Department Of Landscape Architecture.



# Research, Practice and Education

In the Department of Landscape Architecture at Sheffield University we're often discussing the interactions between the three endeavours of education, research and practice (and yes, please do visualise that Venn diagram). This publication aims to reflect our current research projects and recent publications in a way that is accessible for landscape practitioners, and reflective on the range of thinking and writing here at Sheffield. You will find listed a mix of reports, toolkits, books and academic papers. Most of these can be downloaded free of charge, while the books can be purchased via online bookshops. If you find a member of staff's work of particular interest, you'll find a full list of their research publications on their staff webpages at www.sheffield.ac.uk/landscape.

Our ongoing research, both findings and methods, are also integral to shaping our curriculum. We expect our students to engage with new ideas and developing knowledge across science, social science and the humanities, and our graduates to be able to evaluate and apply these within varied areas of landscape practice.

There's also that third overlap, between practice and education. We are hugely appreciative of the many ways that landscape architects in practice contribute to the learning of our students – as tutors, as guest speakers, as members of the professional review board, as curators of our 'Whole School Project' and through taking part in initiatives like Pop Into Practice and our Employers Fair (see page 23 for more information). If that's you, thank you for making our department such a lively place.

Best wishes.

Dr. Clare Rishbeth

One Rishbit

Director of External Relations

Department of Landscape Architecture

University of Sheffield, UK.

Autumn 2020

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# Andy Clayden

Landscape design // natural burial // eco system services // military cemeteries design //

# In victory and in defeat: Reading the landscape of Luxembourg's WW2 military cemeteries

This illustrated book chapter investigates the design of an American and a German military cemetery that was constructed shortly after WWII and are located on the outskirts of the city of Luxembourg. The difference in their design expression, memorialization, materiality and spatial organization is striking and reveals something of the challenge each nation faced in how to memorialise their war dead.

### + Book chapter in: Ewige Ruhe? Concession à perpétuité ?

www.capybarabooks.com/buecher/sachbuch/ewige-ruhe-concession-a-perpetuite.html



### Natural Burial: Landscape, Practice and Experience - Routledge

This illustrated book explores the ideas and motivations that have shaped the development of natural burial in the UK since its conception at Carlisle cemetery in 1993 by Ken West. It provides a detailed

analysis through site visits, drawings, interviews with owners, managers and bereaved people, and includes a longitudinal study of a single burial ground. The book unravels the many different interpretations of natural burial and how these highly dynamic landscapes continue to evolve.

### Gardening in a Changing Climate: RHS report 2017

This illustrated and freely accessible report considers the impact of climate change on the domestic garden in the UK. In particular it explores how warmer and more turbulent weather conditions will shape how we design and manage these spaces. These ideas were used to design and build a demonstration garden at RHS Chatsworth 2017 that included flexible and robust structures that could withstand storms, harvest rain water and adapt to sudden changes in the weather.

<u>+ Free download: report</u> www.rhs.org.uk/science/gardening-in-achanging-world/climate-change

#### Currently working on...

My research into WW2 military cemeteries continues with visits to the CWGC archive to investigate the design and making of the German Military Cemetery on Cannock Chase. Cycle touring in France has also provided a great opportunity to explore how different nations addressed the challenge of memorialising their war dead. I am also currently working on a research that investigates the potential of diffrent deathscapes to deliver natural capital.



# Anna Jorgensen

Wild urban spaces // biodiversity // health and wellbeing // air pollution // Latin America //



**Urban Wildscapes** 

Does urban renewal lead to the loss of valued wild places that connect us with history and nature, or can we make changes whilst retaining some of these essential qualities? This is one of the first collections of writing about urban wild spaces seen from a landscape perspective, exploring their characteristics, uses and contemporary relevance. Rather than just being purely descriptive or theoretical this illustrated book provides case studies and practical guidance on how to intervene in urban wildscapes without destroying their unique qualities and functions.

<u>+ Edited book: Paperback & ebook</u> www.routledge.com/Urban-Wildscapes-1st-Edition/Jorgensen-Keenan/p/ book/9780415581066

"Not in their front yard" The opportunities and challenges of introducing perennial urban meadows: A local authority stakeholder perspective

Are urban meadows a substitute for mown amenity grassland? This paper reports on local authority green space manager's experiences of introducing biodiverse perennial meadows into amenity green spaces in two urban areas in the south of England. The paper explores the challenges and opportunities under three thematic headings: aesthetics and public reaction, locational context, and human resources and economic sustainability. Our paper

concludes that changes in management practice such as the introduction of perennial meadows have significant political, strategic, economic and practical implications and cannot be viewed purely as a technical challenge.

+ Free download: Open Access academic paper

Greenspace spatial characteristics and human health in an urban environment: an epidemiological study using landscape metrics in Sheffield, UK Urban green space boosts health and wellbeing, but can we plan our towns and cities to maximise these benefits? Our study was one of the first to compare the complex characteristics of urban green space with human health. Our findings suggest that planning urban areas to include greater water cover and diversity of tree planting and less amenity grassland in large greenspace patches that are well interspersed with the built environment is likely to support the health of the people who live in those areas.

<u>+ Free download: Open Access academic paper</u> doi.org/10.1016/j.ecolind.2019.105464

#### Currently working on...

Anna's research and innovation project CONEXUS (co-producing nature-based solutions and restored ecosystems-transdisciplinary nexus for urban sustainability) has been funded by the European Union. CONEXUS involves creating pilot demonstrator projects in 3 European and 4 Latin American Cities. She is supervising a number of PhDs projects that explore the potential for local interventions that improve health and urban liveability e.g. green fences to mitigate air pollution in school playgrounds.



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## Armina Pilav

Ecologies of war transformation // transitional landscapes // nature destruction // cross-media research // feminist design practices //

### No-connection: notes on transformation of violence

In the period between 2015-2016 many European states located on the Balkan and Mediterranean Sea route started to close their borders in an attempt to stop the people on the move from Syria, Iraq, Afghanistan, Iran and African countries. This research projects operates with the art and landscape research methods and looks at how different periods and territories of migrations resonate in the present, based on ephemeral material and digital evidences, including human, non-human alliances and narratives. The research was conducted in Croatia, Serbia and Malta, and the notes and documents are collected on the project blog.

+ Blog http://rctouring.riskchange.eu/



#### Drowned in Neretva River: Nature Destruction and Inter-Species Alliances

Research on spatial, ecological, political and material formations of the post-war landscape system of the Neretva river flowing through Mostar, the city on the south of Bosnia and Herzegovina, opens an inclusive analysis of the contemporary condition of the river while documenting current exposure of the riverine landscape to the environmental dangers. The research has been selected as one of the 25 projects among 433 for the Future Architecture fellowship program for 2020 and it is presented on the FA platform.

#### + Website

http://futurearchitectureplatform.org/

#### **Un-war Space Device**

Un-war Space Device serves as a performing and informing archive in the form of a compressed, specially designed, exhibition device, through which we can now, in the "age defined by planetary civil war" (Hito Steyerl, 2017), see, read and speak about the war in Sarajevo (Bosnia and Herzegovina). Un-war Space Device is the research method that helps to engage in conversations about the war and lived trauma of the humans who survived the war. It is designed to be used as single or as part of series of public events and it was exhibited internationally as a self-standing object as well as in group exhibitions.

#### + Online article

https://horizon-magazine.eu/article/forensic-architects-piecing-together-story-war.html

#### Currently working on...

New research outcomes of the 'Drowned in Neretva River' research project and a public exhibition of the 'no-connection: notes on transformation of violence' research project was presented in Maribor in Slovenia on 10 April 2020.



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## Clare Rishbeth

Migration and place // cities for diverse populations // cultural associations with nature // refugees // participatory methods //

### #refugeeswelcome in parks: a resource book

This booklet provides an overview of the findings from our research with refugees and environmental and refugee support organisations in the UK and Germany. It gives practical guidelines about how to support access to urban parks with refugees and asylum seekers.

+ Free download: Open Access academic paper Participation and wellbeing in urban greenspace: 'curating sociability' for refugees and asylum seekers

www.sciencedirect.com/science/article/pii/ S0016718519302246



#### Ethnographic understandings of ethnically diverse neighbourhoods to inform urban design practice

This paper argues that often urban designers need to give more attention to the social complexity of urban communities and to intentionally design and manage places for shared positive experiences across difference. It provides a literature review of ethnographic studies within UK neighbourhoods with ethnically diverse

populations, and highlights four key principles for urban designers.

+ Free download: Open Access academic paper www.tandfonline.com/doi/abs/10.1080/1354983 9.2017.1385000

### Young people, mental health and urban nature

This research explored how young multiethnic urban residents of Sheffield (17-27 years) value greenspace and other 'nature experiences', and how in many cases use these to support their own wellbeing. We found much to debunk pervasive notions of 'nature-deficit disorder'. However, some of the social and environmental contexts of young people (especially related to living in deprived areas and work/educational pressures) reduced the likelihood of nature engagement. This research was part of Improving Wellbeing through Urban Nature.

+ Free download: Open Access academic paper Nature doesn't judge you - how urban nature supports young people's mental health and wellbeing in a diverse UK city. doi.org/10.1016/j.healthplace.2020.102296

#### Currently working on...

Following on from #refugeeswelcome in parks, and informed by an exploratory trip to Beirut last year, I have just won funding for a research project based in Lebanon: Included Outside: interventions for a more inclusive public realm in conflict settings. The 18 month project will explore how marginalised groups (focusing on women and refugees) experience public open space and how this might influence professional practice. The team includes Lebanese academics and NGOs and is funded by the Global Challenges Research Fund.



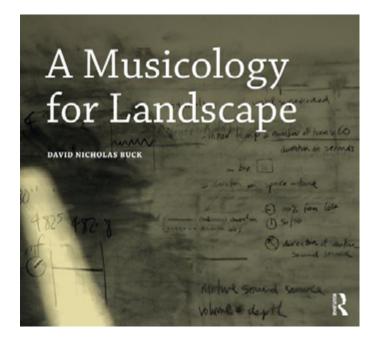
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## David Buck

Sonic urbanism // landscape representation // sound and landscape experience //



#### A Musicology for Landscape

Landscape representation has been hampered by the constraints of the perspective with its monocular vision, static viewpoint, visual dominance and absence of time. This book seeks to address these by drawing conceptually and practically upon the creative practice with the longest history of temporal representation, music. It argues that the rich history of notating time in music provides a critical model for this under-researched aspect of landscape architecture, whilst also ennobling sound in the sensory appreciation of landscape. This book examines three innovative 20th century musical works presenting a critical evaluation of their work within music as well as a means in which it might be used in design research. The book seeks to offer valuable insights into landscape representation and sound by bringing together musical composition and landscape architecture through notation, affording a sensitive exploration of temporality and sound in both fields. + Book: Paperback, hardback and e-book www.routledge.com/A-Musicology-for-Landscape/Buck/p/book/9781472479389

#### Drawing Sounds as Landscape

This essay discusses the relationship between music notation, sound, and landscape. I explore how the notation of musical sounds might lead to new methods for drawing auditory landscapes. There are three components to the research: an analysis of the score of English composer Michael Finnissy's composition Green Meadows (1977); a reference to ethnomusicology to explore how the notation of sound-as-music might allow us to draw sound-as-landscape; and a notation to investigate the composition of a landscape through sound. I question how auditory landscapes might be composed, and suggest ways in which both drawing and sound might be considered landscape. + Free Download: Open Access academic paper

ojs.lib.ucl.ac.uk/index.php/up/article/view/1276

#### Currently working on...

I am currently working on a paper which examines the under-researched relationship between the audio and visual sequences of spatial experience in Picturesque landscapes. It examines the historic records as well as makes contemporary observations, arguing that conventional readings of the Picturesque underplay the poly-sensory nature of spatial experience in the landscape. It then argues that this relationship represents an unnoticed example of montage as defined by Russian filmmaker Sergei Eisenstein and in developing new drawing techniques for this sound and visual experience, this research provides a new understanding of the Picturesque that moves beyond the conventional definition of simply the pleasures of seeing.



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# Eckart Lange

Landscape planning // visualisation // modelling // landscape perception // public participation and communication //

# Assessing the effects of quarry treatment options on the attractiveness of reclaimed limestone quarries using 3D-visualizations

This study investigates the effect of different limestone quarry reclamation treatment options on people's perception of these quarries. Ten different combinations of treatment methods and after-care for reclaiming quarries are simulated from which fifty still images are captured along a transect at five different distances. The attractiveness and different landscape characteristics are rated by seventy students with different academic backgrounds. The methodology and overall findings would be applicable to landscape quality assessment and reclamation in other settings.

<u>+ Academic paper</u> doi.org/10.1080/17480930.2018.1561387

# Tracking Visual Engagement in Mixed Reality: A Framework for Analysing Interaction with Digital Models

Due to technological advances, affordable Mixed Reality devices, including both Virtual Reality (VR) and Augmented Reality (AR), are beginning to be used to support participatory planning to better inform stakeholders of design interventions. Stakeholder participation and perception studies often utilize both qualitative interviews and quantitative techniques to gauge how a model can effectively communicate design intentions. In this paper, we examine how Mixed Reality enables new methods of investigating how users interact with digital models, with details of a device-based perspective tracking system, using the latest low-cost AR and VR platforms.

<u>+ Free download: Open Access academic paper</u> dx.doi.org/10.14627/537663017

### Mobile Augmented Reality for Flood Visualisation

Mobile Augmented Reality for environment, planning, and design has hardly been touched upon, yet mobile smart devices are now capable of complex, interactive, and immersive real time visualisations. We present a real time immersive prototype app for on site content authoring and flood visualization in which we combine available technologies. Networked access to live sensor readings provides rich real time annotations. The flexibility of the app permits a broad range of applications in planning, design and environmental management.

+ Free download: Open Access academic paper doi.org/10.1016/j.envsoft.2018.05.012



#### Currently working on...

As a Professor Emeritus, I am working on a joint research project with TU Delft and South China University of Technology titled Adaptive Urban Transformation. Focusing on the extreme urbanisation dynamics in the Pearl River Delta in China we investigate planning and management options for more resilient urban environments.



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# Helen Woolley

Children's outdoor environments // play value // play in high density cities and crisis situations //

#### Stories of Living with Nature 2014

How do you improve play value and biodiversity in greenspaces connected to social housing? This easy to read and illustrated document tells the story of a three year project working with Sheffield Housing Services and Sheffield and Rotherham Wildlife Trust. The team implemented on-site projects in collaboration with residents in 24 social housing communities and evaluated the results.

+ Free download: report

www.sheffield.ac.uk/polopoly\_fs/1.516000!/file/living-with-nature-online-2014.pdf

### Assessing links between play value and design of play spaces 2013

This academic paper uses literature from landscape architecture, psychology and education to develop a tool for designers to assess the play value of an outdoor play space. It shows that a more natural approach has a greater play value than a Kit, Fence, Carpet approach. The tool can also be used to suggest how to improve these spaces. To find out about using the tool please email Helen.

+ Free download: academic paper eprints.whiterose.ac.uk/94590/

Space, People Interventions, Time: A model for understanding children's outdoor play in post-disaster contexts based on a case study from the triple disaster area of Tohoku in north-east Japan 2015

In the post disaster area of north east Japan after the massive earthquake, tsunami and failure of the Fukushima nuclear power plant, we found that childrens' landscapes were lost, found, reclaimed, temporary, absent and made new. The existence, or not, of such spaces was the result of People

(such as play workers), Interventions (such as new adventure playgrounds and play buses) and the Time children had or did not have for play.

+ Free download: academic paper eprints.whiterose.ac.uk/94589/



#### Currently working on...

Building on the research from Japan and visits to Za'atrai refugee camp in Jordan to explore the constructed and found spaces of children's play in these natural and human-induced (post)disaster contexts. Working with my Growing Up in China PhD group to move towards publishing the findings and analysis of their work in rapidly urbanising China. Much of this explores the use of outdoor environments by three generations of children in different contexts: inner city Beijing, varied housing types in Wuhan and a rural town. Consolidating some of our learning from the Playing the Archive project (funded by the UK research council EPSRC) and the Opie Archive of children's play in streets and games during the 1950s-1980s.



# James Hitchmough

Ecological planting // meadow-grassland design and management // climate change adaptation // nature-inspired design //

# Using big data to improve ecotype matching for Magnolia in urban forestry

This paper is the first in a series that uses the genus Magnolia as a vehicle to explore how we can use digital data (for example digitized herbarium sheets from the past 200 years) on plant distribution in nature to quantify climatic range, and to then be able to match this to future projected urban climates across the world. The work also looks at the deficiencies (and the merits) of the heuristically gained data on how plants work in cultivation and how this might be improved by adopting a more ecological traits based approach. Characterising plants by their traits is the zeitgeist in ecological science but the jury is still out on how useful this way of conceptualizing plants will be to Landscape Architects.

<u>+ Academic paper</u> doi.org/10.1016/j.ufug.2019.126580

# Attractive, climate-adapted and sustainable? Public perception of non-native planting in the designed urban landscape

This paper provides evidence for broad public support for the use of non-native species in urban designed landscapes and how narratives that seek to demonise such plants on the basis of their origin sit very uncomfortably with the climate change epoch we are currently living through.

<u>+ Free download: Open Access academic paper</u> www.sciencedirect.com/science/article/pii/ S0169204617300683

All about the 'wow factor'? The relationships between aesthetics, restorative effect and perceived biodiversity in designed urban planting

This paper looks at the importance of flowering displays in designed urban plantings as a means of providing stimulus for landscape users and how this relates to more background provision of greenery as a form of stress alleviation.

<u>+ Free download: Open Access academic paper</u> www.sciencedirect.com/science/article/pii/ S0169204617300701



#### Currently working on...

I am currently working with PhD student, Kewei Chen, exploring Chinese attitudes to the unfamiliar appearance of urban ecological planting, through a number of woodland parks and gardens I have designed for the Beijing City Government. My latest PhD student, Yuzhou Du, is looking at selecting Yunnan native species from low to medium altitude to better fit future climate change in Western Chinese and Western European cities. This research will also collect the genetic forest material to recreate the forests of the 1300km2 mountain Longquanshan over a 20 year period. This woodland restoration project is being undertaken with Dr Henrik Sjoman of SLA Alnarp and the Gothenberg Botanic Garden as part of a collaboration with UN Habitat.

 $\bowtie$ 

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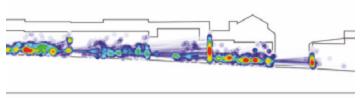
# James Simpson

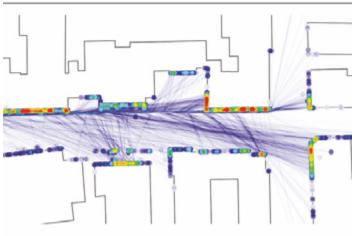
Urban streets // indoor-outdoor interface // everyday experience // human perception // outdoor eye-tracking //

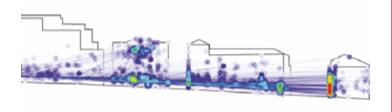
### Visual engagement with urban street edges

This paper presents findings from onsite empirical research using mobile eye tracking technology in order to understand in greater detail where pedestrians are actually looking when they walk along city centre streets. It highlights the relevance of the material build environment in directing the view of pedestrians, and quantifies how their eye movements are directed by a combination of both spatial and social factors.

+ Free download: Open Access academic paper www.tandfonline.com/doi/full/10.1080/17549175 .2018.1552884







#### Visual Engagement with Urban Street Edges Along Non-Pedestrianised and Pedestrianised Streets

This research explores the impact that street pedestrianisation has upon peoples' visual engagement with the environment around them and particularly surrounding ground floors. The findings show that people direct their gaze differently when inhabiting non-pedestrianised and pedestrianised streets. Pedestrianised streets encouraging visual engagement with the entirety of the environment around them in contrast to non-pedestrianised streets that overwhelmingly restrict such engagement to the side of the street being walked along.

+ Free download: Open Access academic paper www.mdpi.com/2071-1050/11/15/4251

#### Currently working on...

I am currently in the process of writing up research that highlights how mobile eye-tracking data can be visualised upon three-dimensional models of real-world urban environments as well as research findings that provide new insight into how pedestrian visual engagement with ground floors is structured in response differing physical and material attributes of the environment.



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# Jan Woudstra

Landscape history // practice of landscape design // conservation // historic planting detail //

#### Dealing with the consequences of climate change in historic parks and gardens in the United Kingdom

Guardianship of historic landscapes needs to engage with the impact of climate adaptation. This paper sets out some of the different agendas and approaches of taken by conservation organisations. However, these are often acted on in a piecemeal fashion. I argue that collaborative ideas and action are desperately needed.

#### <u>+ Open access book</u> www.degruyter.com/view/ product/506313?format=G

### Landscape Gardening and the Metropolis

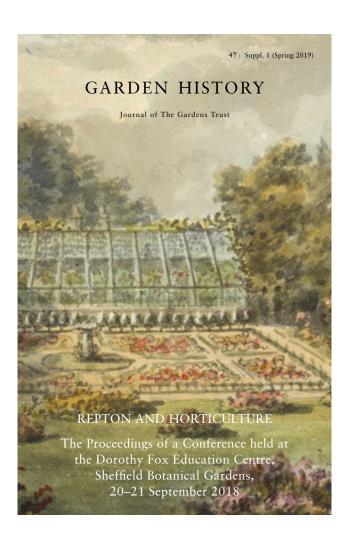
This paper investigates the history of St James park in London and puts it in the context of the urban transformation of London at the turn of the nineteenth century. It includes a discussion of the differing contributions between Nash and Repton, adjusting historical inaccuracies in the attribution of credit. This analysis feeds into a longer research project on the history and development of the London park system.

#### + Free Download: Paper http://thegardenstrust.org/wp-content/ uploads/2019/02/47-07\_Woudstra.pdf

#### A History of Groves

The book argues that groves are an often overlooked landscape feature and need to be more critically investigated and more widely used within landscape architecture practice. The book presents case studies of the range of uses and meanings of groves historically and in contemporary practice.

#### <u>+ Book: Hardback and Ebook</u> www.routledge.com/A-History-of-Groves/ Woudstra-Roth/p/book/9781138674806



#### Currently working on...

Capability Brown, Royal Gardener: The Business of Place-Making in Northern Europe Edited by Jonathan Finch & Jan Woudstra, will be published by White Rose University Press, and will also be an open access publication.

# Joseph Claghorn

Algorithmic design // emergent and self-organizing systems // designing for indeterminacy and risk // vernacular landscapes //

#### Generative Landscapes Blog

I started the blog 'Generative Landscapes' as a series of Rhino and Grasshopper tutorials for landscape architecture students in an Introduction to algorithmic design course, and expanded it to include more complex algorithmic examples from there. It has proven quite popular around the world, with over 800,000 page views from 150,000 unique visitors, and after a hiatus to write my thesis, I will soon start posting new content.

<u>+ Blog</u> generativelandscapes.wordpress.com

#### Algorithmic Landscapes: Computational Methods for the Mediation of Form, Information, and Performance in Landscape Architecture

My doctoral thesis provides an in-depth study of algorithmic design in the context of landscape architecture, beginning with a theoretical and historical exposition of what algorithmic design is. The second part provides numerous examples of algorithmic patterns of potential use and interest to landscape designers, while the final chapters give three in-depth case studies of its application to specific projects.

+ Doctoral Thesis doi.org/10.15488/3734

# Rehabitar la Montaña: Strategies and processes for sustainable communities in the mountainous periphery of Medellín

I was involved in a government funded research collaboration between Leibniz University in Hannover Germany and the planning think tank Urbam at EAFIT University, looking at strategies to reduce risk and improve lives in landslide prone settlements in the periphery of Medellin Colombia. Preliminary results of our research were summarized in a number of major landscape architectural publications (JoLA, Topos), with an open-access version appearing in the Brazilian Journal Urbe.

<u>+ Free download: Open Access academic paper</u> dx.doi.org/10.1590/2175-3369.008.001.SE03



#### Currently working on...

I recently completed a pilot study doing a computational analysis of the footpath and public rights-of-way network of South Yorkshire and Derbyshire to inform a broader study of the whole network of England and Wales. The intention of this study is to find deadends and other inconsistencies in the network which point to potential 'lost' rights of way which could be restored and recorded on each council's definitive map. An open access paper on this first phase will be available in June 2020 through the Journal of Digital Landscape Architecture.



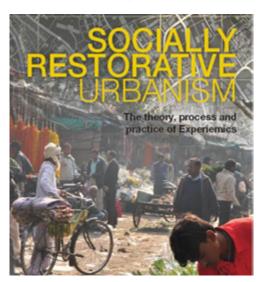
# **Kevin Thwaites**

Socio-spatial urbanism // Experiential landscape // socially restorative urbanism // transitional edges // microenvironments //

Restorative urban open space: Exploring the spatial configuration of human emotional fulfilment in urban open space.

This paper takes the well established understanding of restorative places and applies an urban landscape architecture interpretation focused on identifying the relevance of spatial configuration. It develops a conceptual framework for urban design which supports human wellbeing in urban settings. The paper lays foundations for subsequent work in experiential landscape.

+ Free download: Open Access academic paper eprints.whiterose.ac.uk/94857/7/ Restorative%20Urban%20Open%20Space%20 0804%20%28revised%29.pdf



### Experiential Landscape: An Approach to People, Place and Space

In this book we take a holistic view of human – environment relations and explore relevant philosophical underpinning in order to develop a theoretical structure for an experiential landscape mindset. This underpins the development of experiential mapping methodology for application in practice. In the book we use case studies and field based research to demonstrate

how this approach can be applied in practice.

+ Book: Paperback, Hardback & ebook www.routledge.com/Experiential-Landscape-An-Approach-to-People-Place-and-Space/ Thwaites-Simkins/p/book/9780415340007

# Socially Restorative Urbanism: the theory, process and practice of experiemcs

This book focuses on the social implications of urban planning and design. It is based on a reconceptualization of urban environments as evolutionary places, rather than material and economic products. Change, adaptability and growth are explored through advancing the importance of edges, especially between build form, adjacent open spaces and processes of territorialisation. It ends by proposing an agenda for research, teaching and practice to advance the importance of integrated relationships between the social and spatial.

+ Book: Paperback, Hardback & ebook www.routledge.com/Socially-Restorative-Urbanism-The-theory-process-and-practiceof-Experiemics/Thwaites-Mathers-Simkins/p/ book/978041559603

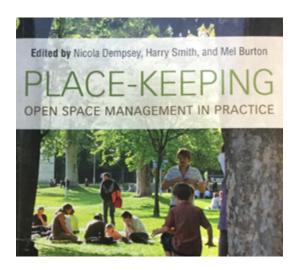
#### Currently working on...

I am working on locating Socially Restorative Urbanism principles within wider socio-spatial design thinking, through exploration of the relationship between urban material structure, spatial organisation and social behaviours. This includes imminant publications on transitional edges, micro-environments and scalar slippage concepts. This informs teaching in 3rd year undergraduate and master level projects in urban design. I work closely with James Simpson in developing a strategic approach to socio-spatial design in the form of the research hub Socio-spatial Urbanism Unit (SsUU).



# Nicola Dempsey

Long-term landscape design, planning and managment // policy implementation into practice // decision-making //



# Working out What Works: The Role of Tacit Knowledge Where Urban Greenspace Research, Policy and Practice Intersect

This paper is from the recently completed Improving Wellbeing through the Urban Nature (IWUN) project which investigated the links between 'urban nature' and mental health. We asked practitioners about what green space interventions they would implement in Sheffield, and what challenges they face. The findings highlight how practitioners' tacit knowledge strongly influences their choice of greenspace interventions, even if research may point to other 'solutions'.

+ Free Download: Open Access academic paper www.mdpi.com/2071-1050/11/18/5029

# Understanding Stakeholder Perceptions of Acceptability and Feasibility of Formal and Informal Planting in Sheffield's District Parks

This is the second of four papers exploring the feasibility and acceptability of a range of alternative park management practices calling on Dr Jinvo Nam's recently completed PhD research. We asked residents, community groups and parks managers about their attitudes towards formal bedding, meadows with wildflowers

and long grasses plantings. Our findings are of real interest in the UK where parks departments continue to deal with the effects of austerity policies, which are severely hampering their ability to manage parks.

+ Free Download: Open Access academic paper doi.org/10.3390/su11020360

#### Volunteered information on naturebased solutions – dredging for data on deculverting

There is growing interest in the quality and reliability of data that can be collected from volunteers. We report here on a 'bottom-up' map-based wiki tool about daylighting rivers, which aimed to crowd-source data from the public as well as professionals. Among the findings, we found that daylighting initiatives rely heavily on volunteers, suggesting that only those people with the skills, time, technology and capacity to make their voices heard are the ones sharing their data.

<u>+ Academic paper</u> doi.org/10.1016/j.ufug.2018.08.019

#### Currently working on...

I am conducting research analysing UK cities' green and open space strategies. I am also working with colleagues at Sheffield Hallam University evaluating the National Heritage Lottery Fund's Parks for People programme and the Future Parks Accelerator programme. And I am also working with The Parks <u>Alliance</u> and the University of Leeds to create an accessible online green space research hub that policymakers and practitioners can use when they need to consult academic research findings. This hub is a work in progress so watch this space! Catch our regular blogs at www. place-keeping.org/



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# Nigel Dunnett

Planting design // green roofs // water-sensitive design // urban meadows // climate-adapted landscape // podium landscapes //

#### Meadows as an alternative to intensely mown urban grassland: effects of composition and structure on biodiversity

This paper contains the results of a largescale consortium research project. I designed the experimental basis for this work (a comparison of standard mown amenity grassland compared with seeded meadows of differing heights and species diversity). In the paper we demonstrate that urban meadows produce biologically diverse grasslands that support richer and more abundant invertebrate communities. and restructured plant, invertebrate and soil microbial communities compared with mown amenity grassland. Our results suggest that a mosaic of meadow types across the urban greenspace network could maximise cumulative biodiversity benefits.

+ Free Download: Open Access academic paper doi.org/10.1002/eap.1946

#### Naturalistic Planting Design: The **Essential Guide**

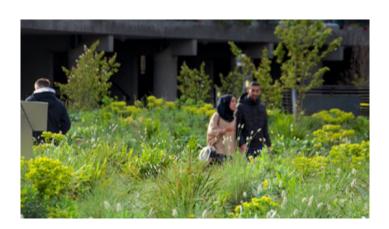
This book distils my research and practice experience in ecological and naturalistic planting design. The book develops a theoretical background to explain the benefits of naturalistic planting, from a scientific and human viewpoint. A framework is presented that explains the development of, and similarities and differences between, the different strands of contemporary naturalistic planting design. A straight-forward design methodology is proposed that cuts through some of the increasingly complex and technical aspects of the discipline. The book is fully illustrated with details and examples from my own projects, and emphasis is placed on urban applications.

+ Book: Published by Filbert Press

#### The Dynamic Landscape: ecology, design and management of urban naturalistic vegetation

This book brings together a range of authors at the forefront of ecological landscape design and provides a coherent philosophical basis and argument for creative and socially-engaging urban greening. Separate sections cover wetlands, woodlands, and herbaceous vegetations, with technical detail and design guidelines. A new edition is in production, with additional emphasis on urban green infrastructure, temporary and meanwhile applications, and a full international perspective.

+ Book: Paperback, Hardback & ebook www.taylorfrancis.com/books/9780203402870



#### Currently working on...

I currently prioritise putting my research into practice through active collaborations. This focuses on planting design theory, resilient and multifunctional urban planting, podium landscapes for high-density cities, long-term monitoring of dynamic urban plantings, and plantings for green roofs and roof gardens.



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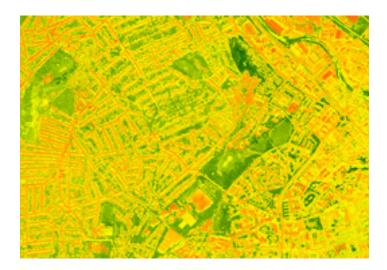


@NigelDunnett



# Paul Brindley

GIS // spatial analysis // land use // classification // statistics //



#### Domestic gardens paper

This paper looks at the health benefits of greenspace to urban residents, with a particular emphasis on how domestic gardens contribute to wellbeing. We found a significant association between average garden size and self-reported general health even after removing likely effects associated with socio-economic characteristics (such as levels of deprivation). This has particular relevance for planning of new housing and gives key recommendations of the value of different sizes of garden.

+ Free Download: Open Access academic paper ij-healthgeographics.biomedcentral.com/articles/10.1186/s12942-018-0148-6

#### Rural Urban Classification

This is a dataset and tool for practitioners that provides authorative definitions for urban and rural areas. It also includes classifications relating to settlement type. This can be used when aggregating data in GIS or within statistical analysis. Covering England and Wales, this Classification is free to use and includes a supporting user guide.

<u>+ Free Download: Dataset</u> www.gov.uk/government/statistics/2011-ruralurban-classification

### Measuring and mapping the equity of greenspace distribution in Sheffield

The distribution of urban greenspace is an important social justice issue. This body of research explores how access to public greenspace in Sheffield varies by deprivation group and investigates the level of variations when using different approaches/methods. We found that whilst deprived areas in Sheffield tend to have greenspace closer to them, it is however frequently smaller and not quality greenspace. We also found that measuring access (in terms of the number of people living close to greenspace) as the crow flies over records provision when compared against more realistic measurements of people travelling along road and path networks. The analysis demonstrates that assessing greenspace equity is not a straightforward task, and care must be taken to articulate which aspects of distribution are being assessed.

+ Free Download: Open Access academic paper doi.org/10.1016/j.geoforum.2019.04.016 + Free Download: Open Access academic paper doi.org/10.3390/ijgi8060286

#### Currently working on...

I am working on a new bid for a research grant to explore how social media data may be used as part of evaluations relating to greenspace use and quality. Alongside students within the department I am also testing innovative methods for improving visual analysis using LIDAR data to both measure greenspace exposure and enhance LVIA techniques. (generating hybrid approaches relating to Zones of Theoretical Visibility and Zones of Visual Influence).



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@DrPaulBrindley

# Ross Cameron

Plants and ecosystem Services // green walls and roofs // changing climate // gardens and health //



Where the wild things are! Do urban green spaces with greater avian biodiversity promote more positive emotions in humans?

We are interested how green space typology influences people's happiness and longer term well-being. In this study (part of the IWUN project) we examine how the amount of wildlife present (real and perceived) in Sheffield's green spaces affected people's response to that place – using a prompt on their mobile phone when they entered a green space. Results showed an enhancement in positive affect (happiness) for those areas with highest bird diversity.

### Environmental Horticulture: Science and Management of Green Landscapes

This book is a comprehensive overview of the value and services associate with urban green spaces, and how these are optimised by management. Scientific rationale behind why green spaces can be good for human health and well-being, promote biodiverse functional ecosystems and help provide resilience against climate change.

<u>+ Book: Paperback</u> www.cabi.org/bookshop/book/9781780641386 Rewilding in the Garden: Are garden hybrid plants (cultivars) less resilient to the effects of hydrological extremes than their parent species? A case study with Primula.

This investigates how climate change will impact on our garden or landscape plants. We used Primula as a model genus. The results tend to suggest that the more flamboyant cultivars with large flowers are much less resilient to rapid oscillations in soil wetting / drying (a phenomenon associated with climate change) than those with smaller flowers. Similar results were found with pansy and petunia. It would seem there is a trade-off between large flowers and the resources allocated for survival! This has implication on what our garden landscapes may look like in future. + Free Download: Open Access academic paper link.springer.com/article/10.1007/s11252-019-00865-7

#### Currently working on...

I have a number of Post-Docs and PhD students working on a variety of projects related to urban green space:

- the value of gardening and components of gardening that are deemed restorative (RHS funded),
- plants and the thermal load on buildings,
- urban plants for improving air and water quality,
- plants for functional raingardens.



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## On-going funded research projects

#### Improving Wellbeing through Urban Nature (IWUN) 2016-2019

Anna Jorgensen // Nicola Dempsey // Clare Rishbeth // Paul Brindley // Ross Cameron //

Research staff based in the Department of Landscape Architecture: Jo Birch, Julian Dobson, and Meghann Mears.

There is considerable evidence that a healthy natural environment and regular access to it, can contribute positively to the wellbeing of the population, and that it has the most benefit on those with the highest levels of ill-health. Increased positive interaction between people and the natural environment could be a significant part of the UK's future health care arrangements. However, this potential is not yet being fulfilled, in part because we do not fully understand how and why people interact with the natural environment, and which aspects of the environment, and people's experience of it, lead to positive health and wellbeing outcomes.

The diverse quantitative and qualitative methods used in this research project have led to new findings that have the potential to enable us to design and manage our urban spaces more effectively to generate wellbeing benefits, and to engage critically

important sections of society more effectively.

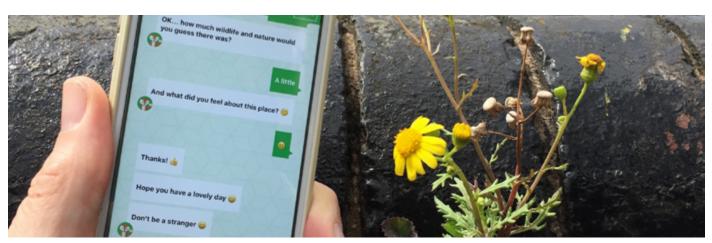
- + What policymakers need to know iwun.uk/wp-content/uploads/2019/04/IWUN-Policy-Document-01-policymakers-dr2.pdf
- + What planners and local government policymakers need to know iwun.uk/wp-content/uploads/2019/04/IWUN-

Policy-Document-02-planners-local-gov-dr3.pdf

- + What greenspace managers need to know iwun.uk/wp-content/uploads/2019/04/IWUN-Policy-Document-03-greenspace-managersdr2.pdf
- + What healthcare professionals need to know iwun.uk/wp-content/uploads/2019/04/IWUN-Policy-Document-04-healthcare-dr3.pdf
- + What voluntary and community groups need to know

iwun.uk/wp-content/uploads/2019/04/IWUN-Policy-Document-05-VCS-dr2.pdf

- + Supporting people with mental health difficulties - how urban nature can help iwun.uk/wp-content/uploads/2019/05/IWUN-Practice-Document-mental-health-ARTWORK-A4-8pp.pdf
- + Supporting young people's mental health how urban nature can help iwun.uk/wp-content/uploads/2019/05/IWUN-Practice-Document-young-people-ARTWORK-A4-8pp.pdf
- + Supporting people's mental wellbeing through urban nature - challenging inequalities iwun.uk/wp-content/uploads/2019/07/IWUN-Practice-Brief-Challenging-Inequalities.pdf



## On-going funded research projects



#### Mobilising Adaptation: Governance of Infrastructure through Coproduction (MAGIC)

### Jo Birch // Ross Cameron // Nigel Dunnett

This project, which focusses on the floodvulnerable region around the city of Hull tries out new ways of reducing flood risks in urban areas, while also making them places that are restorative in terms of health and well-being. We explore how communities might provide and manage rainwater storage, either on public land or on their own properties, using careful co-design and beautiful planting. MAGIC aims to leave a legacy by characterising the benefits of co-productive adaptation; building Hull's capacity for delivering climate adaptation: and developing viable and equitable trajectories for the future governance of these activities. MAGIC is funded by NERC via the Climate Resilience fund.

+ Website: ukclimateresillience

CO-producing Naturebased solutions and restored Ecosystems: transdisciplinary neXus for Urban Sustainability (CONEXUS)

#### Anna Jorgensen // Tom Wild

Cities in Europe and Latin America share urgent global-local challenges to achieve greater inclusion, biodiversity, climate change adaptation and environmental quality. CONEXUS brings together community, private, public and research partners to experiment with novel coproduction methods to deliver Nature Based Solutions in 'Life-Lab' pilots, with citizens in São Paulo, Bogotá, Santiago, Buenos Aires, Lisbon, Barcelona and Turin. Our combined palette of socio-cultural, ecological and governance contexts presents the opportunity to move forward faster, together, and to inform changes in urban policy and practice.

+ Website: CONEXUS

+Blog +Nature-based solutions improving water guality & waterbody conditions

## Recent PhD theses

Investigating potential altitudinal-environmental variation on recruitment, AL FARSI, regeneration and re-establishment of Juniperus serayschanica in K.A.A.Y. Northern Oman. Public Open Spaces in Bahrain: The potential for Transcultural AL MADANI, W. Conviviality. 3D landscape visualisation on mobile devices for participatory planning BILGE, G. and design. Everyday Interculturalism in Urban Public Open Spaces: A Socio-spatial GANJI, F. Inquiry in Bradford City. History and Conservation of Rockwork in Gardens of Imperial China. GU, L. LHOMME-Redesigning Infrastructure a socio-technical approach. **DUCHADEUIL, A.** Front Gardens as Mirrors of Attitude: form and function of front gardens LIU, J. in urban context. Understanding Stakeholders' Perceptions of Current and Future Park NAM, J. Management Practices. The Hong merchant's Gardens during the Canton System and the RICHARD, J.C. aftermath of the Opium Wars. The Chinese Grand Canal World Heritage Site: living heritage in the 21st TANG, J. century? Barriers to Naturalistic Planting in Inner City Parks. TAYLOR, J.H.M.B. Everyday public spaces in an ethnically diverse neighbourhood: VODICKA, G. contextualised convivialities and boundary-crossing urban design. Open Spaces in Informal Settlements in Bangkok, Thailand and the WALLER, M.F. Potential Role for Landscape Architects in their Design and Evolution. The Challenge of Place Identity in the Making and Experience of New XU, Q. Chinese Urban Square. Investigating the Planting Potential for Urban Rain Gardens: Plant YUAN, J.

Selection. Establishment and Performance.

# Ways to get involved

Our Department benefits from strong reciprocal links with landscape practice and throughout the year we have a number of opportunities for collaboration, across research, teaching and external events.

Please get in touch if you are interested in, or could contribute to, any of the following activities and events. Our email is <a href="mailto:landscape@sheffield.ac.uk">landscape@sheffield.ac.uk</a>

#### **Employers Event**

February

Showcase your projects and expertise amongst a select group of international practices, whilst networking with staff and current students.

#### End of Year Exhibition

June

Discover the latest talented graduates in Landscape Architecture at our 'pre-exhibition' employers' showcase. It's a celebration of innovation and hard work, a chance to discuss job opportunities with our graduates and to sponsor prizes for outstanding students.

#### Whole School Event

November

Lead a two-day design challenge for students across all year groups, providing the brief and creative direction for a project of your choice. Previous leaders include Ares, FPCR and Planit-IE. <a href="https://www.sheffield.ac.uk/landscape/news/whole-school-event-2018-andy-clayden-planit-manchester-1.816220">https://www.sheffield.ac.uk/landscape/news/whole-school-event-2018-andy-clayden-planit-manchester-1.816220</a>

#### **Guest Lectures**

Year-round

Taking place within modules, as part of our department seminar series, or organised by our lively student society Landmark, guest lectures allow you to share your expertise and experience.

#### Professional roles

Year-round

Shape Landscape Architecture education through your professional experience. Roles include module tutors, external examiners and members of the Landscape Institute Professional Review Group.

Thank you to all who attend our events and contribute their skills and time. It is much appreciated.

Get in touch...



@LandscapeSheff



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