to data mine a large comparative dataset and exploit the full potential of next generation sequencing (NGS) data. The placement will look to combine taxonomy free approaches with traditional taxonomic assignments, producing a method that responds to environmental pressures and helps the Environment Agency better understand and manage the environment.

The placement provides an opportunity for a researcher working in this field to be part of an end-user organisation where they can understand the challenges associated with embedding the technology into regulation. Since part of the placement will focus on delivering training to Environment Agency staff to help them understand how NGS data is generated, analysed and interpreted. They will get the opportunity to interact with ecologists on the ground who will use the technology to help senior managers who make decisions on whether or not the technology will be implemented. This will provide good insight into how and where the technology could have the most impact, enabling research development that has strategic application.

Job Description

The Environment Agency is the competent monitoring authority in England for EU directives which includes the Water Framework Directive, Bathing Water Directive and the recently enforced Regulation on invasive alien (non-native) species (1143/2014). Monitoring informs our work to protect and improve the environment. The monitoring data then directs the priorities and activities of our work and helps to justify investment decisions.

Working with the research community we have shown that DNA-based technology is a promising cost-effective approach to improving ecological assessment. Our research has focussed on assessing the potential application of DNA-based methods such as metabarcoding freshwater diatoms, fish and macroinvertebrates and assessing targeted assays for invasive species surveillance.

The primary purpose of the placement will be to focus on a specific case study. The Environment Agency have established a metabarcoding method for assessing the ecological status of rivers using diatoms. The method has been developed to reflect the traditional light microscopy approach for assessment that uses only the phytobenthos (benthic diatoms) component and assigns taxonomy to an operational taxonomic unit (OTU) by comparison to a reference barcode database. Currently only around 40% of the sequences generated are utilised. This means that the power within the NGS to provide deeper insights into the make-up of algal communities (other algal taxa detected with the primers) within a river system has not been fully explored. There is enormous potential for data mining this existing dataset and producing an improved method for regulatory use.

The existing dataset comprises comparative light microscopy and NGS data for a range of river samples across the UK which represent a gradient of environmental pressures.

The researcher will be expected to:

- Evaluate the current diatom bioinformatics pipeline with a view to recommending improvements and exploring different OTU clustering methods to improve the accuracy of species assignment.
• Explore ways to incorporate additional unassigned OTUs into the existing method and assess whether this improves the current metabarcoding method. These OTUs would need to have ‘optima’ and ‘tolerance’ scores to a pressure variable (e.g. phosphorus) assigned using multivariate statistical analysis. We will explore opportunities for the researcher to carry out this collaboratively with statisticians.

• Deliver training to Environment Agency staff to help them understand how NGS data is generated, analysed through the pipeline and how it should be interpreted. This is to help us develop new capabilities and greater capacity to use such data. There may also be opportunity to work with other regulatory and conservation agencies.

• Contribute to the development of our wider research programme to explore and develop DNA based methods for ecological monitoring.

This is an excellent opportunity to explore how DNA methods may open the door to deeper analysis and understanding of our aquatic ecosystems. It will allow the opportunity to assess potential improvements to the method for diatom assessment and inform the Environment Agency’s approach to DNA based method development. It will also play an important role in building capability and capacity to understand and interpret new data and help to build confidence in how these may be used by regulators in environmental decision making.

Expected outputs would include a report outlining potential improvements and training materials to facilitate a greater understanding of bioinformatics procedures of DNA derived data interpretation by Environment Agency staff.

Location and eligibility

The researcher will be embedded within the Research, Analysis and Evaluation group of the Environment Agency. Location can be flexible, but ideally the researcher would be based in either the North West of England, Oxfordshire or Berkshire. You would be expected to travel to Environment Agency offices around the country as and when required.

The ideal candidate will be a molecular biologist, competent in bioinformatics and use of R statistics.

Application process

Placements proposals must be co-developed with an Environment Agency member of staff. Please contact:
Dr Kerry Walsh
Email: kerry.walsh@environment-agency.gov.uk
Tel: 07887 634382
3. Design of a long-term water monitoring network in England

The main focus of the placement will be on the design of a statistically robust water environment monitoring network which will serve the Environment Agency as a long-term "sentinel" monitoring network.

This is an opportunity to investigate and apply spatial design for national scale monitoring networks. It will provide the opportunity to improve our understanding of the environment and how it changes in the future, and to use this to inform national policy and strategy.

Job Description

The Environment Agency will be implementing a new long-term Sentinel Network in 2019. It will comprise chemical (including nutrients), physical and biological monitoring at a range of sites in rivers, lakes, groundwaters, estuaries and coasts. It will measure the condition of the environment at a national scale to evaluate status and trends and to understand the factors and processes influencing the aquatic environment and its ecology. The data will be used to indicate the effectiveness of environmental management policies. It will support wider strategic environmental needs such as the detection of emerging threats.

A draft design will have been developed during 2018. This initial design will benefit from further development and refinement during the course of this placement. Consideration needs to be given to the size and cost of the network and its power to detect spatial and temporal trends at a range of scales within these constraints. Use of innovative spatial statistical models could aid prediction for unmonitored sites and enable the incorporation of catchment covariates which may also provide a degree of risk assessment capability.

It is expected that the current extensive data holdings of the Environment Agency will be used to inform and better understand temporal and spatial patterns in the water environment and to identify where we have data or information gaps. We will need to understand the trade-offs between temporal and spatial information needs and how this relates to monitoring programme design. In addition, we will need to understand approaches to interrogate and analyse data from the network as well as the benefits and limitations of reduced networks.

The researcher will be expected to:

- Explore opportunities to build on the design of the draft sentinel network. This may include spatial statistical models or other approaches to define a statistically robust and defensible sentinel monitoring network. Different approaches may be needed for different water categories and must give consideration to both water quality and biological data
- Indicate the strengths and weaknesses of the options identified, both in terms of statistical power and ability to report the types of information we need
- Explore the opportunities and limitations for the practical application within the Environment Agency. This should consider IT infrastructure as well as skills (or skill gaps) needed to maintain and interrogate models
- Explore ways in which the datasets generated from the network can function as a "stand-alone" dataset, but also the benefits and limitations of how more locally derived short-term monitoring for different purposes might be incorporated into the analysis
• Identify opportunities to make use of a broader set of data and information to improve understanding of environmental change
• Explore innovative approaches that we should consider in the future and how these may enable better detection of emerging threats and issues

Expected output would be a report outlining the following:
• Documentation of the various approaches to sentinel network design and refinement investigated along with benefits and limitations and applicability to Environment Agency infrastructure
• Recommendations on the most promising approach/es, balancing data collection and interpretation costs against the benefits in terms of data analysis and robustness of reported information
• Guidance on analysis and interrogation of the sentinel network data in the short, medium and long-term (i.e. with increasing amount of spatial data over increasing time period)
• Identification of appropriate skills needed for the interrogation and maintenance of the sentinel network.

This placement is not anticipated to include novel and emerging monitoring techniques such as earth observation or DNA/eDNA.

Location and eligibility

The researcher will be required to spend some time with Environment Agency staff along the Thames corridor (primarily Bristol, Wallingford and London). The researcher will be embedded within the Research, Analysis and Evaluation group of the Environment Agency. You will work closely with a network of technical experts across the organisation. You would be expected to travel to Environment Agency offices around the country as and when required.

The ideal candidate would be an applied environmental statistician with experience in large-scale monitoring programme design.

Application process

Placements proposals must be co-developed with an Environment Agency member of staff. Please contact:
Dr Sian Davies
Email: sian.davies@environment-agency.gov.uk
Tel: 07876 398154
Field Studies Council (FSC)

NERC Innovation Placements 2018

Enquiries: mark.ward@field-studies-council.org

INNOVATIVE USE OF INFORMATION TECHNOLOGY (IT) AND USE OF OPEN DATA SETS IN FIELDWORK FOR UNIVERSITIES AND SCHOOLS

The Field Studies Council (FSC) is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support the FSC’s strategic goals and its 2025 Vision to improve environmental understanding and learning, to make better connections to nature and to nurture well-being through the environment.

The FSC has over 70 years of experience in environmental research and field course delivery. It has 19 centres across the UK. A placement with us is an excellent opportunity to work at the interface between environmental monitoring and biological recording and the delivery of environmental education courses to universities, schools and the wider public. In recent years we have been exploring ways of better sharing large sets of field data that are collected by students at FSC centres both within the FSC and with the wider public. Linked to this we have also been developing innovative ways of using IT in the field to both collect and analyse these data sets.

Placements with the FSC could involve a range of activities such as:

- Working with the FSC Biodiversity, FSC Digital Services teams and staff at FSC locations to improve the robustness of FSC data. This could include:
  - Improving how ecological data can be better collated and shared by FSC staff and students (post 16 and Higher Education) and how it can be better linked to nationwide biological recording schemes, existing or new citizen science projects and current relevant ecological research;
  - Developing the use of IT based fieldwork methodologies, using mobile devices, field network systems and software such as ArcGIS to enable better collection of organisation wide data sets for use with schools and on Higher Education and Professional level field courses.

- Providing expert advice to the FSC in the development of new business opportunities

Placement researchers will also be expected to produce agreed outputs for communication within and outside the FSC. These could include:

- A report to the FSC on key findings and recommendations;
- Resources for use by the FSC in its delivery of courses including content for the website and intranet;
- Presentation of findings at a FSC Research Seminar;
- A review paper for publication in the Field Studies Journal.
The placement will be expected to spend between 80% and 100% of their time embedded in the organisation. We are able to offer field-based Innovation Placement opportunities based at any of our locations around the UK. Researchers will work out of one or several of our Field Centres, depending on the nature of the project. Details of our locations can be found at: Field Studies Council - Centres. There may be the option of accommodation being available as part of the placement, by negotiation with the Field Centre. The project will be managed by education staff based at our Head Office at Preston Montford near Shrewsbury.

Placements are expected to start on 5th November 2018.

**Application Process:**

All applicants interested in undertaking a placement with the Field Studies Council are required to register their interest as soon as possible by contacting mark.ward@field-studies-council.org by 18th May 2018. Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

Placements proposals must be co-developed with an FSC member of staff who will be allocated to each proposal by the FSC. The FSC will contact applicants by the end of May to confirm whether we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 16:00 on 4th July 2018.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work using NERC or Research Council-funded research within the NERC remit.

A Letter of Support is required from FSC which must be signed by Mark Ward (FSC Project Officer) or an FSC Director, and must be submitted alongside your application to NERC. Applicants who apply for this placement opportunity with FSC can also apply for other placements in this call.

Successful applicants will be required to undergo background checks as appropriate.

For general queries about this call, please contact:

Tessa Edgecombe  
Senior Programme Manager (Innovation)  
Natural Environment Research Council  
Email: tjed@nerc.ac.uk  
Tel: 07788 190531

For technical queries regarding the content of the Placement at the FSC please contact:

Mark Ward  
FSC Project Officer – Higher Education  
Email: mark.ward@field-studies-council.org  
Tel: 01743 852127
Fugro GB Marine Limited (Fugro)

Near Term Forecasting utilising Deep Learning

Fugro GB Marine Limited is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support Fugro’s NorthStar Development Programme.

Fugro is the world’s leading, independent provider of geo-intelligence and asset integrity solutions for large constructions, infrastructure and natural resources. Historically Fugro has been at the forefront of the development of data acquisition systems, but it now is entering a new phase in its history as it seeks to better exploit the extensive data sets it has collected. As such, Fugro is engaging in a digitisation programme that will expose data in a searchable, efficient manner to allow our scientists and engineers to explore the data and to develop new ways of synthesising data sets to deliver information and value to our clients.

Fugro’s Metocean Global Service Line provides forecasting services and real time data acquisition. We are seeking to better exploit this breadth of services by utilising Deep Learning to predict Metocean conditions over short horizons, <12-hours. The horizon is chosen to support operational decision making based on intra-forecast periods. The range of data collected by Fugro includes wind, wave and current parameters, and the successful applicant would be asked to look at a number of data sets from regions with different Metocean conditions to help assess where such an approach might offer greatest value. We would welcome researchers with experience of using not only in-situ measurements, but also satellite derived data. Of particular interest to Fugro is the ability to predict short term wind conditions under low wind speeds, squall impacts, current profile, and wave conditions including wave distributions.

The placement will be expected to spend between 80% and 100% of their time embedded in the organisation and is expected to spend 80% of their allocated time in Fugro’s offices in Wallingford, Oxfordshire.

Fugro has acquired a huge number of datasets, and has a significant number of hindcast and forecast model data sets, that offer a unique opportunity to the applicant to explore Deep Learning techniques using high quality data. Fugro is open with respect to the Deep Learning framework utilised in the project, as it is presently building a digital environment that will provide ready access to well described data to allow the outcomes to be exploited.

Start date: expected to start on 1 November 2018 and be completed by 31st October 2019 (we would be happy to consider a nine-month placement ending 31st July if necessary).

The successful researcher will be involved in a range of activities and tasks which may include:

- Selection of data sets to utilise in the investigation.
- Exploratory data analysis.
- Application of Deep Learning to predict near term parameter values
• Documentation of each case study clearly indicating whether the approach decreases forecast error.
• Regular presentations to business staff to demonstrate capability.

Expected outputs to Fugro GB Marine Limited include:
• Documented Deep Learning models including view of accuracy of the models, applicability of the models to different Metocean regimes.
• Prototype applications that apply machine learning to predict short term forecasts to horizons of 12-hours using in-situ measured, satellite and modelled data.
• Knowledge transfer to in-house data scientist.
• Co-authored paper(s).

Application Process:

All applicants interested in undertaking a placement with the Fugro GB Marine Limited are required to register their interest by 18th May 2018. All applicants should contact: Mark Calverley (Innovation Manager), e-mail: m.calverley@fugro.com, Tel. 01491820546, Mob 07900242366. Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

Placements proposals must be co-developed with a Fugro GB Marine Limited member of staff. Applicants needing help with finding an appropriate member of staff should contact Mark Calverley (Innovation Manager) via details above. Fugro GB Marine Limited will contact applicants by 25th May 2018 to confirm whether we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4th July 2018.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work using NERC or other Research Council-funded research within the NERC remit.

A Letter of Support is required from Fugro GB Marine Limited and must be signed by Anthony Gaffney, Global Service Line Director. Applicants who apply for this opportunity can also apply for other placements in this call.

For general queries about this call, please contact:
Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

For technical queries regarding the content of the Placement at Fugro GB Marine Limited please contact:

Mark Calverley (Innovation Manager)
E-mail: m.calverley@fugro.com
Tel. 01491 820546
Marine Scotland

Placement Opportunities with Marine Scotland Science

Marine Scotland is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support the Marine Scotland Science Renewables and Energy (RE) and the Environment, Monitoring and Assessment (EMA) Programmes. Placements are expected to start on 1 November 2018, last from 6 – 12 months, and be completed by 31 October 2019.

1. Marine mammal acoustics Placement (Based in Aberdeen)
2. Fish acoustic surveys Placement (Based in Aberdeen)
3. Ecosystem effects of large scale marine renewables developments Placement (Based in Aberdeen)
4. Use of vessel location data to assess potential interactions with seabirds Placement (Based in Aberdeen)
5. Review of marine renewables ornithology research programme Placement (Based in Aberdeen or Edinburgh)
6. Marine invasive species Placement (Based in Aberdeen)
7. Marine litter and plastics Placement (Based in Aberdeen)

Background Information about Marine Scotland

Marine Scotland is the lead marine management organisation in Scotland. It was established on 1st April 2009 as a Directorate of the Scottish Government, to integrate core marine functions involving scientific research, compliance monitoring, policy and management of Scotland’s seas. Marine Scotland Science (MSS, formerly Fisheries Research Services) is the scientific research and advisory division of Marine Scotland. MSS provides expert scientific, economic and technical advice and services on marine and freshwater fisheries, aquaculture, and the aquatic environment and its flora and fauna, in support of the policies and regulatory activities of the Scottish Government operating through Marine Scotland.

Marine Scotland supports the Scottish Government’s vision of having marine and coastal environments which are clean, healthy, safe, productive and biologically diverse that meets the long-term needs of people and nature. Marine Scotland is the statutory planning authority for marine developments in Scottish marine waters, and, through Ministers, is also marine licensing and regulating authority in Scotland.

The MSS Renewables and Energy Programme gives scientific support to policy development and licensing of energy production from renewable sources in Scottish waters, and to advise on environmental aspects of the offshore oil and gas industries.

The MSS Environment, Monitoring and Assessment Programme provides scientific support on a wide range of environmental issues including climate change, marine contaminants, environmental assessment, marine invasive species and marine litter.
Benefits to the Successful Selected Placements

Marine Scotland will provide placements with training and development opportunities to expand their knowledge and skills, these opportunities can be tailored to individual ambitions but could include:

- Induction to Marine Scotland, including both science and policy units.
- Opportunity to work at the interface between science, policy and regulation and to learn how science is used in those contexts.
- Opportunity to discuss with policy and licensing colleagues how science is used in their processes
- Attendance at industry and science conferences and events
- Presentation of work as part of the Marine Scotland Seminar Series
- Presentations at relevant stakeholder engagement meetings / steering groups

MSS will provide the intern with experience of applying research data and interpretation methods in an applied context. The intern will work with the in-house scientific advisors, who provide advice to the Scottish marine licensing and planning authority and to Scottish Government more widely. This will provide the intern with experience of carrying out scientific work that can have direct impact on policy decisions. MSS will provide access to data that we hold in support of the placements.

MSS will provide office accommodation, access to library and IT systems, etc. as will be necessary to undertake the work. MSS staff will support the placement during their time in Aberdeen and will facilitate knowledge transfer to support the aims of the project.

Placements will be expected to spend between 80% and 100% of their time embedded in Marine Scotland, based during that time at the Marine Scotland Marine Laboratory in Aberdeen. In the case of the “Review of marine renewables ornithology research programme” placement, this could be based at either the Marine Scotland Marine Laboratory in Aberdeen or the Marine Scotland Victoria Quay in Edinburgh (or a combination of both) depending on the preference of the placement.

Background Information about the Projects

Renewables: Scotland has well established and valuable offshore energy industries. An ambitious target of generating 100% of our electricity requirements from renewable sources by 2020, requires marine renewables to play a strong role. Up to 10 GW of offshore wind projects are currently planned for Scottish waters, together with about 2GW of wave and tidal energy. Scotland also hosts a wide range of species protected under European Directives and UK legislation, and also a variety of commercial fisheries. The interactions between renewable energy developments, protected species, and existing activities are important factors in reliable environmental impact assessments, and also enables conservation bodies and Scottish Government to discuss and design appropriate conservation measures. Further information can be found at: Marine Scotland - Marine Renewable Energy

Invasive Species: Globally, the impact of Invasive Non-Native Species (INNS) ranks alongside climate change as a major threat to natural biodiversity, as well as having significant economic impact through loss of food production as well as control, containment and eradication costs. Marine INNS are being spread through global shipping, recreational boating, aquarium releases, fishing, renewable energy, aquaculture and other marine industry related activities. In Scotland, situated on the northwest boundary of the European continental shelf, marine INNS is already a source of concern, introduced through all of the routes described above. European and national laws have been established to deal
with INNS, and there are national coordinating mechanisms such as the GB Non-Native Species Secretariat and it’s Marine Pathways project. The Scottish Government is in the process of establishing a national strategy to manage marine INNS and its impact on our marine industries. Further information can be found at: Marine Scotland - Marine Environment

**Marine Litter:** Globally, marine litter and especially marine plastics have been identified as an emerging threat to marine biodiversity and environmental health. Plastics, unlike other contaminants, become more biologically available over time rather than less, as they break down from large pieces of litter into smaller pieces, and eventually microplastics (<5mm). While large plastic items can entangle marine life, as well as be ingested by larger marine animals, microplastics can be ingested by a huge range of marine life, and be passed up the food chain. The Scottish Government has made tackling marine litter and plastics one of its key goals, and this featured strongly in the most recent Programme for Government. Under the Scottish Mariner Litter Strategy a number of initiatives are underway in order to bring a strategic approach to tackling this growing anthropogenic threat to our seas and the life within them. Further information can be found at: Marine Scotland - Marine Litter

**Details of the Placements**

**Placement 1: Marine mammal acoustics placement (Based in Aberdeen)**

The primary purpose of the placement project will be to review the effectiveness of the current classifier that has been used to detect minke whale vocalisations in broadband acoustic recordings held by Marine Scotland Science. The placement will then review the potential to improve the classifier, using data collected around Scotland, and develop a new tool for application in relation to development consents and protected area identification, designation and monitoring. The main source of data will be the ECOMMAS project through which several months of data have been collected at each of 10 locations on the east coast of Scotland for the last four years. It is the most intensive and comprehensive data set available for UK waters. It is anticipated that further data will be available from west coast sites by the time of the placement.

The successful applicant will be involved in a range of activities and tasks which may include:

- Becoming familiar with current and proposed marine acoustics monitoring activities undertaken by Marine Scotland and others in UK waters.
- Review the potential for adding value in core areas of MSS responsibilities.
- Review the effectiveness of the current classifier that has been used to detect minke whale vocalisations in broadband acoustic recordings.
- Provide advice on the potential to improve the efficiency, reliability and effectiveness of the current classifier.
- Develop an improved classifier, test and validate it against existing data.
- Train MSS staff in the handling, manipulation and interpretation of broadband marine acoustic data and in the application of the minke whale classifier, and interpretation of the results.
- Draft reports on the review of the minke whale classifier, and on the development and testing of an improved classifier.
- Apply the improved classifier to data from the ECOMMAS array (and other data that may be available from the west coast) and report on the findings.
• Review the current monitoring network and provide recommendations to optimise it for work on minke whales

Key outputs:

• Report of a review of the current minke whale classifier.
• Report on the development and testing of an improved classifier.
• Training activities to transfer knowledge of the use and behaviour of the classifier to MSS staff.

Placement 2: Fish acoustic surveys Placement (Based in Aberdeen)

The primary purpose of the placement project will be to establish the potential of acoustic methods for survey related to spawning and other activity by fish species of commercial and conservation interest, in the context of renewable energy development. The placement will review current literature on the use of acoustic recordings to detect relevant fish species and behaviours, and will collate samples of fish noises of interest. This will allow them to bring together classifiers necessary to detect relevant fish species in the broadband recordings and test them on available data (e.g. ECOMMAS data). A key output will be the production of a draft guidance document covering the required equipment and survey methodology, including guidance on the application of the technique in site characterisation and post-consent monitoring. The placement will transfer the practical knowledge gained through training MSS staff in the analytical and date interpretation methods required.

The successful applicant will be involved in a range of activities and tasks which may include:

• Become familiar with current applications of marine acoustics monitoring of relevant commercial and protected fish species, and prepare a report.
• Review the potential for acoustic monitoring of fish to be applied in the context of marine renewable energy development.
• Review and advise on the methodological requirements to make appropriate recordings, and other aspects of survey methodology.
• Prepare a draft guidance document covering the application of the technique in site characterisation and post-consent monitoring.
• Prepare a library of classifiers necessary to detect relevant fish species in the broadband recordings and test them on available data (e.g. ECOMMAS data).
• Develop an efficient data analysis protocol, and prepare a user guide.
• Train MSS staff in the handling, manipulation and interpretation of broadband marine acoustic data and in the application of the fish classifiers, and interpretation of the results.

Key outputs:

• Report on the feasibility of using acoustic recordings to address questions regarding key life stages of commercial and protected fish species.
• Draft guidance document covering the required equipment and survey methodology, including guidance on the application of the technique in site characterisation and post-consent monitoring.
• Develop convenient data analysis protocol, and prepare a user guide.
• Training activities to transfer knowledge of the use and behaviour of the fish classifiers to MSS staff.

Placement 3: Ecosystem effects of large scale marine renewables developments (Based in Aberdeen)

The primary purposes of the placement project will be to identify and quantify expected changes in the benthic community in response to marine renewables developments at a range of spatial scales. The approach will cover traditional community metrics such as macrobenthic alpha-diversity and extend this to encompass the implications for community function and ecosystem service delivery at a range of spatial and temporal scales. The placement will advise on the requirements from benthic studies to support spatially-resolved whole ecosystem models of the wide ecosystem consequences of very large scale renewables developments.

The successful applicant will be involved in a range of activities and tasks which may include:

• Become familiar with the results of benthic monitoring at marine renewables developments in a range of habitats in European waters.
• Synthesise this information to provide description of the expected nature and degree of benthic change in renewables development areas, expressed in terms of community statistics, changes in community function, and the consequences for delivery of key ecosystem services.
• Identify and report on the key parameters of benthic ecosystem function that would be required to predict the ecological consequences of very large scale renewables developments through the application spatially-resolved bio-geochem-physical and/or food-web-based models.
• Prepare an advisory document, and peer-reviewed publication, on the changes that would be required in current benthic monitoring programmes to meet the key requirements of such models.
• Present the results to MS and other staff responsible for marine planning and Strategic Environmental Assessment.

Key outputs:

• Report/paper on the expected nature and degree of changes in benthic communities on large-scale renewables developments, and the consequences for benthic ecosystem functions and the delivery of key ecosystem services.
• Report/paper on the requirements of benthic data to support spatially-resolved bio-geochem-physical models of the ecosystem consequences of very large scale renewables developments in the North Sea.
• Presentation of conclusions to Marine Scotland spatial planners and others with central roles in marine planning and SEA in UK.

Placement 4: Use of vessel location data to assess potential interactions with seabirds Placement (Based in Aberdeen)

The primary purpose of the placement project will be to explore potential interactions between seabirds and vessels through undertaking analyses of vessel location data to map densities of vessel and activity types, with a particular focus on those most relevant to seabirds. Understanding how
these activities may vary spatially and temporally will be of key interest, as will the ability to link the vessel activity maps with available information of seabird distribution and abundance. There is also the opportunity to undertake analyses comparing the interpolated VMS vessel tracks with those produced data with a higher temporal (AIS). The latter may have implications for analyses of fishery vessel tracking data with seabird tracking data to identify potential fishery-seabird interactions.

The successful applicant will be involved in a range of activities and tasks which may include:

- Review literature on seabird – vessel interactions to identify those of most relevance to Scotland
- Becoming familiar with the vessel location (AIS and VMS) data available to MSS.
- Analysing AIS data to estimate densities of vessel types and vessel activities as relevant to potential interactions with seabirds around Scotland.
- Comparison of the interpolated vessel tracks derived from low temporal resolution VMS data with those from higher resolution AIS data.
- Provide advice on the processing of vessel location data to provide outputs of greatest relevance to MSS and wider stakeholders.
- Develop a standardised approach for processing, analysis, and presentation of outputs derived from vessel location data.
- Train MSS staff in the processing, analysis and interpretation of vessel location data.
- Draft reports on the work undertaken.

Key outputs:

- Review of vessel – seabird interactions
- Vessel and vessel activity density maps relevant to potential seabird interactions
- Report on the vessel location data processing and analyses undertaken, and the result obtained.
- A document describing the standardised approach for data processing, analysis and presentation of results.
- Training activities to transfer knowledge of the methods developed to MSS staff.

Placement 5: Review of marine renewables ornithology research programme Placement (Based in Aberdeen or Edinburgh)

The primary purpose of the placement project will be to examine the key knowledge gaps facing the development of marine renewables (offshore wind, wave and tidal power generation) in relation to seabirds. The placement will review the priorities identified via the MORE process and make recommendations on its suitability and any changes required.

The successful applicant will be involved in a range of activities and tasks which may include:

- Review the knowledge gaps facing the development of marine renewables (offshore wind, wave and tidal power generation) in Scotland relating to seabirds.
- Becoming familiar with the SG policies relating to marine renewables development and the sustainable management of our seas.
- Consider the knowledge gaps identified by the Marine Scotland strategic review and identify any recommended changes/ additions.
• Identification of any links or synergies with other activities or research programmes elsewhere in the UK, EU or beyond.
• Draft a report on the work undertaken.

Key outputs:
• Review of knowledge gaps facing the development of marine renewables
• Report summarizing any recommended changes/ additions to the strategic research priorities.

Placement 6: Developing a Strategic Plan for Monitoring Marine Invasive Non-Native Species in Scotland (Based in Aberdeen)

The primary purpose of this placement project is to contribute to the development of a strategic plan for the systematic monitoring of marine INNS in Scottish marine waters. A marine pathways analysis will be conducted in order to identify areas of high risk of introductions of INNS into Scotland. This will involve helping assemble geographical data bases of aspects such as shipping, recreational boating, aquaculture, etc. Analysis of these pathways using GIS and other mapping systems will then be used to identify where monitoring may be lost effective. Finally, different monitoring techniques will be considered, including scrape sampling, rapid visual surveys, and eDNA techniques.

The successful applicant will be involved in a range of activities and tasks which may include:
• Review previous marine pathways analyses and introduction risk modelling.
• Assembly of large relevant data sets
• Analysis and display of information using GIS and other mapping systems
• Discussions with marine INNS experts, and gathering consensus views and opinions
• Developing a strategic plan for monitoring Scottish waters
• Draft a report on the work undertaken.

Key outputs:
• Assembled data sets related to vectors of introduction of marine INNS into Scotland
• A risk analysis identifying areas of potential introductions into Scotland
• A draft report outlining a strategic plan for monitoring marine INNS in Scotland

Placement 7: Review of marine litter, plastics and microplastics research programme Placement (Based in Aberdeen)

The primary purpose of the placement project will be to examine the key knowledge gaps in tackling marine litter and plastics in Scottish seas. The placement will consider what sources and sinks of litter are present in Scotland, and what research is being conducted to quantify these. The study will also consider what research nationally and internationally is currently underway focusing on the ecological and environmental impact of marine plastics and microplastics. Working with scientists and policy makers in Scotland, the placement will then identify the key research gaps for Scotland for the coming decade, and will help inform the development of a research plan to tackle this growing problem.
The successful applicant will be involved in a range of activities and tasks which may include:

- Review what is known about sources and sinks of marine litter and plastics in Scotland
- Review national and international research into the impacts of marine litter and plastics
- Review SG policies relating to marine litter and plastics and the sustainable management of our seas.
- Consider the knowledge gaps identified by the strategic review and identify any recommended changes/additions
- Visit researchers in Scotland and obtain their opinions on key research gaps
- Identify links or synergies with other activities or research programmes elsewhere in the UK, EU or beyond.
- Draft a report on the work undertaken.

Key outputs:

- Review of current knowledge of sources, sinks and impacts of marine litter and plastics
- Identification of key knowledge gaps to inform the management of marine litter in Scotland
- Report outlining a draft research plan for Scotland.

Application Process

All applicants interested in undertaking a placement with Marine Scotland are required to register their interest by contacting

- Renewables - Ian Davies (ian.davies@gov.scot)
- Invasive Species and Marine Litter – Bill Turrell (bill.turrell@gov.scot)

by 15 May 2018 (and preferably well in advance of this deadline). Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

Placements proposals must be co-developed with a Marine Scotland Science member of staff. Applicants needing help with finding an appropriate member of staff should contact Ian Davies or Bill Turrell as above. Marine Scotland will contact applicants by the end of May to confirm whether we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4 July 2018.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work using NERC or other Research Council-funded research within the NERC remit.

A Letter of Support is required from an authorised signatory in Marine Scotland (Ian Davies or Bill Turrell). Applicants who apply for this opportunity can also apply for other placements in this call. Successful applicant will be required to meet the Scottish Government Baseline Personal Security Standard before they commence the placement.

For general queries about this call, please contact:
Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

For technical queries regarding the content of the Renewables Placement at Marine Scotland Science, please contact:
Ian M Davies, ian.davies@gov.scot 0131 244 2905
Kate Brookes, kate.brookes@gov.scot 0131 244 3732

For technical queries regarding the content of the Invasive Species and Marine Litter Placements at Marine Scotland Science, please contact:
Bill Turrell, bill.turrell@gov.scot 0131 244 3194
National Physical Laboratory (NPL)

NERC Innovation Placements 2018
Energy and Environment Strategy – Energy Transition Reports

National Physical Laboratory is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support NPL’s Energy and Environment Strategy team in creating industry specific analysis.

NPL is the UK’s National Measurement Institute, providing the measurement expertise that underpins economic growth and quality of life in the UK. We are a world-leading research facility.

The National Physical Laboratory (NPL), founded in 1900, is the UK’s National Measurement Institute, a unique facility in this country and one of the top three measurement institutes in the world. Since January 2016 NPL has been a wholly-owned company of the Department for Business, Energy & Industrial Strategy (BEIS).

As a world-leading centre of excellence in developing and applying the most accurate measurement standards, science and technology, NPL delivers widespread social and economic impact. We sit at the intersection between scientific discovery and real world application. We bring together over 500 scientists and engineers from almost every field to save lives, protect the environment and enable citizens to feel safe and secure, as well as to support international trade and innovation.

With global climate targets in place, the global economy needs to shift away from fossil fuels towards clean, renewable energy sources. This energy transition will see the emergence of innovative, low carbon alternatives within our transport and heat sectors, as well as in playing a role balancing the grid. As the UK’s National Measurement Institute, NPL has a responsibility to tackle priority measurement challenges that are barriers to this transition and is producing a series of reports which highlight and prioritise measurement need that will enable appropriate energy technologies. NPL has already produced two reports under the themes of hydrogen and batteries and is working to produce more. The Energy Transition Reports Placement will focus on the production of upcoming reports where the topics will include: Smart Grids and Power Networks, CCUS, Biogas and Offshore Renewables. We are similarly looking at environmental reports covering Air Quality, Emissions Monitoring and Earth Observation for Climate Services.

The placement will be expected to spend between 80% and 100% of their time embedded in the organisation and is expected to spend 90% of their allocated time at NPL in Teddington with 10% of their time being spent going to relevant meetings, events and potentially NPL regional offices.

The benefits of the successful placement include:

- Gain oversight of measurement and innovation challenges in the relevant Energy Transition report topic working with leading NPL scientists
- Networking opportunities with a range of industry, science and innovation stakeholders
- Directly support UK science and innovation through formulation of measurement challenges

Project start date: expected to start on 1 November 2018 and be completed latest by 31 October 2019.

The successful applicant will form part of NPL’s Energy and Environment Strategy team. The candidate will be involved in a range of activities and tasks which will play to their strengths and may include:
• Setting up a delivery plan for the Energy Transition report they have been brought in to deliver
• Coordination of NPL staff, who may sit across different teams in the lab, around their knowledge and expertise
• Literature review (including industry, academic and policy publications) that will form the basis of the strategy and inform the stakeholder engagement and planning of the project workshop
• Stakeholder interviews with identified experts from across the selected industry
• Organising and running of an industry workshop together with the NPL events team for around 30 (+/-) people, which includes practical organisational aspects through to planning an agenda
• Writing a comprehensive but succinct report based on the above activities (will include technical information that needs to be written up into easy to read language)
• Working with the marketing and communications team to create a nicely designed infographic that summarises the industry measurement needs as well as full report that will be used for external engagement work

Expected outputs include:
• A regular internal project team meeting
• A literature and industry review of Energy Transition report topic
• A list of relevant stakeholders (and their details) to interview/invite to the workshop
• An Energy Transition infographic (that can be used in or outside the full report)
• An Energy Transition report

Application Process:

All applicants interested in undertaking a placement with NPL are required to register their interest by contacting Marcia Jackson on careers@npl.co.uk by 21 May 2018 (and preferably well in advance of this deadline). Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

Placements proposals must be co-developed with an NPL member of staff. NPL will contact applicants by 15th June 2018 to confirm whether we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 16.00 hours on July 4, 2018.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work based on NERC- or other Research Council-funded research which lies within the NERC remit.

A Letter of Support is required from NPL. Applicants who apply for this opportunity can also apply for other placements in this call.

For general queries about this call, please contact:

Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

For general queries about working at NPL please contact:

Marcia Jackson
NPL HR Business Partner
Email: careers@npl.co.uk
Tel: 020 8977 3222
National Resources Wales (NRW)

Natural Resources Wales Placement Opportunities

Natural Resources Wales is potentially offering to host a placement or placements under the NERC-funded Innovation Placements Call 2018 dependent on whether topics and activities can be agreed.

Natural Resources Wales (NRW) is the largest Welsh Government Sponsored Body - employing 1,900 staff across Wales with a budget of £180 million. It was formed in April 2013, largely taking over the functions of the Countryside Council for Wales, Forestry Commission Wales and the Environment Agency in Wales, as well as certain Welsh Government functions. NRW’s vision is to lead the way to a better future for Wales by managing the environment and natural resources sustainably. It works in a variety of ways to benefit the people, environment and economy of Wales as: advisor; regulator; designator; responder; statutory consultee; land manager; partner, educator and communicator; evidence gatherer; and locally-based employer.

Potential topics include:

1. **Operationalising and evaluating the ecosystem approach**: NRW is embedding the ecosystem approach (aka Sustainable Management of Natural Resources) across its internal and external activities. Areas of interest include development or adaptation of analytical tools to be used in the preparation of the next State of Natural Resources Report and in “Area Statements” at the subnational level. Area Statement will provide information on the priorities, risks and opportunities for sustainable management, for all areas of Wales. The area statements must detail the natural resources in the area, the benefits which the natural resources provide, and the priorities, risks and opportunities that need to be addressed in that area. Implementation and effectiveness metrics are also an area of challenge.

2. **Improving the integration and use of monitoring data**: Under both financial and policy challenges, NRW is reviewing its monitoring programmes for both statutory and investigative purposes. Areas of interest include application of new and improved ground-based and remote monitoring techniques, including Earth Observation, evidence synthesis, and data mining and extrapolation. This can link closely with area 1 above. Some, but by no means all, datasets are available on Lle Geo-Portal.

3. **Marine biodiversity**: NRW has identified priority evidence needs relating to its marine biodiversity work, and in particular projects considered to be high priority where opportunities exist for collaborative working: Marine Biodiversity Collaborative Research Priorities

Projects are expected to start on 1 November 2018, lasting from three to 12 months, and be completed by 31 October 2019. Placements will be expected to spend between 80% and 100% of their time embedded in one or more of NRW’s main offices in Aberystwyth, Bangor, or Cardiff, depending on project.

**Application Process**

Interested applicants should contact Kathryn Monk (kathryn.monk@naturalresourceswales.gov.uk), copying in (Richard.Cardwell@naturalresourceswales.gov.uk) by 7 May 2018 (and preferably well in advance of this deadline).
Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity. Also, be prepared to discuss how you think you could address and add value to any of the topics stated above and the particular skills and experience that you could bring to this work using either NERC or other Research Council-funded research within the NERC remit. A Letter of Support from the host organisation is mandatory for any proposals.

The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4 July 2018.

For general queries about this call, please contact:

Tessa Edgecombe  
Senior Programme Manager (Innovation)  
Natural Environment Research Council  
Email: tjed@nerc.ac.uk  
Tel: 07788 190531
NERC Innovation Placements 2018

The National Trust is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support the delivery our strategy ‘Playing Our Part’ and our new research strategy. With 250,000ha of land (40% of which is nationally important for wildlife or geology), 775 miles of coast and over 4000 listed buildings to look after, the National Trust is keen to ensure that we have robust evidence to inform how we manage built and natural heritage, based on the best available science and strong collaborations. We are also actively involved in trying to shape future land management policy, using our land to demonstrate how farming and the delivery of a range of ecosystem benefits can go hand in hand. A placement with us is an excellent opportunity to collaborate with a large conservation organisation, which has over 5 million members, and many visitors who enjoy days out at the properties we look after across England and Wales. There will be opportunities to extend research reach and impact, working alongside heritage experts and sharing scientific expertise in a way that influences management and thinking inside the organisation and potentially across the heritage sector.

The National Trust is interested in hosting placements that directly address the challenges we face in delivering our strategy. Previous NERC-funded placements have focused on lake management and the impact of sea level rise on NT land and properties on the south coast. Our interests span the breadth of NERC’s science but in particular we are keen to hear from researchers with interests in:

- Management and assessment of natural resources (e.g. soils, water)
- Climate change adaptation and mitigation from a natural environment perspective
- Biodiversity science and ecosystem management
- Heritage science, including archaeological conservation

Placements are expected to start on 1 November 2018, and researchers can expect to spend between 80% and 100% of their time at the National Trust’s head office in Swindon and/or regional offices and properties as agreed. Placements will be co-developed with a National Trust member of staff to ensure maximum benefit for the placement holder and the Trust.

Placements could involve a range of activities such as:

- Providing expert advice to the Trust to inform business decisions;
- Analysing and synthesising existing datasets;
- Identifying new ways to share and apply research;
- Engaging NT staff, volunteers and visitors in science and research.

Researchers undertaking a National Trust placement will be expected to produce a series of outputs for communication within and outside the organisation. These will be determined at the outset of the project but could include some or all of the following:

- A report to the National Trust summarising key research findings and recommendations;
- Material for the National Trust website and intranet (blogs, video);
- A review paper for the conservation management community.
Please use the space on the NERC application to provide some ideas of how you could address and add value to the proposed project and the particular skills and experience that you could bring to this work using NERC or other Research Council-funded research within NERC remit.

How to apply for a placement with the National Trust

Each year, the Trust receives a high number of enquiries from researchers wishing to secure a placement with us via an application to this highly competitive NERC-funded scheme. In 2018, the Trust can support up to a maximum of three placements that strongly align with our strategic aims. Consequently, we ask potential applicants to:

- Refer to the NERC innovation placement Announcement of Opportunity to check that you are eligible to apply.

- Work closely with a National Trust member of staff (‘sponsor’) to develop your placement proposal. Applicants needing help finding an appropriate NT Sponsor should contact research@nationaltrust.org.uk, indicating their research interests.

- Complete our placement proposal form (see below – word versions of the form can be requested from National Trust or NERC) and send it to research@nationaltrust.org.uk by Friday 1st June. Proposals will be assessed by our panel and a maximum of three proposals will be chosen to be developed into full applications to be submitted to NERC.

- Draft applications should be submitted to the Trust for review by Friday 22nd June (email research@nationaltrust.org.uk). A Letter of Support from the National Trust will be issued once the application has been approved.

Applications should be submitted to NERC via JeS (deadline 4th July 2018). Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance.

For general queries about the NERC Innovation Placement call please contact:

Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

National Trust placement enquiries should be directed to:
research@nationaltrust.org.uk
<table>
<thead>
<tr>
<th>Title of Project</th>
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<tr>
<td>Name of Applicant</td>
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**Applicant Status**
*Please tick to confirm eligibility to apply for a placement*
- [ ] I am a UK resident
- [ ] I am an academic researcher (postdoctoral or above)
- [ ] I am employed by an eligible research organisation for the duration of the placement

**Lead Research Organisation**

**NT Placement Sponsor**
[Enter name & job title of the NT staff member supporting the placement]

**Placement Base**
[Please state which office or property the placement holder will be based]

**Duration of Placement**
[Must be between 3 and 12 months. State whether full or part time (%)].

**Start Date**
[Projects must start by 1st November 2018]

**Finish Date**

**Project Description**
(max 500 words)
[State project aims and objectives and fit to NERC remit]

**How will the project outputs contribute to delivering the Trust’s strategic aims?**
[Pleas show how the project will contribute to the Trust’s strategic aims outlined in ‘Playing Our Part’ and the NT Research Strategy (available on the NT website)]

**Key outputs / benefits for the Trust**
[State key project deliverables]

**What will the Trust contribute to the project (e.g. funding, staff time, access to land)?**
[Please ensure all contributions are agreed with and approved by your NT sponsor]

**Applicant: ……………………………………………………………………… Date: …………….**

**NT Project Sponsor: …………………………………………………………  Date: …………….**

*Please sign and date this form (electronic signatures are acceptable). Forms received without this section fully completed will not be reviewed.*

**Note to NT Sponsor:** By signing this form you are confirming your support for the proposed project and agreeing that you will support the placement on behalf of the NT should the application be successful. This may include providing a letter of support to accompany the NERC application and placement administration (e.g. organising desk space and IT services for the placement holder).
NERC Innovation Placements 2018

Defining and implementing Favourable Conservation Status for Habitats and Species (Phase 2 – Practical Application)

Natural England (NE) is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support the delivery of Natural England’s Conservation Strategy for the 21st Century (C21) and the Defra 25yr plan target to deliver 500,000ha of additional wildlife habitat. C21 recognises that conservation processes and practices conceived to protect the environment often no longer represent the most effective means of achieving real and lasting environmental outcomes. Defining FCS will contribute to the long-term resilience of our landscapes and seas, enabling us to plan and deliver more broadly than at a site level.

We are offering the opportunity to work with NE specialists on developing statements of Favourable Conservation Status (FCS) for priority habitats and species and to test their application in informing decision-making. FCS is a situation in which habitats have sufficient area and quality, and species have a sufficient population size to ensure their survival into the medium to long-term, along with favourable future prospects in the face of pressures and threats. We need to be able to describe the current situation for individual habitats and species at a national, landscape and local scale, and clearly articulate our objectives for the next 25 years.

The FCS work will inform:

- development of local, shared plans, alongside other considerations for a particular area – e.g. local community wants and needs, development considerations etc.
- targeting of farmland conservation funding, and decisions relating to licensing of protected species.
- our approach to achieving Good Environmental Status, under the Marine Strategy Framework Directive.

Key Details

<table>
<thead>
<tr>
<th>Duration of placement</th>
<th>12 months</th>
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<tbody>
<tr>
<td>Commitment of placement applicant</td>
<td>Full-time</td>
</tr>
<tr>
<td>Location(s)</td>
<td>Office based. NE has offices at various locations: <a href="#">Natural England - Office Locations</a> National travel will be required (approx. 1 day per week).</td>
</tr>
<tr>
<td>Start date of project</td>
<td>1 November 2018</td>
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<tr>
<td>Completion date</td>
<td>31 October 2019</td>
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### Expected benefits for successful placement applicant
- To work as part of a team working at the forefront of conservation innovation.
- To develop understanding of how their scientific knowledge/research findings can be interpreted to inform policy/decision-making for the benefit of the natural environment.
- Experience of working with a range of sectors to achieve outcomes for nature.
- Opportunity to influence NE’s future ways of working.

### Expected outputs for host organisation
- Progress toward defining and delivering FCS for a range of habitats and species.
- Better delivery decisions due to a much better understanding of the ecological impact of proposals and reduced levels of uncertainty.
- A clear understanding of requirements for biodiversity to inform 25YEP, shared plans for places and other strategic objectives.
- Enable more flexibility in NE’s approach to licensing.
- Give a focus and impetus to conservation action.

### Placement activities
The successful applicant(s) will be involved in a range of activities and tasks that may include:
- Testing of the effectiveness of FCS Statements and Strategies focusing on a number of pilots, to show how FCS can make a difference in the real world to conservation gains and decision-making, enabling sustainable economic growth.
- Developing Statements for individual habitats and/or species that define what FCS means for a range of habitats and species. To be able to describe what good looks like for a habitat/species in a place.
- Strategies for habitats and species that explain how we will achieve this, over 25 years, setting out priority actions. These strategies are set at the national level but are intended to be applied flexibly, contributing to local decision-making for planning in a particular landscape or place.
- Working with stakeholders/partners to build confidence in the approach and understand the role stakeholders/partners want to take in testing and application.

### Background information about host organisation
Natural England (NE) is the independent statutory Non Departmental Public Body (NDPB) dealing with the natural environment established in accordance with national legislation (Natural Environment and Rural Communities Act 2006) on 1 October 2006. The Act sets out our purpose "to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.

### Application Process
All applicants interested in undertaking a placement with Natural England are required to register their interest by contacting Orlando Venn by 1st June 2018 (and preferably well in advance of this deadline).
Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

Placements proposals must be co-developed with a Natural England member of staff. Applicants needing help with finding an appropriate member of staff should contact Orlando Venn. Natural England will contact applicants by 15th June to confirm whether we can support their application. Natural England can only support up to three and NERC will only fund up to three Natural England proposals. The chosen applicants will then need to work up a full funding application to be submitted to NERC by Wednesday 4th July, 16:00 hours.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work using NERC or other Research Council-funded research that falls within the NERC remit.

A Letter of Support is required from Orlando Venn at Natural England. Applicants who apply for this opportunity can also apply for other placements in this call.

Contact details

For general queries about this call, please contact:

Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

For technical queries regarding the content of the Placement at Natural England please contact:

Orlando Venn
Principal Advisor (Priority Habitats & Species)
Email: Orlando.Venn@naturalengland.org.uk
Tel: 0792 027 0564 / 0208 026 7516
Scottish Environment Protection Agency (SEPA)

NERC Innovation Placements 2018
Scottish Environment Protection Agency / Delivering One Planet Prosperity

SEPA is responsible for delivering two core services – environmental regulation and flood risk management. *One Planet Prosperity - Our Regulatory Strategy*, sets out how we will tackle environmental crime; support businesses in driving up compliance, and help those who want to go beyond compliance to reap the economic and social benefits of environmental excellence. As Scotland’s authority for strategic flood risk management, we will implement *Scotland’s Flood Risk Management Strategies* with our partners, develop new flood warning schemes, and further improve our flood forecasting to help people and businesses protect themselves and their property from the impacts of flooding.

SEPA is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support the delivery of these strategy in a number of broad functional areas all of which underpin the delivery of a sustainable and innovative approach to flood risk management, environmental regulation and human health and wellbeing.

Our goals are ambitious. To deliver them, SEPA needs to be clearer, stronger, more innovative and more collaborative, and we need academics with the vision and drive to help us achieve them.

We are interested in fellowships in the following broad areas:-

- Aquaculture – how we innovate in monitoring, assessing and regulating the risks of environmental impacts in freshwater and marine systems;
- Remote Sensing – particularly in waste regulation, aquaculture and flooding;
- Smart monitoring using techniques such as genomics (eDNA) and Internet of Things to understand the environment;
- Innovation that supports the Scottish Economy to go “beyond compliance” and reduce the impact of flooding.

The placements will be expected to spend between 80% and 100% of their time embedded in the SEPA. Location is flexible within Scotland depending on the specific proposal.

Start date: Successful applicants will be expected to start in early November 2018, the length of the placement will be between 3-12 months and will be finalised during the co-development of an application.

The successful applicant(s) will be involved in a range of activities depending on the functional area where they will work.

Application Process:

All applicants interested in undertaking a placement with the SEPA are required to register their interest by contacting lesley.whyte@sepa.org.uk or peter.singleton@sepa.org.uk to discuss your proposal by Friday 15th June 2018 (and preferably well in advance of this deadline to ensure access to staff member for co-developing a proposal).

Following this initial contact we will ensure any proposal is co-developed with relevant SEPA staff. Before contacting us, please ensure that you have read and fully comply with the NERC placement
eligibility requirements outlined in the Announcement of Opportunity.

SEPA will contact applicants as soon as possible after their initial idea is received to confirm whether we can support their application. SEPA can only support up to three and NERC will only fund up to three SEPA proposals. The chosen applicants will then need to work up a full funding application to submit to NERC by the closing date Wednesday 4 July 2018 at 16.00 hours.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work using NERC or other Research Council-funded research that falls within the NERC remit.

A Letter of Support is required from SEPA. Applicants who apply for this opportunity can also apply for other placements in this call. Successful applicants will be required to undergo background checks to enable them to work in SEPA.

For general queries about this call, please contact:

Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

For technical queries regarding the content of the Placement at SEPA please contact:

Lesley Whyte or Peter Singleton
SEPA
Telephone: 01786 457700
Email: lesley.whyte@sepa.org.uk & peter.singleton@sepa.org.uk
Scottish Marine Animal Stranding Scheme (SMASS)

NERC Innovation Placements 2018

The Scottish Marine Animal Stranding Scheme/Scotland’s Rural College is offering to host placements under the NERC-funded Innovation Placements Call 2018 to work with the existing team to investigate further metrics of marine health and population viability. This will primarily require the application of appropriate statistical and analytical tools to necropsy data and samples collected over the past 25 years of the scheme’s operation, with the aim to improve our ability to reliably and robustly monitor threats and pressures on marine mammal populations.

Investigation of stranded marine animals can yield substantial information on the health and ecology of some fascinating but often poorly understood species, while also helping to highlight important conservation issues. The long-term accumulation of stranding data facilitates the investigation of spatio-temporal trends and patterns in stranding numbers and mortality. Post-mortem examinations additionally provide unique insight into wider metrics such as age structure, sex, body condition, cause of death, pollutant levels, reproductive patterns, diet, disease burden and pathology of the stranded population. This information can provide essential baseline data to help detect any future outbreaks of disease, unusual mortality events, anthropogenic stressors, and other health issues. It also enables assessment of pressures and threats, possible population dynamics, and responses to environmental stressors as well as specific conservation measures.

Key details

<table>
<thead>
<tr>
<th>Duration of placement</th>
<th>12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location(s)</td>
<td>This placement is largely office based and would be based at SMASS’s offices at the SRUC Disease Investigation Centre, Inverness. There is some flexibility in this however and requests for a different time allocation can be considered.</td>
</tr>
<tr>
<td>Start date of project</td>
<td>1st November, 2018</td>
</tr>
<tr>
<td>Completion date of project</td>
<td>By 31st October, 2019</td>
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</tbody>
</table>

Background information about host organisation

The Scottish Marine Animal Stranding Scheme (SMASS) has been in operation since 1992. It is part of the Cetacean Strandings Investigation Programme (CSIP), and is funded by the Scottish and Westminster governments. The projects aims to provide a systematic and coordinated approach to the surveillance of Scotland’s marine species by collating, analysing and reporting data of all cetaceans, pinnipeds, marine turtles and basking shark that strand on the Scottish coastline.

Marine animals have become stranded along UK coasts for centuries but the reasons for these
events and the anthropogenic contribution to their frequency remain unclear. The need to quantify anthropogenic impacts on marine mammal populations is now becoming even more pressing as the next decade could see significant changes to the marine environment, most notably from increases in the marine renewables energy sector, climate change or increasing levels of underwater noise. Stranding records are historically one of the longest and richest sources of data on any demographic phenomenon, and detailed insights on the patterns and trends in mortality of apex marine species are waiting to be unlocked from this valuable data repository.

Placement activities

The Scottish Marine Animal Stranding Scheme is a small group of three full time staff and the successful candidate would become familiar with most aspects of this work. The applicant would be able to become familiar with both the pathological and epidemiological aspects of a longstanding opportunistic monitoring system, and would be encouraged to critically review the characteristics of the scheme compared to other marine and terrestrial surveillance systems. Other activities would involve the collation, integration and analysis of a number of data sources, and a request to review the potential for improving the applicability of strandings data from these data.

The main aim of this placement would be to develop a sustainable, long-term collaboration between the academic researcher and the work of SMASS, allowing for better use to be made of the existing datasets, adding value to the existing monitoring programme and informing on the direction of prospective analysis and future work. The precise nature of the tasks would depend on the individual’s skillset; however the successful applicant would have a significant role to play in developing the future direction of SMASS, and hopefully derive experience applicable to many opportunistic surveillance systems worldwide.

Application Process

All applicants interested in undertaking a placement with the SMASS are required to register their interest by contacting Andrew Brownlow at strandings@sru.ac.uk by 18th May 2018 (and preferably well in advance of this deadline). Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

Placements proposals must be co-developed with a SMASS member of staff. Applicants needing help with finding an appropriate member of staff should contact Andrew Brownlow at strandings@sru.ac.uk. SMASS will contact applicants by 25th May 2018 to confirm whether we can support their application. The chosen applicants will then need to work up a full funding application to be submitted to NERC by 4th July 2018.

Please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work.
A Letter of Support is required from SMASS and must be signed by Andrew Brownlow.

Applicants who apply for this opportunity can also apply for other placements in this call.

**Contact details**

For general queries about this call, please contact:

Tessa Edgecombe  
Senior Programme Manager (Innovation)  
Natural Environment Research Council  
Email: [tjed@nerc.ac.uk](mailto:tjed@nerc.ac.uk)  
Tel: 07788 190531

For technical queries regarding the content of the Placement at SMASS please contact:  
Andrew Brownlow  
Scottish Marine Animal Stranding Scheme  
SAC Veterinary Services  
Drummondhill, Inverness, UK, IV2 4JZ  
+44 (0) 1463 246044  
[www.strandings.org](http://www.strandings.org)
Soil Association

NERC Innovation Placements 2018

The Soil Association is offering to host placements under the NERC-funded Innovation Placements Call 2018.

At the Soil Association we champion good food for all, produced with care for the natural world. Our campaigns to change policy are underpinned by evidence from our partnerships with farmers, businesses and communities, and with scientists. These include: working with thousands of businesses through our certification business, best known for organic food and farming but also a leading certifier to FSC and other standards; the Innovative Farmers network, which matches farmer groups with scientists to run practical ‘field labs’; AssureWel, which has developed the industry standard in animal welfare outcome metrics; and Food for Life, which supports healthy and sustainable eating in thousands of UK schools. Over the past year, these activities have seen us collaborate with dozens of researchers across the environmental, biological and social sciences.

Key details

<table>
<thead>
<tr>
<th>Duration of placement</th>
<th>Up to 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment of placement applicant</td>
<td>Between 80% and 100% of your time</td>
</tr>
<tr>
<td>Location(s)</td>
<td>Bristol</td>
</tr>
<tr>
<td>Start date of project</td>
<td>1 November 2018</td>
</tr>
<tr>
<td>Completion date of project</td>
<td>No later than 31 October 2019</td>
</tr>
<tr>
<td>Expected benefits for you</td>
<td>Have an impact on current practice &amp; policy, Experience working with innovative farmers, Learn what it is like working in a dynamic NGO, Develop practical science communication skills</td>
</tr>
<tr>
<td>Expected outputs for the Soil Association</td>
<td>We have several project opportunities, each with different outputs. We would co-develop the work plan and outputs with you.</td>
</tr>
</tbody>
</table>

A placement with us is an opportunity for your scientific knowledge and skills to have a direct impact, and to develop new skills. We have a strong record of influencing progressive policy change and delivering benefits on the ground, yet are a small enough organisation that your individual contribution will be felt. Our team is thoughtful about the role of science in informing policy and land management decisions, and highly motivated, with the SA ranking 24th in the latest Best Companies survey of UK not-for-profits.

We are particularly interested in placements to help develop:

- Practical environmental performance metrics that can support reporting and continuous improvement on organic farms, using data from annual inspections and other sources.
- Models relevant to organic systems of the relationship between farm management decisions and catchment/landscape-scale outcomes (e.g. water quality, biodiversity).
- Further policy proposals relevant to protecting and restoring the UK’s soils.
- Environmental and economic evidence relating to innovative farming and land management practices in the UK, including agroforestry.
- Environmental evidence and practical experience to support jurisdictional approaches to land management certification in countries around the world where we certify forestry.
Applicants need scientific knowledge and skills relevant to one or more of these projects. You must be ready to think creatively about how to make the most of your expertise in meeting the objectives of our project together. Your written and verbal communication needs to be excellent.

Your work programme and expected outputs would depend on the focus of your placement. Placements of up to 12 months are welcome.

**Application process**

All applicants interested in undertaking a placement with the Soil Association are required to register their interest by contacting Tom MacMillan (tmacmillan@soilassociation.org) by **11 May 2018** (and preferably well in advance of this deadline). Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the [Announcement of Opportunity](#).

Placements proposals must be co-developed with a Soil Association member of staff. We will contact applicants by the end of May to confirm whether or not we can support your application. Up to three chosen applicants will then need to work up a full funding application to be submitted to NERC by **4th July 2018**.  

Please follow the application process outlined in the NERC Innovation Placements [Announcement of Opportunity](#) and supporting JeS guidance. Please use the space on the application to provide some ideas of how you could address and add value to this project and the particular skills and experience that you could bring to this work.

A Letter of Support is required from Tom MacMillan at the Soil Association. Applicants who apply for this opportunity can also apply for other placements in this call.

**Contact details**

For general queries about this call, please contact:

Tessa Edgecombe, Senior Programme Manager (Innovation)  
Natural Environment Research Council  
Email: tjed@nerc.ac.uk  
Tel: 07788 190531

For technical queries regarding the content of the Placement at the Soil Association, please contact:

Dr Tom MacMillan, Director of Innovation, Soil Association  
Email: tmacmillan@soilassociation.org  
Tel: 07973137185
Transport for London (TfL)

NERC Innovation Placements 2018

The impacts of Climate Change on Transport in London

Transport for London is offering to host placements under the NERC-funded Innovation Placements Call 2018 that support the resilience of transport services in London to climate change.

Transport for London (TfL) is responsible for the transport system in Greater London. TfL has responsibility for London’s network of principal roads, rail networks including the London Underground, London Overground, Docklands Light Railway and TfL Rail, for London’s trams, buses and taxis, for cycling provision, and for river services. The draft London Mayor’s Transport Strategy (due to be finalised shortly) identified that more action was required in order to improve the resilience of transport services. Subsequently TfL has identified a number of priority areas to ensure we understand climate change risks and the mitigating measures that are required to improve resilience.

Through the NERC Innovation Placement, TfL would like to improve understanding of risks posed by climate change to transport services in London, through:

- Pulling together existing sources of information in order to demonstrate the scale of the problem
- Analysing data on the performance of the transport network in different climatic conditions and extrapolating from this in order to predict future risk.

The key topic areas where a NERC placement could be beneficial are as follows:

1. Gather evidence to help TfL monetise the benefits of Green Infrastructure, for use in business cases.
2. Review new climate change projections from the Met Office (UKCP18), and work with TfL to develop ways of using this information to identify key impacts for transport, e.g. flooding
3. Use TfL data to identify relationships between different forms of extreme weather and performance of transport networks. E.g. precipitation and bus journey time, wind and delay on London Underground
4. Use the new UKCP18 Climate Change forecasts to monetise the impact of potential future disruptive weather events on various modes of transport.
5. Reviewing existing evidence and data sources relating to the choice of green infrastructure in a changing climate.

The broad work programme which TfL has developed in relation to climate change adaptation provides a variety of options which can be tailored to the individual skills and experience of the NERC placement. The successful applicant will be involved in a range of activities, liaise with different disciplines and tasks that may include (depending on the specific topics worked on):

- Programme management
- Literature reviews
- GIS
- Data manipulation and statistical analysis using specialist software
- Economic impacts assessment
- Policy development
Through the placement, it is envisaged that the applicant will:

- Develop an understanding of the impacts of climate change on transport in London
- Build a network of contacts in TfL, particularly in the fields of strategic analysis, policy development and asset management
- Be directly involved in translating complex data sets into clear recommendations which can be used by the operational parts of the business

**Location and duration of placement**

The placement will be expected to spend between 80% and 100% of their time embedded within our offices in London located at: Palestra, 197 Blackfriars Road, London, SE1 8NJ, and 5 Endeavour Square, Stratford London E20 1JN. The split of time between these locations is flexible and will also depend on the topic being worked on.

Any successful project will run for up to 12 months starting on **1st November 2018**.

**Application Process**

All applicants interested in undertaking a placement with Transport for London are required to register their interest by contacting Melina Kakouratou (melinakakouratou@tube.tfl.gov.uk) by the **end of April 2018**. Please provide some ideas of which topic/s you are interested in, how you could address and add value to a project on this topic and the particular skills and experience that you could bring to this work. Before contacting TfL, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the [Announcement of Opportunity](https://www.nerc.ac.uk). Placements proposals must be co-developed with a Transport for London member of staff (melinakakouratou@tube.tfl.gov.uk). Transport for London will contact applicants by the end of May to confirm whether we can support their application. The chosen applicants will then need to work with TfL to develop a full funding application to be submitted to NERC by 4pm, 4th July, 2018. A Letter of Support is required from TfL staff. Please follow the application process outlined in the NERC Innovation Placements [Announcement of Opportunity](https://www.nerc.ac.uk) and supporting JeS guidance.

The successful applicant will be required to undergo background checks and due to sensitive nature of some information may be required to sign a confidentiality agreement to cover aspects of work.

Applicants who apply for this opportunity can also apply for other placements in this call.

**Contact details**

For general queries about this call, please contact:
Tessa Edgecombe
Senior Programme Manager (Innovation)
Natural Environment Research Council
Email: tjed@nerc.ac.uk
Tel: 07788 190531

For technical queries regarding the content of the Placement at Transport for London please contact:
Melina Kakouratou
Email: melinakakouratou@tube.tfl.gov.uk
Tel: 07921403141
UK Water Industry Research (UKWIR)

NERC Innovation Placements 2018

The development of the ‘Big Question’ Projects for the Water Industry

UK Water Industry Research (UKWIR) are delighted to be able to offer placements under the NERC-funded Innovation Placements Call 2018 that support the Water Industries ‘Big Questions’ Programme. The placement/s will be expected to spend between 80% and 100% of their time in the central London based organisation.

UKWIR has been running a common research programme for UK water and sewerage companies on ‘one voice’ issues since 1993. UKWIR often collaborates with government departments and regulators in carrying out this research. UKWIR is responsible for facilitating the shaping of the water industry’s research agenda, developing the research programme, procuring and managing the research and disseminating the outputs. The focus of our long-term strategic research is captured in a number of ‘Big Questions’ under the four research themes as detailed below. These have been identified through extensive consultation and discussion. These questions cover many areas and activities of the water industry’s work and represent the key challenges faced by the industry, now and in the future.

Big Questions:

DRINKING WATER PRODUCTION & DISTRIBUTION

• How do we halve our abstractions by 2050?
• How will we achieve zero leakage in a sustainable way by 2050?
• How do we achieve zero interruptions to water supplies by 2050?
• How do we achieve 100% compliance with drinking water standards (at point of use) by 2050?

WASTEWATER COLLECTION & RECYCLING

• How will we deliver an environmentally sustainable wastewater service that meets customer and regulator expectations by 2050?
• How do we achieve zero uncontrolled discharges from sewers by 2050?

CROSS CUTTING THEME

• How do we achieve zero customers in water poverty by 2030?
• What is the true cost of maintaining assets and how do we get this better reflected in the regulatory decision making process?
• How do we ensure that the regulatory framework incentivises efficient delivery of the right outcomes for customers and the environment?
OPERATING SUSTAINABLY

- How do we become carbon neutral by 2050?
- How do we turn all wastes we receive and generate into products by 2030?

To support development of these programmes we are looking for researchers with interests in bringing environmental science to any of the following areas:

- The long-term strategic issues facing the water industry and the country
- An appetite to gather information on current research programmes within UK Universities
- Specific knowledge of any of the areas highlighted in the Big Question list above

Candidates will be expected to disseminate information to other UKWIR members and water company representatives on completion and throughout the duration of the placement.

The start date is expected to be in November 2018.

Application Process

All applicants interested in undertaking a placement with UKWIR are requested to register their interest by contacting Mark Jones on mjones@ukwir.org.uk by 30th April 2018. Please provide some ideas of which topic/s you are interested in, how you could address and add value to a project on this topic and the particular skills and experience that you could bring to this work. Before contacting us, please ensure that you have read and fully comply with the NERC placement eligibility requirements outlined in the Announcement of Opportunity.

Placements proposals must be co-developed with an UKWIR member of staff. UKWIR will be holding an internal meeting to decide which applicants to support in mid-May, and we will contact applicants by the end of May to confirm whether or not we can support their application. The chosen applicants will then need to work with UKWIR to develop a full funding application to be submitted to NERC, via Je-S, by 4th July 2018. A Letter of Support is required from UKWIR.

For the Je-S application, please follow the application process outlined in the NERC Innovation Placements Announcement of Opportunity and supporting JeS guidance.

Applicants who apply for this opportunity can also apply for other placements in this call.

Contact details

If you are interested in developing a proposal on any of the topics above, then please contact Mark Jones using the contact information below.

<table>
<thead>
<tr>
<th>For general queries about this call, please contact:</th>
<th>For technical queries regarding the content of the Placement at UKWIR please contact:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tessa Edgecombe</td>
<td>Mark Jones</td>
</tr>
<tr>
<td>Senior Programme Manager (Innovation)</td>
<td>Strategic Programme Manager</td>
</tr>
<tr>
<td>Email: <a href="mailto:tjed@nerc.ac.uk">tjed@nerc.ac.uk</a></td>
<td>Email: <a href="mailto:mjones@ukwir.org.uk">mjones@ukwir.org.uk</a></td>
</tr>
<tr>
<td>Tel: 07788 190531</td>
<td>Tel: 020 3897 6885</td>
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