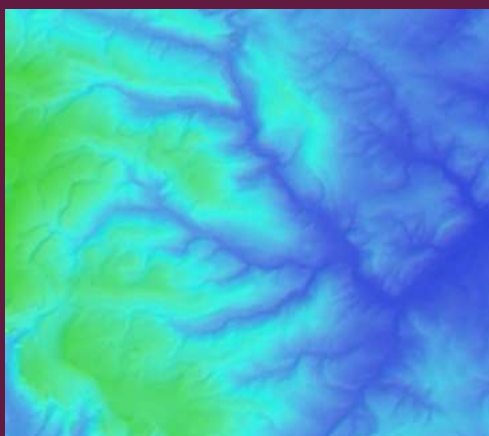


ANNUAL RESEARCH
REVIEW 2017-2018

Department of the Natural and Built Environment



Architecture
Construction
Environment
Geography
Housing
Planning
Real Estate
Surveying

CONTENTS

Introduction.....	1
DNBE Research Overview.....	2
Centre for Regional, Economic and Social Research	6
DNBE Research and Consultancy Projects.....	7
DNBE Publications (by Research Group).....	22
o Environment.....	22
o Planning, Housing and Neighbourhoods.....	29
o Space and Place.....	31
o Sustainable Design, Architecture and Construction Materials	39
Other Indicators of Esteem	41
Doctoral Research Programme.....	46
Staff-Student Research Projects	49
Sharing Our Research.....	52
Concluding Remarks.....	58

INTRODUCTION

Welcome to the annual review for the Department of the Natural and Built Environment at Sheffield Hallam University, for 2017-2018. Our department provides a home for academics and students who want to understand, design and shape our world. We bring together the disciplines of architecture; planning; housing; construction; real estate; surveying; geography; and the environment.



We also have a national and international reputation for our applied, industry-focused research. Our established partnerships with industry and the professional sectors promote the transfer of knowledge, and underpin teaching and learning across the department.

This annual review provides a summary of our research achievements during 2017-18. These include maintaining high level outputs and conference presentations, a flourishing doctoral research programme, book awards, invited national and international lectures, and new invitations to join prestigious organisations and professional bodies both regionally and internationally.

Professor Paul Stephenson (DNBE Head of Research)

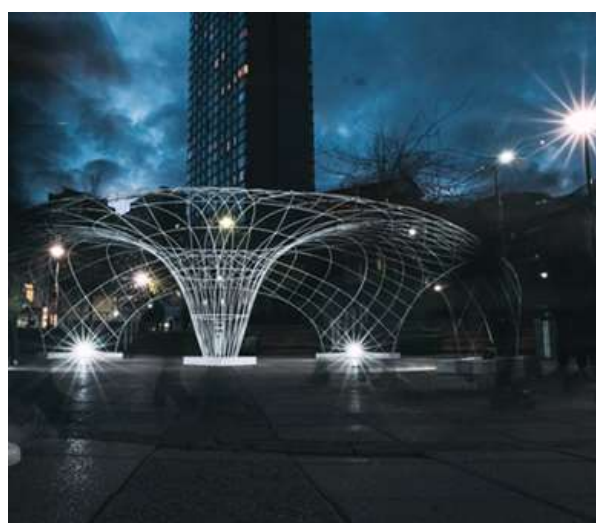


DNBE RESEARCH OVERVIEW

The Department of the Natural and Built Environment (DNBE) includes a diverse range of academic disciplines, but with one purpose - to contribute to making the world a better place. We aim to find practical solutions to real world problems. Our research and scholarship activities seek to understand the impact of social, environmental and economic changes on society, focusing on both local and global trends and challenges. Drawing on this understanding, we contribute to the better design and planning of spaces and places. We hope to benefit individuals, communities and society through social, economic and environmental improvement - sustainable development in its widest sense.

In collaboration with the Centre for Regional Economic and Social Research, our subject area (Architecture, Planning and Built Environment Unit of Assessment 16) was ranked first among 23 modern universities and eleventh of all UK universities in the Research Excellence Framework (REF) 2014 exercise. Over 80% of our research was assessed as "world leading" (4*) or "internationally excellent" (3*).

In order to support and extend our research activities, we focus our research through six informal research groups. These groups are working at the strategic and global level, through to local solutions to practical problems.



The DNBE six research groups are as follows:

- **Construction Materials** (led by Steve Hetherington)
- **Environment** (led by Dr Kevin Spence)
- **Housing and Neighbourhoods** (led by Dr Angela Maye-Banbury)
- **Planning** (led by Josie Wilson)
- **Space and Place** (led by Dr Luke Bennett)
- **Sustainable Design, Architecture and Construction** (led by Dr Gabriel Tang)

Each of these groups has a programme of research aims and activities, and each group supports staff to further develop and extend their own research and scholarship.

During 2017-18, we welcomed several new staff to the department. Dr Roy Woodhead has had a varied career in the construction and IT industries, and returned to academia and construction project management in the last year. His research interests combine large scale innovation with the Internet of Things, digital innovations and Participative Action Research to improve "Affordable homes in Smart Cities". He is also interested in organisational transformations and artificial intelligence.

Dr Louisa Cadman joined the human geography team and her research interests are in the geographies of health and wellbeing, along with theoretical work in the field of Foucauldian studies. Most recently, Lou has been looking **at the relationship between 'new spiritual practices' and health, focusing on the phenomena of mindfulness.**

Dr Andreea Serbescu's main interest is in the field of rehabilitation of concrete structures using innovative materials. She is particularly interested in limiting the impact of strengthening strategies on the natural environment whilst ensuring a safe and economic implementation. Her current key research interests include: the durability prediction of FRP-to-concrete bond; the enhanced

performance of bamboo as reinforcement in temporary concrete structures; and the use of FRP stitches for masonry/concrete crack control.

Dr Cristina Cerulli joins our architecture group. Cristina's main research interests are in community-led housing development models, shared models of living, and 'alternative' and creative forms of management and procurement. We are delighted that Cristina was also awarded a Readership this year, and will be developing further work with her contacts, including RCUK (EPSRC, AHRC), the EU, the Department of Health and the National Lottery.

During 2017-18, DNBE staff achieved some notable personal successes in relation to their research activities. In particular, we congratulate our colleagues Carolyn Gibbeson, on the award of her research doctorate from Newcastle University on her study "*After the Asylum: place, value and heritage in the redevelopment of historic former asylums*", and Gabriel Tang on his research doctorate awarded by the University of Edinburgh for his study on "*Resurface: The novel use of deployable and actively bent gridshells as reusable, reconfigurable and intuitive concrete shell formwork*".

The department continues to support the following members of staff to enable them to complete their research degrees:

		Topic
Sarah Dickinson	PhD	Work based learning in non-standard delivery courses, including the new Degree Apprenticeships
John Grant	PhD	Aquaponics: A food production method to help realise a domestic dwelling's environmental autonomy.
Anna Hawkins	PhD	Problematic consumption practices and change.
Andrew Jones	PhD	Influence of ice sheet bed morphology on ice flow in Greenland.
Paul King	PhD	Codifying and Fabricating an Invisible Architecture

Kaeren van Vliet	PhD	The design of the public private interface in contemporary residential development in Sheffield.
Frances Robertson	PhD	The future practice of Architectural Technology: informing practice and education.
Rob Stevens	PhD	Understanding the processes of policy agenda-setting for planning and economic development within city regions as locations of policy.
Jonathan Took	PhD	Sensory design in construction.
Josie Wilson	PhD	Active travel to school and the transition from primary to secondary school.

All DNBE staff are supported and encouraged to undertake research and scholarship activities, and all our staff have individual profiles, which can be viewed on-line at - www.shu.ac.uk/about-us/academic-departments/natural-and-built-environment/staff.

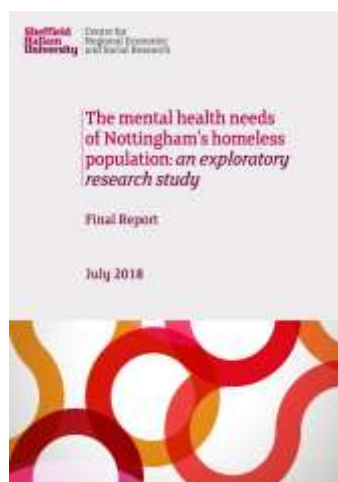
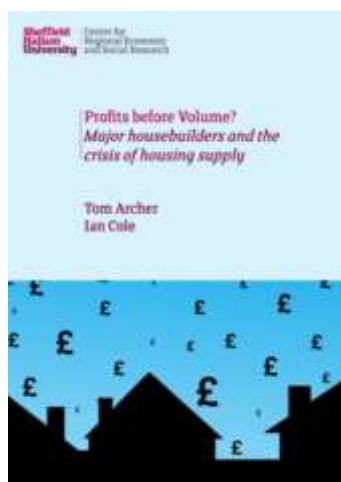


CENTRE FOR REGIONAL ECONOMIC AND SOCIAL RESEARCH

Our staff work closely with our associated research centre in the Faculty of Development and Society - the Centre for Regional Economic and Social Research (CRESR). As a leading UK policy research centre, CRESR seeks to understand the impact of social and economic disadvantage on places and people, and assess critically the policies and interventions targeted at these issues. CRESR clients include government departments and agencies, local authorities, charities and foundations, international organisations, and the private sector.

DNBE academics Professor Lynn Crowe, Dr Angela Maye-Banbury and Anna Hawkins have all worked on recent projects in partnership with CRESR colleagues. Recently, our Professor of Housing and Urban Planning, Barry Goodchild, has transferred to CRESR on a permanent basis as a Senior Research Fellow. Dr Cristina Cerulli is working with Dr Tom Archer on research around community-led housing and, more specifically, Community Land Trusts. We also undertake joint supervision of research students, as well as welcoming CRESR colleagues to contribute to our taught courses in applied research methods, evaluation and other subjects relevant to their research projects.

More information about the work of CRESR can be found on their web site - www4.shu.ac.uk/research/cresr/.



DNBE RESEARCH AND CONSULTANCY PROJECTS

DNBE research and scholarship activities seek to understand the impact of social, environmental and economic changes on society, and then to draw on this understanding to contribute to the better design and planning of spaces and places. Ultimately, this leads to the creation, management and maintenance of improved built and natural environments. An important focus of our work is to develop contract research in partnership with government agencies, private industry and non-governmental organisations, and to provide support to community groups.

Working with communities and non-governmental organisations to understand and improve local environments

- Professor Ian Rotherham is continuing a collaboration utilising citizen science with the British Ecological Society and the Peak District National Park Authority, focusing on landscape history and peatland management. Ian also supports various local community-led environmental initiatives such as the Sheffield Street Trees Campaign, and organisations such as the Woodland Trust, and the Arboricultural Association on national tree-related issues. Ian has also on-going collaborations with major organisations such as the RSPB, Re-wilding England, and the Woodland Trust on future landscapes.
- Dr Luke Bennett has been appointed as a **collaborator on the ‘Replacing Risk and Ruination: experimental approaches to access, design and engagement in transitional heritage sites’** research project (2017-2019) funded by The Carnegie Trust. The project is led by Professor Hayden Lorimer (geography – University of Glasgow) supported by Professor Ed Hollis (architecture & design – University of Edinburgh) and comprises an interdisciplinary study of the re-activation of the **St Peter’s Seminary modern ruins at Cardross near Glasgow**. The project will examine the interaction of stakeholders (cultural

industries practitioners, built environment professionals and local communities in the re-making of an iconic derelict site.

- Our Environment Research Group has developed new links with the Sheffield Lakeland Landscape Partnership (SLLP) this year. This is a new Heritage Lottery Fund project, working in partnership with Sheffield and Rotherham Wildlife Trust. Professors Lynn Crowe and Ian Rotherham worked with SHU's Outdoor Recreation Research Group to complete an "Access and Gateways Study", exploring existing visitor and community use in the area and potential for access improvements. Our recommendations have been integrated in to a further bid to the Heritage Lottery Fund for £2.8m funding for landscape and cultural projects in the area.
- We are also working with Sheffield and Rotherham Wildlife Trust on natural flood management (NFM). A staff-student research project, led by Dr Alexandra Savage and Dr Jon Bridge, is focusing on one of the Sheffield LLP candidate sites to establish a detailed site characterisation, sampling and instrumentation infrastructure. This will enable baseline monitoring of the site hydrology before, during and after interventions designed to achieve NFM benefits. This has the potential to be one of the longest and most detailed continuous datasets on a single site subject to NFM work and therefore of significant scientific value in the longer term.



- Dr Jon Bridge is also leading on plans to develop natural flood management projects incorporating expert knowledge from landowners and users in environmental modelling. Jon has completed a set of initial site walkover surveys and a consultancy project worth £3000 to produce a report on site priorities, feasibility and monitoring design for 6 locations across the Sheffield LLP area. This is anticipated, subject to final confirmation of the Heritage Lottery Funding, to lead to a £25K monitoring contract supporting the NFM work over the four-year Sheffield LLP period (2018-2022).
- Architect lecturer, Dr Julia Udall, has contributed to the development of a new web-based platform - <http://storiesofchange.ac.uk/> - with the Open University Geography Department. The project aims to share inspirational community initiatives and support lively public and political conversations about energy, by looking in a fresh way at its past, present and future. The project draws on history, literature, social and policy research and the arts to encourage a more imaginative approach to current and future energy choices.
- Julia has also been working with East Streets Art, a contemporary arts organisation working across the UK and EU, who seek to support artists to create work that brings lasting change to everyday lives. This partnership involves teaching, research and engaged practice, including developing a partnership on their Business, Environment, Engineering, Technology and Arts (BEETA) hub, which is currently being developed in Leeds. We envisage this being a long term and multi stranded partnership- which may include joint design research PhDs, teaching, and exhibitions, as well as experimental research with other members of the architecture department.

- Dr Cristina Cerulli, with Studio Polpo, the social enterprise architecture practice that she co-founded, is working with the Sheffield Community Land Trust, to facilitate the first Community Land Trust project in Sheffield, to provide permanently affordable housing and workspaces.
- Cristina and Julia have also been collaborating with Sheffield City Council and Ground Works to reprogram a disused Victorian school in Tinsley, closed down due to proximity to the M1. The Tingas Tinsley project, initiated and led by Studio Polpo (where Christina and Julia are both directors), is repurposing the building into a sustainable community hub, combining one off and regular events with long term use - from citizen science, to archaeology workshops, henna nights and celebrations, a hydroponics farm, and office space for charities, including Ground Works. An M.Arch. Design Studio, proposed by Cristina, Julia and Dr Sam Vardy, is also based at Tingas Tinsley.
- Dr Roy Woodhead helped to develop and host a programme of 'Sheffield Smart City Hackathons' during 2018. These monthly events, run in partnership with the Things Network Sheffield and Sheffield Hardware Hackers and Makers (at their Portland Works) are intended to bring the open source culture in to the act of building a Smart City in Sheffield.



- Paul King is working with a SEN school in Doncaster to develop a 'design to build' teaching space and growing space on the school site. Employing digital fabrication techniques from his PhD research, the building will be constructed collaboratively over the course of two weeks with SHU Architecture students and pupils from the SEN school. Construction is planned to begin in spring 2019 and will form the technology component in the curriculum for final year Architecture design studio.
- Dr Angela Maye-Banbury completed eight oral housing histories of Irish men and women who emigrated to America in the 1950s in the last year.. Angela's expertise in oral history has informed many of her research outputs. She has also mentored colleagues inside and outside SHU on using oral history for housing related social science research.

Supporting Government Agencies and Local Authorities

- Professor Liz Laycock's core research interests are in frost and salt degradation of materials and conservation of deteriorating geomaterial. Past contract work has focused on the specification of replacement stone for Truro Cathedral, a study into the feasibility of production of stone roofing slates and proprietary frost testing of historic masonry for reuse as engineering fill. Recent work has focused on the evaluation the repair material for the Palace of Westminster (the Houses of Parliament) and evaluating flooding of masonry and working to ultimately improving post flood remediation of historic properties.
- Professor Liz Laycock and Steve Hetherington are undertaking initial work which will inform a larger scale testing to determine the behaviour of traditional masonry walls exposed to flood water. This will improve understanding of post-flood remediation of historic buildings. Gravimetric monitoring will be used to in empirical testing in the laboratory to monitor

drying behaviour. Later iterations will use non-destructive testing to evaluate the accuracy of these techniques. Methods of cleaning or post flood remediation may also be applied to monitor changes to the surface and total moisture condition.

- Liz is also working with Dr Andreea Serbescu and Historic England, looking at stone degradation and the performance of replacement stone for the Temple of Concord at Audley End in Cambridgeshire and on use of a variety of non-destructive test methods to determine in-situ characteristics of the masonry materials currently used.
- Professor Lynn Crowe continues her work advising Natural England's Science Advisory Committee, with a particular focus on the Government's new 25 Year Environment Plan. Lynn has also been invited to become the Countryside Management Association's academic advisor. The CMA is the professional body for officers working in the countryside and urban green space sectors, in both local authorities and non-governmental organisations. During the past year, there has been a particular focus on the continuing discussions around funding for local authority parks and urban green spaces, with Lynn providing advice to the CMA on their responses to government consultations and in national briefings.
- Expanding on the work mentioned previously with the Sheffield Lakelands Landscape project, Dr Jon Bridge is now also a member of Sheffield City Council's Natural Flood Management Steering Group, working to integrate NFM with the wider Sheffield Flood Protection Strategy.
- Professor Ian Rotherham has provided advice to local authorities such as Kent County Council on street tree management, as well as local councillors and MPs, and North Lincolnshire County Council on potential rewilding projects.

- Dr Roy Woodhead has been working with Sheffield City Council to help develop their Assistive Technology Strategy for Adult Services - reporting to their Primary Leadership Team. Assistive technology is used to support adults with a wide range of health, social and learning needs in their own homes, and can enhance independence at home in a less intrusive way than other support services.
- Kaeren van Vliet is a member of the Sheffield City Council Sustainable Urban Design Panel and their Conservation Advisory Group, where she provides both landscape architecture and urban design expertise.

Partnerships with industry and our professional sectors

- Simon Kincaid is continuing to undertake research into fire safety for historic buildings, and emergency planning for fire. He has involved developed links with national bodies, including fire and rescue services (particularly Cheshire and Derbyshire), National Trust and Historic England; as well as maintaining links with Chatsworth, Historic Royal Palaces and Oxford University. Simon attended the Historic England Salvage and Disaster Recovery Course as an observer, the North Wales Emergency Planning Group and has visited the Palace of Westminster as a guest of the National Fire Chiefs Council NW Heritage Protection Group to view fire safety arrangements.



- Dr Kevin Spence has developed an industry funded Enhanced Mentored Internship (EMI) with Network Rail. This project focuses on the design of standards for both on and off track drainage. The project will have been running for one to two years from October 2017.
- Kevin is also working with Steve Hetherington investigating mortar sequencing at the archaeological site "Blessed Mary of the Peak", Castleton in the Peak District.
- Professor Liz Laycock and Steve Hetherington have been working since 2015 to testing the durability of replacement stone for the Palace of Westminster. The project has tested a selection of Magnesian Limestone blocks from a quarry of a similar lithotype to the original with the aim of determining the suitability for use in the extensive repair project. This work will be continued to study the possible deleterious action of salts on the replacement stone used.
- Architect, Frances Robertson has received funding and support for a Sheffield Innovation Project to create an event for local SME companies to take part in a collaborative BIM (Building Information Modelling) workshop. The three day workshop took place in October 2017. The project has been arranged through SHU's Research Innovation Office.



- Dr Barry Haynes is working on a three year Knowledge Transfer Project with Mitie (a leading facilities management services provider) to develop a quantifiable relationship between the built environment and its impact on user comfort, productivity and well-being. Arising from this work, Barry has developed a collaborative research project with the University of Liverpool and Mitie to evaluate the impact that open plan office **environments have on office occupants' speech privacy**, productivity and welling. The study includes on-site physical acoustic measurements and questionnaire survey to establish both objective and subjective measures.
- Dr Rebecca Sharpe and Dr Kevin Spence have developed a postgraduate research project in partnership with United Utilities entitled: *'The effects of rainfall and land use on river water quality in NW England'*. Rebecca has also been working with United Utilities and the Environment Agency to develop a **second project** *'Identifying housing stock at most risk from misconnections'*.



Interdisciplinary Research

We also collaborate with other researchers in different faculties across SHU on a variety of interdisciplinary projects:

- The cross-University **SHU Space and Place Group** is run from within DNBE by Dr Luke Bennett. This broad group operates on a cross-SHU basis to provoke and enable innovative collaborations across the institution. In 2017-18 the theme of 'investigating infrastructure' was chosen as the focal point for the group's activities. An evening panel event with four presenters was held in March and followed in June with a day-long conference in which speakers from across SHU (including DNBE), plus academics from Manchester Metropolitan University, University of Manchester and University of the Arts, all contributed showing how the fine arts, social sciences and humanities each have their productive role to play in revealing infrastructure and our socio-technical dependencies embodied in landscape and environment.
- Professor Lynn Crowe continues to work on cross departmental research with both the **SHU Outdoor Recreation Research Group**, and the **Nature Connections Research Group**. During 2017, Lynn also worked with colleagues in CRESR and the SHU departments of Law and Psychology, to explore issues around changes in the governance and management of public parks in response to local authority funding cuts.
- Dr Cristina Cerulli has been working with Rory Ridley-Duff, Professor of Cooperative Social Entrepreneurship at Sheffield Business School, exploring applications of the Fair Shares cooperative model to built environment practice and education.

International research collaboration

Of course, much of our research work has an international dimension, and we have worked closely with institutions and agencies from around the world over the last year.

- Professor Ian Rotherham is continuing his work with international bodies and research colleagues across Europe and globally; including chairing major research committees and networks for the International Union of Forest Research Organisations, the European Society for Environmental History, UNESCO, and the British Ecological Society.
- Dr Rob Storrar has received funding through the INTERACT project (part of the EU Horizon 2020) to conduct research on a glacier in Svalbard (an island in the Norwegian High Arctic). The project is in collaboration with colleagues from the University of Sheffield, Queens University Belfast and Adam Mickiewicz University, Poland, and aims to understand the meltwater drainage system of a glacier using Ground Penetrating Radar. Following on from this work, Rob has been awarded a British Society for Geomorphology Early Career Researcher Grant of £3,996 for the project *High spatial and temporal resolution UAV-based measurement of glacier 'micro-velocity' and surface elevation changes as a tool for understanding the link between glacier hydrology and velocity*. This project is a collaboration between SHU and the Adam Mickiewicz University, Poland.



- Dr Luke Bennett has co-ordinated and edited a collection of 14 essays written by an international, interdisciplinary array of academic commentators looking at the fate of remnant structures around the world (Albania, France, Germany, the Netherlands, Norway, Taiwan, USA and the UK). The resulting collection, *In the Ruins of the Cold War Bunker: Affect, Materiality and Meaning Making*, was published in June 2017.
- Following on from the above work, Luke hosted a 14 paper set of sessions on '*Utility after abandonment*' at the Royal Geographical Society annual conference in Cardiff in August 2018. The sessions features presentations exploring the opportunities and challenges of re-appropriating modern ruins to new uses around the world, from the Arctic to South Africa, Ghana to the Netherlands, Sicily to China, Berlin to Glasgow, Milan and Barcelona. The proceedings will result in an edited collection, showing the ruin reanimation as a global phenomenon. Luke was also the invited keynote presentation for the Institute of Australian Geographers – Legal Geography Study Group (at the University of Canberra) in March 2018. The title of Luke's talk was '*Law in Ruins: searching for law in empty spaces*'.
- Dr Roy Woodhead is developing a Knowledge Transfer Partnership with a Chinese Reliability Engineering firm based in China. The project is around Artificial Intelligence to predict equipment failures based on scant information. As well as his proposed KTP, Roy was also invited to be the key note speaker at an International Sustainability conference in Jakarta. Roy expects collaborative research to follow, working in partnership with the University of Indonesia.
- Dr Julia Udall and Dr Cristina Cerulli are working with a European network investigating community and solidarity economies. In the UK our partner is Tinsley Tingas, an

experimental managed workspace, which will support the development of skills and enterprise primarily within the neighbourhood, but also aims to forge links across the city, region and Europe. Julia has worked with an Italian partner, Brave New Alps, who are setting up a community economies resource centre in Rovereto. Julia's work employs design research methods to explore the ideas and tactics that could support refugees and local young people within their neighbourhood.

- Cristina has also led, in collaboration with Dr Julia Udall and Dr Sam Vardy, a pan-European consortium bidding for a project around "Infrastructures of Support: Inclusionary Spatial Practices for Integrated yet Diverse Cultural Ecologies in European Peri-urban Areas".
- Cristina is working with the British Council to establish the first Venice Fellowship at Sheffield Hallam University. The Fellowship supports one student on a one month residency in Venice, where they combine work on stewarding the British Pavilion and the Architecture Biennale with an individual research project. Cristina is also working with Dr Salima Amrane, from the Institute of Architecture and Urbanism, University of Batna, Algeria, to develop work around contemporary issues in the Algerian city.
- Dr Jon Bridge is developing research collaborations and research-led teaching exchanges with Mutah University in Karak, Jordan, following on from previous supervision of a research student now an academic at that institution. A bid has been submitted to the British Council Newton Fund to run an international workshop on sustainable catchment management in Jordan, presenting an excellent opportunity to link expertise in catchment management from the UK with high priority sustainable development objectives in one of the most water-stressed parts of the world. A research visit is planned for April

2019 with further journal outputs and research funding bids in planning.

- Dr Kevin Spence has led a collaboration with the Australian Universities Network and several UK institutions which has resulted in a two book chapters (currently in review) co-authored by Dr Jon Bridge on urban stormwater and flood management in UK and Australian contexts; and by Professors Lynn Crowe and Ian Rotherham on the wider ecosystem services provided by natural flood management.
- Dr Gabriel Tang has undertaken a series of academic visits in China and Japan, sharing his expertise in sustainable construction. In Guizhou, China he took part in a study visit hosted by MUME Architects focusing on vernacular timber structures of the Dong Tribe. In Japan, Gabriel conducted a visual and architectural survey of concrete shells at various locations throughout Japan including the Kakamigahara Crematorium (Gifu Prefecture) , Teshima Art Shells (Kawaga Prefecture) and in Fukuoka Prefecture (Grin Grin Park Concrete Shell, Uchino Community Centre and Naiju Community Centre). Whilst in Tokyo, he also met with the Pritzker Prize winning architect Toyo Ito to talk about his new concrete shell projects.



- Dr Richard White was invited to speak at the Università di Milano-Bicocca in Italy on anarchist geographies. Richard was also co-organiser of the 1st International Conference of Anarchist Geographies and Geographers (ICAGG) held in Reggio Emilia, Italy (September 2017). Elsewhere, he has co-organised three conferences on Geographies of Anarchist Praxes (New Orleans, AAG), all of which fostered new international academic and activist collaborative spaces.
- Dr Angela Maye-Banbury is Visiting Professor of Applied Research Ethics at the Centre for Applied Research Ethics University of Linköping, Sweden. Angela led in the hosting of a week long visit involving Professor Göran Collste, Director of the Centre for Applied Research Ethics at the University of Linköping and Kicki Collste, architect.
- We also work pro-actively with our research colleagues in European institutions through EU funded programmes such as Erasmus. Dr Mike Heath has developed a link with the University of Chemistry and Technology, in the Czech Republic, supporting PhD students in their work on contaminated land remediation. Mike is also assisting colleagues at a geotechnical company, Teramed, to create a Eureka proposal to develop an *in situ* tool for measuring ground moisture in relation to slope stability. Fieldwork is planned near Prague and in the Peak District, in partnership with Mike's Czech colleagues and Teramed. Eureka is an EU funded network for industrial research and development.

DNBE PUBLICATIONS

Academics in the Department of the Natural and Built Environment have published a wide range of books, journal articles and reports during 2017-18, as well as presenting at many conferences around the world. The following list is organised under our research group themes, and the DNBE authors are highlighted in each reference.

Environment Research Group

Books and Book Chapters

- **Kirca, S., Çolak, A., Günay, T., & Rotherham, I.D.** (2017) *Country Chapter: Turkey*. In: Joosten, H., Tanneberger, F., & Moen, A. (eds) *Mires and peatlands of Europe: Status, distribution and conservation*. Schweitzerbart Science Publishers, Stuttgart, 684 - 690.



- **Rotherham, I.D.** (2017) *Recombinant Ecology – a hybrid future?* Springer Briefs, Springer, Dordrecht.
- **Rotherham I.D., & Handley, C.** (eds) (2017) *What did Capability Brown do for Ecology? The legacy for biodiversity, landscapes, and nature conservation*. Wildtrack Publishing, Sheffield.
- **Rotherham I.D.** (2017) *Shadow Woods: A Search for Lost Landscapes*. Wildtrack Publishing, Sheffield.
- **Rotherham, I.D. & Handley, C.** (eds) (2017) *The Industrial Legacy & Landscapes of Sheffield and South Yorkshire*. Wildtrack Publishing, Sheffield.
- **Rotherham, I.D.** (2017) *York's Military Legacy*. Pen & Sword, Barnsley.

- Rotherham, I.D. (2018) *Sheffield in 50 Buildings*. Amberley Publishing, Stroud.
- Rotherham, I.D. et al. (eds) (2018) *Ecosystem and Habitat Management: Research, Policy, Practice*. *Aspects of Applied Biology*, 139.
- Rotherham, I.D. & Handley, C. (2018) *Historic England: Nottingham: Unique Images from the Archives of Historic England (Historic England Series)*. Amberley Publishing, Stroud.
- Rotherham, I.D. (2018) *Steel City: An Illustrated History of Sheffield's Industry*. Amberley Publishing, Stroud.
- Evans, D.J.A., Guðmundsson, S. & Storrar, R.D. (2018), *Glacial landsystem development at Breiðamerkurjökull*. In Evans, D.J.A. (ed.) *Glacial Landsystems of Southeast Iceland, Quaternary applications*. London: Quaternary Research Association.

Journal Articles and Reports

- Babakhani, P., Bridge, J.W., et al. (2017), *Parameterization and prediction of nanoparticle transport in porous media: A reanalysis using artificial neural network*, *Water Resources Research*, 53.
- Bababkhani, P., Bridge, J.W., Doong, R. & Phenrat, T. (2017), *Continuum-based models and concepts for the transport of nanoparticles in saturated porous media: A state-of-the-science review*. *Advances in Colloid and Interface Science*, 246, 75-104.
- Babakhani, P., Bridge, J.W., Phenrat, T., Doong, R.-a., and Whittle, K. (2018). *Aggregation and sedimentation of shattered graphene oxide nanoparticles (SGO) in dynamic environments: a solid-body rotational approach*. *Environ. Sci. Nano*. DOI: 10.1039/C8EN00443A
- Babakhani, P., Doong, R.-a., & Bridge, J.W. (2018). *The significance of early and late stages of coupled aggregation and sedimentation in the fate of nanoparticles: measurement and modelling*. *Environ. Sci. Technol*. DOI: 10.1021/acs.est.7b05236.

- Biddulph, M., Collins, A.L., Foster, I.D.L., & Holmes, N. (2017), *The scale problem in tackling diffuse water pollution from agriculture: insights from the Avon Demonstration Test Catchment programme in England*. *River Research and Applications*. 33: 1527-1538.
- Crowe, L. (2018), *Effectively Managing Parks and Green Spaces*, *Ranger - Journal of the Countryside Management Association - Issue 119, Summer 2018*.
- Emery D. & Leckie, S. (2017) *Exploring the Role of Urban Greenspace (UGS) in the Development of a Concept Termed the 'Urban Idyll'*, *Sheffield Hallam University Natural Environment Research Transactions, Volume 3 (1)*.
- Evans, J. Foster, I., Boardman, J. & Holmes, N. (2017), *SMART – Sediment Mitigation Actions for the River Rother, UK*. *Proceedings of the International Association of Hydrological Sciences*, 375, 35-39.
- Fenn, R.W. & Laycock, E. (2017), *A socio-economic investigation of pre-harvest and post-harvest crop loss between producers and retailers in Fenland*, *Sheffield Hallam University Natural Environment Research Transactions, Volume 3 (1)*.
- Hammond, C.A. & Escott, K. (2018), *Resident perceptions of the function, roles and value of peri-urban green infrastructure in contemporary residential development: A case study of Kingswood: Hull*, *People, Place and Policy Special Issue*.
- Holmes, N. (2017), *Engaging with assessment: increasing student engagement through continuous assessment*. *Active Learning in Higher Education*.
- Holmes, N. (2018), *Mapping glacial landscapes in the Indian Himalaya*. *Geography Review*. 31: 2-5
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- Rotherham, I.D., Çolak, A., & Kirca, S. (2017) *Ancient common boxwood in Turkey – a history of exploitation*. *TOPARIUS*, 21, (Summer 2017), 54 -56.
- Rotherham, I.D. (2017) *The Industrial transformation of South Yorkshire landscapes*. *Landscape Archaeology & Ecology Special Series*, No. 4, 3 - 40.

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- **Rotherham I.D.** (2017), *Champions of grassroots conservation: A future for local authority countryside services?* *ECOS*, 38 (1).
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Conferences and Presentations

- Bennett, E., **Crowe, L.**, Dickinson, J. & Freeman, E. (2017) *Diminishing equality of greenspace provision? National discourses and local lived realities in a northern English City*, People, Place and Policy Conference ‘**Tackling Social & Spatial Resource Inequality**’, Sheffield Hallam.
- Butcher, F.E.G., Balme, M.R., Gallagher, C., Arnold, N.S., **Storrar, R.D.**, Conway, S.J., Lewis, S.R. & Hagerman, A. (2017) *Environments of recent wet-based mid-latitude glaciation on Mars*. Oral presentation at the British Planetary Science Congress, Glasgow, UK.
- **Crowe, L.** (2017), *New ways of funding protected areas - setting the scene*, Europarc Atlantic Isles workshop, 16 August, 2017.
- **Hammond, C.A.** & **Crowe, L.** (2017) *Major Development in National Parks*, the UK Ireland Planning Research Conference: Queen's University, Belfast, September 2017.



- **Hammond, C.A. & Crowe, L.** (2018) *Examining tensions between protecting the landscape and local economic development in National Parks, UK and Ireland* Planning Research Conference: Sheffield, September 2018.
- **Rotherham I.D.** (2017), *The Role of Forest History & Cultural Heritage in Re-constructing Nature*, workshop at the IUFRO 125th Anniversary Congress 2017 Freiburg, Germany.
- **Rotherham I.D.** (2018), *A new look at ancient woods*, Worcestershire Wildlife Trust, county recorders conference - Lower Smite Farm, Hindlip, Worcester, March 2018.
- **Rotherham I.D.** (2018) *Rewilding in a Changing Europe: Opportunities, Threats and Shifting Geographies of Land-Use*, Bangor University, January 2018.
- **Rotherham I.D.** (2018), Invited speaker: BogFest, Edale, September 2018.
- **Rotherham I.D.** (2018), *Woodland Management: past, present and future - heritage, practice and sustainability*, University of Bangor, March 2018.
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Planning, Housing and Neighbourhoods Research Groups

Books and Book Chapters

- **Goodchild, B.** (2017) *Markets, Politics and the Environment: an introduction to planning theory*. New York: Routledge.
- Gullino, S., **Cerulli, C.** et al. (2018) *Citizen-led micro-regeneration and the negotiation of new urban public spaces: A comparative case-study of civic crowdfunding in London*, in Fisker, J. K. et al. (eds) *The Production of Alternative Urban Spaces: An International Dialogue*. 1 edition. New York: Routledge



Journal Articles and Reports

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- **Goodchild, B. Ambrose, A. & Maye-Banbury, A.** (2017), *Storytelling as oral history: revealing the changing experience of home heating in England*, *Journal of Energy Research and Social Science* 31: 137 - 144.
- **Goodchild, B** & Eadson, W. (2017), *Looking for the Green in the Green Paper: working towards an urban industrial strategy*. *People, Place and Policy* (online) Early View.
- **Maye-Banbury, A.** (2018), *Strangers in the shadows: exploring life in the Irish boarding houses in Leicester in post war Britain as heterotopic spaces*. *Irish Geography*, May 2018.
- Reeve, K., **Maye-Banbury, A.** et al (2018), *The mental health needs of Nottingham's homeless population: an exploratory*

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Conferences and Presentations

- **Cerulli, C.** (2018), *Community Led Approaches to Housing: Towards a Relational Understanding of Practices and Policies of Contemporary Non-speculative Housing in the UK*, in Professionalism, Policy and Practice: Exploring the Relationship between Theory and Practice in Housing Studies. HSA Conference 2018, Sheffield.
- Gullino, S., **Cerulli, C.** et al. (2018), *Citizen-led, innovative practices in envisioning, designing and shaping the future of European Cities: stories of Civic Crowdfunding in London and Milano*, in. **'Making Space for Hope'** - AESOP (Association of European Schools of Planning) Annual Congress, Gothenburg.
- **Cerulli, C.** (2018), *A 3 point manifesto for a more equal urban future ...understand the rules of the game, chew them up and propose new rules*. People, Place and Policy 2018: Alternative urban futures for tackling social and spatial inequalities, Sheffield, UK, 27 June.
- Gullino, S., **Cerulli, C.** et al (2018), *Citizen-led micro-regeneration case studies of Civic Crowdfunding in London and Milan*, in Alternative urban futures for tackling social and spatial inequalities. People, Place and Policy 2018, Sheffield, UK.
- **Cerulli, C.** & **Vardy, S.** (2018), *Designing Infrastructures of Autonomy: Reflections on Architectures for More Just Cities*, in People, Place and Policy 2018: Alternative urban futures for tackling social and spatial inequalities, Sheffield, UK.
- **Cerulli, C.** (2018), *Addressing socio-economic access and inclusivity in my practice*, in Inclusive Collaborative Housing Futures: towards an international agenda.
- **Cerulli, C.** (2017), *Sheffield Community Land Trust: The story so far and how to get involved*, Sheffield Housing Conversations, Union St Co-Working, Sheffield, 1 November 2018.

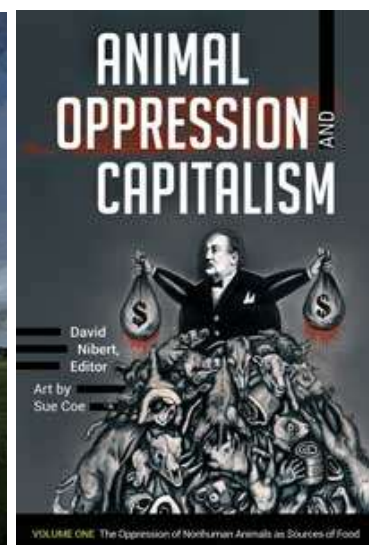
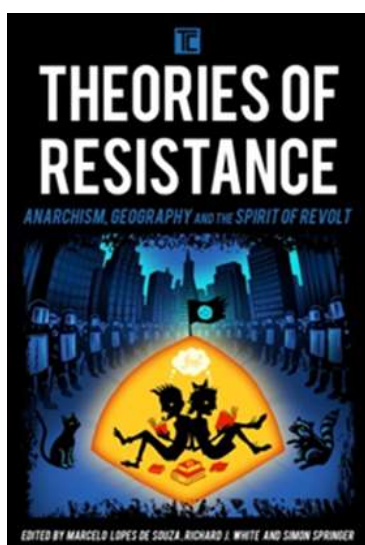
- **Maye-Banbury, A.** & McNally, M. (2017), *Multigenerational living in England: challenges and opportunities*, European Network of Housing Researchers; Tirana, 2 Sept 2017.
- **Maye-Banbury, A.** (2018), *Common Ground: A Critical Review of Reciprocity in English Multigenerational Home*, at the University of Uppsala in Sweden, June 2018.
- **Maye-Banbury, A.** & McNally, M. (2018) *Raising the Roof: Aspirations, Motives and Challenges Associated with Multigenerational Living in the English Housing Context*, presentation to Housing Studies Association Conference, Sheffield 12 April 2018.
- **Maye-Banbury, A.** & Maye-Banbury, S. (2018), *The Soul Of the Machine*, keynote address at the Momowo Symposium 2018 'Women, Creativity and Modernism', held at Torino Polytechnico, Italy, June 2018.
- **Wilson J** (2017), *The Future of Sustainable Transport: Active Participation and the School Commute: A review of the literature and developing the research theme*, Modeshift Convention, Sheffield, 9th November, 2017.

Space and Place Research Group

Books and Book Chapters

- **Bassi, C.** (2017), *On Identity Politics, Ressentiment, and the Evacuation of Human Emancipation*, in Nocella II, A. J. (ed.) *Fighting Academic Repression*, Peter Lang Publishing.
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- **Bennett, L.** (2017), (ed.) *In the Ruins of the Cold War Bunker: Affect, Materiality & Meaning Making*. Rowman & Littlefield International.
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 - Lea, J., Philo, C. & **Cadman, L.** (2018), *The small stuff of barely spiritual practices*, in Bartolini, N., Mackian, S and Pile, S (eds.) *Spaces of Spirituality*. London: Routledge Research in Culture, Space and Identity series.
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 - **White, R.J.** (2017), *Rising to the challenge of capitalism and the commodification of animals: post-capitalism, anarchist economies and vegan praxis*, in D. Nibert (eds) *Animal Oppression and Capitalism*. Praeger, Connecticut.



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- **White, R.J.** (2017), *Radically reassessing "the economic" at a time of crisis: recognising and valuing the diverse economies of work and organisation in society*. *The Age of Perplexity: Reassessing the World We Knew*, BBVA. <https://www.bbvaopenmind.com/en/book/the-age-of-perplexity/>
- **White, R.J.** & Williams CC (2017), *Crisis, Capitalism and the anarcho-geographies of community self-help*. In A. Ince & S.M. Hall (eds) *Sharing Economies in Times of Crisis: Practices, Politics and Possibilities*, Routledge, London.
- **White, R.J.** & Williams C.C. (2017), *Hidden in plain sight: recognising and valuing non-commodified spaces of work and organisation in a "capitalist" society*. In A. Ince and S.M. Hall (ed) *Sharing, Gifting and Reciprocity: Everyday Moral Economies and Politics of Crisis*, Routledge, London.
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- **White, R.J.** & Cudworth, E. (2018), *Bringing down the Animal Abuse Industry by Any Means Necessary: state-corporate-media alliance, the fragility of pro-meat propaganda and the fear of counter cultural intervention*. In A.N. Nocella and K. Socha (ed) *Radical Animal Studies*. Rowman & Littlefield.
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- **White, R.J.** & Williams C.C. (2018), *For a world dominated more and more by household and hidden economies: radical implications for management and organisation*. In M. Parker. T. Swann & K. Stoborod (ed) *Management and Anarchism*. Routledge: London.
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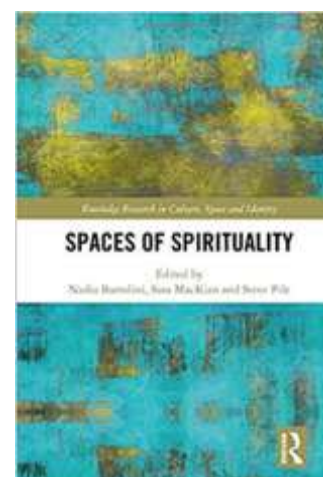
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- **Kincaid, S.** (2018) *The Upgrading of Fire Safety in Historic Buildings*, *The Historic Environment: Policy & Practice*, 9:1, 3-20
- Marum, G. & **Patterson, A.** (2017), *How the transport infrastructure of Milton Keynes affects the way people travel*. *Natural Environment Research Transactions* 3 (1) pp56-69.
- Sidaway J. & **White, R.J.** (2017), *Introduction: The Anarchist Roots of Geography: Toward Spatial Emancipation*, *The AAG Review of Books*. Volume 5, Issue 4. 281-296.
- Sidaway J.D., **White, R.J.**, Barrera G., Ferretti F., Crane N.J., Long S., Knopp L., Mott C., Rouhani F., Smith J.M., and Springer, S.

(2017), *Review of The Anarchist Roots of Geography: Toward Spatial Emancipation*, AAG Review of Books Vol 4, Issue 5 (4).

- **White R.J.**, Rollo T., Pickerill, J., Mullenite, J. Mason, K., Ferretti, F. & Araujo, E. (2017), *Beyond Electoralism: Reflections on Anarchy, Populism, and the Crisis of Electoral Politics*, ACME: An International Journal for Critical Geographies.
- **White, R.J.** / ACME Resistance. (2018), *Geographers Against Trump*. ACME: An International Journal for Critical Geographies 17 (1), 1-16.
- **White, R.J.**, Rollo T., Pickerill, J., Mullenite, J. Mason, K., Ferretti, F. & Araujo, E. (2017), *Beyond Electoralism: Reflections on Anarchy, Populism, and the Crisis of Electoral Politics*, ACME: An International Journal for Critical Geographies.

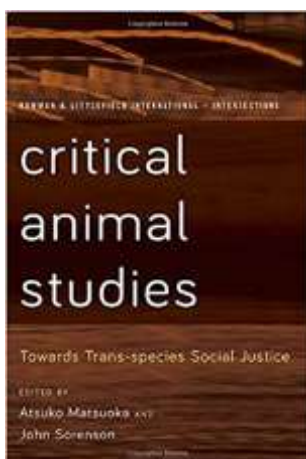
Conferences and Presentations

- **Bennett, L.** (2017), *What do we really want from bunkers?* Royal Geographical Society Annual Conference, Sept. 2017.
- **Bennett, L.** (2018), *Law in Ruins: searching for law in empty spaces*. Keynote presentation for the Institute of Australian Geographers – Legal Geography Study Group (at University of Canberra), March 2018.
- **Bennett, L.** (2018), *Grubbing out the Führerbunker: Ruination, demolition and Berlin's difficult subterranean heritage*. 'Difficult Heritage' conference held in York. April 2018.



- **Bennett, L.** (2018), *Back to the basement: the rehabilitation of subterranean dwelling in the UK*. People, Place & Policy conference, Sheffield, June 2018.
- **Bennett, L.** (2018), *What really haunts the modern ruin?* Royal Geographical Society Annual International Conference, Cardiff, August 2018.
- **Bennett, L.** (2018), *On hearing the roar of war still trapped inside: the reverberation of wartime trauma, and of the bunker, in Paul Virilio's analysis of Pure War and Hyperterrorism*. Royal Geographical Society Annual International Conference, Cardiff, August 2018.
- **Desforges, L., Norton, A. & Wall, K.** (2018), *Keys to Success in session on 'ACHIEVE Projects in Action', Sheffield Hallam University Learning Teaching and Assessment Conference*, 10-11 July 2018.
- **Gibbeson, C.** (2018), *Memorialising the afterlives of asylums: reuse, renovation and remembrance*, Queen Mary University, London, Workshop, 5 July 2018
- **Gibbeson, C.** (2018), *Architectural appreciation or pastiche? The changing role of asylum architecture through time*, paper presented at the International Conference of Historical Geographers, Warsaw, Poland, 19 July 2018.
- **Gibbeson, C. & Ambrose, A.** (2018), *High Rise as Visual Cue of Stigma: Can Demolition Transform the Reputation of High Rise Estates*, Royal Geographical Society annual conference in Cardiff, 30 August 2018.
- **Jobling, A.** (2018), *Resistance and adaptation to expansion of the agribusiness frontier from within a Peruvian Coastal Peasant Community*, Congress of the Latin American Studies Association, May 2018, Barcelona, Spain.
- **Jobling, A.** (2018), *The expansion of the agribusiness frontier and new spaces of capitalism on the Peruvian coast*, World-Ecology Research Network Conference, August 2018, Helsinki, Finland.

- **Patterson, A.** (2017), *Sidelining Sustainable Development: structural constraints on the implementation of local sustainable development policies in the UK*, International Geographical Union Commission on Geography of Governance conference, 19th October, University of Salento, Lecce, Italy.
- **Patterson, A.** (2017), *Local Government Restructuring: designing a research project*, presented at the Research Design Workshop, 28th September, York St John University.
- **Patterson, A.** (2017) *Policy priorities for the water market in England and next steps for PR19*, Westminster Energy, Environment & Transport Forum keynote seminar, 13th July, London.
- **van Vliet K. L.** (2017) *Planning and Design since the NPPF 'Indivisible or Invisible'*, RTPI Yorkshire conference series. 'What now for the NPPF'? 6th December 2017
- **van Vliet, K.L.** (2018) *Negotiating the interface*. People Policy and Place Conference. Sheffield. 27th June 2018.
- **van Vliet, K.L., Hammond C. & Appiah G** (2018) *Resident Perceptions of Green Infrastructure in residential peri-urban development: A case study of Kingswood urban extension Hull: The UK and Ireland Planning Research Conference: Sheffield 4th -6th September 2018.*
- Véron, O. & **White R.J.** (2018), *Anarchism, Feminism and Veganism: A Convergence of Struggles*. Association of American Geographers (AAG) Conference, New Orleans, April 2018 .



- **White R.J.** (2017), *21st Century Anarchist Geographies and the Purity of Rebellion*. International Conference of Anarchist Geographies and Geographers (ICAGG) Reggio Emilia, Italy, Sept. 2017.
- **White R.J.** (2017), *56 billion+ farmed animals killed every year: the limits of "go" vegan" and the need for a critical vegan praxis*. Sheffield Hallam Students Union Vegan and Vegetarian Society Guest Speaker. Sheffield Hallam University.
- **White R.J.** (2017), *For a pro- intersectional vegan revolution*. Sheffield University Students' Union Vegan Festival. Guest Speaker. Sheffield University.
- **White R.J.** (2018), *The Need for Critical Animal Geographies: some thoughts and reflections*, Animal Geographies/ Animal Spaces: New Research Directions, Università di Milano-Bicocca, Milan. May 2018.
- **White R.J.** (2018), *The informal basis of alternative economies: a focus on community self-help in the UK*. British Academy conference on Innovative informality: business, society and the sustainability of the informal economy. University of London, UK. March 2018.
- **White R.J.** (2018), *The Need for Critical Animal Geographies: some thoughts and reflections*, Animal Geographies/ Animal Spaces: New Research Directions, Università di Milano-Bicocca, Milan. May 2018.
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- **White R.J.** & Véron, O. (2018), *Toward Anarcha-feminism and Veganarchism*. Vegan Geographies and The End of Anthroparchy (I) Association of American Geographers (AAG) , New Orleans, USA. April 2018.

Sustainable Design, Architecture and Construction Materials Research Groups

Books and Book Chapters

- **Haynes, B.P.**, Nunnington, N. & Eccles, T. (2017), *Corporate real estate asset management: Strategy and Implementation*. 2nd Edition. Oxford, Routledge
- Tyszczyk, R.T., Smith, J., Smith, B., **Udall, J.**, Llewelyn, D., & Rohse, M. (2017) (Eds.) *Energetic - Stories of Change*, published by the AHRC under the Connected Communities programme.



Journal Articles and Reports

- **Haynes, B.P.**, Suckley, L. & Nunnington, N (2017), *Workplace Productivity and office type: An evaluation of office occupier based on age and gender*. Journal of Corporate Real Estate, Volume 19, Number 2, pages 111-138.
- **Hetherington, S.** (2017), *A comparative investigation into lime activated ground granulated blast furnace slag as a sustainable alternative to Portland cement in masonry mortars*. Masonry International, August 2017.
- **Laycock, E.**, Jefferson, D., **Hetherington, S.**, Clegg, F., & Wood, C. (2018), *Revitalising Collyweston limestone slate production by artificial freeze/thaw splitting*, Construction and Building Materials, V. 159, 20 January 2018, pages 486-498.
- **Woodhead, R.M.**, **Stephenson, P.** & Morrey, D. (2018) *Digital Construction: From Point Solutions to IoT Ecosystem*, Automation in Construction. Vol. 93: pages 35-46.

Conferences and Presentations

- **Serbescu, A.** (2017), *Basalt Fibres for Concrete Strengthening*, at the "Seismic Loss, Rehabilitation and Post-earthquake Crisis Management of Critical Infrastructure" Workshop (funded by The Newton Fund and British Council), 20-24 Nov 2017 at Istanbul Technical University in Turkey.
- **Tang, G.** (2017), *The Weald and Downland Grid shell as a harmonic embodiment of Architecture, Structure and Craft*, by invitation of Cultural Engagement Officer at Weald and Downland Open Air Museum, Sussex, UK, 24th July 2017.
- **Tang, G.** (2018), *Timber Gridshells, Architecture, Structure and Craft*, invited lecture, Hunan University of Science and Technology, Hunan China.
- **Tang, G.** (2018), *Timber Gridshells in Huang Gang (Unesco World Heritage Village)*, international invited guest lecture series, Guizhou China.
- Veenendaal, D., Augustynowicz, E. & **Tang, G.** (2017), *Magnolia: a glass-fibre reinforced polymer gridshell with a novel pattern and deployment concept*, International Association of Shells and Spatial Structures Interfaces: 23-25 September 2017 Hamburg, Germany.



OTHER INDICATORS OF ESTEEM

We take pride in both our academic scholarship and our contribution to our relevant professional sectors through applied research and knowledge transfer activities. These indicators of esteem demonstrate the impact which our research has finding solutions to real world problems.

Our Head of Department, Dr Luke Desforges, is Co-Convenor and Member of the Assessment and Feedback Community of Practice, of the Higher Education Academy.

Professor Paul Stephenson is a member of the Association of Researchers in Construction Management, and a management board member of Construct IT for business. Paul has also been elected to the Scientific and Technical Committees of the Sustainable Ecological Engineering Design for Society (SEEDS) Conference, September 2018, Dublin Institute of Technology, and the Building Information Modelling (BIM) in Design, Construction and Operations Conference, October 2019, in Seville, Spain.

Professor Barry Goodchild is one of three UK national experts for the International Energy Agency demand-side management programme, essentially concerned with behaviour change and sustainable consumption. Barry continues to act as member of the ESRC peer review panel for planning. He is also a Member of an Anglo-Australian consortium led by Stephen Berry (University of South Australia) and involving the Royal Melbourne Institution of Technology and Salford University.

Professor Lynn Crowe continues to act in an advisory capacity to a range of UK government agencies, including Natural England's Science Advisory Committee, and various non-governmental organisations including the South Yorkshire Local Nature Partnership and the Sheffield Waterways Strategy Group. She is on the Board of the Europarc Atlantic Isles section - the regional section of the Europarc Federation (who represent protected area agencies across Europe), and has recently been invited by the Countryside

Management Association to act as their academic advisor. Lynn has also acted as a reviewer for the Journal of Public Mental Health (with a focus on the benefits of nature for health).

Professor Liz Laycock has been elected to the Council for the International Masonry Society, and also represents the UK on the European Committee for Standardisation (CEN) technical committee. Liz serves as Principal UK Expert on *CEN/TC 346/WG3 "Evaluation of methods and products for conservation works on porous inorganic materials constituting cultural heritage"*, and is part of the international team writing new European Standards in this area. Liz was one of the authors awarded the Howard Medal (best paper in the journal "Proceedings of the Institution of Civil Engineers - Construction Materials") at the ICE Publishing Awards 2017, for her paper on recycled construction materials published in 2016.

Professor Ian Rotherham is Editor of the Arboricultural Journal – the international journal of urban forestry; and on the Editorial board of the Landscapes Journal and Global Environment. He is also Chair of the British Ecological Society Peatlands Research Group; the International Union of Forest Research Organisations (IUFRO) Division 9 Forest History and Traditional Knowledge; and is the coordinator of the European Society for Environmental History UK & Ireland. Ian is a reviewer for the following journals: International Journal of Public and Environmental Health; Journal of the Royal Society of New Zealand; Nature Conservation; HortTechnology (journal of the American Society for Horticultural Science); the Journal of Applied Ecology; as well as a book proposal reviewer for Routledge and CABI.

Dr Angela Maye-Banbury is on the editorial board of the Journal of Resistance Studies, and on the board of directors for the West Ireland (Connacht) for the Oral History Network of Ireland. Angela is also a long-standing member of the European Network of Housing Researchers, and the Scientific Ecological Engineering Design for Society (SEEDS) international committee with Leeds Beckett University.

On the invitation of the Institute of Structural Engineers (IStructE Yorkshire Regional Group), Dr Andreea Serbescu and Dr Gabriel Tang were invited to present their research in May'17 at The Diamond Building, at The University of Sheffield with the attendance of IStructE Chief Executive. Gabriel's presentation was entitled "*Timber Gridshells – The inter-relationship of Architecture, Structure and Craft*" and was inspired by the findings of his 2016 Routledge book. Andreea's presentation was entitled "*FRP strengthening for RC Beams*". Andreea is also a member of the International Federation of Structural Concrete - Task Group 5.1 on FRP Reinforcement for concrete structures; a subsidiary organisation of The Institution of the Institution of Structural Engineers UK.

Gabriel has also been admitted to the Scientific Committee of the International Conference of Architecture and Civil Engineering, Singapore, and has acted as a reviewer for various journals including the International Journal of Spatial Structures (Madrid)

Paul King is a Member of the Royal Institute of British Architects (RIBA) Validation Panel, continuing our close working relationship with RIBA (following the retirement of our Head of Department, Professor Norman Wienand - who was also a member of their Validation Panel). Paul was invited to join the Education, Research and Innovation group for RIBA Yorkshire this year. The group aims to champion the provision of research in architectural education and practice along with encouraging innovation and collaboration between practices and schools of architecture.



Dr Cristina Cerulli has been appointed as a member of the newly established RIBA Commission on Ethics and Sustainable Development, examining how the architectural profession can best reflect its core values of public interest, social purpose and sustainability. Cristina has also been appointed as a judge for the prestigious 2018 RIBA President's Awards for Research, which includes the RIBA President's Medal for Research.

Dr Rob Storrar is a reviewer for the following journals: Quaternary Science Reviews, Journal of Maps, Earth Surface Processes and Landforms, Icarus. He is also a reviewer for the National Science Centre, Poland, and has just been appointed to the editorial board of the journal Open Quaternary.

Dr Richard White is on the editorial board of the following publications: ACME: An International Journal for Critical Geographies; Animal Liberation Currents, Arissa Media Group (AMG); Green Criminology and Security Studies; Green Theory and Praxis Leadership and Policy Quarterly; Peace Studies Journal; Political Media Review; The International Journal of Sociology and Social Policy; The Journal for Critical Animal Studies; The Journal of Management Decision; and The Journal of Social Justice.

In 2017-2018 Richard acted as a journal reviewer for ACME; Capitalism, Nature and Socialism; Ephemera; Gastronomica: The Journal of Critical Food Studies; Geoforum; Journal of Youth Studies; Management Decision; Progress in Human Geography; Settler Colonial Studies and Transactions. . He also reviewed manuscript proposals for Routledge and Pluto Press.

Dr Jon Bridge continues as a member of the NERC Peer Review College, providing review of funding applications submitted to a range of Research Council programmes.

Dr Cate Hammond has been appointed to the Town and Country Planning Association's Policy Council.

Dr Rebecca Sharpe is a Committee Member and Admissions Secretary for the Royal Geographical Society's Geographical Information

Science Research Group. Dr Alan Patterson also continues to work closely with the Royal Geographical Society and Geographical Association, and has organised many events on their behalf for our staff, students and external audiences at Sheffield Hallam. Alan is also a reviewer for the following publishers and journals: Urban Studies; Journal of Political Ecology, and various manuscripts for Routledge and Blackwell.

In addition to these individual contributions, we are also delighted to be involved in the creation of a new White Rose Doctoral Training Partnership (WRDTP). At the heart of the delivery of the DTP are seven thematic pathways. Research experts from CRESR (Will Eadson and Christopher Dayson) and DNBE (Richard White) have been invited to provide an institutional lead, and represent SHU on the Cities, Environment, and Liveability group; the Wellbeing, Health, and Communities group; and the Civil Society, Development, and Democracy group.



DOCTORAL RESEARCH PROGRAMME AND STUDENT PROJECTS

DNBE has a broad programme of doctoral research, with 21 research students from around the world working under supervisors in DNBE (and some based in CRESR). Six students successfully completed their research degrees in 2015-16. These students work on collaborative research with industry and governments, or research which is centred on staff interests and the requirements of our professional sectors and other stakeholders.

Research students are appointed based on research proposals that are seen to relate to the department and its supported research themes, or as part of funded research through Knowledge Transfer Partnership, government and other external funding bodies and associations.

The Graduate School within the Faculty of Development and Society provides support and training for our postgraduate research degree candidates in order to equip them with the skills, knowledge and techniques required for carrying out their research.

Applications can be made on-line with intakes normally in September and May each year: - (<https://www.shu.ac.uk/study-here/find-a-course/graduate-school>).



COMPLETED AND CURRENT PHD/MPHIL RESEARCH

We would like to congratulate the following research students, who successfully completed their research degrees in 2017/8:

Student	Degree	Supervisory Team	Thesis Title
*Kiri Langmead	PhD	Richard White Peter Wells (CRESR) Chris Dayson (CRESR)	Problematising the relationship between 'economy' and 'democracy' in worker cooperatives.
Elmansuri Seham	PhD	Barry Goodchild Alan Patterson Richard White	Courtyard Housing in Tripoli: Tradition, Modernity and Users' Perceptions

(* Students based in CRESR)

The following research students are continuing with their studies:

Student	Degree	Supervisory Team	Thesis Title
Iman Laeirj	PhD	Kevin Spence Liz Laycock	A Holistic Approach to Identify Important Factors within Housing in Eastern Libya
Claire Beaumont	PhD	Paul Stephenson Barry Haynes	The Principles and Practices of Shallow Depth Soil Stabilisation/Solidification
Osama Sasi	PhD	Kevin Spence Elizabeth Freeman	Design of a healing residential environment for Libyan veterans
*Ali Maimon	PhD	Barry Goodchild Paul Hickman (SIPS)	Housing Quality in Malaysia: An Assessment of Current Practice
*Beth Speake	PhD	Kesia Reeve (CRESR) Angela Maye-Banbury	Welfare Reform as Structural Violence: Women and the Impact of Benefit Sanctions
Russell Moore	PhD	Barry Goodchild Angela Maye-Banbury Paul Hickman (SIPS)	Bangkok's mass-transit system: Gentrification, displacement and housing preferences
Sarah Chittenden	PhD	Catherine Hammond Kaeren Harrison John Rose	Spatial Planning's Role in Implementing Biodiversity Protection through Green Infrastructure Strategies
Ali Allafi	PhD	Mike Heath John Rose	Examining the Water Footprint Concept in Relation to Sustainable Water Management, Libya

Wilter Malandi	PhD	Ian Rotherham John Rose Suzanne Leckie	The Ecological Impacts of Recreational Trails in a Tropical Protected Area
*Jamie Redman	PhD	Del Fletcher (CRESR) Richard White	Welfare Conditionality: An investigation into Sanctioning, Stigma and the Construction of Subjectivities.
Faysal Shaba	PhD	Ian Rotherham Catherine Hammond	Urban Expansion, Land Management and Development in Tripoli. Libya
Jwan Othman	PhD	John Rose Doug Fraser	Determining the Factors Affecting Deer Population in Kurdistan-Iraq
Abi Woodward	PhD	Richard White	Community Self-help in an Age of Austerity.
Jonathan Took	PhD	Barry Haynes Nick Hodge Paul Stephenson	Design of School Buildings for People with Autism and Sensory Processing Difficulties
Michael Roskums	PhD	Barry Haynes Paul Stephenson Kevin Spence	An Investigation into the relationships between the built environment, human wellbeing and productivity

(* Students based in CRESR)

Several colleagues also supervise students based at other universities.

Dr Jon Bridge is external supervisor for three PhD students at the University of Liverpool, and one at Xi'an Jiaotong-Liverpool University in Suzhou, China. A further PhD student, Dr Esraa Tarawneh, successfully defended her thesis at the University of Liverpool in October 2017 and is now an academic at Mutah University in Jordan (see International Collaborations section).

Dr Cristina Cerulli acted as second supervisor for Ivan Rabodzeenko, **working on** “*Citizen-led urban development in vacant spaces in the city*”, **with supervisor Prof. Philip Misselwitz at the Habitat Unit, TU Berlin**. Ivan successfully completed his doctoral study in July 2018.

STAFF STUDENT RESEARCH PROJECTS

As well as our doctoral research programme, we also promote a research culture with our students through our Staff-Student Research Project initiative. This enables existing students or recent graduates to be awarded a small bursary to undertake field research outside their normal coursework and under the supervision of DNBE academics. 2017-2018 was another extremely successful year for this programme. Completed projects this year have included the following:

Student	Supervising Staff	Topic
Rachel Squire	Carolyn Gibbeson Aimee Ambrose	The stigmatisation of high rise housing estates (a case study of Norfolk Park Estate)
Gabrielle Appiah	Kaeren Harrison Cate Hammond	Major residential development: A role for public space in delivering environmental and social objectives? A case study of Kingswood urban extension, Hull.
Jess Swiffen	Anna Hawkins Naomi Holmes	A critical exploration of equality of access to Geographic fieldwork in Higher Education.
Saul Oliva Cabrera	Naomi Holmes Ian Rotherham	Discovering shadow woods and investigating landscape change in the Peak District.
Joe Leach	Naomi Holmes Ian Rotherham	Ageing ancient upland willow carr in the Peak District
Rebecca Parks	Andrew Jobling	Global agri-food commodity networks and territorial transformations.
Liam Piercey	Liz Laycock Andreea Serbescu	Monitoring moisture condition changes in stone by non-destructive testing
Dom Ng	Angela Maye-Banbury	Housing Pathways of the Chinese Community in Sheffield: An Oral History Approach
Nial Griffin	Ian Rotherham	Analysing Green Belt issues in the South Pennines and South Yorkshire.
Samira Emadi	Kevin Spence Rebecca Sharpe	The effects of rainfall and land cover use on river water quality in NW England

Molly Jones	Rob Storrar Naomi Holmes	Glacial geomorphology of Ladakh, Indian Himalayas, as a tool for assessing natural hazards and water supply in remote mountain communities.
Leslie Lam	Julia Udall Sam Vardy	Mapping Diverse Economies: Pedagogical tools for transformation
Alex Hinchcliffe	Richard White	Harnessing critical academic-and student-activist geographies beyond the classroom: a focus on intersectional animal rights-based activism within Sheffield.

In the coming year, we have planned more of these successful SSRP collaborations, as we see this as an excellent way for students to engage in our research and develop their own research skills. The following projects have been funded for the current year:

Student	Supervising Staff	Topic
Phil Kokoszka	Luke Bennett Helen Reardon	New Uses for Old Hangars: a study of the afterlife of abandoned Cold War airbases, 30 years after fall of the Berlin Wall
Catalina Ionita	Cristina Cerulli	Motives, Values and Contingencies: Stories of Ethical Practice in Architecture
Jamie Gordon William Twigg	Naomi Holmes Rob Storrar	Palaeolimnological evidence of Holocene environmental change in south east Iceland.
Pippa Humphries	Paul King	LiDAR Scanning the Architecture and Architectural Technology Exhibition
Katy Lister	Angela Maye-Banbury Barry Goodchild	Fuel filled stories: how the oral history method reveals residents' stories of energy consumption.
Isobel Thompson	Alexandra Savage Jon Bridge	Characterising riparian eco-hydrology in small, headwater streams prior to major interventions: a case study in the Sheffield Lakelands.

Jie Qi	Rebecca Sharpe Keith McKoy	Towards the development of innovative interfaces for spatial mapping of cultural infrastructure.
Matt Bowker Shannon Harewood- Malone	Rob Storrar Andrew Jones	High spatial and temporal resolution UAV-based measurement of glacier 'micro-velocity' and surface elevation changes as a tool for understanding the link between glacier hydrology and velocity
Ben Gibson	Kaeren van Vliet Catherine Hammond	Multi-functional green infrastructures: A case study in the English peri-urban residential context.



SHARING OUR RESEARCH

As a leading applied University, we aim to share the findings of our research widely - to benefit our own students through teaching and their own research, to contribute to growth and sustainable development within our region, and to support our professional sectors nationally and internationally. During 2017-2018, we have undertaken a series of seminars, workshops, professional events and conferences, alongside departmental publications, in order to disseminate our research more widely.

Our department publishes two in-house journals - Built Environment Research Transactions and Natural Environment Research Transactions. These journals showcase research work by our students and staff. Copies are available on-line at <http://research.shu.ac.uk/ds/bert/> and <http://research.shu.ac.uk/ds/nert/>.



Our associated research centre, CRESR, also publishes an online journal *People, Place and Policy* (<http://extra.shu.ac.uk/ppp-online/>) to provide a forum for academic debate around issues of urban policy, social and economic regeneration, housing and the labour market.



As well as our own internal monthly research seminar series, sharing ongoing research and scholarly activity by our staff and research students, we also organise an annual DNBE Student Research Showcase, to celebrate the best research by our undergraduate and postgraduate students. This event provides an opportunity for students to share their research work with colleagues at the beginning of their own research careers and creates a shared research culture across the whole Department.

Alongside our annual Student Research Showcase, our architecture and architectural technology students display their final design projects at their annual Summer Show in June. This event is also open to professional practitioners and the public. The show celebrates our students' innovative approaches to social and environmental challenges in the built environment.



A programme of events, conferences and workshops throughout the year allows us to share our research findings and professional expertise with a wider audience. The following events were held in 2017-2018 (many in partnership with our associated professional bodies):

- | | |
|----------------|---|
| July 2017 | RTPI Yorkshire Region Conference Series - <i>Major Infrastructure Planning - the Current Agenda</i> . Chaired by Josie Wilson |
| August 2017 | Europarc Atlantic Isles - Members conference - <i>Alternative funding models for our National Parks</i> - organised and chaired by Prof Lynn Crowe. |
| September 2017 | <i>Wilder Visions: Issues & Opportunities in Re-constructing</i> |

- September 2017 *Peatlands for Birds*, Sheffield. Organised and chaired by Ian Rotherham.
- September 2017 Council of Heads of Built Environment Education (CHOBE) conference: *To attend or not to attend; is that the question: Factors that influence student non-attendance.*
- October 2017 RGS/GA lecture - Kevin Dixon - *Going Underground! The re-mapping of Gaping Gill.*
- October 2017 RGS/GA lecture - Darren Axe - *Treading Lightly: exploring Europe by train, boot and snowshoe.*
- October 2017 Eco-science in the Park: *Shadow Woods and Ghosts on Peatland Landscapes*: Display at event, with Naomi Holmes.
- November 2017 *Shadow Woods: A Search for Lost Landscapes - A Celebratory Evening*, Sheffield. Organised and chaired by Ian Rotherham. Display by Naomi Holmes.
- November 2017 *History & Heritage of the Bogs & Peatlands of Cumbria and the surrounding areas, Carlisle.* Organised and chaired by Ian Rotherham
- November 2017 RGS/GA lecture - Alan Kinder - *Global Cities.*
- November 2017 RGS/GA lecture - Prof Jamie Woodward, *From Green Sahara to desert river: 6000 years with a shrinking Nile.*
- November 2017 G4C / CITB seminar - *Effective use of Social Media for Built Environment Professionals.*
- December 2017 RTPI Yorkshire conference series - *What next for the National Planning Policy Framework?* - Organised and chaired by Josie Wilson/Luke Desforges+
- February 2018 RGS/GA lecture - Richard Calvert, Chief Operating Officer at Sheffield Hallam University, and former Director General of the UK Department for International Development - *The road to 0.7%: UK ambitions to be an "aid superpower" and challenges for the future.*
- February 2018 G4C/ CITB seminar - *Digital technology for Built Environment Professionals.*
- March 2018 RGS/GA lecture - James Harris, Policy and Networks Manager, RTPI- *Why we need to plan smart city-regions.*
- March 2018 SHU Space & Place Group, *Beneath the city streets: four researchers explore urban infrastructure and its invisibility*, featuring an assortment of DNBE presentations alongside other SHU departments and guest speakers from other universities.
- April 2018 RICS - *Stay Informed* conference for practitioners and aspiring members discussing current themes pertinent to the profession.
- April 2018 Professor Simon Springer (University of Victoria, Canada) gave the annual DNBE Guest Lecture - *The Integral Beauty of Anarchist Geography: For Courage, Kindness, and Community.*
- May 2018 *Investigating Tree Archaeology: History and Technology*

- of *Woodland Management and Product Use*, Sheffield. Organised and chaired by Ian Rotherham.
- May 2018 RGS/GA lecture - Klaus Dodds, Professor of Geopolitics, Royal Holloway, University of London, '*Global Governance: a case study of the Arctic*'.
- June 2018 SHU Space & Place Group - *Investigating Infrastructure* symposium, featuring an assortment of DNBE presentations alongside other SHU departments and guest speakers from other universities.
- July 2018 RTPI Yorkshire conference series - *Planning for Water Management*. Chaired by Catherine Hammond.

As well as organised events and publications, many of our staff work closely with our professional sectors and with the media to disseminate and share our research findings more widely. DNBE staff appeared on television and radio, and in other local and national media throughout the year, providing expert opinions on issues of both local and national significance.

Professor Ian Rotherham is well known for his media appearances emphasising the importance of our natural and cultural heritage. Ian has a regular weekly column in the local Sheffield Star and Sheffield Telegraph newspapers, as well as undertaking a wide range of other media activities.

Ian also organises many citizen science activities and events, working with organisations such as the Moors for the Future, and local wildlife trusts.

DNBE staff have also undertaken outreach work with our related professional bodies and other organisations.



Dr Naomi Holmes works as a STEM ambassador, talking about her research expeditions to local schools. Naomi has also run workshops (with British Exploring) at the Royal Society Partnership Grants Conference. In July 2018, Naomi led and coordinated the river science programme for a youth expedition to the Yukon Territory, Canada in partnership with British Exploring.

Dr Doug Fraser undertakes an annual presentation to the Sheffield Friends of the Botanical Gardens; this year his talk was on *Habitat Creation: stories from People and Nature*. Dr Roy Woodhead's innovative work exploring the relationship between cities and the Internet of Things was showcased in an article in the Yorkshire Business Insider "*Connecting the dots to a smarter world*".

Dr Jon Bridge featured in a May 6th edition of BBC Radio Cambridge science programme 'The Naked Scientists', which discussed water, water consumption and the current water crisis in Cape Town, South Africa. The broadcast is available online and was also syndicated in Australia. Jon also continues as a STEM Ambassador and has taken part in outreach activity at St Catherine's Catholic Primary School, Pitsmoor (Year 2 STEM activities) and King Edward VII School, Crosspool (Year 7 STEM club).

Several staff across the department were involved in a schools outreach day in June 2018. Renishaw Primary School came to the university to experience different types of learning experience. 57 pupils from years 5 and 6 had a lecture on *Energy and Food: Saving the World with Chocolate and Spaceships*, from John Grant; a lab session *Mess and Stink* with Dr Mike Heath; *Exploring sustainable food production and the impact on the environment* led by Anna Hawkins; and a further lab session *Bridging the gap*, led by Steve Hetherington; and *In the bog: looking after the planet* led by Dr Alexandra Savage.

Many academics in DNBE are also embracing social media as a way of networking with other researchers and sharing their research with their students and a wider audience. An overview of relevant Twitter accounts suggests we have around 18,000 followers on this platform.

As well as extensive use of Twitter, several staff have also developed their own personal blogs and web sites to share research ideas:

Blog Research Focus

Camila Bassi	Urban political economy and critical geography: https://anaemiconabike.wordpress.com
Luke Bennett	Tracing the spectacular within the humdrum of the built environment - with a particular focus on modern ruins and the darker side of real estate: https://lukebennett13.wordpress.com
Jon Bridge	Soil and water research interests; environmental radioactivity, groundwater contamination and dryland catchment management, to glacial hydrology and drone-based remote sensing: https://seeshallam.wordpress.com
Lynn Crowe	Environmental policy, landscape management and outdoor recreation and access: https://lynncroweblog.wordpress.com
Naomi Holmes	Environmental Science and Geography - staff and student news and research: https://blogs.shu.ac.uk/bscenvsci
Ian Rotherham	Urban wildlife, landscape change, flooding and climate change: https://ianswalkonthewildside.wordpress.com
Julia Udall	Research on ecology, history, archaeology and landscape change (with the South Yorkshire Biodiversity Research Group): https://www.ukeconet.org
	A project developed in partnership with the Open University Geography Department, which aims to share inspirational community initiatives and support lively conversations about energy, by looking in a fresh way at its past, present and future: https://storiesofchange.ac.uk/

It is a central aim in all our academic research, to communicate and share our findings as widely as possible, supporting Sheffield Hallam University's strategy to create knowledge, lead locally and engage globally.

CONCLUDING REMARKS

Applied research is what makes Sheffield Hallam distinctive. As the Head of Department for the Natural and Built Environment, I will be working alongside colleagues and with CRESR, to enrich and enhance the research culture in the Department. The University has launched a strategy to undertake research which has real social, economic and cultural impact. This Department is in a prime position to do so, particularly with our strong links with industry and employers, our commitment to applied research, and our ability to integrate research into our students' learning.



Our aim is to strengthen our already impressive research and scholarly activities and, ultimately, create knowledge and transform lives.

Dr Luke Desforges

Head of the Department of the Natural and Built Environment



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