

2014 Strategic Environmental Science Capital Call

Summary

The Natural Environment Research Council (NERC) is the UK's leading public funder of environmental science, investing £330 million each year in cutting-edge research, postgraduate training and innovation in universities and research centres. NERC will invest in strategic capital priorities to provide a well-founded research and innovation environment that will support existing and future world-class environmental science.

Eligible Research Organisations were invited to submit up to three proposals (with a minimum value of £100,000 per proposal, but not exceeding a combined total value of £500,000) for capital assets (for science, innovation, estates, I.T, facilities).

Proposals were required to demonstrate how the capital asset would support world class environmental science, aligned with NERC's remit and strategic priorities, and have potential to stimulate innovation and economic impact. All awards must be finished by 31 March 2016.

Items Awarded (December 2014)

Research Organisation	Title
Scottish Universities Environmental Research Centre (SUERC)	A plasma source positive-ion mass spectrometer for next generation radiocarbon (¹⁴ C) and beyond.
University of Hertfordshire	Cloud and aerosol dropsonde system for FAAM aircraft
University of Aberdeen	PolyExESS: PolyEXTremophile Environment Simulation System
University of St Andrews	New analyses of trace environmental sulfate, and sulfur and metal isotopes in individual organic compounds by multi-collector inductively coupled plasma mass spectrometer (MC-ICP-MS) with gas chromatograph (GC)
Sir Alister Hardy Foundation for Ocean Science (SAHFOS)	Development of total environment ocean surface sensing array - integrating continuous plankton measurements and state-of-the-art marine environmental sensing technologies across the global ocean.
University of Manchester	Nanoscale Imaging and Analysis Facility for Environmental Materials (NIAFEM). Field Emission Gun Scanning Electron microscope (FEG-SEM) with m-focus X-ray fluorescence (XRF), energy dispersive spectroscopy (EDS) and Raman.
Marine Biological Association (MBA)	MICRO-CLIMATE – an advanced quantitative microscopy resource with precise environmental control of temperature, CO ₂ and O ₂

Durham University	HiFAST: A portable, <u>high-frequency acquisition system</u> to measure dynamic stress and strain in natural rocks experimentally deformed at seismic, high strain-rates.
Aberystwyth University	Developing the next generation of Quaternary dating methods using a high resolution spatially resolved luminescence imaging system.
University of Lancaster	RAPID 2G magnetometer with Field-Tumbling capability (acronym: R2G-FT).
University of Leeds	Three-dimensional fluid dynamic measurements: combining Volumetric Particle Imaging Velocimetry (Volumetric PIV) with three dimensional Laser Doppler Anemometry (3D-LDA)
University of Bristol	High resolution gas chromatograph quadrupole time-of-flight mass spectrometer for complex mixture analysis and accurate mass determination.
University of York	Molecular Quantification of organic Aerosols by High Resolution Mass Spectrometry (MQA-HR-MS).
Plymouth Marine Laboratory	Environmental Single Cell Genomics (eSCG) instrumentation
University of Sheffield	QuantStudio 12K Flex Real-Time PCR System, with OpenArray/96 well block and Taqman Array upgrade and robotic liquid handling. Provider: Applied Biosystems/Life Technologies.
Loughborough University	Time Resolved Laser Fluorescence Spectroscopy (TRLFS).
University of Southampton	A liquid He-free u-channel Superconducting Rock Magnetometer (SRM) with automated long core sample treatment system for analysis of sediment, rock and soil cores; bio-magnetite; archaeological artefacts and synthetic materials.
Lead: University of Leicester (Collaborator: University of Lancaster)	European Mid-Latitude High Frequency SuperDARN radar
University of Plymouth	
Royal Holloway, University of London	Pioneering triple-quadrupole ICPMS for complete interference control and highest sensitivity in laser-ablation (LA)ICPMS: Multiple applications including in-situ sulphur in ice cores and speleothems
Newcastle University	Ground Based Synthetic Aperture Radar: GB-SAR is a field based radar imaging system offering users enhanced capabilities in mapping topography and monitoring ground displacements and revolutionising the land survey industry.
Durham University	Scanning probe microscope – stable isotope mass spectrometer (SPM-SIMS) for establishing mineral chemistry equilibria.
Natural History Museum, London	High resolution micro-CT scanner, incorporating multi-energy scanning and phase contrast capability.

University of Plymouth	Video and image seabed sampling platforms facility. Funding is required to enhance Plymouth's existing facility through technological development, purchase of an electric winch, and supporting material.
University of Sheffield	LGC Genomics – SNPLINE LITE genotyping system
Cranfield University	Microcalorimetric equipment for soil ecosystem thermodynamic efficiency determination and organic matter decomposition studies.
University of Bristol	Medusa Gas Chromatograph-Mass Spectrometer (Medusa-MS) for trace analysis of climate-reactive gases, biogenic gases and volatile pollutants.
University of Exeter	Amnis® ImageStreamX Mark II Imaging Flow Cytometer.
University of Aberdeen	Multi-Vis: A high resolution large scale X-Ray CT Scanner to build a multi-scale environmental science focussed facility in northern UK.
University of Brighton	Polyomics Centre and Biobank for Aquatic Toxicity Research.