

PROJECTS IN NERC remit		
Please talk to supervisors who work on your area of interest, as there may be updates or possibilities for alternative projects		
Dr Ian Bastow, Dr Derek Keir (School of Ocean and Earth Science, University of Southampton)	Monitoring seismicity at volcanoes with geothermal prospects in Ethiopia	Info Sheet - Bastow Geothermal Prospects
Dr Rebecca Bell; Prof. Gary Hampson, Dr. Alex Whittaker, Department of Earth Science and Engineering; Dr. Mark Vardy, SAND Geophysics; Dr. Margaret Stewart, BGS; Mr. Abdulqadir Cader, GeoTeric	Geological and geophysical investigation of the environmental evolution of the southern North Sea for offshore wind applications	Info Sheet - Bell Geo
Prof. Jenny Collier, Prof. Tim Henstock (Southampton)	Structure and tsunamigenic potential of the Lesser Antilles accretionary prism	Info Sheet - Collier Prism
Prof. Jenny Collier, Prof. Tim Henstock (Southampton)	Tectonics of the North America/South America plate boundary	Info Sheet - Collier Tectonics
Prof. Jenny Collier, Dr. Gareth Roberts, Dr. Lidia Lonergan	Magmatism and Continental Breakup in the South Atlantic 1	Info Sheet - Collier South Atlantic Magmatism
Prof. Jenny Collier, Prof. Tim Minshull (Univ. Southampton, UK), Prof. Marta PerezGussinye (Univ. Bremen, Germany)	Magmatism and Continental Breakup in the South Atlantic	Info Sheet - Collier Sosem
Dr. Jacob Kegereis, Prof. Gareth Collins	Simulating impacts onto Earth: from enabling early life to causing extinction	
Prof. Gareth Collins, Prof. Matthew Piggott, Prof. Sue Dawson (Dundee)	Simulating submarine slide tsunami inundation of the Shetland Islands	Info Sheet - Collins Shetlands
Dr Fangxin Fang, Prof. Christopher Pain, Dr Paul Wilkinson (British Geological Survey), Dr Oliver Kuras (British Geological Survey), Dr Jorg Herwanger (MP Geomechanics)	Anisotropic Geoelectrical Imaging - can Artificial Intelligence (AI) replace conventional resistivity inversion approaches?	Info Sheet - Fang Anisotropic Geoelectrical Imaging
Dr Fangxin Fang, Prof. Christopher Pain	New generation data assimilation and rapid response models for urban flooding	Info Sheet - Fang Flooding
Prof. Saskia Goes, Dr Ian Bastow	Mapping thermal and compositional structure of cratons	Info Sheet - Goes Cratons
Prof. Saskia Goes, Dr Gareth Roberts	Structure and Evolution of the African Plate from Geophysical Observations	Info Sheet - Goes Africa Joint Tomography
Prof. Saskia Goes, Dr. Alexandra Renouard, Prof. Peter Stafford (Civil), Dr. Alex Whittaker	Earthquake Forecasting Using Machine Learning	Info sheet - Earthquake Forecasting
Prof. Matthew Jackson, Dr Haiyang Hu, Professor Jon Blundy (University of Oxford)	Fluid dynamics of magma reservoirs	Info Sheet - Jackson CFD
Dr Doyeon Kim, Dr Frederick Richards, Prof. Ved Lekic (University of Maryland)	Exploring origin and composition of the lowermost mantle structures with machine learning methods and seismology	Info Sheet - Kim Lower Mantle Structures
Dr Doyeon Kim, Prof. Matthew Jackson	Monitoring Global groundwater change using seismic methods	Info Sheet - Kim Groundwater Seismology
Dr Philippa Mason, Dr James Lawrence (Civil Engineering), Prof. Richard Ghail (Royal Holloway)	Developing time-series InSAR for understanding changes to the ground surface, subsurface, biosphere and environment	Info Sheet - Mason Time-Series InSAR
Prof. Mike Mayall, Dr Alex Whittaker, Prof. Gary Hampson, Dr Lidia Lonergan	Submarine channels, deformation, and routing of sediment and plastics to the deep ocean	Info Sheet - Mayall Sediment Routing
Dr Ben Moseley, Prof. Christopher Pain	Learning fast and generalizable climate models with neural differential equations	Info Sheet - Moseley NDEs
Prof. Adrian Muxworthy, Dr. Elisa Piispa (University of Reykjavik) and Dr. Arne Døssing (DTU, Denmark)	Testing the Geocentric Axial Dipole hypothesis: Palaeomagnetic analysis of the Westfjords lavas, Iceland.	Info sheet - Geocentric Axial Dipole
Prof. Adrian Muxworthy, Prof. Dominik Weiss, and Dr. David Green (Public Health)	Biomagnetic monitoring as an urban air quality assessment method	Info sheet - Biomagnetic Monitoring
Prof. Adrian Muxworthy, Prof. Jenny Collier, and Simon Allerton (Cardiff)	Geophysical studies of the spreading structure of the Troodos Ophiolite, Cyprus	Info sheet - Troodos Ophiolite, Cyprus
Prof. Adrian Muxworthy, Prof. Tom Mitchell (UCL)	Field and experimental determination of the role of low pressures (< 1GPa) on the fidelity of magnetic recording in rocks and meteorites	Info sheet - Magnetic Recording in Rocks and Meteorites

Prof. Adrian Muxworthy, Prof. Dominik Weiss, and Dr. David Heslop (ANU, Canberra)	Determining ancient field intensities from chemical remanent magnetisations in rocks and meteorites	[Info sheet - Ancient Field Intensities]
Dr Michele Paulatto, Dr Lluís Guasch, Prof. James Hammond (Birkbeck University of London)	Teleseismic full-waveform imaging of active volcanoes	[Info Sheet - Paulatto TSFWI]
Dr Yves Plancherel	Modeling the global Pb cycle: from industrial emissions to the bottom of the ocean	[Info Sheet - Plancherel Pb Cycle]
Dr Yves Plancherel, Dr Pablo Brito-Parada, Dr Philippa Mason	Tracking Illegal Gold Mining Safely with Earth Observations and Machine Learning	[Info Sheet - Plancherel Illegal Gold Mining]
Dr Yves Plancherel, Prof. Mark Rehkamper, Prof. Tina van de Flierdt	Exploiting the GEOTRACES toolbox to characterize ocean biogeochemical processes: trace elements, isotopes and new quasi-conservative tracers	[Info Sheet - Plancherel GEOTRACES]
Prof. Mark Rehkämper, Prof. Tina van de Flierdt	Understanding Modern Biogeochemical Cycles in the context of the international GEOTRACES project – Lead, cadmium, neodymium	[Info sheet - GEOTRACES project]
Dr Fred Richards	Hot rocks in cold places: Quantifying mantle dynamic impacts on Antarctic Ice Sheet evolution	[Info sheet - Hot rocks in cold places]
Dr Fred Richards, Dr. Gareth Roberts	Deciphering the influence of mantle dynamics on Cenozoic records of sea-level change	[Info sheet - Deciphering the influence of mantle dynamics]
Dr Fred Richards, Dr Gareth Roberts, Prof. Saskia Goes, Dr Mark Hoggard (Australian National University), Dr Karol Czarnota (Geoscience Australia)	Integrating Geochemistry and Geophysics to Make Critical Metal Treasure Maps	[Info Sheet - Richards Treasure Maps]
Dr Gareth Roberts, Dr Leon Barron (School of Public Health), Prof. Guy Woodward (Life Sciences), Dr Alex Lipp (Earth Sciences, University of Oxford)	Mapping pollutants and biodiversity throughout drainage basins	[Info Sheet - Roberts Mapping Pollutants]
Dr Gareth Roberts and Prof. Matthew Piggott	Continental Uplift and Erosion From Drainage Patterns: Predicting Sedimentary Flux to Passive Margins	[Info Sheet - Roberts Drainage Patterns]
Dr Gareth Roberts, Prof. Matthew Piggott, Prof. Gareth Collins and Dr Alex Whittake	Modeling landscape evolution through space and time	[Info Sheet - Roberts Landscape Evolution]
Dr Gareth Roberts, Dr Yves Plancherel, Dr Alex Whittaker, Charles Gowing (British Geological Survey), Dr Alex Lipp (University of Oxford, Earth Sciences)	Hard Rock to Heavy Metal: Data and tools for geochemical baselines and chemical fluxes through landscapes	[Info Sheet - Roberts Hard Rock to Heavy Metal]
Dr Gareth Roberts, Dr Alex Whittaker and Dr. Dylan Rood	Histories of mantle convection: Constraints from Arabia's landscape	[Info Sheet - Roberts Arabia]
Dr Dylan Rood	Using Cosmogenic Surface Exposure Dating to Reconstruct Late-Holocene Glacier and Climate Stability to Determine Precedence for Recent Declines in Snowpack and Water Resources in the American Pacific Northwest	[Info Sheet - Rood Cosmogenic Surface Exposure]
Dr Dylan Rood	Will climate change make coastal erosion rates faster?: Comparing historic and Holocene cliff retreat rates using cosmogenic isotopes with numerical models	[Info Sheet - Rood Coastal Erosion]
Dr. Joanne Johnson (British Antarctic Survey), Dr Dylan Rood, Associate Prof. Brent Goehring (Tulane University), and Stephen Roberts (British Antarctic Survey)	Exploring terrestrial geological evidence for past glaciation and volcanism in the Thwaites Glacier catchment, Antarctica	[Info Sheet - Johnson Thwaites Glacier]
Dr Dylan Rood, Dr John-Paul Latham and Dr Peter Stafford	Validating Earthquake Hazard Models For Critical Engineered Structures Using Geologic Data And Cosmogenic Isotopes	[Info Sheet - Rood Earthquake Engineering]
Prof. Mark A. Sephton, Dr Simon Davis, David Bell (Protium)	Forensic Detection of Microplastics	[Info sheet - Forensic Detection of Microplastics]
Prof. Mark A. Sephton, Prof Alexandra Porter	Atmospheric Pollution by Tyres	[Info sheet - Atmospheric Pollution by Tyres]
Prof. Mark A. Sephton, Prof. Craig Smalley, Prof. Al Fraser	Capture Carbon Dioxide on Shales	Info Sheet - Sephton Shales

Prof. Tina van de Flierdt, Dr Jim Marschalek	Reconstructing the history of the West Antarctic Ice Sheet using sediment provenance techniques	[Info sheet - West Antarctic Ice Sheet]
Prof. Dominik Weiss	Micronutrient cycling in submerged soils and uptake into rice	[Info Sheet - Weiss Micronutrient Cycling]
Prof. Dominik Weiss	Arsenic Contamination of Drinking Water	[Info Sheet - Weiss Arsenic Contamination]
Prof. Dominik Weiss	Geochemistry of Non-Traditional Stable Isotopes	[Info Sheet - Weiss NTSI]
Prof. Dominik Weiss	Human and Natural Control on Global Atmospheric Trace Element Cycles	[Info Sheet - Weiss Atmosphere]
Prof. Dominik Weiss	The Aqueous Chemistry of Actinides and Metalloids	[Info Sheet - Weiss Actinides and Metalloids]
Prof. Dominik Weiss	Nuclear Waste – How to deal with it safely	[Info Sheet - Weiss Nuclear Waste]
Dr Alex Whittaker, Dr Rebecca Bell	energy transition	[Info Sheet - Whittaker Corinth Rift]
Prof. Jamie Wilkinson	Supervisors: Dr Gege Wen	Info Sheet - Wilkinson Chemical Audit
Prof. Jamie Wilkinson	Development of UV-fluorescence spectroscopy as a tool for mineral exploration	[Info Sheet - Wilkinson UV Fluorescence]
Prof. Jamie Wilkinson	Residence and mobility of metals in the alteration zones of porphyry ore systems	[Info Sheet - Wilkinson Detrital accessories porphyry]
Prof. Jamie Wilkinson, Prof. Geoff Bromiley (University of Edinburgh)	Developing garnet and epidote as mineral indicators of porphyry-skarn ore systems	[Info sheet - mineral indicators of porphyry-skarn ore systems]
Prof. Adrian Muxworthy, and Prof. Wyn Williams (University of Edinburgh)	Using the magnetic signature of former hydrocarbon-rich environments to test for the suitability of carbon Sequestration: A numerical approach	[Info sheet - Magnetic Signature of Hydrocarbon-rich Environments]
Prof. Matthew Piggott	Understanding and minimising the potential environmental impacts of tidal range (lagoon) based renewable energy generation via advanced numerical modelling	[Info Sheet - Piggott Tidal Lagoons]
Prof. Matthew Piggott, Dr R. Iestyn Woolway (University of Reading), Prof. Stephen Maberly (UK CEH)	Accelerating Scientific Discovery of Complex Scientific Applications with Process-Guided Deep Learning: Aquatic Eco-Dynamics in Lakes	[Info Sheet - Piggott Lakes]