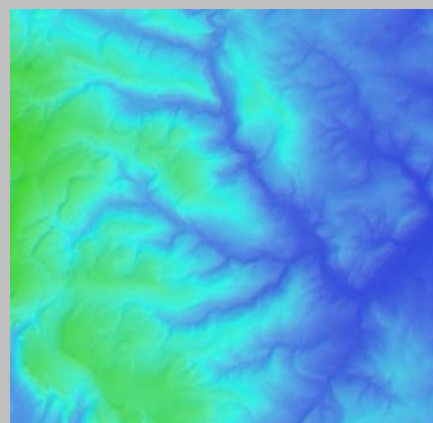


ANNUAL RESEARCH REVIEW 2016-2017

**Sheffield
Hallam
University**

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.....	18
Other Indicators of Esteem.....	36
Doctoral Research Programme.....	40
Staff-Student Research Projects.....	43
Sharing Our Research.....	46
Concluding Remarks.....	50

INTRODUCTION

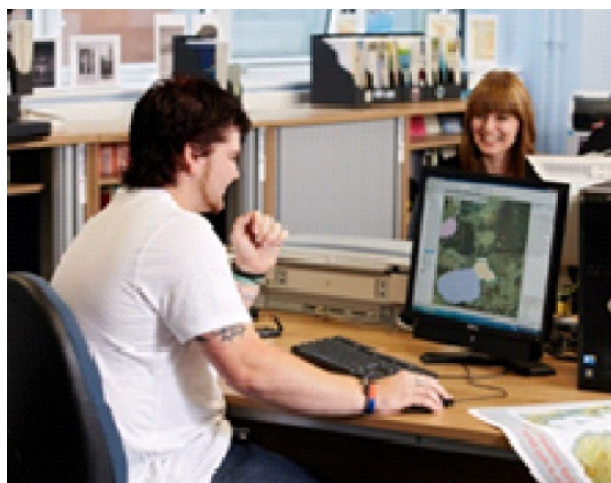
Welcome to the annual review for the Department of the Natural and Built Environment at Sheffield Hallam University, for 2016-2017. Our department provides a home for academics and students who want to understand, design and shape our world. We bring together the disciplines of architecture; planning; 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 2016-17. 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 CRESR, 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 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.

The Housing and Neighbourhoods Research Group was officially launched on 4 May 2017. The day signalled a revived commitment to the importance of housing and neighbourhood related research and scholarship activities. Key note addresses by Professor Göran Collste Director of the Centre For Applied Research Ethics, University of Linköping, Sweden, and Professor Ian Cole from CRESR, SHU, focused on the importance of safeguarding housing for all, and the evolution of housing and neighbourhoods related research. Colleagues from Connect Housing also facilitated a workshop session on communities and neighbourhoods.



During the year, our Head of Department, Professor Norman Wienand, retired. We will miss Norman and we wish him well with his future plans. We also welcomed Dr Luke Desforbes as our new Head of Department. Luke is a human geographer with a particular interest in how cultural change in the UK impacts upon developing countries, and changing tourism cultures and development charities. Luke is also interested in pedagogical research and education generally, and particularly how people learn about Geography.

During 2016-17, DNBE staff achieved some notable personal successes in relation to their research activities. In particular, we congratulate our colleagues Sam Vardy on the award of his research doctorate for his study of approaches to re-politicising the production of urban space, through a study of self-organised spatial practices, and Aimee Ambrose on the award of her research doctorate for her work using qualitative methods to understand non-technological aspects of domestic energy efficiency

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
Carolyn Gibbeson	PhD	An examination of the interplay between place attachment, place stigma, heritage and stakeholder perceptions in the redevelopment of historic former asylums
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.
Daniela Hawryliuk	PhD	Focusing on academic and vocational education in the housing industry.
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.
Gabriel Tang	PhD	The use of deployable grid shells as reusable, reconfigurable and intuitive formwork for concrete shell construction.
Jonathan Took	PhD	Sensory design in construction.
Josie Wilson	PhD	Active Travel and the School Commute'

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 are often involved in CRESR research projects focused on communities, regeneration, and planning. Aimee Ambrose has worked closely with colleagues in the department, on secondment from CRESR, in order to strengthen our research links. Anna Hawkins is involved in the development of qualitative case studies and CRESR's evaluation of the Trussell Trust's 'More than Food' Programme (with Christopher Dayson and Sadie Parr, CRESR).

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, the Ancient Tree Forum, and the Arboricultural Association on national tree-related issues. Ian has also on-going collaborations with major organisations such as the RSPB, the Woodland Trust, Historic England and Natural England on future landscapes.
- Professor Lynn Crowe and Dr Catherine Hammond completed a research study funded by the Campaign for National Parks, the National Trust, and the Campaign for the Protection of Rural England, to investigate trends in the application of the major development test in planning proposals in English and Welsh national parks. Their report was launched in December 2016 at a workshop if invited central and local government representatives and provided recommendations to develop policy to better protect these nationally significant 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.
- Dr Angela Maye-Banbury completed eight oral housing histories of Irish men and women who emigrated to America in the 1950s. She plans to return to New York in spring 2018 to develop this work further.
- Our Environment Research Group has developed new links with the Sheffield Lakeland Landscape Partnership this year. This is a new Heritage Lottery Fund project, working in partnership with Sheffield and Rotherham Wildlife Trust. Professor Lynn Crowe is focusing on access improvements and local people's use of the area. Whilst Dr Jon Bridge is leading on plans to develop research projects in natural flood management and incorporation of expert knowledge from landowners and users in environmental modelling.
- 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. In 2017, March studio four worked with East Street to support their research around their main design project, and also hosted an exhibition at Patrick Studios, one of the many sites run by the organisation.
- In November 2016 Paul King and Sam Vardy worked in collaboration with the Sheffield Institute of Arts to design and build folded steel pavilions at SHU and Sheffield Train Station. The pavilions were designed and fabricated in collaboration with MB Products of Barnsley. The project formed part of the Catalyst festival of creativity and Sheffield Design Week. The project also featured an Architecture research symposium at SHU during Sheffield Design Week. Paul and Sam worked with local artist Patrick Murphy on the project.

Supporting Government Agencies and Local Authorities

- Professor Liz Laycock is undertaking a project with Historic England looking at replacement stone for the temple of Concord at Audley End in Cambridgeshire. Also with Historic England, Liz is assessing the use of hydrophobic coatings to better protect and maintain the structures of historic buildings. Liz is also working with the Conservation Department of English Heritage

on the initial assessment of the behaviour of traditional masonry walls exposed to flood water. Gravimetric monitoring will be used to monitor situations of this type where other sensing methods are found to be less accurate. Methods of cleaning or post flood remediation may also be applied to monitor changes to the surface and total moisture condition.

- Simon Kincaid works with the cultural heritage section of the Peak District National Park Authority, including quinquennial inspections of listed buildings within the National Park. Simon also contributed to a consultation on the protection of non-listed heritage assets: the *English Heritage Historic Farmsteads Project*. This aimed to develop a toolkit for assessing the significance of farmsteads based on their character, form and function. The local version of this, the *Peak District Farmsteads Guidance*, was formally launched in August 2017.
- Simon has also been involved in a project to set up a new form of 'Buildings at Risk Survey' for South Yorkshire Buildings Preservation Trust (again working in partnership with the Peak District National Park Authority). Recently he has facilitated a training day for Historic Environment Local Management, a Historic England initiative, which took place at SHU and was aimed at increasing planning officers' knowledge on building conservation issues.



- 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.
- Dr Angela Maye-Banbury (with Arlene Crampsie - chair of the Oral History Network of Ireland) prepared a response on behalf of ONHI on Galway County Council's heritage strategy in June 2017. Angela also worked with the directors and committee members of the Strategic leadership with fellow Oral History Network of Ireland directors and steering group members in organising their annual national conference in Galway 2017.

Partnerships with industry and our professional sectors

- Simon Kincaid is undertaking research at Chatsworth House Estate in Derbyshire, to investigate recent upgrades to fire safety and interactions between these requirements and the restrictions imposed by conservation concerns. This work has recently expanded to include Historic Royal Palaces and listed buildings at Oxford University. A second thread has also developed concerning the lessons which can be learnt from actual fire events in heritage buildings, including planning for such an event.



- 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.
- Professor Liz Laycock and Steve Hetherington have been working since 2015 to undertake durability testing of potential 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 led to the selection of a quarry near Anston to provide stone for the repair.
- Dr Barry Haynes is working on a research project with Mitie (a leading facilities management services provider) to explore a trial of energy, asset and workplace analytics solutions, following the launch of Mitie Energy's intelligent buildings proposition. This three year project is part funded by Mitie and the UK government, and will utilise their data on workplace management and staff performance unlocked by Mitie via remote connectivity to allow Mitie to move to a more proactive service model. This means finding patterns in data, building algorithms and identifying research to support our recommendations to our clients.
- 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'*.

- 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. This will take part in early November 2017. The project has been arranged through SHU's Research Innovation Office.

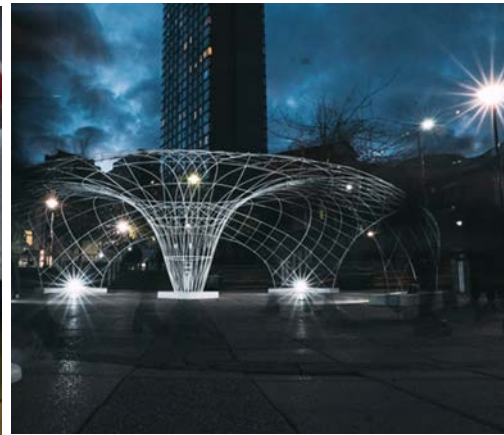
International research collaboration

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, and the British Ecological Society.
- Dr Barry Haynes completed a research project with Nick Nunnington (Nottingham Trent University) for the RICS looking at workplace productivity in the Middle East, leading to the production of specific design guidance for inclusion in the next Best Practice Guide produced by the Middle East Council of Offices.
- As a follow-on to a day-long bunker themed session at the 2014 Royal Geographical Society's annual conference, Dr Luke Bennett has co-ordinated and edited a published collection of 14 essays written by an international and interdisciplinary array of academic commentators looking at the fate of these remnant structures around the world (Albania, France, Germany, the Netherlands, Norway, Taiwan, USA and the UK). The resulting edited collection, *In the Ruins of the Cold War Bunker: Affect, Materiality and Meaning Making* (London & New York: Rowman & Littlefield International), was published in June

2017. It will be the focal point of a follow-up RGS bunker themed day at this year's conference, accompanied by 10 new papers from additional international collaborators.

- Since 2012, Dr Luke Bennett has been collaborating with Professor Antonia Layard (University of Bristol) to raise the profile of Legal Geography in the UK. In April 2017 Luke organised an international Legal Geography workshop at the University of Bristol, in collaboration with Professor Layard, Professor Nick Gill (University of Exeter) and Tayannah O'Donnel (University of Canberra, Australia). The workshop was attended by academics from Italy, the US, Australia, Eire, the UK and Canada.



- In November 2016, Gabriel Tang worked in collaboration with the Sheffield Institute of Arts to design and build grid shells within the SHU city campus. The project involved ARUP Sheffield, research specialists from ETH Zurich (Switzerland) and Edinburgh Napier University. The Magnolia grid shell was constructed by staff and students from our architecture and architecture technology courses, and aimed to popularise innovative lightweight structures as a sustainable construction typology.
- Dr Julia Udall is 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.

- Dr Richard White, Reader in Human Geography in DNBE, accepted an invitation from the University of Victoria (Canada) to speak at their distinguished *The City Talks* programme. While in Canada, Richard also delivered a guest lecture to the Department of Geography, and led a reading group discussing his work on anarchist geography and animal liberation.
- In March 2016, Dr Angela Maye-Banbury was appointed 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.
- 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.
- 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.

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 addition to an Autumn workshop session on representations of the seaside (which juxtaposed artist research on the marginal coastal communities of Grimsby and Cleethorpes with quantitative economic and social characterisation of the seaside economy) the group's annual conference in June 2017 saw 40 delegates assemble to consider a variety of presentations interrogating 'the Politics of Place', ranging across South African street art, Dutch street design, and UK sex shops, food premises and heritage spaces.
- Professor Lynn Crowe continues to work on cross departmental research with both the **Outdoor Recreation Research Group**, and the **Nature Connections Research Group**. During 2016-17, Lynn also worked with colleagues in CRESR, and the SHU departments of Law and Psychology, to explore issues around the public perceptions of changes in the governance and management of public parks in response to austerity impacts on local authority funding.

Built Environment Energy and Consumption Research Group

The Built Environment Research Group provides a link between our Department, the Centre for Regional Economic and Social Research, and the Materials and Engineering Research Institute. Its focus is on the sustainability and liveability of cities, considering these issues in relation to energy efficiency, access to energy and social inclusion. Within this broad remit, the group investigates a number of themes, each pursued by different researchers. The following projects have been led by DNBE research staff:

- **Resilience and flood risk** - Dr Rebecca Sharpe is leading on research in urban water engineering and management. Her research is particularly focused on human interactions with manmade (clean and waste water supply networks) and natural water systems (river water quality and flooding). An example of her current research activity is the resilience of small firms and their dependent communities to flood risk.
- **Sustainable consumption** - John Grant's research focuses on establishing an adaptive and resilient strategy for domestic housing, through the concept of the "Autonomous House", including on-site energy production, thermal comfort, water consumption, waste water treatment, and on-site food production.
- **Urban planning** - Professor Barry Goodchild is our main researcher in relation to urban planning in this group. Barry's view of urban planning is as a means of shaping the physical form of the lived environment. Urban planning is therefore an integrating activity, but also an exercise in governance. Much of Barry's work has been about land, housing development and housing design. Recent work has focused on planning theory and socio-environmental theories of risks and sustainable 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 2016-17, as well as presenting at many different conferences around the world. The following list is organised under our research group themes, and the DNBE authors are highlighted in each reference.

Environment

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.** (2016) *Eco-fusion of alien and native as a new conceptual framework for historical ecology*. In: Vaz, E., de Melo, C.J., & Pinto, L. (eds) *Environmental history in the making*. Volume 1, Springer, Dordrecht, The Netherlands.



- **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.

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. DOI: 10.1002/2016wr020358
- Burnett, A. & **Crowe, L.** (2016), *An Evaluation of Secondary School Students' Perceptions of Geography at Key Stages 3 and 4*. Natural Environment Research Transactions, 2 (1), 53-79. Sheffield Hallam.
- Coban, S., Colak, A.H., & **Rotherham, I.D.** (2016), *An investigation into interactions between canopy cover density and regeneration cores of older saplings in Scots pine (Pinus sylvestris L.) stands*. Forest Systems, 25, (3), e073, 14 pages
- **Crowe, L., Hammond, C.** & Wilson, N. (2016), *An Examination of the Development and Implementation of Planning Policy Relating to Major Development in the English and Welsh National Parks*, published on line by CNP/National Trust/CPRE at <http://www.cnp.org.uk/SHU-planning-research>.
- Evans, D.J., **Storror, R.D.** & Rea, B.R., (2016), *Crevasse-squeeze ridge corridors: Diagnostic features of late-stage palaeo-ice stream activity*. Geomorphology, 258, pp.40-50.
- 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.
- Gregory, S. & **Rose, J.** (2016), *Investigating the Influences of Differing Field Margins on the Abundance and Species Richness of British Ground Beetles (Carabidae)*, Natural Environment Research Transactions, Volume 2 Number 1, pp5-25, ISSN 2059-4577. Sheffield Hallam
- **Holmes, N.**, Langdon, P.G., Caseldine, C.J., Wastegård, S., Leng, M.J. Croudace, I.W. & Davies, S.M. (2016), *Climatic variability during the last millennium in Western Iceland from lake sediment records*. The Holocene 26 (5), 756-771.

- **Holmes, N.** (2017), *Engaging with assessment: increasing student engagement through continuous assessment*. Active Learning in Higher Education. Published online DOI: <https://doi.org/10.1177/1469787417723230>.
- Kilburn, N. & **Fraser, D.** (2016), *The Proposal that Nudibranch Jorunna funebris 'Juvenile' is Precocious, a Distinct Phenotype or a New Species*, Natural Environment Research Transactions. Volume 2 Number 1, pp 29-48, ISSN 2059-4577. Sheffield Hallam.
- Ma, S.C. & **Rotherham, I.D.** (2016), *Residents' changed perceptions of sport event impacts: the case of the 2012 Tour de Taiwan*. Leisure Studies, 35 (5), 616-637.
- Pourbakhtiar, A., Poulsen, T.G., Wilkinson, S., & **Bridge, J.W.** (2017), *Effect of wind turbulence on gas transport in porous media: experimental method and preliminary results*. European Journal of Soil Science, 68(1), 48-56. DOI: 10.1111/ejss.12403
- Rodrigo-Rech, A., Dalsgaard, B., Sandel, B., Sonne, J., Svenning, J-C., **Holmes, N.** & Ollerton, J. (2016), *The macroecology of animal versus wind pollination: ecological factors are more important than historical climate stability*. Plant Ecology and Diversity, 9 (3), 253-262.
- **Rotherham, I.D.** (2017), *How we lost our way with cuts to local authority countryside & environmental services*. Ranger, 115, Spring 2017, 8 -10.



- **Rotherham, I.D.** (2017), What's in a name? Parts 1 & 2. *Smallwoods*, 65, 20 - 21.
- **Rotherham I.D.** (2017), Book Review: *European Wood-pastures in Transition: A Social-Ecological Approach*. Edited by T. Hartel & T. Plieninger. *Environmental History*, 22 (2), 362 - 363.
- **Rotherham I.D.** (2017), *Champions of grassroots conservation: A future for local authority countryside services?* *ECOS*, 38 (1).
- Sheehan, K.A., Ardron, P.A., Kirk, H.R., & **Rotherham, I.D.** (2017), Thorne Moors Sphagnum Survey, 2016. Thorne & Hatfield Moors Papers.
- Shatford, K. & **Savage, A.** (2016), *The Clearfelling of Exotic Conifer trees: The effects on some Soil Chemical Properties at Snake Woodland in the Peak District*. *Natural Environment Research Transactions*, Volume 2 Number 1, pp 80-86, ISSN 2059-4577. Sheffield Hallam
- **Storror, R.D.** & Livingstone, S.J. (2017), *Glacial geomorphology of the northern Kivalliq region, Nunavut, Canada, with an emphasis on meltwater drainage systems*. *Journal of Maps*, 13, 153-164.
- **Storror, R.D.**, Jones, A.H., & Evans, D.J.A. (2017), *Small-scale topographically-controlled glacier flow switching in an expanding proglacial lake at Breiðamerkurjökull, SE Iceland*. *Journal of Glaciology*.
- Tarawneh, E., **Bridge, J.W.** & Macdonald, N. (2016), *A pre-calibration approach to select optimum inputs for hydrological models in data-scarce regions*. *Hydrology and Earth System Sciences*, 20(10), 4391-4407. DOI: 10.5194/hess-20-4391-2016
- Walmsley, J. & **Crowe, L.** (2016), *What makes a good smartphone app for outdoor recreation*, *Outdoor Recreation Network Journal*, Summer, Volume 27. Published on line <http://www.outdoorrecreation.org.uk/stories/volume/27>

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', 22 June, 2017, Sheffield Hallam.
- **Crowe, L.** (2017), *Alternative sources of funding for protected areas*, Europarc Atlantic Isles conference, August, 2017, Sheffield.
- **Crowe, L.** (2016), *Major Development in the English and Welsh National Parks*, CNP/CPRE/NT conference, London, December 2016.
- Heath, N. & **Crowe, L.** (2016) *An investigation into how the natural environment affects mental wellbeing: A comparison of the effects of different environments and their qualities*. Nature Connections 2016 - 2nd Interdisciplinary Conference: Getting Connected to Nature, University of Derby, 15 June 2016
- **Goodchild, B., Sharpe, R.,** Hanson, C. (2017), *Between resistance and resilience: a study of flood risk management in the Don catchment area (UK)*. The 13th Nordic Environmental Social Science Conference, 6-8th June 2017, Tampere, Finland.



- **Jones, A.H.**, Swift, D. A., and Livingstone, S.J. (2016), *Influence of ice sheet bed morphology on spatial and seasonal patterns of ice flow in Greenland: preliminary results from an automated method for interpreting high resolution ice velocity data derived from Landsat imagery*. Geophysical Research Abstracts Vol. 18, Poster Presentation, EGU General Assembly 2016.
- **Holmes, N., Storrar, R.D.** et al (2016), *Investigating recent environmental change through geomorphological mapping of glacial landforms in Ladakh, India: a geomorphological outreach project*. In: British Society for Geomorphology Annual Meeting, Plymouth, 5th-7th September 2016.
- **Holmes, N.** & Lem, R, (2016), *Wild science: undertaking geomorphological research on youth expeditions*. In: British Society for Geomorphology Annual Meeting, Plymouth, 5th - 7th September 2016. (Unpublished)
- **Rotherham I.D.** (2016), *Recombinant Ecology*, December 2016, British Ecological Society Liverpool.
- **Rotherham I.D.** (2017), *War & Peat - the role of wetlands in conflict and the impacts of conflicts on wetlands*, June 2017, ESEH, Zagreb, Croatia.
- **Sharpe, R.L., Holmes, N.** & Douterelo, I, (2016), *A methodological review of the long term storage of pollutants in freshwater sediment biofilms and their response to environmental disturbances*. British Society for Geomorphology, September 5-7, 2016, Plymouth UK



- **Storrar, R. & Jones, A.H.**, (2016), *Three-dimensional morphometry of eskers derived from Lidar data*. Geophysical Research Abstracts Vol. 18, Poster Presentation, EGU General Assembly 2016.
- Swift, D. A., Patton, H., Livingstone, S.J., **Jones, A.H.**, Clark, C., and Cook, S. (2016), *Distribution and characteristics of overdeepenings beneath the Greenland and Antarctic ice sheets and their glaciological implications*. Geophysical Research Abstracts Vol. 18, Poster Presentation, EGU General Assembly 2016.

Planning, Housing and Neighbourhoods

Books and Book Chapters

- **Goodchild, B.** (2016) *Markets, Politics and the Environment: an introduction to planning theory*, Routledge, New York.



Journal Articles and Reports

- **Ambrose, A.**, Eadson, W. and Pinder, J. (2016), *The role of actor-networks in the early stage mobilisation of low carbon heat networks*, Energy Policy online
- **Ambrose, A.**, **Goodchild, B.** & O'Flaherty, F. (2017), *Understanding user responses to low energy housing: a call for in-depth, qualitative methods*, Journal of Energy Research and Social Science.
- Casey, R., & **Maye-Banbury, A** (2016), *Relational and gendered selves: older Irish migrants' housing and employment histories in the north and East Midlands of England*. Housing Studies, 1-15.

- **Goodchild, B., Cadman, L. & Hammond, C.** (2016) *'Diversifying the master's research project: reflections on an initiative in architecture, planning and environmental management'*, Student Engagement and Experience Journal (Sheffield Hallam University).
- **Goodchild, B. et al** (2017), *Building, housing and planning - three linked omissions*, Consultation response to 'Building our Industrial Strategy': HM Government Green Paper January 2017.
- **Maye-Banbury, A.** (2016), *The Realities of Resistance During Maoism: Chinese Residents Untold Stories in the period Following the 1949 Communist Revolution*, 1st April, Journal of Resistance Studies Magazine.
- **Maye-Banbury, A.** (2016), *Repertoires of Resistance: Agency, Motive and Action Revealed By the Counter Housing Narratives of Three Beijing Residents in Mao's China*, Journal of Resistance Studies, Jan 2016. 1 (2), 51-84.
- **Maye-Banbury, A., & Casey, R.** (2016), *The sensuous secrets of shelter: How recollections of food stimulate Irish men's reconstructions of their early formative residential experiences in Leicester, Sheffield and Manchester*. Irish Journal of Sociology, 24(3), 272-292.
- **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 (Special edition on storytelling)

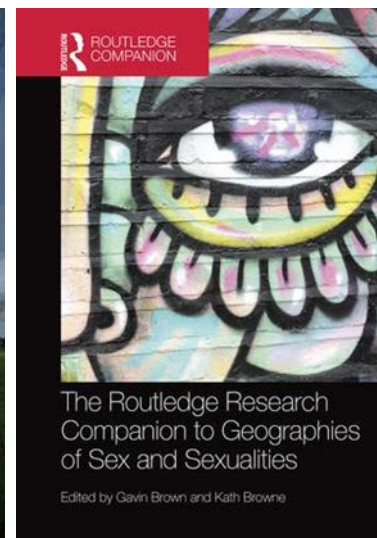
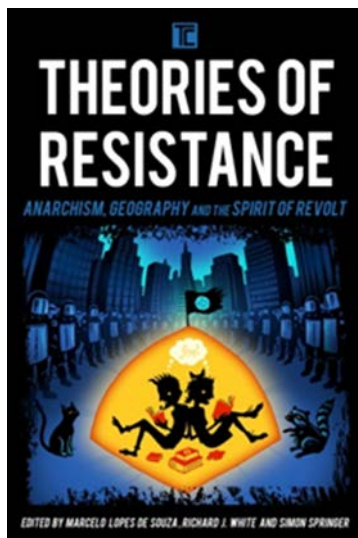
Conferences and Presentations

- **Goodchild, B.** (2017), *A sustainable transition? Recent trends in UK domestic energy consumption and the policy implications*, University of South Australia, Adelaide, 12 April.
- **Goodchild, B.** (2017) *Between resistance and resilience: a study of flood risk management in the Don catchment area (UK)*, the Royal Melbourne Institution of Technology, Melbourne, 28 April.

- **Hawkins, A.**, (2017), *School food, food-security and inequality*. People, Place and Policy Conference - 'Tackling Social & Spatial Resource Inequality', 22 June 2017, Sheffield Hallam.
- **Hawkins, A.**, Beatty, C. & Bennett, C. (2017), *Women in Low income Work and Food bank Use* , People, Place and Policy Conference - 'Tackling Social & Spatial Resource Inequality' , 22 June 2017, Sheffield Hallam.
- **Hawkins, A.**, Beatty, C. & Bennett, C. (2017), *The Left Behind: survival strategies of women in low income work in a changing welfare regime*, BSA Early Career Forum Event - 'The Precariatization of Women's Lives in the UK' - June 2017
- **Maye-Banbury, A.** (2017), *Share and Share Alike - Everyday life in English multi-generational households - motives, aspirations and challenges*. Faculty of Development and Society Researcher Conference - 12 June, Sheffield Hallam.
- **Maye-Banbury, A.** (2017), *Strangers in the Shadows: The Hidden Housing Histories of Irish Men Living in Leicester's 'Boarding Houses' During the 1950s and 1960s as Heterotopic Spaces*. ONHI annual conference - Galway 23 June.
- **Maye-Banbury, A.** (2017), *Resistance, Brexit and use of third spaces*, British International Studies Association, 15 June, Brighton.
- **Maye-Banbury, A.** & Martin McNally (2017), *All for one and one for all - everyday life in English multi-generational households*, European Network of Housing Researchers Conference 2017 Tirana.
- **Wilson, J.** & Gray J (2017) *Transport Planning to Encourage Active Lifestyles*, RTPi Yorkshire Conference Series, March 2017

Space and Place

Books and Book Chapters



- **Bassi, C.** (2016), Chapter 11: *Tunnels of Social Growth within the Leviathan: A Story of China's Super Girl*, in *The Routledge Research Companion to Geographies of Sex and Sexualities*, Edited by Gavin Brown, Kath Browne, Routledge.
- **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.
- **Bennett, L.** (2016), Chapter 4: *Thinking like a brick: Posthumanism and building material* in Taylor, C. & Hughes, C. *Posthuman Research Practices in Education*, Palgrave Macmillan: Basingstoke.
- **Bennett, L.** (2017), (ed.) *In the Ruins of the Cold War Bunker: Affect, Materiality & Meaning Making*. Rowman & Littlefield International.
- **Bennett, L.** (2017), *Forcing the empties back to work? Ruinphobia and the bluntness of law and policy*. In: Henneberry, John, (ed.) *Transience and Permanence in Urban Development. Real estate issues*. Hoboken, NJ, Wiley, 17-30.
- Clare N, White G and **White R.J.** (2017), *Striking Out! Challenging academic Repression in the neoliberal university through alternative forms of resistance: some lessons from the*

UK. in A. Nocella (ed) *Taking Back Our Universities: Strategies to Fight Against Academic Repression and the Corporatization of Higher Education* Peter Lang: New York

- Souza, M. L. de, **White R.J.**, Springer, S. (2016), (eds.) *Theories of Resistance: Anarchism, Geography and the Spirit of Revolt*, Rowman & Littlefield, Lanham.
- Springer, S., **White R.J.**, Souza, M.L. de. (2016), (eds.) *The Radicalization of Pedagogy: Anarchism, Geography and the Spirit of Revolt*, Rowman & Littlefield, Lanham.
- **White R.J.**, Springer, S., Souza, M.L. de. (2016), (eds.) *The Practice of Freedom: Anarchism, Geography and the Spirit of Revolt*, Rowman & Littlefield, Lanham.
- **White R.J.** and Williams, C.C. (2016), *Valuing and harnessing alternative work practice in a neoliberal society*, in Springer, S., Birch, K, and MacLeavy, J. (eds.). *The Handbook of Neoliberalism*. London, Routledge.
- **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, Conneticut.
- **White R.J.** (2017), *We Are One Lesson: reflections on teaching critical animal geographies in the classroom*. in C. Drew, A. George, J. Lupinacci, AJ. Nocella II, I. Purdy, and JL Schatz, *Critical Animal Pedagogy*, Peter Lang Press.
- **White, R.J.** & Springer, S. (2017), *For spatial emancipation in Critical Animal Studies*. *Critical Animal Studies*. Eds. Sorenson, J. and Matsuoka A. Rowman & Littlefield, Lanham.
- **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.

Journal Articles and Reports

- **Bassi, C.** (2016), *What's radical about reality TV? An unexpected tale from Shanghai of a Chinese lesbian antihero.* Gender, Place & Culture,
- **Bassi, C.** (2016), *Antonio Gramsci and Britain's Corbyn moment*, Global Labour Column 231, <http://column.global-labour-university.org/2016/03/antonio-gramsci-and-britains-corbyn.html>
- **Bennett, L.** (2016), *How does law make place? Localisation, translocalisation and thing-law at the world's first factory.* Geoforum, 74, 182-191.
- **Bennett, L.** & Crawley Jackson, A. (2016). *Making common ground with strangers at Furnace Park.* Social and Cultural Geography. (In Press)
- **Bennett, L.** (2017). *Cold War Ruralism: civil defence planning, country ways and the founding of the UK's Royal Observer Corps' fallout monitoring posts network.* Journal of Planning History.
- **Bennett, L.** & Crawley Jackson, A. (2016). *Making common ground with strangers at Furnace Park.* Social and Cultural Geography. 18 (1), 92-108.
- Nocella, A.J., **White R.J.**, and Cudworth, E. 2015 (eds.) *Anarchism and Animal Liberation: Essays on complementary elements of total liberation.* McFarland Press, Jefferson.



- 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.** & Williams, C.C. (2016) "*Beyond capitalocentrism: are non-capitalist work practices 'alternatives'?*", AREA, doi: 10.1111/AREA.1226.
- **White, R.J.** & Wood, T. (2016) *Special Double Issue in Protest and Activism With(out) Organisation*, International Journal of Sociology and Social Policy., Vol. 36 Iss 9/10 & Iss 11/12.
- **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.** & Wood, P. (2016) *Editorial: protest and activism with(out) organisation*, International Journal of Sociology and Social Policy, Vol. 36 Issue 9/10.
- **White, R.J.** & Wood, P. (2016), *Introduction: activism and protest with(out) organisation*, International Journal of Sociology and Social Policy, Vol. 36 Issue, 11/12.

Conferences and Presentations

- **Bennett, L.** (2016), *The cultural geologies of stone*, Royal Geographical Society Annual Conference, August 2016
- **Bennett, L.** (2017), *Making 1,500 holes: thinking about doing law, its closure and its absence*, Legal Geography Workshop, University of Bristol, April 2017 (organiser)
- **Bennett, L.** (2017), *At work in the ruins of the Cold War's nuclear bunkers*, Nuclear Humanities Workshop, University of Liverpool, April 2017 .
- **Bennett, L.** (2017), *Back to the basement: The rehabilitation of subterranean dwelling in the UK*, Volumetric Urbanism Symposium held at the University of Sheffield, May 2017.

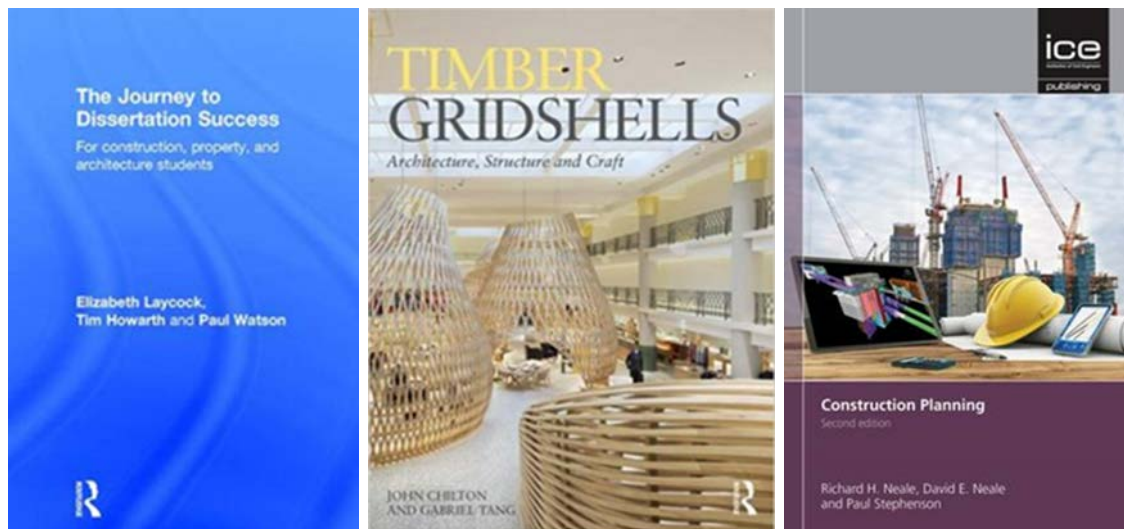
- **Bennett, L.** (2017), *Origins: the link to 1930s Air Raid Precautions' Protect & Survive Workshop*, University of East London, June 2017.
- **Bennett, L.** (2017), *What do we really want from bunkers?* Royal Geographical Society Annual Conference, Sept. 2017.
- **Jobling, A.** (2017), *The ongoing struggle for control of Lambayeque's sugar estates and regional power dynamics in Peru*, Society for Latin American Studies Annual Conference, 6-7 April, University of Glasgow.
- **McKoy, K.** (2017), *The impact of political marketing on the politics of transport*, American Association of Geographers conference, Boston.
- **Patterson, A.** (2017), *Critical Realism, Spatial Relations and Social Science Research*, presented at the RGS-IBG Annual International Conference, 30th August, Royal Geographical Society, London.
- **Patterson, A.** (2017), *Infrastructure governance: the emergence of a 'not for profit' water utilities sector in the UK*, presented at the 49th Conference of Irish Geographers, 5th May, University College Cork, Ireland.
- **White R.J.** (2016) *Pedagogy, Resistance and Freedom*, Meet the Author Session, University of Manchester, Manchester, November 2016.
- **White R.J.** & Springer S (2016), *For Spatial Emancipation in Critical Animal Studies: a veganarchist politics*. Anarchist Studies Network (ASN), Conference, Loughborough University, Loughborough. September.
- **White, R.J.** (2017) *Anarchy in the UK! Envisioning and Enacting the Anarchist City*, The City Talks, Victoria, Canada, January 2017.
- **White, R.J.** (2017) *Anarchist Geographies*. Invited lecturer for the course "Activism & Community Based Planning, University of Victoria, Canada, January 2017.

- **White, R.J.** (2017), *Animals and Animal Liberation*. Critical Geographies Reading Group, University of Victoria, Canada, January.
- **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), *The anarchic infrapolitics of community self-help, and the challenge of reinterpreting "the household" as a radical site of anti-capitalist activism*. Interpretive Policy Analysis (IPA) Conference, Leicester, July 2017.
- **White R.J.** (2017), *Is sharing really caring? A roundtable on sharing economies, social justice and (in) equalities*, Nordic Geography Meeting, Stockholm, Sweden. June 2017
- **White, R.J.** (2017), *Capitalism and the commodification of animals: the need for critical vegan praxis, animated by anarchism!* Association of American Geographers (AAG) Conference, Boston, April 2017.
- **White R.J.** (2017), *70 billion farmed animals killed every year: the limits of "go vegan!" and the need for critical vegan geographies*. Association of American Geographers (AAG) Conference, Boston, April 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.



Sustainable Design, Architecture and Construction

Books and Book Chapters



- De Been, I., Van der Voordt, T. & **Haynes, B.** (2016), 'Productivity'. In: P. A. Jensen and T. van der Voordt (eds.), Facilities Management and Corporate Real Estate Management as Value Drivers: How to Manage and Measure Added Value. Oxfordshire: Routledge.
- **Haynes, B.**, Nunnington, N. & Eccles, T. (2017), *Corporate real estate asset management: Strategy and Implementation*. 2nd Edition. Taylor & Francis.
- **Laycock, E.**, Howarth, T. & Watson, P. (2016), *The Journey to Dissertation Success: For Construction, Property and Architecture Students*. Routledge, Taylor & Francis, Abingdon, ISBN 10 1138839175, ISBN 13 978 1138839175 .
- Neale, R. H., Neale, D. E., & **Stephenson, P.** (2016), *Construction Planning*, second edition, ice publishing, ISBN 978-0-7277-6057-9.
- **Tang, G.** & Chilton, J. (2016), *Timber Gridshells: Architecture, Structure and Craft*, Routledge ISBN-10: 1138775304, ISBN-13: 978-1138775305.

- Tyszczuk, 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.**, Suckley, L. & Nunnington, N. (2017), *Workplace productivity and office type: An evaluation of office occupier differences based on age and gender*, Journal of Corporate Real Estate, Vol. 19 Issue: 2, pp.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.

Conferences and Presentations

- Clifford, S., Austin, P., & **Stephenson, P.** (2017), *Building Information Modelling (BIM): operation and use on major infrastructure projects*, 2nd International Conference on BIM in Design, Construction and Operations, 10-12 May, 2017, Alicante, Spain.
- **King P.** (2016), *The spaces in between: Praxis in the shared territory of the workshop and site*, Research Introductions Symposium, The Bartlett School of Architecture, UCL, London, December 2016.
- **Marsh, J.** (2016) *Theatre Design and Natural Ventilation - A UK Case Study*, PLEA Conference 2015 Bologna, 2015 9-11 September, 2016.
- **van Vliet, K.** & Thwaites, K. (2016), *The public private interface: academic concepts into urban design and planning policy and practice*, The UK and Ireland Planning Theory and Research Conference: Urban Design Track, Cardiff 8-9th September 2016.
- **van Vliet, K.** (2017), *The public private interface in late 20th and early 21st century housing in Sheffield*, University of

Sheffield Department of Landscape Architecture PhD Symposium, 14th June 2017.

- **van Vliet, K.** (2017), *Dutch Street Design: The role of order in enabling socio-spatial expansion of the Dutch public private interface*, Sheffield Hallam Space and Place Group Annual Conference 'The Politics of Place', 28th June 2017.
- **Tang, G.** (2016), *Structural Intuition and Creative Play: An Architectural Perspective to Shell Pedagogies*. International Association of Shell and Spatial Structures Annual Conference September, 2016.
- **Tang, G.** (2017), *Timber Gridshells*, ORT Universidad Montevideo Uruguay, 1 March 2017
- **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.** (2017), *Timber Gridshells – The Relationship of Architecture, Structure and Craft*, Institution of Structural Engineers (Yorkshire Regional Group), University of Sheffield, 17 May 2017.
- 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.
- **Udall, J.** (2017), *Make work work! Practices in Eco-social design that are sustainable, also economically*. Conference `By Design or By Disaster`. Free University of Bozen–Bolzano, Italy.
- **Udall, J.** (2017) *Mapping Solidarity Economies at Portland Works*. `Learn to Act` International Symposium, Sheffield.

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.

Professor Paul Stephenson has been appointed to Scientific and Technical Committees of several national and international bodies and organisations. These include the Association of Researchers in Construction Management, International Structural Engineering and Construction, Construction Applications of Virtual Reality, and the Sustainable Ecological Engineering Design for Society. Paul is also a member of the Management Board of Construct IT for business.

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. In the last year, Lynn was also invited to become the Countryside Management Association's academic advisor, and has recently joined the Board of the Europarc Atlantic Isles section - the regional section of the Europarc Federation (who represent protected area agencies across Europe).

Professor Liz Laycock has been elected to the Council for the International Masonry Society.

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 co-ordinator of the European Society for Environmental History UK & Ireland. In the past year, Ian has been invited to give keynote presentations to many conferences and events, including the Oliver Rackham Memorial Celebrations at Corpus Christi College Cambridge; the Woodland Trust's annual Oliver Rackham commemorative lectures; the Vernacular Architecture Group, Leicester University (on ancient woodlands); and at the Fiftieth anniversary meeting of the Countryside Management Association, at Losehill Hall in the Peak District.

Dr Angela Maye-Banbury is on the editorial board of the Journal of Resistance Studies, and became strategic lead for West Ireland (Connacht) for the Oral History Network of Ireland in October 2016, and nominated to their board of directors in May 2017. In March 2017, Angela ran an outreach and networking event at Turlough House, Co Mayo, Ireland. Angela was asked by special invitation to attend a reception with American Embassy in Dublin 21st June with distinguished American oral historian Don Ritchie.

Angela is also a member of the European Network of Housing Researchers, and the Scientific Ecological Engineering Design for Society (SEEDS) international committee with Leeds Beckett University.

Dr Rebecca Sharpe has been elected as a Committee Member and Admissions Secretary for the Royal Geographical Society 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.

Coinciding with the British release of Gabriel Tang's book entitled *Timber Gridshells: Architecture, Structure and Craft* (co-written with Prof John Chilton, University of Nottingham), a public lecture series where academicians and practitioners reflect and share their experience and insight into innovative lightweight structures construction was organised. Speakers come from ETH (Switzerland), ZJA Architects (Netherlands), Prof Juergen Hennicke (University of Stuttgart, Germany), Prof Sergio Pone (University of Naples, Italy), and Prof Sigrid Adrianenssens (Princeton, USA). Parallel to these lectures, and supported by Sheffield Institute of Art, an exhibition at Sheffield Millennium Gallery was organised to showcase innovative timber construction.

Sam Vardy has been an invited speaker at East Street Arts, an arts organisation in Birmingham, with a guest lecture entitled *Micro-politics of Spatial Self-Organisation*. Sam was also a co-organiser of the Family Activist Network, Paris, France, as part of COP 21, the Paris climate change conference in November, 2015.

Paul King has been invited to become 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).



Dr Richard White is on the editorial board of ACME: an International E-Journal for Critical Geographies, and is a reviewer for the following journals Antipode, AREA, Gender Work & Organisation, Peace Studies, International Journal of Sociology and Social Policy. In 2016-17, Richard was also on editorial boards for the Arissa Media Group (AMG) and the journal Animal Liberation Currents.

Richard has also been enlisted as a member of the Research Advisory Committee (RAC) for the Vegan Society, UK. The RAC supports staff and trustees of The Vegan Society by conducting and sharing academic and other research relevant to veganism. Committee members give advice, recommend references and speak on behalf of The Vegan Society at external events and in the media.

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). In July 2016, the ESRC announced the accreditation of 14 new Doctoral Training Partnerships (DTP) to succeed the current 21 Doctoral Training Centres (DTC). 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 2016/17:

Student	Degree	Supervisory Team	Thesis Title
*Mike Foden	PhD	Tony Gore (CRESR) Richard White	Reclaiming Unwanted Things: Alternative Consumption Practices, Social Change and the Everyday
Barry Wright	PhD	Ian Rotherham John Rose	A Critical Assessment of Botanical Indicators as Historic Markers in Wooded Landscapes
Sadeg Kamouka	PhD	Michael Heath Stephen Jay	Environmental Impact Assessment (EIA) Application to Oil and Gas Projects in Libya

(* 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
*Kiri Langmead	PhD	Richard White Peter Wells (CRESR) Chris Dayson (CRESR)	Exploring the Performance of Democracy and Economic Diversity in Worker Co-operatives
*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
Elmansuri Seham	PhD	Barry Goodchild Alan Patterson Richard White	Courtyard Housing in Tripoli: Tradition, Modernity and Users' Perceptions
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.

(* Students based in CRESR)



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.

Completed projects this year have included the following:

- Adam Rich (supervised by Gabriel Tang) explored the novel use of auxetics in architecture. These materials are known for their unusual mechanical properties which expand when pulled. The six week study involved exploring moving physical models and digital simulations using skills developed during Adams architecture degree. Adam's project was awarded a young designer's prize at the International Association of Bridge and Structural Engineering conference.
- Nikky Wilson (supervised by Professor Lynn Crowe and Dr Cate Hammond) contributed to a project exploring the implementation of the Major Development Test in English and Welsh National Parks. Her primary research, interrogating National Park Authority planning portals to establish the progress of planning proposals through their committee and appeal stages, was crucial to the success of this project. Nikky completed her M.Sc. Environmental Management this year, with a distinction, and is currently working for the Environment Agency.
- Dr Kevin Spence and Professor Lynn Crowe worked with Will Jones (B.Sc. Construction Management) to develop his dissertation research exploring the use of ecosystem services valuation tools for the construction industry. Will focused on how the financial valuation of ecosystem services, such as biodiversity and access

benefits, might better inform developers in their selection of housing sites.

- Dr Angela Maye-Banbury and her student, Xi Zhang (B.Sc. Urban and Regional Planning), documented the untold oral housing histories of the Beijing people in the last eighty years. So little is known about China's housing history, particularly the impact of a radical shift from unregulated housing under the National Government to tightly controlled state-sponsored accommodation following the Communist victory of 1949. Angela and Xi's study was designed to fill this gap in existing scholarship. Xi began a masters degree in Planning at Edinburgh University this year, and Angela and Xi have discussed her return to SHU to complete a doctorate, undertaking further fieldwork together in China.

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
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.



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 2015-2016, 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/index.html>.

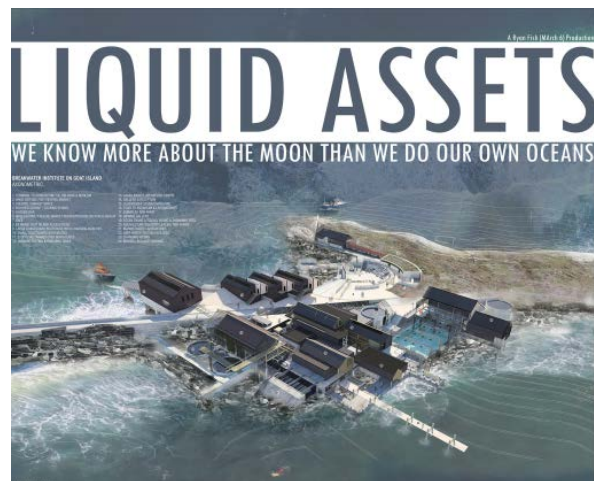


Our associated research centre, CRESR, also publishes an online journal *People, Place and Policy* (<http://extra.shu.ac.uk/ppp-online/>) to provide a forum for academic debate around issues of urban policy, social and economic regeneration, housing and the labour market.



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 2016-2017 (many in partnership with the Royal Geographical Society and the Geographical Association, and our associated professional bodies):

15-17 June 2016 *What Capability Brown did for Ecology* - organised by DNBE, Historic England, Natural England, the Ancient Tree Forum and others, celebrating the 300th anniversary of Lancelot 'Capability' Brown's birth.

6 October 2016	RGS/GA lecture - Catherine Anderson <i>'India's Disappearing Railways'</i>
20 October 2016	RGS/GA lecture - Susan Buckingham <i>'Climate Change, Gender and Activism'</i>
October 2016	Sheffield Design Week Symposium, October 2016 - Gabriel Tang - <i>Design Practices between Architects, Engineers and The Maker</i>
December 2017	RTPI Yorkshire Region Conference Series - <i>The Delivery of Housing in the UK</i> - Chaired by Karen Escott and Barry Goodchild
7 February 2017	RGS/GA lecture - James Evans <i>'The Experimental City'</i>
12 March 2017	RGS/GA lecture - Mark Evans MBE <i>'Crossing the Empty Quarter'</i>
March 2017	RTPI Yorkshire Region Conference Series - <i>Planning for a Changing Population</i> - Chaired by Josie Wilson.
4 April 2017	RGS/GA lecture - Naomi Holmes <i>'Geographical Adventures in a High Altitude Desert'</i>
26 April 2017	RGS/GA lecture - Paul McGreavy <i>'Meanderings on the Silk Roads'</i>
4 May 2017	RGS/GA lecture - Huw Kingston <i>'Mediterranean: a year around a charmed and troubled sea'</i>
July 2017	RTPI Yorkshire Region Conference Series - <i>Major Infrastructure Planning - the Current Agenda</i> . Chaired by Josie Wilson

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 featuring on Sheffield Live Television, on BBC Countryfile, and newspaper coverage in the Guardian, the Daily Mail, the Yorkshire Post, and the 'i'.

Ian also organised three major international and national conferences at SHU: '*What did Capability Brown do for Ecology*' – as a part of the national tercentenary celebrations; '*Peatlands & Raptors*' with Natural England and the RSPB and other partners; and '*Wood Meadows & Pastures*'; along with other local events - Action for Woods and Trees Part 2, and Eco-science in the Park.



Angela Maye-Banbury was invited on to BBC Radio 4 '*Thinking Allowed*' (with Professor Laurie Taylor) on 30 November 2016, to discuss her research with Rionach Casey involving food, memory and the Irish immigration experience. Angela was also interviewed live on Manchester 96.9 FM '*Out and About*' programme 17th May 2017 on life and work of modernist architect and designer Eileen Gray.

Other DNBE staff have undertaken outreach work with our related professional bodies and other organisations. For example, 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, and coordinated the science programme for a youth expedition to the Yukon, Canada. 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*'.

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

As the new Head of Department for the Natural and Built Environment, I would like to place on record my thanks to my predecessor, Professor Norman Wienand, for nurturing a culture of research 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 integrating research into our students' learning.



I will be working alongside colleagues, and with CRESR, over the coming year to refresh the Departmental research strategy. Our aim is to enrich and enhance the research culture in the Department, thereby strengthening our already impressive research and scholarly activities and, ultimately, creating knowledge and transforming lives.

Dr Luke Desforges

Head of the Department of the Natural and Built Environment



Contact details:

Colm Campbell

Department of the Natural and Built Environment

Faculty of Development and Society

Sheffield Hallam University

City Campus

Sheffield, S1 1WB

Email: Colm.Campbell@shu.ac.uk

Telephone: +44 (0)114 2254805 / 5094

Departmental web page -

www.shu.ac.uk/about-us/academic-departments/natural-and-built-environment