

THE NEWSLETTER FOR OUR RESEARCH COMMUNITY

RESEARCH FORUM

Volume 8 Issue 1, March 2012

REEF 2014

What it means to you

PLUS TACKLING GLOBAL RESPONSIBILITY
GAUGING GREEN PROGRESS | SHELTER AFTER DISASTER

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This issue and back copies of Research Forum are available at www.brookes.ac.uk/about/publications/research

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Contributions are welcome from all sections of the University and should be sent to: researchforum@brookes.ac.uk

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We reserve the right to edit contributions before publication and to refuse editorial items.

Co-ordinated by Louise Wood, Research and Business Development Office.

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Hello and welcome...

To March 2012's edition of *Research Forum*, the University's magazine that showcases our current research.



In this issue we explore how the fourth of our research themes, **Global Responsibility**, is being tackled at Brookes. Protecting the world's resources and safe-guarding our planet for future generations is a huge collective responsibility - for individuals, the world of business and academia amongst others. But what does Global Responsibility really entail?

Brookes' researchers are leading the way in answering this central question. Two articles here illustrate how our Centre for Development and Emergency Practice is exploring how to improve the **world's response to humanitarian disasters** (p8) as well as the art of using small steps to bring about big change (p7).

Crucial research taking place here at Brookes is looking at various ways in which the built environment is **measuring progress on**

green issues (p16 and 21). The Sustainable Vehicle Engineering Centre is working towards bringing **electric cars to the mass market** (p18), while the School of Art is using art to shed light on our responsibilities towards **the natural environment** (p23).

Finally, we feature a guide to the impact assessment element of the forthcoming **Research Excellence Framework 2014** (p11). This will provide you with useful information for this vital assessment which will help to determine our research funding allocation for years to come.

I hope you find this issue a stimulating read.

**Alistair Fitt, Pro Vice-Chancellor,
Research and Knowledge Transfer**



Professor Diana Woodhouse awarded OBE in New Year's Honours

Former Pro Vice-Chancellor for Research and Knowledge Transfer at Brookes, Professor Diana Woodhouse (pictured), has been awarded an OBE for services to Legal Scholarship and Higher Education in the New Year's Honours list.

Diana enjoyed a long career at Brookes. Enrolling as a mature student at Oxford Polytechnic in 1985 to study for a degree in Law and Politics, a PhD on the topic of ministerial responsibility followed, awarded in 1991. Specialising in research into ministerial accountability, Diana was then appointed a graduate teaching associate in Law and became a lecturer, both also in 1991.

In 1998 she became a professor and established the Centre for Legal Research and Policy Studies. She was made head of the Department of Law two years later and in 2002 was appointed Assistant Dean for Research in the School of Social Sciences and Law.

Diana was appointed Pro Vice-Chancellor for Research and Knowledge Transfer in 2005 and oversaw a period of significant growth in research activity at Brookes and a steady increase in research quality, impact and reputation.

An Emeritus Professorship was conferred in November last year.

Medal for Brookes scientist bringing biology to a wider audience

Dr Anne Osterrieder (pictured) has been awarded the prestigious President's Medal for Education and Public Affairs by the Society for Experimental Biology in recognition of her work in increasing public understanding of biology.

Anne will become only the fourth scientist in the world to have received this accolade from the leading international society promoting experimental research in biology. The Society's President's Medals are awarded annually to young scientists of outstanding merit, normally within 10 years of obtaining their PhD.

Anne, who is a Postdoctoral Research Assistant working on Plant Cell Biology is outreach co-ordinator for Oxford Brookes' Faculty of Health and Life Sciences. She is involved with a large number of public and online activities to raise interest and awareness of plant cell biology and said, "It is a real honour to receive this medal. I am very passionate about making our research more accessible, understandable and interesting for everyone."

View Anne's educational videos on plant cell biology online at www.youtube.com/user/plantendomembrane/videos





Tackling alcohol education

Alcohol misuse by young people in the UK is amongst the highest in Europe. David Foxcroft, Professor of Community Psychology and Public Health at Brookes is co-leading with Dr Harry Sumnall from Liverpool John Moores University on a £1 million project to study the effectiveness of a classroom based intervention to reduce alcohol-related harms. This is in collaboration with leading researchers from Liverpool John Moores, the University of

Liverpool, Queen's University Belfast and the Clinical Research Support Centre in Belfast. David said "We don't have much high quality research evidence from the UK so this is a very significant development for alcohol research and prevention."

Up to 10,000 pupils in 100 schools based across Northern Ireland and Glasgow will take part in the four year study, funded by the National Institute for Health Research.



Medical research – from the participants' perspective

A new, collaborative project aims to provide a fresh perspective on the history of medical research by focusing on the experience of the participants themselves. Led by medical historians in the Centre for Health, Medicine and Society, the study will analyse the life stories of those who took part in European medical research from the 1940s to 2001, and also explore the ethics of accountability in medical research.

The participants' perspective is under-researched in European medical humanities, as are cases of suffering and trauma, and the health implications of being involved in experiments. Despite the gruesome Nazi

medical experiments, the expansion of medical research tended to place scientific knowledge above informed consent and the welfare of the research subject.

Running from January 2012 to 2016, the work will source and analyse the views of both willing and unwilling subjects of European medical research. Researchers, led by Principal Investigator Professor Paul Weindling, have been granted unique access to archives of international importance enabling them to take a trans-European perspective of the period.

The work is made possible by a major programme grant (£530,000) from the Wellcome Trust.

NEWS IN BRIEF

Bamboo bike goes the extra mile

A commercially available bamboo bike, designed by Brookes, is being used by a local rider on a long distance ride from Africa to Oxfordshire. The bike, a bamboo-framed Cross Country Mountain bike, was unveiled at the Cycle Show last October and is now on sale priced at £1,000.

For more information, please visit www.bamboobike.co.uk

New Brookes support service for lawyers in small countries

A new support service, launching this year, will help lawyers in small countries with small legal systems who are frequently under-supported despite often having as much law to deal with as larger countries. The School of Law will provide help including documentary support, continuing professional development and academic consultancy.

For more information, please contact pwedge@brookes.ac.uk

Brookes academic joins green think tank

Dr Pritam Singh, Reader in Economics at The Faculty of Business, has been invited to join the advisory board of the Green House think tank, which seeks to influence debate on environmental issues. Pritam's work focuses the sustainability implications of the shift of global capitalism to the East as well as Indian capitalism.

For more information, please visit www.greenhousethinktank.org

See Pritam's article on p10.

Facebook boosts autism social skills

A two-year, pioneering study examining whether social media can help young people with autism build stronger friendships has ended – with positive results. Participants showed awareness and improvements in social skills and a general measure of psychological 'well-being'. The two-year programme was led by Dr Johnny Lawson with participants from four different countries.

For more information, please visit <http://psych.brookes.ac.uk/ace/project.php>

▶ RESEARCH FAST FORWARD

Brookes research to look out for in the future

New research centres approved

Two new research centres have been approved to facilitate research and knowledge transfer:

- **The Institute of Public Care Market Development Centre** will focus on social care, supported housing, community health and disseminating information on the care market to policy makers, commissioners, service managers and providers.
- **The Centre for Ecology, Environment and Conservation** will provide continuing professional development in environmental change, quality of life, biodiversity, ecosystem services and food security. It will offer a multi-disciplinary scientific approach to both government and EU biodiversity and environmental policies and targets.



Storing the nation's research data

Research councils are calling on all universities to devise a means of making widely accessible all the data used or produced by researchers in their publicly funded studies.

A steering group will be considering how Brookes can meet the challenge by designing a storage system that is suitable for a wide range of data types, as well as metadata that accurately explains the material stored.

Anyone with any suggestions should contact the Research and Knowledge Transfer Committee at ktp@brookes.ac.uk



Building links with the Gulf universities

Delegates from universities in Bahrain, Kuwait and Saudi Arabia were among those hosted on a research study tour by Oxford Brookes International recently. The Gulf countries are investing heavily to increase research capacity and new partnerships with UK universities will help them achieve this.

The tour provided an insight into how research is conducted both at Brookes and the UK in general. Topics included approaches to building research capacity, the UK research culture, how best to work collaboratively with UK higher education institutions, research and knowledge transfer, and how these link to government policy and practice.



KNOWLEDGE TRANSFER ACHIEVEMENTS

Four Brookes Knowledge Transfer Partnership associates won national acclaim in 2011:

- **Catia Guimaraes** was named as a business leader of tomorrow for her work on business continuity and disaster recovery with InterContinental Hotels Group.
- **Charlie Symonds** has been working on sustainability and was announced as runner-up for graduate of the year 2011 by the Institute of Environmental Management and Assessment for providing his company with a framework for its five year sustainability strategy.
- **Jonathan Biddulph** achieved a top-three place in The Engineer Technology and Innovation Awards 2011 for his project on materials and joining technology with Oxford YASA Motors.
- **Lisa Pasquale** has been appointed measurement, monitoring and evaluation expert with the Institute for Sustainability having successfully completed a sustainable architecture evaluation project with the company Archetype. Her work also helped Archetype win the 2011 Building Awards 'Cut the Carbon' award.

Tackling global responsibility

Start small, think big

Jeni Burnell, Chair of the Small Change Forum, argues that to tackle the seemingly overwhelming issue of global responsibility we need to start small and be strategic to bring about big change.

In a world of globalisation, increasing urbanisation and poverty it is easy to become overwhelmed by the idea of global responsibility, says Jeni, research associate at the Centre for Development and Emergency Practice (CENDEP) in the Faculty of Technology, Design and Environment. Indeed the magnitude of the issues can leave many of us stifled by their complexity.

This in part is what makes the Small Change approach to community development so powerful. It turns global responsibility into a local challenge by starting with a common sense assumption: if you want to achieve something big, you start with something small and you start where it counts.

Small Change explores how small, practical and mostly low budget interventions, if carefully targeted, act as catalysts for bigger, long-lasting change - change that is designed to improve people's lives and their life opportunities.

This development approach was pioneered by

“If you want to achieve something big, you start with something small and you start where it counts.”

Professor Nabeel Hamdi, CENDEP Emeritus Professor, and has been championed by him throughout his 40 years of practice.

Based on the assumption that all people, no matter how impoverished or socially excluded, are the experts of their own experiences, the Small Change approach can be applied to many emergency and development situations - such as post-disaster reconstruction, conflict resolution and micro-finance schemes. It promotes the concept that all individuals have invaluable knowledge and skills, drawn from their own lives, to contribute to improving the situation they find themselves in. Within the development sector this valuing of a person's assets - their knowledge and skills - is defined in the well-known development framework, the Sustainable Livelihoods Approach.

Small Change in action

Last year, CENDEP teamed up with UK-based community arts organisation, Multistory, to create the Small Change Forum.

The aim of the forum is to promote Small Change learning and practice both in the UK and internationally. Within the partnership, CENDEP leads on the research and learning while Multistory is putting the theory into practice.

Creative pilot projects are currently underway around the world, from the Midlands (UK) to Ladakh in India, led by Multistory. The partnership makes the most of Multistory's extensive experience of working with people to tell their stories through art in order to bring about change.

Culture was chosen as an aspect of The Forum's work because historically the arts and culture have remained marginalised within the international development process, despite the fact that all

human beings exist within a set of cultural norms, values and beliefs. Attempts are now underway to address this imbalance.

At a time of austerity the time is right to question our global responsibility and how we fulfil it in order to ensure change that benefits the vast majority, not just the privileged few.

For information about this project, read *Small Change: about the art of practice and the limits of planning in cities* by Professor Hamdi or contact: jburnell@brookes.ac.uk

Launching the Small Change Forum

A one-day conference hosted by CENDEP and Multistory was the launch pad for the new forum.

The event, 'The Small Change Forum: ingenious people make better places' focused on the role of cultural action - specifically the participatory arts - as a tool for achieving small change.

The role of culture and the arts was explored under three themes - doing, thinking and sustaining.

Delegates' backgrounds included non-governmental organisations, universities, the public and private sector.

First Annual Hamdi Lecture

The inaugural Hamdi lecture will feature the journalist and BBC News presenter, **George Alagiah**, a specialist on Africa and the developing world. The event is on 22 March 2012 and open to all.

For further information please visit: www.brookes.ac.uk/events/

Providing shelter after disaster Time for a re-think

Providing shelter after a humanitarian disaster is costly, complicated, fraught with problems and frequently falls short, say CENDEP's **Professor David Sanderson** and **Jeni Burnell**.

Despite it being over two years since the devastating earthquake in Haiti of January 2010, well over half a million people are still living in tents, with solutions of what to do still seemingly far off. Despite costing vast sums, frequently the provision of shelter after a disaster is largely inadequate.

What though is 'shelter after disaster?' The phrase is used to describe temporary structures beyond tents, but also the broader efforts by aid agencies to construct permanent post-disaster housing. The term can therefore also extend to reconstruction and, at times resettlement, of people living in vulnerable situations, often on marginal land, in cities and towns.

The UK Humanitarian Emergency Response Review (see opposite) defines transitional shelter as a broad term for housing that is something better than a tent, that is not intended to be a permanent structure and is usually designed to last between three and five years.

Transitional shelter has become the response 'of choice' for nearly all large aid agencies in recent years. However its use is raising questions. Critics argue that too often it becomes permanent, uses up valuable aid resources, and expends political will and donors' cash on short-term solutions that do little to address long-term problems.

Strong among the critics of transitional

shelter is the United Nations agency, UN-Habitat. It advocates instead the 'safe return' of affected dwellers to their original location, assuming it is safe to do so.

But safe return also has its problems and limitations. If, before the earthquake, you lived in a four-storey block as a tenant, where, and what, do you return to? Or if you were a squatter, or a renter, what rights do you now have?

In urban areas post-disaster shelter problems are compounded by such problems as density, confusion over land ownership, high-rise living and the presence of squatter settlements.

What can be done differently?

A recent publication, *Strategy for meeting humanitarian challenges in urban areas*, by the Inter-Agency Standing Committee outlines key objectives for making humanitarian responses in urban areas more effective. It also identifies 90 tools and approaches suitable for urban areas, that are applicable to a range of themes and sectors - not just shelter.

The committee highlighted the fact that almost all of the aid community's tools and understandings are rural in origin – we still talk of working 'in the field', even when that 'field' is a densely packed neighbourhood!

One example of an alternative successful

approach is that taken after the Gujarat earthquake last year by SEEDS India, an Indian NGO. They trained local masons to rebuild houses for, and with, local village communities. The process took longer, but the outcome – houses designed and built using local practices with real people in mind – was appropriate accommodation costing roughly half the price for houses twice the size, compared with other nearby NGO-built housing.

Further information

In September last year a special edition of *'Environmental Hazards: Human and Policy Dimensions'*, was published, guest edited by Jeni Burnell and David Sanderson from CENDEP. The edition published peer-reviewed papers generated from a conference, *Improving learning and practice in the NGO shelter sector*, hosted by CENDEP at Brookes in 2010.

For further information, please contact jburnell@brookes.ac.uk

Jeni Burnell and Professor David Sanderson are in the Centre for Development and Emergency Practice (CENDEP), School of Architecture, Faculty of Technology, Design and Environment



Findings of the Humanitarian Emergency Response Review

A UK government commissioned review* examined how our government could respond better to disasters. Launched in March 2011, it reached the conclusion that “providing adequate shelter is one of the most intractable problems in international humanitarian response.” Reasons for this include:

- sorting out land ownership
- procurement of materials
- organising engagement with those affected by disaster
- for urban areas, density and rubble clearance
- governmental involvement (or the lack of it)
- space
- co-ordination.

*by the Department for International Development

The Case of Haiti

Following the earthquake, there have been real difficulties in implementing transitional shelter in Haiti.

Why?

Reasons include:

- underlying problems with poverty and governance that existed before the earthquake
- at least one large agency cancelling its programme outright, while others have found progress to be extremely slow
- the Haiti government’s resettlement of large numbers of people several miles out of town has been criticised as creating new, un-serviced pockets of poverty.

What lessons were learnt?

An independent study, commissioned by the UK Disasters Emergency Committee, examined the first year of operations of 13 of the member agencies.

It found almost no support, within agencies or elsewhere, for transitional shelter as a useful solution. Criticism included it being described as “a total waste of money”, “counter-developmental” and “suiting NGO timeframes and marketing needs rather than people’s needs”.

Recommendations included that agencies should rethink their use of transitional shelter during the recovery stage after a disaster to ensure that provision of permanent housing takes priority over that of short-term shelter.

Towns and cities are growing by some one million people a week according to UN-Habitat

A nation's human rights responsibilities versus its economic interests



Nations have enormous power in the global campaign for human rights. Yet often they prioritise economic interests over human rights when pursuing their international relations. Human rights campaigners should turn this to their advantage, argues Dr Pritam Singh.

When the bargaining power of a human rights agency acquires a high international profile, the balance of priorities is disrupted as the issue of human rights is forced into the economic and diplomatic relationship between nations.

For instance, a state may face a boycott on its products or risk other economic sanctions if it is perceived as a consistent violator of human rights, which can adversely affect exports and GDP. Consequently, human rights issues then become of economic interest and a matter of responsible global governance.

Economic interests and human rights become further entwined in relation to societal responsibilities towards marginalised and vulnerable sections of society. For the under-privileged - such as the homeless, unemployed, famine and disaster victims, immigrants, and environmental and political refugees - economic interests and human rights are not in conflict at all. The defence of human rights is absolutely critical to the furthering of their economic interests.

The relationship of political culture to human rights is in continual flux. The intervention of

human rights agencies can significantly transform political cultures - from human-rights hostile to becoming human-rights friendly.

Sustained human rights campaigning has shown us that any nation state that views human rights unfavourably, for the sake of promoting short-term economic gains, runs the risk of damaging its interests, including economic ones. Embedding human rights considerations into domestic policy, as well as in foreign policy, is therefore in the long-term interests of building a more sustainable, conflict-free society.

The globalisation of the economy, and the flow of labour power between countries, adds further weight of argument to a nation's responsibility to include human rights in their international relations.

Transforming human rights campaigning

This economic/human rights dynamic highlights the need for human rights activists to alter their approach. Currently it usually

emphasises the presentation of human rights victims as the main campaigning strategy against oppressive regimes. While this strategy may capture media attention, human rights activism needs instead to harness the transformative power that human rights can have in the broader aim of building a more secure and just society.

Communicating this transformative power will enable those rights to become more acceptable to wider sections of the population and to reach beyond the narrow confines of human rights advocates.

An effective campaigning strategy should be constantly aware of this potential when seeking to make nations more willing to embed human rights in their governance strategies.

Dr Pritam Singh is a Reader in Department of Accounting, Finance and Economics and can be contacted at psingh@brookes.ac.uk

His book, *Economy, Culture and Human Rights* (2010), can be found at: www.threeessays.com

REF 2014

What it means to you

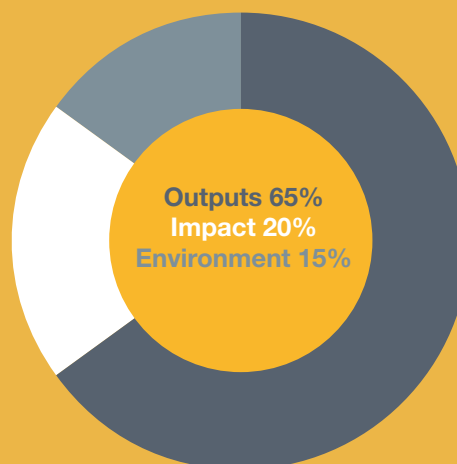
The Research Excellence Framework (REF) is the system for assessing the quality of research in UK higher education institutions (HEIs) and replaces the Research Assessment Exercise (RAE).

The primary purposes of the REF are to:

- inform the selective **allocation of research funding** to HEIs from 2015–16
- provide **accountability for public investment** in research and demonstrate its benefits
- provide **benchmarking** information and establish reputational yardsticks.

The REF requires an ‘impact’ submission, outlining the effect that your research has had on the wider world over the period being assessed (January 2008 – December 2013). It will contribute 20 per cent of Brookes’ overall quality profile, and the assessment sub-panels will examine the ‘reach’ and ‘significance’ of any impact we claim.

REF assessment criteria





Dr Emily Brown, REF Impact Officer, answers the all- important questions surrounding your REF impact submission

Emily is a member of the Research and Development Office. The Research Support Office, responsible for co-ordinating the data collection for the next REF, is based in the same office.

What is 'impact'?

For REF2014 'impact' is defined as the 'effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia.' It is a purposefully broad definition designed not to limit the range or type of submissions.

How is it assessed?

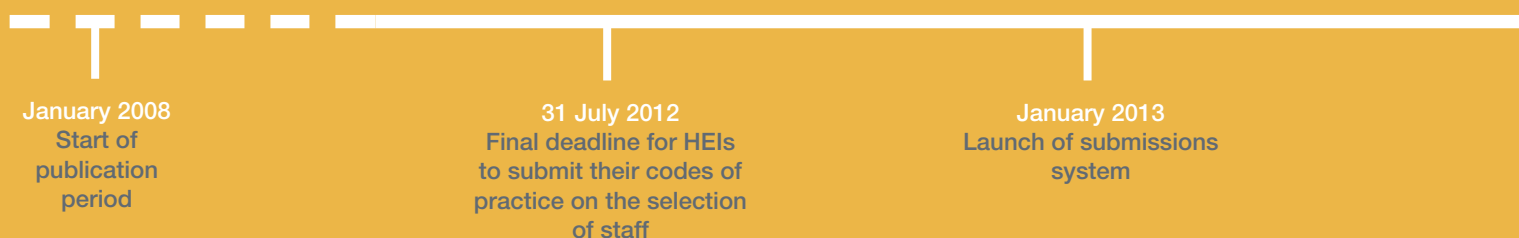
The assessment consists of the completion of an impact template along with the submission of case studies.

The underpinning research for the case studies must be at least two star (international) or equivalent. The impact template should outline your unit's approach to supporting and enabling impact from its research.

What can impact include?

Examples of impact include an effect, change or benefit to activities, attitudes, awareness, behaviours, opportunities, performance, policy, practice or understanding. It can include impact on an audience, beneficiary, community, constituency, organisation or individual - and can be local, national or international. Impact can also include the reduction or prevention of harm, risk, cost or other negative effects. Impact within the higher education sector, including on teaching and students, is also accepted provided they extend significantly beyond the submitting higher education institution (HEI).

KEY DATES*



What does impact exclude?

Research, or the advancement of academic knowledge, within higher education is excluded. Equally, impact on students, teaching or other activities within the HEI itself does not qualify.

What sorts of things could I consider including?

There are a number of ways of demonstrating the benefits of research, depending on the nature of the study and its outputs.

Examples include consultancy, contract research, forming a spin-off company, or activities to transfer or exchange knowledge to a wider, non-academic audience, such as blogging and tweeting.

What is a case study?

Case studies illustrate specific impacts that are underpinned by excellent research.

Submissions are not expected to provide case studies that show the volume of research activity across your unit, but should be your strongest examples.

What is meant by 'reach' and 'significance'?

'Reach' and 'significance' have separate definitions for each main assessment panel, but are examined together.

Reach is broadly defined as the spread or breadth of the influence or effect while significance is its depth or intensity.

What is 'underpinning research'?

It is important that the research that underpins the impact claimed is responsible for it taking place - to the extent that without it the impact would not have occurred, or would have been significantly reduced.

The **underpinning research must have been undertaken during the period 1 January 1993 – 31 December 2013*** and the onus is on the submitting HEI to provide evidence of the quality of the research.

*apart from Architecture, Built Environment and Planning which extends to 1 January 1988

What if my research has no impact?

Not all individual academics have to demonstrate impact within their submission. The number of case studies required is proportional to the number of full-time staff in a unit. At Brookes we expect to submit two or three per unit.

31 October 2013
Census date for staff eligible for selection

29 November 2013
Closing date for submissions

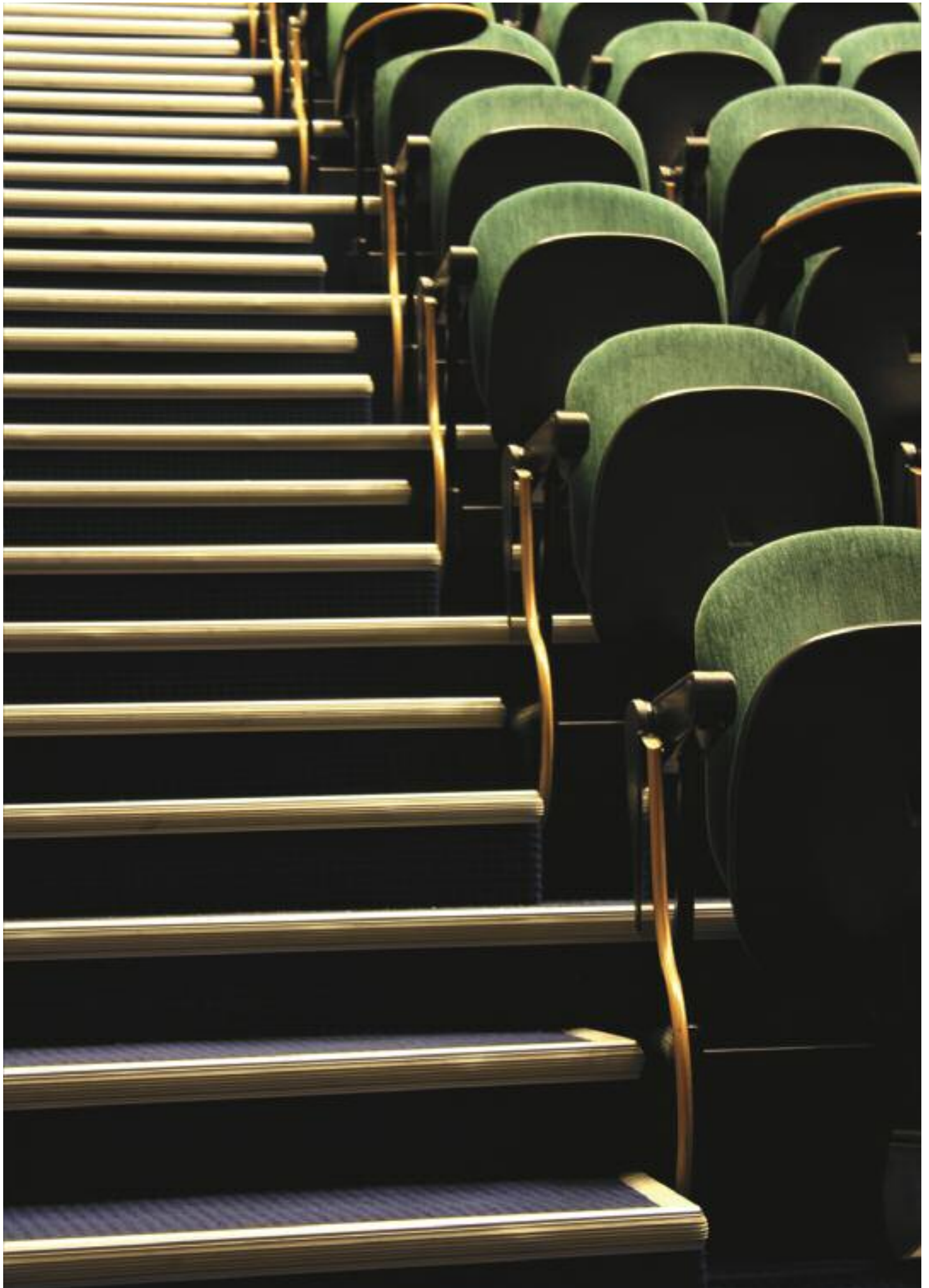
31 December 2013
End of publication period

December 2014
Publication of outcomes

USEFUL SOURCES OF INFORMATION

- www.brookes.ac.uk/ref2014
- REF: www.hefce.ac.uk/research/ref/
- REF timetable: www.hefce.ac.uk/research/ref/timetable/
- FAQ's: www.hefce.ac.uk/research/ref/faq/

For further information, please contact Dr Emily Brown – ebrown@brookes.ac.uk



Rebuilding higher education in Iraq and Kurdistan

The Brookes contribution

Professor Munira Kadhim, together with the Genomic Instability research group she leads at Brookes, has been active in helping to retrain Iraqi academics.

Over the past three decades the Iraqi education system has suffered greatly as a result of long periods of wars, isolation and successive conflicts.

Professor Munira Kadhim, who is of Iraqi Kurdish origin, is actively involved in helping to rebuild and reform higher education (HE) in Iraq. She is a member of the Network of Iraqi Scientists and Academics (NISA) which is working in partnership with Iraqi HEIs and the UNESCO* Iraq Office on the task.

Iraqi universities have suffered from a huge 'brain drain' and many academics were forced

with universities and research institutions internationally. These plans are yet to mature in parts of Iraq, but in Iraqi Kurdistan there has been steady progress.

The Genomic Instability (GI) Research Group, part of the Department of Biological and Medical Sciences, has developed a special programme of research training for such Iraqi academics.

Professor Kadhim said, "As a Kurdish Iraqi, I feel privileged to be involved in such an important programme to contribute to the development of higher education and research

“...the development of higher education and research in Iraq and Kurdistan is essential for rebuilding the economy and modernising healthcare.”

to flee or chose voluntary exile. In addition, generations of new Iraqi academics have been trained in Iraqi Universities in total isolation, without access to adequate resources, expertise or training.

However, as the security situation has started to improve, the Iraqi government has turned its attention to the challenging task of reconstruction and recognises the importance of reforming the HE system. Since 2003, contact and discussion between Iraqi academics working in the UK, US and EU, and Iraqi HE authorities and universities has helped to develop the beginnings of a strategy for reform.

A prominent part of this strategy is to retrain existing academics at English-speaking universities for short periods. The aim is to refresh and modernise their scientific knowledge, as well as reconnect them

in Iraq and Kurdistan which is essential for rebuilding the economy and modernising healthcare.”

Currently the GI group has one PhD student in his final stage of study and also delivered a month-long training programme last year for two academics. The programme was later extended and formalised to meet the needs of other groups of academic and students in Life Sciences.

At a related workshop (see box) the head of the Iraqi delegation expressed strong interest in further collaboration with Oxford Brookes, providing new opportunities to host postgraduate students and post-doctoral scientists through Iraqi-funded scholarships and training programmes.

For further information, please contact: mkadhim@brookes.ac.uk



Professor Munira Kadhim

Experts unite

A workshop was held in Beirut last September, entitled 'Scientific Research in Iraq – situation and perspectives' to initiate a UNESCO-funded project to reform research in Iraq.

Attended by NISA experts and a high-level Iraqi delegation from the Iraqi and Kurdish Ministries of HE, the workshop discussed a programme of collaboration to develop the research capacity in Iraqi universities.

Professor Kadhim was able to advise on priorities for scientific research, as well as outline scholarship programmes and training academies for developing research skills. Cancer and radiation research has been identified by the Iraqi authorities as a top priority.

Gauging Green progress in the built environment

The Oxford Institute for Sustainable Development carries out a unique and independent annual survey – the Green Gauge – on behalf of the Royal Institution of Chartered Surveyors (RICS) to track ‘green’ progress within the profession.

With the built environment contributing 40 per cent of global carbon emissions, Professor Tim Dixon, Director of the Oxford Institute for Sustainable Development (OISD) in the Faculty of Technology, Design and Environment, argues that the professional advice that surveyors and built environment professionals provide has a huge potential to influence climate change and low carbon agendas globally.

The latest findings from the 2010 global Green Gauge survey show that sustainability remains high on RICS members’ agendas, with 75 per cent of respondents saying it is ‘highly relevant’ to their work.

Sixty-five percent of respondents had had requests from clients for sustainability advice, including on issues of energy efficiency and supply, waste management, transport and natural resource consumption.

As one respondent, in an earlier Green Gauge survey commented, “Becoming aware of environmental issues is a moral imperative for all property professionals. It probably never was, and certainly no longer is, a minority issue. We must change along with the rest of society.”

According to Green Gauge 2010, the leaders in sustainability promotion within the surveying industry are those professionals working in project management, management consultancy and environment. Similarly those working in Canada, Australasia, USA, UK and the rest of Europe are more likely to promote green issues, the survey showed.

The RICS Sustainability Index, contained in the Green Gauge report, puts the UK in fourth place globally (see chart), trailing behind the rest of Europe in adopting sustainable practices.

In response, RICS has continued to be

proactive in promoting sustainability through information, education and training programmes for its members. Sustainability competencies have also now become a mandatory requirement for professional membership.

The role of built environment professional bodies in promoting sustainability cannot be underestimated, both in their ability to influence pedagogy, as well as wielding direct sway with

Worldwide, the building and construction sector is worth 10 per cent of global GDP and employs 111 million people, of whom 75 per cent are in developing countries. In addition the total global ‘investible’ property is worth approximately \$16 trillion and many chartered surveying firms practice internationally.

But Green Gauge shows we should not be complacent. New challenges are being presented in climate change and carbon

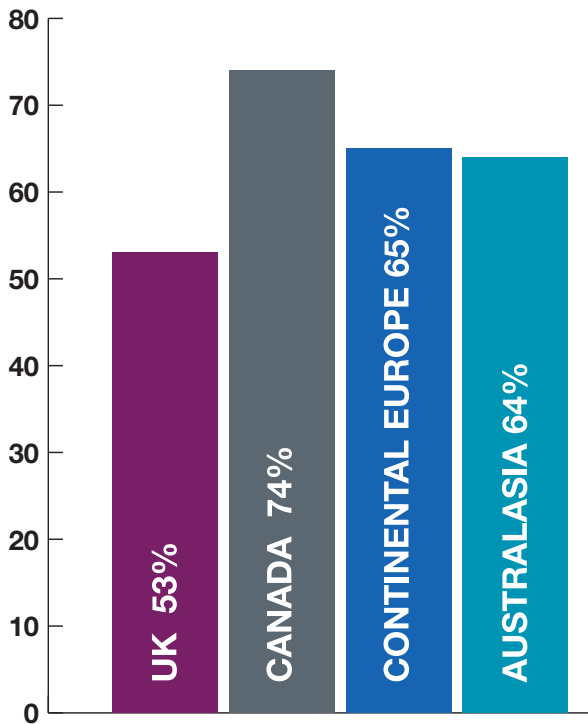
“Becoming aware of environmental issues is a moral imperative for all property professionals. It probably never was, and certainly no longer is, a minority issue. We must change along with the rest of society.”

their clients. Furthermore, leading by example both by ‘greening’ your own business and responding to global and corporate responsibility agendas, is essential when offering sustainability advice to clients.

The reach of surveyors’ advice on sustainability is vast. Land and property are key assets for most organisations, whether global, multi-million corporate owners and occupiers, large scale public sector bodies, international pension funds, or SME businesses.

emission reduction in the UK as the implications of recent government policy and guidance unfolds. The need to retrofit some 80 per cent of our existing buildings in order to achieve carbon reduction targets raises significant challenges for the sector - a challenge other Brookes researchers are addressing (see box).

For further information, please visit <http://ricsgreengauge.org/> or contact: tdixon@brookes.ac.uk



RICS sustainability index 2010

Worldwide, the building and construction sector

is worth

10% of global GDP

employs

111m people

of which

75%

are in developing countries

The total global 'investible' property is worth approximately

\$16 trillion



Home energy consumption reduced by 85 per cent

An Oxford 'pilot' home has had its energy usage cut by 85 per cent thanks to a School of Architecture project.

Findings from the Low Carbon Building Group, led by Professor Rajat Gupta, will influence government decisions on ways to make large-scale carbon reductions to existing UK housing stock to meet their target of an 80 per cent reduction in emissions by 2050.

There are some 26 million homes in the UK and it is estimated three-quarters will still be in use by 2050. Their energy use accounts for 27 per cent of total UK CO₂ emissions. The energy-saving measures installed at the Nelson Street property include:

- advanced levels of internal and external insulation, including 42cm thick loft and 28cm wall
- advanced airtightness membranes and tapes to reduce air leakages and draughts
- triple glazing
- a highly efficient gas fired boiler for central heating with integrated controls
- a device allowing natural light and ventilation into the centre of the house
- low energy lighting and appliances
- a solar hot water system
- a heat recovery system to reclaim waste heat while providing tempered fresh air.

Councillor John Tanner, Board Member for the Cleaner, Greener Oxford campaign, said, "This is a fantastic project where we worked with our partners to produce a house that is now environmentally and carbon efficient."

For further information, please visit

www.brookes.ac.uk/about/news/ecohouse



Electric vehicle development

Meeting an auto industry responsibility

The Sustainable Vehicle Engineering Centre (SVEC), part of the Department of Mechanical Engineering and Mathematical Sciences, was involved in two major projects, completed in 2011, to study the needs and wishes of both industry and consumers.



Bringing electric vehicles to the European market

SVEC was one of five partners in a European project on electric vehicle mobility, funded by the EU, which ended in September 2011. The E-Mobility Accelerator Project lasted for 19 months, was led by BOM in The Netherlands and included partners from Sweden, Spain and Poland.

The overall aim was to create some common strategy and policy recommendations to accelerate successful market implementation of electric vehicles in the participating countries. In particular the project examined the attitude of the public towards electric vehicles which is key to successful adoption. Without consumer acceptance there will be very few electric vehicles on the road.

The project had four objectives. Firstly, the identifying of the key success factors that take pilot projects to market implementation. Next, the development of regional business cases for market implementation. Finally, making regional and international policy and strategy

recommendations, along with their dissemination to policy makers and industry technologists.

Three electronic brochures have been produced that address these objectives, as well as six short videos about the business cases. Dissemination has included showing the video clips (<http://bit.ly/nhgW6Z>) at LCV2011, the principal UK low carbon vehicle conference.

Studying how real drivers use their electric vehicles

The second project was the two-year MINI E project, completed last summer and based in Oxfordshire and the South East. SVEC, along with colleagues from the Department of Psychology, co-ordinated the research on behalf of BMW. The aim was to understand real-world use of electric vehicles in the hands of ordinary drivers.

In addition to informing the development of new electric BMW models, a further outcome was the formation of the Oxfordshire Electric

60 million
vehicles being
scrapped to
landfill annually

over
950 million
vehicles on the
road globally



Vehicle Partnership from the core members of the project. The new partnership's aim is to contribute towards the development of a self-sustaining market for electric vehicles in Oxford. This includes devising a membership scheme providing the general public with a range of e-mobility transport options. The scheme proposes to subsidise the cost of electric vehicles by taking advantage of the current preferential tariffs for low carbon generation of electricity using solar panels. Longer-term, the aim is to incorporate a public transport network into the scheme to build truly sustainable transport system.

The role of SVEC

The SVEC team studies the whole life of a vehicle, from the design and new technologies needed for future vehicles to end-of-life, including such issues as legislative incentives, forecasting and education.

For further information, including the three downloadable brochures, please contact: arhutchinson@brookes.ac.uk



Are carbon emission assessments as accurate as we think?

Dr Bridget Durning, Senior Research Fellow in the Department of Planning in the Faculty of Technology, Design and Environment is currently leading two studies exploring how greenhouse gas emissions are evaluated and addressed.

Whilst the argument for carbon emission constraint has become increasingly embedded in global consciousness, many believe change is not happening fast enough.

Environmental Impact Assessment (EIA) is a well-established procedure for assessing the environmental impact of proposed new builds. However, a developing body of evidence suggests that the evaluation of carbon emissions within the EIA process lacks

Our first, comparative study examines a variety of proposed developments - anything from wind farms to airport extensions and hotels - from a number of countries, including UK, USA, Canada, Australia, New Zealand and South Africa.

The findings show that the practice of accounting for carbon, and the rigour with which it is carried out, is highly variable. This raises great concerns about understanding

decision-makers in this process. The study concentrates particularly on Portugal, often considered to be more advanced than the UK in carbon emission reduction. According to the UK Department for Business and Skills, 43 per cent of Portugal's energy is generated from renewable sources such as wind and hydropower. It has also already rolled out a national network of public charging stations for electric vehicles.

The study seeks to assess whether this advanced Portuguese thinking includes all aspects of the country's development, and the lessons that can be learnt for both policy and practice in EIA.

Specifically, the study aims to:

- explore the decision-making process in Portugal, including the role of EIA
- identify the status of climate change mitigation and adaptation both at national and local level
- identify how greenhouse gas reporting is currently undertaken in Portugal.

The study, which is being undertaken in collaboration with colleagues at the University at Oporto, is funded through the Santander Scholarship Scheme. It aims to be completed by summer 2012.

For further information, please contact bdurning@brookes.ac.uk

“Approximately one third of the 40 assessments examined did not consider greenhouse gas emissions in any way.”

methodological rigour or consistency.

Although EIA is a legislated process in most parts of the developed world, addressing greenhouse gas emissions is not a legislated requirement within the process, and consequently other policy drivers are influential.

Anecdotal evidence suggests that in the UK the motives for accounting for carbon emissions in EIA depend as much on the body undertaking the assessment (usually a consultant) as they do on policy prompts.

the impact on climate change of any new development.

Approximately one third of the 40 assessments examined did not consider greenhouse gas emissions in any way. In the remainder, a range of tools and methods were used, with assessment being undertaken in a variety of ways. Mitigation was also very minimal.

The second study focuses on the motives for including greenhouse gas emissions in the assessment process, and the role of



Meeting the information needs of charity trustees Can Enterprise Performance Management Systems help?

UK charities have complicated regulatory structures and their trustees are accountable to a wide range of stakeholders. The **Accounting, Finance and Economics department** is developing a way of improving reporting systems.

An inter-disciplinary study is examining the potential that computerised Enterprise Performance Management (EPM) systems could offer for improving charity reporting and performance management.

Charities often have complicated regulatory structures and are accountable, via their trustees, to regulators, funders, employees, beneficiaries and the public amongst others.

One common challenge is the dispersed networks and partnerships many larger charities operate within, whether internationally, nationally or locally. In addition, many charities are now moving from direct funding to bidding for contracts with governmental departments and, increasingly, commercial firms.

The study aims to examine to what extent charities currently provide accurate, relevant, timely, user-friendly information - and how they might benefit from applying Enterprise Performance Management.

The benefits of EPM systems include being able to accommodate data from multiple,

diverse sources as well as analyse and present data in formats in line with organisational needs.

With preliminary work funded by an internal Brookes research grant, external funding is now being sought by Cathy Knowles, Dr Diana Limburg and Maureen McCulloch who are running the study. This will enable further qualitative research, interviewing trustees and managers of six charitable organisations.

The six organisations will be chosen for study in discussion with funders and bodies already engaged in related research. Interviews with managers will aim to map the flow of information and identify:

- the type of decisions trustees need to make
- the information they need
- their sources of information
- their perceptions of the adequacy of existing IT systems
- the existing use of IT.

The way trustees use information and IT will then be studied, using flow diagrams, the 'DIKAR' model (Data, Information, Knowledge, Action, Result) and Soft Systems Methodology, to identify both shortcomings and how EPM systems might improve their information provision.

The study will also examine how information can be managed in publicly accountable organisations to improve the ability of accountants to act in the public interest. The findings may also benefit EPM software providers, as well as for-profit organisations seeking to streamline their financial and other reporting.

For further information, please contact: cknowles@brookes.ac.uk

Exploring our responsibility to the natural environment through art

The research of **Dr Tracey Warr**, Senior Lecturer in Art Theory, has taken her up mountains, into forests and wild swimming along rivers, in order to shed light on our global responsibilities towards natural environments.

The artistic investigation of the river is one theme Tracey is exploring. Contemporary rivers have a variety of often conflicting agendas. They are simultaneously sources of food and water, sites of property development, industry, agriculture, habitation, sport and leisure, transport, and wildlife habitats.

“Only two per cent of England’s thousands of miles of rivers have public right of access.”

A forthcoming project, Riparian Territories will open up these issues for debate and engagement through art and is being funded by Arts Council England. It will examine how rivers define our sense of individual and collective belonging, Riparian meaning ‘of or on a river bank’. The project will explore:

- river ecosystems and histories
- how the river has a different pace to that of the land
- how it is a lateral and border space, with its own rules and regulations, differing from the land it is flowing through.

The project will work with experts from various fields and will involve discussions, an exhibition, workshops, and facilitating encounters between different groups of river users, focusing on citizenship and public space in relation to the river.

Only two per cent of England’s thousands of miles of rivers have public right of access. The water is in public ownership, but the riverbanks and riverbed are frequently privately

owned, often controlling and restricting access. Port Meadow in Oxford, for instance, is one of the few remaining areas of common land in England. And access is only one issue. Water consumption, for example, has gone up 30 per cent in the UK since the 1970s.

The project space at Modern Art Oxford will

become a temporary research and design centre, building on a workshop at MIT with artists Nomedas & Gediminas, focused on the river Charles in Boston, USA.

The research will be reflected in fabrication, inspired by boats, islands, and boathouses. Nomedas & Gediminas’ works often have a central sculptural platform, a ‘device for action’. Tracey will act as the ‘embedded writer’ for the project and edit a publication.

Nomedas & Gediminas have established an international reputation for socially interactive artworks. Gediminas is Associate Professor and Acting Chair for Art, Culture and Technology at MIT. Nomedas is a researcher at the Norwegian University for Science and Technology, Trondheim. They examine the production of public space and develop devices and models to inspire the cultural and political imagination of local communities. Riparian Territories continues their interest in the defence of public space.

For further information, please contact: t.warr@brookes.ac.uk

Outlandia: a tree house

Tracey is Associate Curator for a tree house artists’ studio created by artists, London Fieldworks, as a space for other artists to generate work and carry out research. Called Outlandia, it is an artist-led project built to foster links between creativity and the environment.

Looking out across the glen to Ben Nevis in the Scottish Highlands, Outlandia echoes the ruined and rimed weather observatory on the summit of Ben Nevis. The old division between humans and nature is challenged now by human ecology research, seeing the human as part of nature instead, and work at Outlandia reflects this approach.

There have been six artists’ residencies since Outlandia’s launch in 2010, responding to its immersion in an extraordinary forest and mountain landscape.

A book series, *Future Fictions*, is planned to capture Tracey’s work on the intersection between contemporary art practice and Future Studies. Four writers will produce fictional narratives set in the future, inspired by residencies at Outlandia.

The tree house was designed by award-winning practice, Malcolm Fraser Architects and shortlisted for the *Architects Journal* Small Projects Prize. Funding to develop Outlandia came from the Highland Council, the Calouste Gulbenkian Foundation and the Scottish Arts Council amongst others.

For further information, please visit www.outlandia.com



COMING UP

The latest research focused events to look out for in 2012

A selection of forthcoming open lectures designed to appeal to staff, students and the general public alike. They provide an opportunity to learn more about the work of colleagues and departments across the University.

22 March

Inaugural Hamdi lecture with George Alagiah

Speaker:

George Alagiah, BBC news presenter

26 April

International law and international relations: towards transnationalism and transdisciplinarity

Speaker:

Math Noortmann, Professor of International Relations and Public International Law

2 May

Economic uncertainty: leadership teams rediscover market analysis

Speaker:

Lyndon Simkin,
Professor of Strategic Marketing

24 May

Movement prints

Speaker:

Professor Helen Dawes,
Head of the Movement Science Group

24 May

Seventh annual 'John Wesley' lecture

Speaker:

Isabel Rivers, Professor of Eighteenth-Century English Literature and Culture, Queen Mary, University of London

Venue:

Lincoln College, University of Oxford

15 June

Software engineering in the 21st century

Speaker:

Professor Rachel Harrison, Head of Empirical Software Engineering Group

All events are held at the Main Lecture Theatre, Gipsy Lane Campus unless otherwise stated.

New events are constantly being added to the calendar. To keep abreast of all events and make bookings please visit www.brookes.ac.uk/events

Your research career: the help you need

28 March:

I've won my award! What do I do next?

Advice and tips on managing your research project – including the role of Principal Investigator, finances and managing contract staff.

13 June:

Research induction and networking

An introduction to conducting research at Brookes - including policies, procedures, key contacts and support available.

Both events are from 1-4pm at Room BG11, Buckley Building, Gipsy Lane
For details and bookings please contact louise.wood@brookes.ac.uk