

**Collaborative Doctoral
Awards
Studentship Competition
(Project-led)**

**NORTHERN BRIDGE
CONSORTIUM** DOCTORAL
TRAINING
PARTNERSHIP



**Arts and
Humanities
Research Council**

Project Title:	Historic landscape change in Northumberland’s upland valleys (HiLand)	
Project Summary:	This project, which addresses research aims identified by Northumberland National Park Authority, will combine new and established landscape archaeology techniques to explore the development of landscape character in upland Northumberland during the Middle Ages. New quantitative survey methods pioneered by the research team over the last five years will enable the researcher to analyse how the uplands were shaped and settled between AD c. 400 and 1700 with unprecedented levels of chronological and spatial accuracy. In turn, this knowledge will feed back into heritage-led spatial planning and landscape management strategies via the partner organisation.	
Institution:	Newcastle University	
Partner Organisation:	Northumberland National Park Authority	
Primary AHRC Subject Area:	Archaeology	
Creative Practice Component:	None	

For further information and to submit an expression of interest, please contact:

Lead Supervisor:	Professor Sam Turner	Email:	sam.turner@newcastle.ac.uk
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EXPRESSIONS OF INTEREST MUST BE RECEIVED NO LATER THAN:	31 March 2020
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Project Description:

Historic landscapes face intense and rapid change over the next few decades driven by factors including economic development, climate change and demographic shifts. Whilst landscapes are recognized as key elements of the common heritage, in many regions their development and the historic features which contribute to their character remain poorly understood by academics and landscape managers, who consequently struggle to justify their value.

This project will examine how the landscape character of Northumberland National Park’s river valleys developed in the formative period between AD c. 400-1700. Landscape historians have labelled Northumberland part of the ‘Highland Zone’ of England, with high levels of precipitation and significant areas of land at high elevation with relatively thin, poor soils (Rackham 1986, Williamson 2002). During the early modern period (1500-1700) cattle and sheep were bred on the fells and moors and the typical settlement was the hamlet or single farm rather than a village. However, knowledge of the chronological development of settlements and farming landscapes in the area remains rudimentary, particularly in the early medieval period (AD c.400-1100).

The research will concentrate on the upper Coquet and Breamish valleys of central Northumberland. Both show extensive traces of earlier agricultural practices and shrunken/deserted settlements in the form of earthworks. Despite this rich evidence, researchers currently have only theoretical models for the exploitation of these areas during the early Middle Ages, with almost no empirical evidence. This project will generate detailed chronological and spatial data relating to historic landscape change and enable the identification of the crucial tipping points in past processes. The case studies will not only result in new perspectives on the long-term evolution of both areas, but will also allow new methodologies to be tested and fine-tuned.

Landscape archaeologists use a range of methods to analyse areas of varying sizes. Geographical Information Systems (GIS) enable archaeological and documentary sources to be combined with historical cartography. Methods including retrogressive analysis (to understand how successive phases have developed; Williamson 1987) and Historic Landscape Characterisation (HLC - to represent the dominant historic character of the present landscape; Turner 2018) are widely used to address landscapes at the regional scale. However, there are a number of generally-acknowledged issues with these approaches, particularly problems related to chronological resolution (Williamson 2007).

To fully understand how cultural landscapes were formed over the long term, and how elements from earlier landscapes contributed to the heritage of subsequent periods up to the present, better methods for identifying ancient landscape features and understanding their chronological relationships are needed. This project aims to address these problems by integrating analysis using new techniques and data sources with established approaches. At the regional scale, it will use HLC and retrogressive analysis to identify specific areas for detailed survey. It will then combine analysis of new remote sensing data (e.g. from LIDAR) with data from targeted field survey using GPS, terrestrial laser scanning (TLS) and geophysical survey. The project will deploy optically stimulated luminescence dating and profiling (OSL-PD) to date earthwork features including the earth banks enclosing historic fields. These have been notoriously difficult to date until now, but recent research by the McCord Centre team has used OSL-PD to date ancient field systems accurately for the first time in Spain, Greece, Turkey and the UK (Kinnaird et al. 2017; Turner et al. 2018; Vervust et al. 2020). Combined with GIS-based analysis of historic maps and 3D survey in the field, this work has enabled the team to identify and characterise early medieval boundary features for the first time in Northumberland (on the National Trust's Wallington estate). This PhD project will apply these methods and develop the techniques by extending them to a range of landscape features in Northumberland National Park (particularly hedge banks, lynchets and cultivation ridges created by medieval farmers).

The powerful combination of traditional research methods with state-of-the art remote sensing, field survey, and scientific dating techniques will allow a holistic and in-depth examination of how the historic landscape in this upland region developed through the formative centuries of the Middle Ages. This will contribute to a richer understanding of how past societies have shaped northern England's landscape, and will be used in turn to underpin heritage and landscape management strategies by the Partner Organisation.

SUPERVISION AND EXTERNAL ADVISORS

First Supervisor:	Professor Sam Turner	School/Department:	History, Classics and Archaeology
Second Supervisor:	Dr Francesco Carrer	School/Department:	History, Classics and Archaeology
Additional Advisor:	Chris Jones	Organisation/Institution	Northumberland National Park Authority

The lead supervisor will be Sam Turner. His research focusses on the medieval archaeology and historic landscapes of Britain and Europe, including long-term landscape change. Over the past 10 years Turner has gained significant experience as a research leader, supervising 13 PhDs to successful completion (including 6 funded by AHRC) and acting as PI for more than 25 RAs/PDRFs. In the same period he has been Newcastle PI on more than 50 grants worth over £6m, including AHRC TerraSage (£944k), MSCA-ITN Heriland (€821k) and NHLF WallCAP (£2.07m). These have included several doctoral and postdoctoral projects involving work in

Northumberland, e.g. David Astbury's AHRC (Northern Bridge) PhD (2015-19), Dr Soetkin Vervust's FWO-MSCA CoFund fellowship (2018-21) and Dr Sabrina Pietrobono's Marie Curie fellowship (2014-16). All these projects have included the application of novel GIS techniques for medieval landscape analysis. Joining this group (currently 24 researchers) will enable the PhD student to benefit from working with a diverse (46% female) and international (46% non-UK origin) team at the international leading edge in the field, which is further strengthened by numerous international and professional collaborative relationships and networks.

Turner is currently supervising 5 PhD students as first supervisor on topics including medieval archaeology and cultural heritage management. His former PhD students and postdoctoral supervisees now work in universities, museums and companies around the world (e.g. universities of York, Newcastle, Cambridge, Peradeniya (Sri Lanka), Princeton (USA)); consultancies including AECOM and Wood plc).

At Newcastle he is Director of the McCord Centre for Landscape (www.ncl.ac.uk/mccordcentre), where he edits the journal *Landscapes* with Graham Fairclough.

Dr Francesco Carrer (second supervisor) is a Newcastle University Academic Track (NUAcT) fellow, with interests including upland landscapes, pastoralism, GIS and modelling. From October 2020 he will supervise a NUAcT-funded PhD who will be researching the pastoral exploitation of upland landscapes, further enhancing the research environment for this project. Carrer and Turner collaborate on current projects involving field survey and GIS including the Apalirou Environs Survey, Naxos (Greece), CHiLaT - cultural heritage in landscape planning (Turkey), and TerraSAgE - terraces as sustainable agricultural environments (all with funding from AHRC). Carrer has significant experience of training PGRs and postdocs in GIS and is Newcastle PI of an Erasmus+ project on pastoralism in Europe.

The third (external) supervisor will be Chris Jones, Historic Environment Officer at NNPA. Turner and Jones have previously supervised a successful AHRC CDA together, Dr J. Shipley (2010), now Principal Archaeology and Heritage Consultant at AECOM, one of the world's leading multidisciplinary environmental consultancies. Jones has twenty years of experience working in the historic environment sector and is currently Lead Officer for the Historic Environment Group of National Parks in the UK. Jones will advise the student on strategic and practical issues relating to the project, including training in heritage-led landscape planning, during a placement at NNPA.

RESEARCH ENVIRONMENT

'Landscape' is one of the School of History, Classics and Archaeology's core research themes for 2014-2021. In 2014 we launched the McCord Centre for Landscape, with support of around £200k from the university for equipment and staff (including 3 dedicated RAs, all GIS specialists). Since 2014 the Centre has been awarded substantial funding for research projects, so that it now has around 20 RAs/PDRFs and 20 PhD students, with annual research income over £1.5m. Current research includes a range of international and UK projects, including major programmes such as Rome Transformed (European Research Council Advanced Grant) and TerraSAgE (AHRC Research Grant). Current work in partnership with NNPA includes substantial projects involving local case-studies in Northumberland, e.g. the Hadrian's Wall Community Archaeology Project (National Lottery Heritage Fund, £2.07m) and HERILAND: Cultural Heritage and the Planning of European Landscapes (Horizon 2020 MSCA ITN, €4m).

The Centre brings researchers in Archaeology together with other landscape specialists (from e.g. Computing, Planning, Landscape Architecture, Maths, Civil Engineering, Heritage, Geography) using methods including GIS and spatial analysis, historic characterisation, geoarchaeology, digital field and building survey, geophysics, analysis of remote sensing data and 3D/4D modelling. The Centre's research and technical staff also has considerable experience of historic map analysis, archival/documentary research and field survey. This means we can provide excellent support and training for this PhD research through dedicated training sessions, peer-mentoring and research seminars.

Regular research events in both landscape and medieval archaeology are open to all PGRs and PGTs. They include weekly meetings which include lectures, reviews of work in progress, and discussion of funding opportunities. The McCord Centre regularly organises national and international events, with recent

examples including the Chartered Institute for Archaeologists' conference (2017) and the fifth IALA Landscape Archaeology Conference (2018, jointly with Durham University). It is active in policy development and advice in the UK (e.g. the 2015 and 2020 workshops on the implementation of the European Landscape Convention in the UK, with Natural England) and internationally (e.g. the 2019 event for the Government of Flanders on creation of an integrative landscape convention). Such events provide excellent opportunities for PhD researchers to develop networks with academic and professional colleagues.

The researcher will be provided with workspace, secure space on the McCord Centre's 20TB server, and access to field survey equipment (with technical support). PhD students are allocated an annual allowance of £250 for research trips and conferences, and have free access to resources including stationery, photocopying, postage and inter-library loan vouchers.

PERSON SPECIFICATION

The supervisory team is invited to use the space below to highlight any particular skills or experience, etc. that might benefit a prospective applicant interested in being considered for this project. Note, *applicants must meet the criteria for acceptance on a doctoral programme as set out by the host institution's Postgraduate Admissions Service.*

Qualifications

- Masters degree (or international equivalent) in a relevant landscape-related field (e.g. archaeology, geography, history, geoscience) [awarded or anticipated]
- Good undergraduate degree (minimum 2.i or equivalent)

Skills

- Basic knowledge of GIS
- Good level of proficiency in English language (native speaker or IELTS 6.5 overall)

Attributes

- Interests in the landscape archaeology of Britain
- Ability and willingness to work as a member of an interdisciplinary team
- Outstanding communication and interpersonal skills
- Ability and willingness to travel and work in upland environments

HOW TO APPLY

Applications must include:

1. Current CV (2 sides of A4 maximum)
2. Contact details of two referees
3. Transcript of previous qualifications
4. Letter of application detailing applicant's interest in the PhD project and how they meet the criteria noted in the Person Specification (1 side of A4 maximum)

Applications must be emailed to sam.turner@ncl.ac.uk no later than **31 March 2020**.

Please include the subject line 'NBDTP CDA application'

Shortlisted candidates will be interviewed.

Informal enquiries can be sent to sam.turner@ncl.ac.uk or francesco.carrer@ncl.ac.uk