

Institution: Oxford Brookes University
Unit of Assessment: UoA17 – Geography, Archaeology and Environmental Studies
a. Context <p>The Geography, Archaeology and Environmental Studies UoA primarily comprises research groups and staff within the Department of Social Sciences together with ecologists from the Department of Biological and Medical Sciences, both of which are new departments following a major University reorganisation from eight schools to four Faculties in 2011/12. Research centres and clusters provide foci for knowledge transfer and impact supported by Faculty and the University. Oxford Brookes Archaeology and Heritage (OBAH) formed in 2008 via HEFCEs Higher Education Investment Fund (HEIF) to develop a business enterprise for research and consultancy in archaeology and heritage management. OBAH staff are also members of the Human Origins and Palaeoenvironments Research Group. The Centre for Ecology, Environment and Conservation was established in 2012, with a remit of providing a focus for research, consultancy, teaching and training in ecology, environment and conservation. Staff are linked to several research sub-groups including Human Wildlife Interactions and Spatial Ecology. We have a well-established record of engaging with non-academic users of research, and a strong commitment to connecting our excellent research with those outside academia. The main non-academic beneficiaries of the Unit's research and expertise range from museums and heritage organisations, including advice to Governments' policies (Carter), geoarchaeological analyses (Morley, Parker, Russ), leading CPD training for archaeology and heritage practitioners (Morley), to providing bespoke mobile technologies for: ecological recording for the public, schools and commercial organisations; citizen archaeology; charitable trusts; healthcare practitioners and ultimately patients and the general public (Thompson). The importance of enabling research to have impact is recognised in current University and Faculty research strategies. To support these objectives, the University makes strategic investments in business-facing knowledge exchange opportunities, KTPs, allocating time within staff workload planning for knowledge exchange activities, outreach and media events.</p>
b. Approach to impact <p><i>Developing research of use to end-users:</i></p> <p>The primary approach to developing impact has been to produce research outputs that relate well to concerns beyond academia, underpinned by strong institutional support mechanisms. Staff have developed research which is of interest to a range of users, and as a result have developed relationships with organisations including governmental and non-governmental organisations, at domestic (e.g. British Geological Survey; SCAPE Trust), and international level e.g. Kenya Wildlife Services; UNESCO; Government Bahrain and museums in Ras al-Khaimah, Sharjah, Abu Dhabi and Qatar. At the research grant application stage, PIs are supported by a mentor and members of the Faculty research office (RO), who read, comment on and question pathways to impact statements. All staff produce a rolling five year research plan, which is updated and discussed annually with the Department Research Lead. The plan prompts staff to consider the impact of their research and what support might be required to enable impact to be achieved. Staff are advised to contact their respective Business Development Officer in the University's Research and Business Development Office (RBDO) where opportunities are reviewed and assessed for support. The University Commercial Steering Group, of which the Associate Dean for Research and Knowledge Exchange (ADRKE) is a member, provides follow on funding (up to £60k) to bridge the gap between research outputs and realising their potential for impact. Awards are used to support market research or market intelligence reports, proof of concept projects or bringing in expert advice to secure licence opportunities.</p> <p>In addition the University has invested Higher Education Innovation Funding (HEIF) to support and develop a broad range of knowledge-based interactions between universities and the wider world, which result in economic and social benefit to the UK. Oxford Brookes Archaeology and Heritage (OBAH) was founded in 2008 and received investment from the HEIF 4 (£175k) and HEIF 5 (£20k) initiatives to develop a self-sustaining business enterprise in contract/research and consultancy in archaeology and heritage management. A BBSRC KTP (£96,627) was developed with support from Oxford Brookes RBDOs KTP link-adviser to spin out Wildknowledge (WK) and provide links with the Training Strategy Board and National Geographic.</p>

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Staff support to enable impact and institutional support mechanisms

Staff research time can be used to enable individuals to undertake impact-enhancing activities, such as writing reports that may be of use to non-academic users. As part of the annual research planning process, all research active staff are encouraged to plan activities designed to engage a range of non-academic users with research outputs, such as participation in conferences, seminars and workshops, breakfast clubs aimed at both academic and non-academic audiences as well as blogs, podcasts, press releases. Thus, as part of planned research activity, **OBAH** staff produced reports for the Governments of Bahrain, Qatar, Sharjah, Fujairah, Abu Dhabi and Ras al-Khaimah as part of their review of archaeology and heritage practices. **WK** has received funding support for staff from the Training Strategies Board (formerly part of the DTI) to develop research contracts which link SMEs with large global owners of digital media. This led to a successful partnership with National Geographic to develop their apps.

The Faculty and University, to help staff engage in impact generating activity with end users, have allocated financial resources. For example, funds were made available for **Morley** to have a stand at the 2011 EXPO in Bahrain to market services and explore future funding opportunities with potential clients in the construction and energy industries to explore developer funded archaeology. This highlighted the importance of developer and exploration funded archaeology in the Gulf States and has led to follow up discussions with several large companies for archaeological advice. **WK** has attended a number of national and regional exhibitions to showcase their research and how this provides impact for users. These include VENTUREFEST, an event for emerging science and technology clusters that are at the forefront of our community's growth, and were awarded the 'Public Choice Award for Innovation' in 2008, and the British Education Teaching Technologies (BETT) annual event where they were listed in the top 20 companies by *Business and Industry Today* in 2011 out of a field of 600.

Training and support for those engaging in impact related activities are available: staff have mentors to help support their research activity, both by supporting staff in planning for impact as well as the production of research outputs. As an example of the training given, staff participated in a workshop on increasing our research and consultancy presence externally; workshops on developing the impact of our work were held across the university in 2012; and the Faculty Grants Panel has held seminars and produced podcasts on developing external partnerships in order to enhance impact. Finances have been made available from research and consultancy funds for staff to undertake up-to-date training in the use of new and specialist equipment upgrades (**Morley** and **Russ**), which are used to underpin or research and consultancy services.

c. Strategy and plans

Since 2008, we have developed a broad range of knowledge-based exchange between the University and the wider world. Examples in this UoA include: the creation of a self-sustaining business enterprise, which provides contract research and consultancy; and a spin out company developing software for mobile devices with a range of applications for professionals and the public. These activities have demonstrably enhanced and channelled our research achievements beyond the traditional academic arena. Our plans for the next period are focussed on sustaining and enhancing impact in the following ways:

1. Build on our achievements in this review period to sustain and enhance our distinctive innovative, interdisciplinary research, which contributes to society beyond the academic community.
2. Maintain existing core staff and replace those due to retire.
3. Appoint Knowledge Exchange departmental champions for specific types of impact (public discourse, cultural life, economic impact, policy making) identified through the personal research planning (PRP) cycle.
4. Enhance the use of institutional support, expertise and resources, providing strategic support to our activities e.g. the development of KTPs.
5. Re-invest income received from impact related contract research, consultancy and knowledge exchange to ensure sustainability and vitality.
6. Develop 'impact' scholarships for PhD and early career staff, and create public engagement fellowships to support academics taking short sabbaticals to work with NGOs, think tanks, local and national government departments.

We are shaping and adapting our plans to ensure that we continue to deliver impact beyond academia. Our foci for maximising potential impact from current and future research are to:

Impact template (REF3a)

1. Build on our strengths in environmental studies, ecology, conservation, and archaeology and heritage management whilst advancing new agendas and communicating our knowledge and understanding through scholarship.
2. Further strengthen our academic community, securing enhanced opportunities for intellectual exchange, training and professional development for staff to engage with non-academic users. To reach audiences ranging from the general public to specified professional beneficiaries.
3. To continue to enrich and inform non academic-audiences of the benefits of our research.
4. We aspire to benefit practitioners through the development of CPD. For example, in 2012, **OBAH** was approached by the Government of Vietnam to deliver a bespoke two-week CPD course for twenty officials working as archaeology and heritage specialists and managers. This approach arose from Morley's archaeological work in Vietnam. A number of CPD and short courses for professionals working in the area of ecology and conservation are planned by the Centre for Ecology and Environment (**Thompson**) as well as establishing a European centre to work in partnership with African-based tour operators to train field guides.

d. Relationship to case studies

The impact initiatives were developed from empirically focussed research in the areas of archaeology and heritage, and spatial ecology and conservation and their applications to wider audiences outside of the academic arena.

The **OBAH** case study exemplifies how archaeological research influences and informs evaluation, excavation and reporting for management of the landscape, heritage and identity in Bahrain. Prior to the creation of OBAH, research and consultancy, led by **Parker**, was undertaken on an ad hoc basis. The potential to develop contract research and consultancy further was identified in the annual review of the rolling five-year research plans for academic staff. This led to a business case being developed, which was supported by HEIF funding to kick-start the enterprise, which led to the appointment of two full-time members of staff to undertake research and consultancy activities. **OBAH** is also a good illustration of how staff in the UoA has been supported to exploit their research through a partnership between academic staff, Faculty ADRKE, RBDO and Legal Services facilitated by regular team meetings. Since inception in 2008, **OBAH** has generated ~£½ ma in external revenue through a wide range of projects. OBAH also provides placements, projects for OBU undergraduates as well as work experience opportunities for local schools.

The **WK** case study is an example where academic staff (Thompson and members of the spatial ecology research group) and staff within RBDO and Legal Services were supported by external consultants from the Training Strategy Board to spin out WK. This demonstrates how research evolving from spatial ecology and land use led to the development of tools for handling large spatial and temporal datasets to impact beyond its original remit (environmental data collection and management), to include Continued Professional Development and distance learning. The KTP has allowed **WK** to combine research in environmental data collection using mobile technologies by developing a platform for supporting the **WK** software on high-end devices such as iPhone/Android and Blackberry devices. **WK** has worked with a number of user groups to deliver a series of toolkits, which include the ability to create mobile recording forms, maps, decision trees and interactive images aimed at engaging a host of audiences. Prior to spin out the spatial ecology group, headed by Thompson, had been undertaking research and consultancy for ten years. It was decided to spin out WK after developing a range of ecological data recording applications as they had broader application implications. Thompson became a founding director and consultant to the new company. WK continues to employ OBU graduates, and has provided placements and projects for OBU undergraduates.

The University has also provided support and advice for media coverage of some of our work, which is often aimed at non-academic audiences. These include (**Carter**, Gulf News; **Morley**, You Tube; **Underdown** The Guardian, BBC Breakfast News, Radio 4 The Today Programme; **Thompson** BBC Natural History Film Unit, National Geographic).