



Project title: Mainstreaming green infrastructure: how to better use the green belt to address the climate and biodiversity emergencies in North East England . (Ref: OP202063)

One Planet Research Theme:

Tick relevant boxes (MUST include one of either C&CC or A, and one other to be acceptable for One Planet DTP)

Climate & Climate Change | Earth System Processes | Anthropocene | Environmental Informatics

Lead Supervisor:

Alister Scott University of Northumbria

Claire Walsh Newcastle University

Paul Brannen Chair of North East England Nature Partnership (NEENP)

Key Research Gaps and Questions:

1. *How can we mainstream nature more effectively in green belts?*
2. *Given both climate and biodiversity emergencies; how can we better utilise our peri-urban spaces to be more environmentally productive?*
3. *What is the natural capital value of our green belts?*

Project Description: There is considerable public & policy attention around the optimal use for green belts (GB). This is polarised between those who see GB's purpose simply as preventing urban sprawl and those who see GB as potential sites to meet housing need through careful and selective GB releases. A further dimension relates to GB as green infrastructure, stressing its potential for nature-based solutions. It is this hidden and neglected dimension that this PhD proposal is built upon. Specifically, how GB can be made more "environmentally productive" as a core component of a green infrastructure network. Here potential policy "hooks" arise from the convergence of the UK climate emergency, severe and ongoing natural capital/ biodiversity declines and health and well-being concerns. This work builds on existing NERC research undertaken by Scott on mainstreaming green infrastructure¹ and work by Walsh on valuing green infrastructure and alternative business models for delivering green infrastructure in cities² and NEENP's work on rethinking our peri-urban spaces. This PhD will involve working primarily in North East England GB but with application across UK and globally to:-

1. Undertake a literature and policy review of green belt policy and impacts globally with particular relevance to the role of environmental innovation.
2. Undertake a policy assessment of extant and proposed green belt policies across the North East area and the impact of national/international policies and guidance.
3. Identify and prepare a natural capital assessment of the north east England green belt, drawing upon the latest approaches and providing a critique of these (currently no systematic assessment of green belt value has been undertaken in the UK)
4. Identify suitable land uses and delivery mechanisms that can help address the climate and biodiversity and health emergencies as well as deliver other ecosystem service benefits
5. Identify, secure and test 2-3 pilot areas (including benchmark data and indicators) to measure progress and, if appropriate, model a range of scenarios e.g. flood risk; woodland cover
6. Propose new green belt policies and principles to show how environmental value can be better identified, captured and delivered to help respond to climate, health and biodiversity emergencies.

Prerequisites: *Essential: - Master's Degree in Geography, Planning or Environmental Science Must be willing to integrate environmental and social science to achieve significant policy impact.*

For more information, please contact Alister.Scott@northumbria.ac.uk

¹ NERC project NE/R00398X/1 Mainstreaming Green Infrastructure in planning policy and decision making.

² NERC project NE/N019180/1 Delivering green infrastructure in cities through new business models