

<p><b>Institution: University of Northampton</b></p>
<p><b>Unit of Assessment: 17 - Geography, Environmental Studies and Archaeology</b></p>
<p><b>a. Context</b></p> <p>Engagement with non-academic stakeholders is a fundamental part of the Department's strategy for research and enterprise in geography and environmental studies, and takes its lead from the University of Northampton strategy plan, <i>Raising the Bar</i>, along with the research strategy of the School of Science and Technology. In line with these strategies, geographical and environmental research engages with a broad spectrum of non-academic users and beneficiaries at local, national and international levels. These include local, national, international and intergovernmental departments and organisations; conservation NGOs; international businesses; local and national special interest groups; and the general public via national and international printed and broadcast media, advising museums and exhibitions, and events which members of this UoA have organised at the University of Northampton. A log of these activities is kept centrally within the School of Science and Technology.</p> <p>The reach of this research, at all scales from local to international, has in turn resulted in research impact in three main ways: <b>[1]</b> informing practice at local, national and international levels through expert advice via committee membership, workshops and training programmes; <b>[2]</b> informing national, international and intergovernmental policy in relation to conservation of biodiversity, mitigation of the effects of radon, land management, and management of wastes and resources; <b>[3]</b> a heightened awareness of environmental issues and changed behaviour amongst the public in the UK and internationally, particularly in relation to wastes management and resource use, the dangers of radon, land degradation and biodiversity conservation.</p>
<p><b>b. Approach to impact</b></p> <p>Impact is developed by members of this UoA in a range of ways, for example: fostering relationships with end users of research; service on advisory bodies; collaborative impact plans with user communities; facilitation (via internal funding and other means) of staff and research students to engage with stakeholders; etc. This has proven to be an effective approach, as we detail below.</p> <p><b>Engagement with users and beneficiaries:</b> Members of UoA17 have been active in engaging the public and organisations with their research through public and professional lectures, written and broadcast media, social media, workshops and reports, all of which are important in tying the University to its region, enhancing its national and international reputation, and bringing the latest research to non-academic audiences.</p> <p><u>Public lectures and events:</u> In the period 2008-2013, staff (and their research students) gave more than 50 public talks within UoN and in external venues. This is an easily overlooked aspect of user engagement but is important to our research culture given the public's appetite for information about the natural and built environments, and how it is changing. Feedback from these events shows that their impact has been in terms of both raising awareness and changing attitudes in favour of pro-environmental behaviour. A few representative examples are: <b>Foster</b> speaking about his work on river geomorphology to the Emergency Planning Society and the Cornwall Agricultural Society; <b>Ollerton</b> talking about his research on plants and pollinators to natural history societies and beekeeping groups across the Midlands, stimulated by his appearance in the BBC series <i>Bees, Butterflies and Blooms</i> in spring 2012; and <b>Tudor</b> speaking at the National Household Hazardous Waste Forum, on managing healthcare waste in the community, the ACCA on carbon management in the public sector, and Community Resources Network Scotland on environmental behaviour. Internationally, <b>Bates</b> has spoken at events such as "Toward a sustainable e-waste management in Africa" (French Development Agency, AFD), E-waste Africa Stakeholders meetings (Secretariat of the Basel Convention, United Nations) and Pan-African Forum on E-waste (Secretariat of the Basel Convention, United Nations).</p> <p><u>Written and broadcast media:</u> During the REF period UoA17 staff have extended the reach and impact of their research by writing popular articles for general and specialist, non-academic magazines, as well as for professional magazines and journals (e.g. <b>Ollerton</b> 2010 - <i>Dark Mountain</i>; 2012a - <i>The Plantsman</i>; 2012b <i>WildPlaces – the Local Wildlife Sites Newsletter</i>; <b>Tudor</b> 2012 - <i>European Medical Hygiene</i>). Likewise <b>Foster</b> contributed to a publication for the official journal of the South African Water Research Commission (Boardman et al. 2009 - <i>The Water</i></p>

## Impact template (REF3a)

*Wheel*), whilst **Bates** and **Tudor** acted as expert advisors for a children's book about rubbish and recycling (Frith 2010 - Recycling and Rubbish. Usborne Publishing Ltd) which has had uniformly positive reviews from the public – see [http://www.amazon.co.uk/product-reviews/1409507416/ref=dp\\_top\\_cm\\_cr\\_acr\\_txt?ie=UTF8&showViewpoints=1](http://www.amazon.co.uk/product-reviews/1409507416/ref=dp_top_cm_cr_acr_txt?ie=UTF8&showViewpoints=1)

Members of UoA17 have impacted on the broadcast media by acting as consultants and on-screen experts for TV, radio and cinema. For example, research by **Bates** has featured on BBC Panorama, the Guardian newspaper, Radio 4 You and Yours, The Sun, News of the World, Mail, Mail on Sunday, as well as on local radio, television and newspapers. For several years running **Bates** has been voted in the top 100 most influential people in UK waste management by the readers of *Resource* magazine, who represent government, business, local authorities and charities in the sector. **Ollerton** has been a science advisor and on-screen expert for a number of television and cinema productions (see Pollinator Conservation Impact Case Study) and for the Disney nature feature length documentary *Wings of Love*, the CGI production company Cinesite used the Department's scanning electron microscope to take images of tomato pollination that were subsequently used as the basis of a CGI section in the documentary. **Petford** has regularly discussed his work on volcanoes and geology in the media, including appearances on Sky News, and BBC TV and Radio. During the 2010 eruption of Iceland's Eyjafjallajökull volcano he presented a Channel 4 documentary called *The Volcano That Stopped Britain*. In early 2013 **Petford** worked with the USA's Weather Channel filming a documentary on the effect of volcanic eruptions on weather and blogged about this from Tenerife (<http://blog.geolsoc.org.uk/2013/01/09/notes-from-a-small-volcanic-island/>).

**Committee and workshop membership:** Members of UoA17 deliver impact as members of regional, national and international committees and ad hoc workshops, advising and steering as appropriate to their disciplines. For example: **McCollin** is a member of the Northamptonshire Local Wildlife Sites Verification Panel; **Ollerton** also represents the University on the Northamptonshire Local Nature Partnership committee; **Phillips** sat on the Defra Waste Implementation Programme: Advisory Group on New Technology (2008-2010) and the Defra Business Resource Efficiency in Waste: Zero-waste places programme, as well as acting as an advisor on wastes management research for the Audit Commission (2008); **Foster** was a member of a research consortium (including ADAS and the Universities of Reading and Southampton) presenting results from UK research into soil erosion undertaken in Demonstration Test Catchments to Defra civil servants at a meeting held in Whitehall (2010). Likewise in 2012 **Ollerton** took part in an International Insect Pollinators workshop at Westminster (see Pollinator Conservation Impact Case Study and Vanbergen et al. 2012 - *Workshop report, U.K. Science and Innovation Network*).

**Identifying and supporting impact:** Impact is identified using both formal feedback following events and through soliciting the opinions of those with whom we work. For example, during 2010-2011 the SEED project, on which **Bates** and **Ollerton** are PIs, ran a series of Summits in Northamptonshire that were attended by around 250 invited delegates representing local government, SMEs, charities and large businesses. These summits included presentations and workshops by Department and University staff and covered topics such as sustainable transport policy, wastes management, conservation of biodiversity, and energy and water use. Solicited written feedback from the summits was uniformly positive and placed the University firmly at the centre of sustainability-related activities within the region. We also video recorded some of this feedback on the day and edited highlights from these summits, together with recorded video feedback from delegates, can be seen on the SEED website: <http://www.seed-project.co.uk/videos>

During the period 2010-2012 members of this UoA were successful in securing over £20,000 from central University funds to support activities relating directly to identifying current impact and fostering future impact, for projects which otherwise had no such funding available to them. This includes assessment of the effects of recent advisory and consulting work, underpinned by our research. For example, some of the funding was used to employ a recently completed PhD student to undertake surveys and write a report on how working with the BBC and the RHS had informed public and business decisions about "pollinator friendly" planting (see support material for the "Pollinator conservation..." Impact Case Study). Other funding has supported on-going, early stage research on community engagement and understanding of environmental issues in a Northampton "eco" housing development, a joint collaborative study between ecologists within the Department and human geography colleagues in the School of Social Sciences.

## Impact template (REF3a)

**c. Strategy and plans**

Societal engagement and impact is central to the Department's research strategy and is integral to the research process. This includes practices such as: initial peer assessment of funding applications prior to submission to ensure that they include firm commitments to wider user engagement and impact from the project's activities; expectations of, and advice on, engaging with non-academic stakeholders by PhD students and early career researchers; use of the University press office to raise awareness of research activities; making resources available for facilitating and assessing impact; engagement with research users at an early point in the research cycle; and networking with policy makers. For example, engaging local land owners and gardening societies was specifically written into the Finnis Scott Foundation-funded project on "Diversity of pollinators in large English country house gardens", and this engagement was undertaken by both **Ollerton** (as supervisor) and the PhD student (who has now successfully completed her thesis).

An important strategy for enabling reach as a first stage of ensuring impact is for major funded research projects to have their own dedicated websites, such as the Hefce-funded Shared Enterprise Empowering Deliver (SEED) project (<http://www.seed-project.co.uk/>) [**Bates and Ollerton**], the Natural England-funded Nene Valley Nature Improvement Area project (<http://nenevalleynia.org/>) [**McCullin & Ollerton**] and the Karoo Land Degradation Research Programme of which **Foster** is a member (<http://www.eci.ox.ac.uk/research/other/karoo.php>) and [http://www.ganora.co.za/page/soil\\_erosion](http://www.ganora.co.za/page/soil_erosion); and the Better Thames Network Project (<http://better-thames-network.westminster.ac.uk/>) [also **Foster**, funded by NERC]. Likewise the Namib Sand Sea Digital Atlas is open access (<http://www.sheffield.ac.uk/sandsea>) [**Livingstone**].

In the future we plan to maintain and develop our impact activities in line with the Department's philosophy. An example is given above in relation to the work being done on the Northampton "eco" housing development, and two further examples are as follows:

- Continue developing our research in targeted ways that specifically focus on the future impact of the work. For example, PhD projects supervised by **Ollerton & McCullin** which looked at the biodiversity potential of restored landfill sites are being used as the basis for a guide to good practice in landfill restoration, to be jointly published by the Department and the RSPB in 2014.
- a Defra-funded PhD project run by **Foster** in collaboration with ADAS is investigating a range of mitigation strategies for controlling diffuse agricultural pollution, involving dissemination of good land management practice to farmers via Defra and ADAS, with demonstrations and workshops being integrated into the final phases of the project which runs from November 2012 to October 2015 (see <http://www.avondtc.org.uk/People.aspx>).

All future funding bids include a section on "Pathways to Impact" (even when not specifically requested by the funding body) as part of our commitment to strategies that will maximise the effect of our research on wider society beyond academia.

**d. Relationship to case studies**

The underlying philosophy to both case studies has been one of affecting the way individuals and organisations perceive and react to the anthropogenic changes and challenges that are currently affecting society. However the selected case studies represent two contrasting approaches to achieving research impact.

"Driving the waste reduction agenda: facilitated uptake by Local Authorities...." demonstrates impact as a fundamental part of applied projects, with impactful activities central to excellent research from the outset, and built into the programme of publishing, advising and leading in this area. "Pollinator conservation: impact on government policy and public practices..." shows how impact that informs national and international policies and public practices can emerge post hoc from excellent research without it being a specific aspect of the initial research. Capitalising on the impact of that research involves academics being willing to engage with the media, policy makers, and the public, as opportunities arise.

These case studies are demonstrations of the Department's commitment to excellent research that is relevant to modern society, though not necessarily "applied" in its truest sense, and which is disseminated into society by all possible media.