OXFORD BROOKES UNIVERSITY

Research Councils UK Energy For a Low Carbon Future

Environmental *Change* Institute

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UNIVERSITY OF OXFORD

'ENERGY AND COMMUNITIES'

An international conference from the EVALOC project

Wednesday 12th September 2012

TS Eliot Theatre
Merton College
Oxford OX1 4JD

EVALOC
EVALUATING LOW CARBON COMMUNITIES

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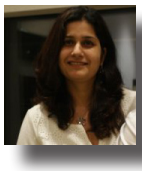

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Welcome!

From the conference chair: Professor Rajat Gupta

Welcome to the EVALOC International conference on Energy and Communities, organised as part of our RCUK funded EVALOC low carbon communities project. EVALOC brings together an interdisciplinary team of researchers from building science and social science disciplines, based in the Low Carbon Building Group of the Oxford Institute for Sustainable Development at Oxford Brookes University, and the Environmental Change Institute at the University of Oxford.

There is unprecedented interest from practitioner, policy and academic circles in the importance of community as a space for realising pro-environmental change, especially in achieving a transition in energy demand and consumption. For example in the UK, the imminent Green Deal is expected to catalyse a step change in reducing carbon emission from our homes, businesses and communities.

This conference brings together leading experts, community organisations, practitioners and academic researchers to share,, discuss and learn from national and international best practice in energy and communities, both new and existing. Visionary speakers share their experiences of making our communities low carbon and sustainable. We have developed an engaging and insightful conference programme comprising plenary sessions, panel discussions as well as specialist parallel workshops to encourage discussion and debate on:

- Learning from monitoring and evaluation of low energy housing refurbishments
- Opportunities and challenges in doing research with/on/for communities
- Engagement opportunities for communities in the forthcoming Green Deal programme

The tireless work and enthusiasm of the EVALOC team members and our case study communities has made this conference possible. We thank you for attending this important event and hope that you find your time shared with us a valuable investment. We also hope the conference will provide an excellent opportunity to network, engage and collaborate.

Welcome again to this timely gathering where we hope to begin building a safer future by understanding better, how each of us, can act effectively, because in the 21st century sustainability is about us.

Rajat

Professor Rajat Gupta
Director of Oxford Institute for Sustainable Development and Principal Investigator of the EVALOC project, Oxford Brookes University, Oxford UK

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Introduction

To the EVALOC project

EVALOC is an exciting, novel and collaborative 3.5-year Research Councils UK (RCUK) funded research project which brings together an interdisciplinary team of researchers, based in the Low Carbon Building Group of Oxford Institute for Sustainable Development of Oxford Brookes University, and the Environmental Change Institute of University of Oxford. EVALOC has been awarded funding of £1.14 million (Grant reference: RES-628-25-0012) from RCUK/ESRC as part of the Energy and Communities programme.

The EVALOC project seeks to assess, explain and communicate the changes in energy use due to community activities within six selected case study projects under the Department of Energy and Climate Change's (DECC) Low Carbon Communities Challenge (LCCC) initiative, a government-supported initiative to transform the way communities use and produce energy, and build new ways of supporting more sustainable living. These low carbon community projects are evaluated in terms of their IMPACTS on changing individual, household and community behaviours, EFFECTIVENESS in achieving real-savings in energy use, CO2 emissions and SUCCESS in bringing about sustained and systemic change.

The project adopts a collaborative action research based approach, which entails an iterative cycle of action and reflection in which communities are involved as co-researchers in shaping the design, implementation, and interpretation of the research programme and its outputs, as well as being subjects of the research. To stimulate further energy reduction, behaviour change and learning in the communities, community-based events and focus groups are co-organised with each case study community, followed by evaluation of their impact. The household level research consists of continuous whole-house physical monitoring and post-occupancy evaluations of retrofitted homes, and the investigations into a small group of householders who use consumption feedback displays. Urban-scale energy and carbon mapping tools, such as DECoRuM are used for visual monitoring and tracking to provide real-time disaggregated feedback on energy consumption and energy reduction both on a household and community level. The consequent effect on inhabitants' habits, behaviour and practice, are investigated. Others are more open-ended, such as the exploration of how knowledge and know-how are transmitted through social networks.

Through the research, the EVALOC project aims to generate evidence about:

- Role, effects, impacts and limits of the six low carbon communities in motivating energy reduction and renewable investment amongst local residents.
- Importance of informal learning within and between communities.
- Role of energy monitoring for individual and community wide energy reduction.

This evidence will be used for community benefit, and to help influence policy. In addition to the academic focused outputs, the research will produce:

- Materials and guidance for community energy projects, covering engagement, methods and evaluation.
- Community energy monitoring data, materials and map based tools.

For the first time, EVALOC project brings social science and building science-based disciplines together to systematically monitor and evaluate changes in energy use due to community activities. This is essential for achieving a holistic understanding of the impact of community-based and community-led interventions in the energy sector, which needs not only integration of the quantitative and qualitative monitoring outcomes, but also an understanding of the social processes of change and their durability, context dependence and capacity requirements.



Programme at a Glance

An international conference from the EVALOC project

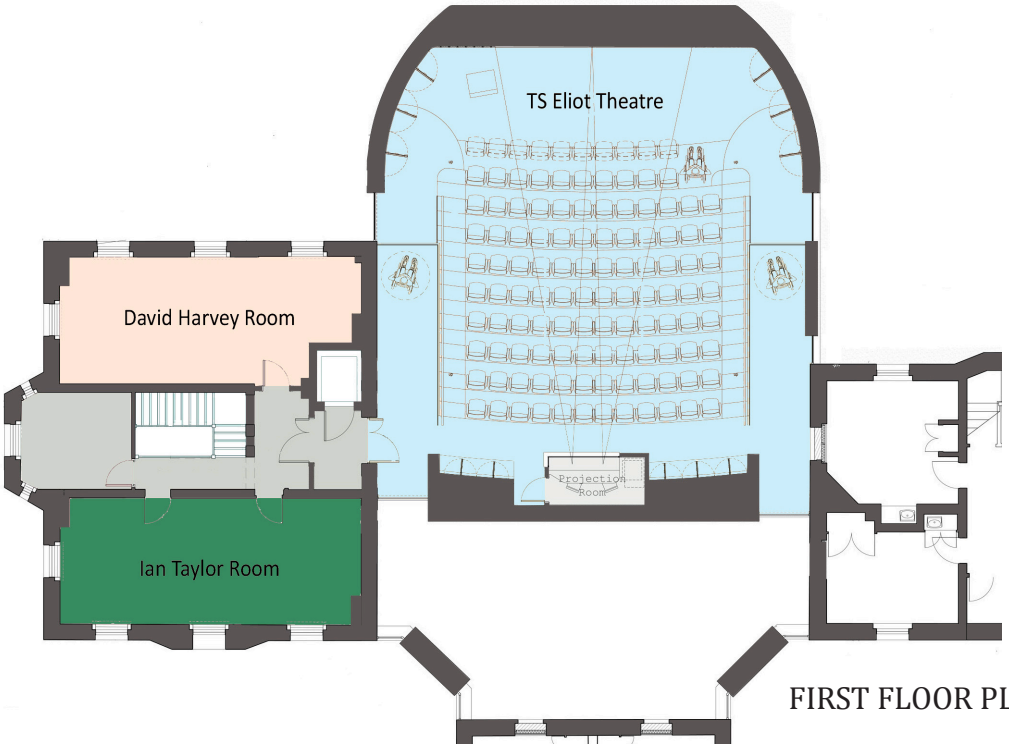
WEDNESDAY 12th SEPTEMBER 2012, 09:30—18:30

9:30	Registration and coffee		
10:00	Session 1: Inaugural session		
11:10	Refreshment break & viewing of posters		
11:40	Session 2: Global vs community-scale approaches for tackling the climate crisis		
13:00	Lunch & viewing of posters (2 course sit-down lunch)		
14:00	Session 3: Innovating at the grassroots level: creating low energy communities		
15:00	Refreshment break & viewing of posters		
15:30	Session 4: Parallel workshops		
	1: Learning from monitoring and evaluation of low-energy housing refurbishment	2: Researching and evaluating low carbon communities	3: Communities and Green Deal: opportunities and challenges
16:40	Session 5: Closing plenary		
17:30	Drinks & networking		
18:30			

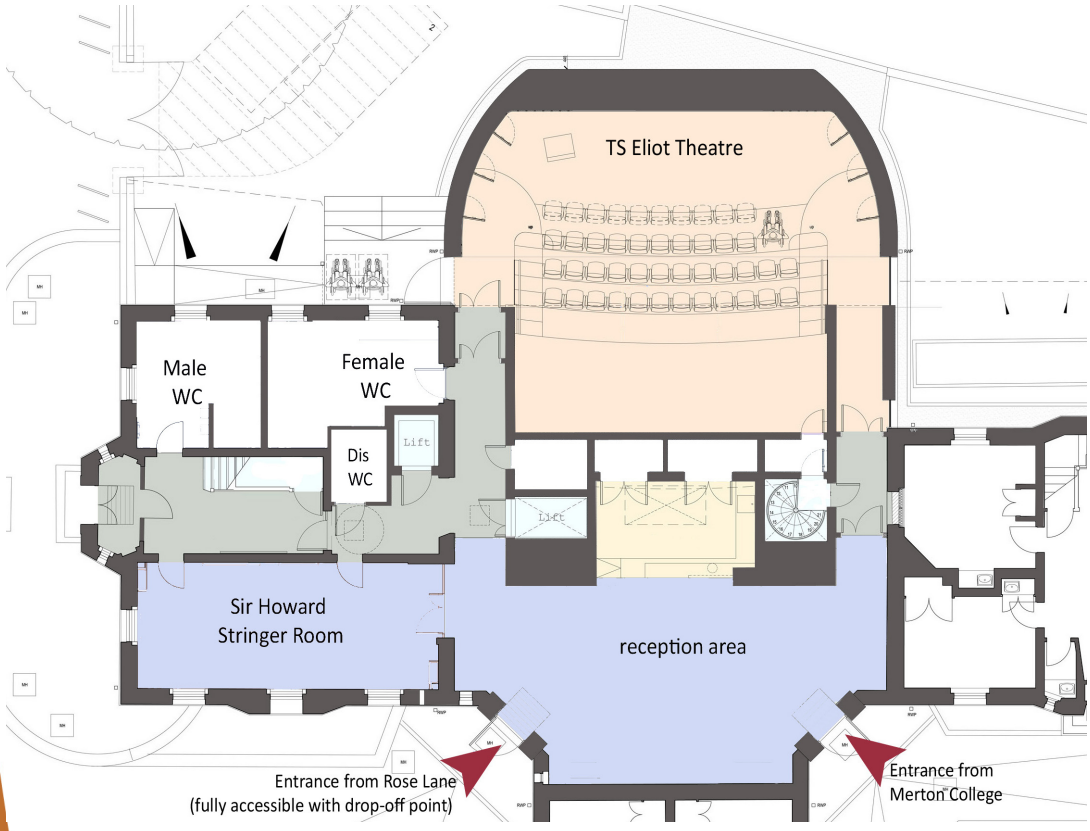
TS Eliot Theatre
David Harvey Room
Ian Taylor Room
Sir Howard Stringer Room/Reception
Merton College Dining Hall

The Venue

The TS Eliot Theatre, Merton College, Oxford OX1 4JD



FIRST FLOOR PLAN



GROUND FLOOR PLAN

EVALOC
EVALUATING LOW CARBON COMMUNITIES

Speakers and Chairs

EVALOC International 'Energy and Communities' Conference

SESSION 1: Inaugural session

Professor Ray Ogden
Associate Dean for Research, Oxford Brookes University, UK

In addition to his role as Associate Dean, Prof Ray Ogden leads a research group specialising in building thermal performance simulation and advanced sustainable construction. He is involved in a wide portfolio of 'close to industry' research including work with major contracting companies and materials sectors in the UK, mainland Europe, Asia and North America. His research group is a strategic partner to the UK steel sector. Prof. Ogden's own research includes a large portfolio of commercial, government, research council, EU and International projects, and includes fundamental aspects of building physics, applied building engineering and full scale demonstration buildings in the UK and abroad. Prof. Ogden has degrees in architecture and a PhD in mechanical engineering. He has written numerous journal articles and more than 10 books in the areas of building physics and sustainable design. He holds two sponsored chairs (the Tata Chair of the Building Envelope and the SCI Chair of Architectural Technology), as well as his University Chair.

Professor John Raftery
Pro-Vice Chancellor, Oxford Brookes University, UK

John is responsible for academic affairs across the University apart from research, providing strategic leadership for both the undergraduate and postgraduate academic portfolio, and for academic planning, academic development, and the enhancement of all taught programmes. Formerly the Dean of the School of Architecture and Pro Vice Chancellor (International), John is the author of four books and over 70 scientific papers in the field of Applied Economics (Real Estate and Construction). He was active in management consultancy with assignments on risks in major public infrastructure projects costing more than US$20 billion, and on cartels and restrictive practices in Hong Kong, Scandinavia and the UK. He was a member of Kofi Annan's Global Humanitarian Forum (2008-10) and he has Chaired and been a non-executive board member of a number of national educational bodies including, currently, the Office of the Independent Adjudicator and the Open University, National Role Advisory Board.

Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

Professor Rajat Gupta

Conference Chair, Director of Oxford Institute for Sustainable Development and Principal Investigator of the EVALOC project, Oxford Brookes University, UK

Rajat Gupta is Professor of Sustainable Architecture and Climate Change, Director of the Oxford Institute for Sustainable Development (OISD) and leader of the OISD: Low Carbon Building Group at Oxford Brookes University. He is recipient of the inaugural 2006 RIBA President's award for outstanding research related to DECoRuM carbon counting model for neighbourhoods and communities. Professor Gupta is engaged in teaching, research and knowledge exchange activities focussing on carbon counting and global common carbon metrics, building performance evaluation, post occupancy feedback, low carbon communities and climate change adaptation of buildings. As Principal Investigator, he has won close to £4.5 million in research grants from ESRC, EPSRC, UK Government, World Bank, UNEP, UNFCCC, RIBA, RICS and British Council. He is a Visiting Fellow in Arizona State University, USA, and Faculty Associate in the Smith School of Enterprise and Environment, University of Oxford.

Rachel Nunn

Strategic Advisor for DECC's LEAF Programme, LEAF programme advisory board, UK

Rachel Nunn began working on UK population carbon behaviour change in 2006 when she voluntarily set up a £1.8million live research project based in her small urban community. With a focus on evaluation and analysis, this project tested the relationships and conditions that would be necessary to produce meaningful carbon reduction results. She has used these and experiences from other UK community groups to lobby for a strategic cross sector approach by governments to carbon reduction. Rachel has been involved within the steering groups of LCCC, LEAF and Sustainable Steps programmes and helped set up the Community and Climate Action Alliance.

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Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

SESSION 2: Global vs community-scale approaches for tackling the climate crisis

Professor Jonathan Fink

Vice President for Research and Strategic Partnerships, Portland State University, USA

Jonathan Fink is Vice President for Research and Strategic Partnerships and Professor of Geology at Portland State University in Portland, Oregon. PSU works closely with the City of Portland (the only large city in the U.S. to have reduced its carbon emissions below 1990 levels) to advance a green agenda around transportation, land use, ecosystem services and sustainable construction. Dr. Fink, a volcanologist by training, is a member of the Board of Advisors of the Smithsonian Institution's National Museum of Natural History, and the National Board of Advisors for KB Home, the fifth largest homebuilder in the U.S.

Dr Michael Ornetzeder

Senior Researcher, Austrian Academy of Science, Austria

Dr. Michael Ornetzeder is a Senior Researcher at the Institute of Technology Assessment at the Austrian Academy of Sciences, and a Lecturer at the University of Natural Resources and Life Sciences in Vienna. His main research interest is within science and technology studies, with a particular focus on participatory forms of technology assessment, user innovation, social learning and innovation networks. His current research is in the field of transition of the energy system towards sustainability and on climate change issues. Furthermore, he is an adviser in a large-scale pilot project on energy efficiency and smart metering in Austria. Since 2009 he is a member of the European Academies Science Advisory Council (EASAC) Energy Steering Panel.

Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

SESSION 3: Innovating at the grassroots level: creating low energy communities

Matt Gaskin

Head of School of Architecture, Cultural Context Leader for the Office Based Examination Programme, Oxford Brookes University, UK

Matt has been teaching architectural design and cultural context for fourteen years. Matt studied architecture in Aberdeen, specialising in Architectural History. He has run design workshops for Mary Washington College, Virginia and Berkeley, California. He has run the BA Honours Part 1 Programme in Architecture and is currently the Programme Leader for the Part 2 course at Oxford Brookes University, and teaches architectural theory for the Pomona Programme in Oxford. He is the cultural context leader for the Office Based Examination. Matt has worked as a research assistant on the Aberdeen Bicentennial, Inventory or Parks and Gardens in Gordon District, and the 3D Model of Oxford. Matt is a judge on the RIBA Dissertation Medal for 2010. He is also a member of the RIBA Validation Visiting Board panel and the RIBA Validation Working Group. He has practiced architecture with Keppie Henderson Architects, Sir Alexander Gibbs, and the British Army.

Trevor Graham

Head of Sustainable Communities, City of Malmö, Sweden

Trevor Graham is Head of Sustainable Communities and Lifestyle in the City of Malmö working with sustainable urban regeneration through a wide range of projects and strategic initiatives. He has previously worked with community development, urban sustainability and sustainable building in the UK and Germany and came to Sweden in 1998 to head the Eco-City Augustenborg initiative, Europe's most ambitious sustainable urban regeneration programme. Current work includes establishing the new large scale regeneration programmes in Malmö incorporating social innovation and sustainable economic development as key parameters to speed up the process towards the sustainable city. Trevor Graham is also CEO of the Scandinavian Green Roof Institute and a board member of both the European Green Roof Federation and the European Sustainable Cities and Towns Campaign. Trevor has also led a bilateral programme for knowledge and technology transfer on sustainable construction between the UK and Sweden and is involved in technology transfer and economic development programmes in China and Africa.

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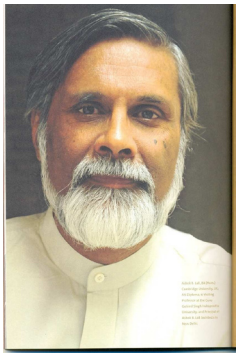
Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference



Professor Ashok Lall
Principal, Ashok B Lall Architects, India

Ashok Lall graduated from the University of Cambridge, UK in Architecture & Fine Arts and obtained the Architectural Association Diploma in 1970. His architectural firm (estd. 1981) is committed to an architectural practice based on the principles of environmental sustainability and social responsibility. It has won a number of awards and its work has been published widely. Engaged in architectural education since 1990, he has developed curricula and teaching methods to address environmental issues. He has published many articles and presented papers on environmentally sustainable design. He has been an active member of institutions and groups providing awareness and building competence in the sustainable design of buildings. He has been invited to deliver lectures and present papers in India and internationally, including Switzerland, Egypt, UK, Indonesia, Sri Lanka, Nepal, and Mexico. He was chair of the Jury for the Holcim Awards for Sustainable Construction, Asia Pacific Region.

SESSION 5: Closing plenary

Dr Paul Rouse
Programme Manager, Economic and Social Research Council, UK

Paul Rouse leads the development of the UK's Economic and Social Research Council's (ESRC) research investment in the areas of environmental change, energy, global food security and water. He has 20 years experience of developing and implementing strategic, directive research investment, predominantly within the social sciences but also the physical sciences through the Engineering and Physical Sciences Research Council (EPSRC).
Paul has personally commissioned in excess of £80 million of new research and currently oversees a portfolio of approximately £60 million of strategic research investment. He works closely with a wide range of government and other agencies developing the future social science environmental change research agenda in the UK.

Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

Chris Church
Chair of Low Carbon Communities Network, UK

Chris Church is a founding Director of Community Environment Associates (CEA). He has worked since 1990 on sustainable and community development and climate change. His main focus is on the development of effective action by communities and locally-based organisations, and on how local action links to policy work at national and international level. Chris has consistently worked across disciplines, working to link sustainability issues with work on poverty and equity, health, and community development. His 1997 publication 'An Environment for Everyone' was the first UK publication to focus on local action on environment and equity issues and to highlight the policy gaps in this area. Since 2005 climate change has been a major focus for Chris' work and he chairs the UK Low Carbon Communities Network. He works at a European level with the NGO network, ANPED – the Northern Alliance for Sustainability, which he chaired from 1999 – 2010.

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Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

WORKSHOP 1: Learning from monitoring and evaluation of low-energy housing refurbishment

Professor Brian Ford

Professor of Bio-climatic Architecture, Department of Architecture and the Built Environment, University of Nottingham, UK

Brian Ford is an architect and environmental design consultant who has over 25 years experience in architectural practice and consultancy, both as a partner and with his own practice. He has specialised in the field of environmental design. His experience in the design of naturally ventilated and passively cooled buildings in different parts of the world includes acting as consultant for the Sydney Olympic Stadium, Australia; Pittsburgh Convention Center, USA; and Torrent Research Laboratories, India. In partnership with Professor Alan Short, he won awards for the design of the Queens Building for De Montfort University, Leicester, UK. Appointed Professor of Bio-climatic Architecture at the University of Nottingham in 2003, he completed a four year term as Head of the School of the Built Environment in 2008. He is currently Head of the Research Division in Architecture and Urbanism. Brian's own research experience has concentrated on natural ventilation and passive cooling (including six EC funded international collaborative research projects). External activities include membership of Sub-Panel 16 (Architecture, Planning and the Built Environment), for the UK Research Excellence Framework 2014; Membership of the RIBA Research & Innovation Committee 2011 -present.

Stephen Passmore

Development Manager, National Refurbishment Centre and Energy Saving Trust, UK

Stephen trained in manufacturing engineering and then environmental science before joining Powergen, (now E.on) where he developed a green energy tariff for SME's. He moved on to an environmental charity to deliver community sustainability advice in the east midlands before joining the Energy Saving Trust in 2007. At EST Stephen has responsibilities for delivering monitoring and evaluation activities for housing, and technology energy performance including for the TSB funded Retrofit for the Future programme. He is the EST lead on smart energy futures and oversees activities within the National Refurbishment Centre in collaboration with BRE.

Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

Kirsten Burrows
Sustainability Consultant, PRP Architects, UK

Kirsten Burrows is a Sustainability Consultant at PRP Architects with extensive experience related to low carbon retrofit, as well as a background in energy and environmental policy within the UK and internationally. She was co-author of the 2011 edition of the Zero Carbon Compendium for the Zero Carbon Hub and is currently working with the Energy Technology Institute to develop appropriate technical retrofit solutions for a wide range of dwelling types across the UK. She also been actively involved in analysing the socio-cultural issues associated with retrofit, leading focus groups and stakeholder interviews as part of the customer engagement component of the project.

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Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

WORKSHOP 2: Researching and evaluating low carbon communities

Dr Sarah Darby

Deputy Programme Leader, Lower Carbon Futures, Environmental Change Institute, University of Oxford, UK

Sarah is deputy programme leader of the Lower Carbon Futures research team at the Environmental Change Institute. Her first degree was in Ecological Science from Edinburgh University. She joined the ECI in 1995 and gained her doctorate there, looking at social, behavioural and educational aspects of energy use and the effectiveness of energy advice programmes. Her research interests centre on how people learn about energy and the environment and apply what they have learned, and on how technologies are adopted and adapted in everyday life. Sarah was a co-author of the '40% House' report (2005), which set out to explore the feasibility of meeting UK carbon reduction targets in the housing sector. From 2007-10 she carried out research into domestic energy feedback in relation to the development of 'smart metering', and now she works mostly on proposed developments in electricity systems, and what these could mean for householders.

Nigel Ingram

Director of Development and Asset Management, Joseph Rowntree Foundation, UK

Nigel Ingram is the Director of Development and Asset Management at the Joseph Rowntree Foundation and Joseph Rowntree Housing Trust, with responsibility for its extensive Property Portfolio – both existing assets and new commissions. He is lead Director on sustainability and is involved in key demonstration and influencing activities around the Built Environment. Nigel also leads on the development of a 540-unit mixed tenure community in York, known as Derwenthorpe. Nigel is a Member of the CIOB and NHBC.

Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

Professor Roy Alexander
RSK Professor of Environmental Sustainability, University of Chester and Ashton-Hayes, UK

Roy is a geographer whose 30-year research and teaching career has covered a range of environment and landscape issues and currently focuses on impacts and responses to climate change in Cheshire, England and Almería, Spain. He is co-Chair of the award-winning Ashton Hayes Going Carbon Neutral project, where he coordinates work on carbon footprinting and community renewables and also works with Sustainable Blacon on evaluation of community energy management. He is a member of the Project Steering Group of Carbon Leapfrog and he regularly gives presentations and advice to voluntary groups, local, regional and national government and the media on community carbon reduction.

Richard Hauxwell-Baldwin
Interdisciplinary environmental social scientist, University of East Anglia

Richard is an interdisciplinary environmental social scientist, with a specialism in environmental politics. His research focuses on developing understandings of the governance of social and environmental change in response to climate change. In particular he is interested in how, and with what effects, interactions between the state and civil society actors structure the field of possible actions for individuals to take in response to such changes.

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Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

WORKSHOP 3: Communities and Green Deal: challenges and opportunities

Dr Nick Eyre

Programme Leader, Low Carbon Futures Group, Environmental Change Institute, University of Oxford, UK

Dr Nick Eyre is Programme Leader of the Lower Carbon Futures Group in the Environmental Change Institute at the University of Oxford, and a Senior Research Fellow in Energy at Oriel College, Oxford. He is a Co-Director of the UK Energy Research Centre, leading its work on energy demand. He is a lead author on 'Buildings for both the Global Energy Assessment and for the Fifth Assessment Report' of the IPCC. Nick previously worked at the Energy Saving Trust as Director of Strategy and, on secondment, in Cabinet Office, where he was a co-author of the Government's 2002 Review of Energy Policy.

Dr David Strong

Director, David Strong Consulting Ltd. & Chairman of the Energy Efficiency Partnership for Buildings, UK

David Strong is an internationally recognised expert in sustainable building design and refurbishment. David was previously MD of BRE Environment and is currently a Director of David Strong Consulting. He chairs the Energy Efficiency Partnership for Buildings and a Ministerial Green Deal Advisory on Installer Accreditation and Qualification.

Bridget Newbery

Community Projects Manager, Centre for Sustainable Energy, UK

Bridget is the Community Projects Manager at the Centre for Sustainable Energy (CSE), developing and managing community energy projects and supporting fuel poverty initiatives across Avon and Somerset. She co-ordinates support and guidance for groups on a wide range of topics, providing expertise and advice, disseminating information about policy and sector developments, linking groups to each other or to other sources of support, and is leading on the development of a new resource pack to help community engage with the Green Deal. She is involved in the Bristol Energy Network, co-ordinates the annual Somerset Community Energy Forum, and works in a voluntary capacity on various local community projects.

Speakers and Chairs cont...

EVALOC International 'Energy and Communities' Conference

Matt Gregg

Research Associate, Architecture and Climate Change, Oxford Brookes University, UK

Matt Gregg is a Research Associate in Architecture and Climate Change, based in the Low Carbon Building Group (LCBG) of Oxford Institute for Sustainable Development at Oxford Brookes University. Matt is currently involved in a number of climate change adaptation projects including the 3-year EPSRC-funded Suburban Neighbourhood Adaptation for a Changing Climate (SNACC) and five TSB funded Design for Future Climate projects. In 2009, Matt graduated with a MSc Sustainable Building: Performance and Design from Oxford Brookes University. Prior to joining Oxford Brookes in 2010, Matt worked over three years in an architecture practice in Tennessee after getting his BArch degree at the University of Tennessee.

Rohini Cherian

Associate Researcher, Carbon Counting, Oxford Brookes University, UK

Rohini is an Associate Researcher based in the Low Carbon Building Group of the Oxford Institute for Sustainable Development. Her work is centred on the themes of carbon mapping, dynamic building simulation, advanced domestic retrofit and building performance evaluation, including a range of projects such as, the Retrofit for Future whole house refurbishment projects in Oxford, London and Whitehaven and the LEAF-funded GLEE project on GIS based urban scale stock modelling to evaluate the potential for low energy technologies in Bicester. Her qualifications include a Masters in Sustainable Building: Performance and Design at Oxford Brookes University and a degree in Architecture from NIT-Trichy, India. Prior to her work in the UK, Rohini worked as a project architect at Karan Grover Associates, a well-known sustainability practice in Vadodara, India. Her research interests are in adaptation to changing climates, post occupancy evaluation and passive design for hot climates.

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Programme in Detail

MORNING, 09:30-13:00

WEDNESDAY 12th SEPTEMBER 2012

9.30-10.00 Registration and Coffee

Session 1 - TS Eliot Theatre

Inaugural Session

10:00 - 11:10

Chair: Professor Ray Ogden, Associate Dean (Research), Faculty of Technology, Design and Environment, Oxford Brookes University

10.00	Welcome address	Professor John Raftery, Pro-Vice Chancellor, Oxford Brookes University
10.10	Introduction to the conference EVALOC low carbon communities project: emerging findings	Professor Rajat Gupta, Conference Chair, Oxford Brookes University
10.40	Seeding community energy action through Local Energy Assessment Fund (LEAF): what did we learn?	Rachel Nunn, Strategic Advisory Board of LEAF programme
11.10 - 11.40	**Refreshment break and viewing of posters**	

Session 2 - TS Eliot Theatre

Global versus community-scale approaches for tackling the climate crisis

11.40 - 13.00

Chair: Professor Rajat Gupta, Director of Oxford Institute for Sustainable Development, Oxford Brookes University

11.40	Neighbourhood-, urban-, and global-scale solutions to the energy and climate crisis: Observations from Portland, Oregon	Professor Jon Fink, Portland State University, USA
12.10	The role of community building processes in sustainable energy projects: Experiences from Austria	Dr Michael Ornetzeder, Austrian Academy of Science, Austria
12.40	Panel discussion	
13.00 - 14.00	**Lunch and viewing of posters**	

Programme in Detail

AFTERNOON, 14:00-18:30

WEDNESDAY 12th SEPTEMBER 2012

Session 3 - TS Eliot Theatre

Innovating at the grassroots level: creating low energy communities
14.00 - 15.00

Chair: Matt Gaskin, Head of School of Architecture, Oxford Brookes University

14.00	Creating sustainable communities in Malmö, Sweden	Trevor Graham, City of Malmö, Sweden
14.30	Strategies for low energy communities in urban India	Professor Ashok Lall, Ashok B Lall Architects, India
15.00 - 15.30	**Refreshment break and viewing of posters**	

Session 4 - Various

Parallel workshops
15.30 - 16.40

Parallel workshop 1:	Learning from monitoring and evaluation of low-energy housing refurbishment	Chair: Professor Brian Ford, University of Nottingham
Parallel workshop 2:	Researching and evaluating low carbon communities	Chair: Dr Sarah Darby, Environmental Change Institute, University of Oxford
Parallel workshop 3:	Communities and Green Deal: challenges and opportunities	Chair: Dr Nick Eyre, Environmental Change Institute, University of Oxford

Session 5 - TS Eliot Theatre

Closing plenary
16.45 – 17.30

Chair: Dr Nick Eyre, Programme Leader of Low Carbon Futures Group, University of Oxford, UK

16.45	Energy and communities research and practice: future challenges and opportunities	Dr Paul Rouse, Economic and Social Research Council, UK
17.00	Engaging with community energy action: future opportunities	Chris Church, Low Carbon Communities Network
17:10	Panel discussion and Q&A with speakers	
17:25	Observations about the day and closing comments	Professor Rajat Gupta, Conference Chair, Oxford Brookes University
17:30	End of conference	

17.30-18.30 Drinks and networking

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Parallel Workshops

EVALOC International 'Energy and Communities' Conference

WEDNESDAY 12th SEPTEMBER 2012, 15:30—16:40

Parallel workshop 1:
Learning from monitoring and evaluation of low-energy housing refurbishment

Chair of workshop: Professor Brian Ford, Department of Architecture and the Built Environment, University of Nottingham

15.30	Approaches and challenges in monitoring and evaluating low energy housing refurbishments	Professor Rajat Gupta, Laura Barnfield and Priyanka Arora, Low Carbon Building Group, Oxford Brookes University
15.45	Reality of energy savings in housing refurbishments	Stephen Passmore, National Refurbishment Centre and Energy Saving Trust
16:00	Evaluating whole-house retrofit for future projects	Kirsten Burrows, PRP Architects
16.15	**Discussion on:** Methodologies and tools for monitoring and evaluating housing refurbishments Addressing the gap between predicted and actual energy savings from refurbishments Learning from monitoring and evaluation	
16.40	**CLOSE**	

Parallel workshop 2:
Researching and evaluating low carbon communities

Chair of workshop: Dr Sarah Darby, Environmental Change Institute, University of Oxford

15.30	Learning from Derwenthorpe low carbon community: opportunities and challenges	Nigel Ingram, Joseph Rowntree Foundation
15.45	Learning from evaluation of a low carbon community in Blacon, Chester	Professor Roy Alexander, University of Chester
16:00	Evaluating low carbon communities funded by the LCCC programme	Richard Hauxwell-Baldwin, University of East Anglia
16.15	**Discussion on:** Methodologies and tools used by academics and their relevance to communities Role of action based research Using systematic evaluation to advance community energy action Community learning from energy display libraries	
16.40	**CLOSE**	

Parallel workshop 3:
Communities and Green Deal: challenges and opportunities

Chair of workshop: Dr Nick Eyre, Environmental Change Institute, University of Oxford

15.30	Green Deal: Opportunities for engagement	Professor David Strong, David Strong Consulting Limited
15.45	What communities could do in preparing for Green Deal?	Bridget Newbery, Centre for Sustainable Energy
16:00	Preparing for Green Deal: carbon mapping households in Bicester	Matt Gregg, Rohini Cherian and Prof Rajat Gupta, Low Carbon Building Group, Oxford Brookes University
16.15	**Discussion on:** Engaging communities in uptake of the Green Deal programme Communities as trusted 'intermediaries' Learning from Green Deal pilots	
16.40	**CLOSE**	

Please confirm preferred workshop when registering for event. Whilst we will try to ensure all attendees attend their preferred workshop, it may not be possible in all cases and we ask for your patience and understanding if we are unable to place you in your preferred workshop.

EVALOC
EVALUATING LOW CARBON COMMUNITIES

Conference Abstracts

EVALOC International 'Energy and Communities' Conference

SESSION 1: Inaugural session

TS Eliot Theatre 10.40

Rachel Nunn
Strategic Advisory Board of LEAF programme

Seeding community energy action through Local Energy Assessment Fund (LEAF): what did we learn?

Rachel will look briefly at the rise of community action in the UK and the motivations of the various funds to support community action on energy and carbon emissions that have been promoted across England, Wales and Scotland since 2008. She will look at the scope and main features of each fund and suggest outcomes, and unintended consequences of each. She will then discuss the features that a fund could have, which communities are suggesting would bring about more meaningful carbon reduction results, and common traits of experienced and 'successful' community projects.

SESSION 2: Global vs community-scale approaches for tackling the climate crisis

TS Eliot Theatre 11.40

Professor Jon Fink
Portland State University, USA

Neighbourhood-, urban-, and global-scale solutions to the energy and climate crisis: observations from Portland, Oregon USA

In his presentation on "Neighbourhood-, urban-, and global-scale solutions to the energy and climate crisis: Observations from Portland, Oregon," Dr. Fink will discuss different ways that cities in the U.S. achieve sustainability goals, including reductions in energy consumption and greenhouse gas emissions, through combinations of local, state and federal policy and grass-roots advocacy. He will cite examples from Portland, arguably one of the "greenest" cities in the U.S., and Phoenix, Arizona, better known as a capital of sprawl. He will consider the complementary roles of the government, industry, academic, and non-profit sectors in pursuing these objectives, along with efforts being made by cities to share their experience with each other. He will end by asking whether the cumulative effects of making cities more efficient can lead to a credible attempt to mitigate climate change, not just adapt to it.

TS Eliot Theatre
12:10

Dr Michael Ornetzeder
Austrian Academy of Science, Austria

The role of community building processes in sustainable energy projects: experiences from Austria

The transition to a low carbon society is one of the great long-term challenges facing our societies today and will doubtless require transformative changes to current energy regimes. Large-scale system transitions such as the one envisaged for the global energy system in the next 30-40 years can only be realized through complex processes of change involving global, regional, national, and local levels. However, in order to be successful, in material terms, novel systems of consumption and production have to be contextualised and translated to the community level.

In this presentation he will discuss the various roles of communities and community building processes in sustainable energy projects on the local level. The case studies and examples cover different socio-technical options for a low carbon society including solar heaters, biomass distinct heating systems and car-free settlements in Austria. In all three cases the processes of community building and social learning were of major importance for the development and diffusion of new solutions. Although the selected examples only present small steps towards a low carbon society they may serve as a common ground to improve our understanding of dynamics of energy projects on the community level.

SESSION 3: Innovating at the grassroots level: creating low energy communities

TS Eliot Theatre
14.00

Trevor Graham
City of Malmö, Sweden

Creating sustainable communities in Malmö, Sweden

Malmö has been working with sustainable urban regeneration for the last 15 years with ground-breaking climate neutral new developments and some leading retrofitting projects in existing neighbourhoods. The Western Harbour and Augustenborg have been global flagships for sustainable renewal but we are now wiring in new areas with urban regeneration with varying levels of leadership from local communities. Malmö is exploring new economic models for the large scale regeneration of 1960s housing blocks.

Conference Abstracts

EVALOC International 'Energy and Communities' Conference

TS Eliot Theatre
14:30

Professor Ashok Lall
Ashok B Lall Architects

Strategies for low energy communities in urban India

India is undergoing a rapid transition into a high energy consuming lifestyle. This is evidenced in the trends of increasing energy consumption in homes in cities. Much of this increase is attributable to vertical conveyance of people, goods and water as residential buildings get taller, and to the use of air conditioning units installed individually by home owners. A case study of a project for affordable housing is presented to discuss strategies toward the future community evolving into an energy conserving community, even as they aspire to higher standards of living. The challenge has been to design affordable homes and a high density housing system that has in-built properties to keep future energy demands in check. Equally important is devising a plan for socializing the new community and instituting management practices toward environmental conservation and energy efficiency.

WORKSHOP 1: Learning from monitoring and evaluation of low-energy housing refurbishment

David Harvey Room
15:30

Professor Rajat Gupta, Laura Barnfield and Priyanka Arora
Low Carbon Building Group, Oxford Brookes University

Approaches and challenges in monitoring and evaluating low energy housing refurbishments

This presentation describes the significance of embedding a systematic approach to monitoring and evaluation to inform the management and design of low-energy improvements of dwellings. Such an approach enables energy use to be assessed before and after refurbishment, and improves the effectiveness of the low energy refurbishment itself. Case studies undertaken by the Low Carbon Building Group at Oxford Brookes University including the Oxford Whole House Carbon Reduction Project and the EVALOC project, are used to illustrate the various methodologies and approaches available. To optimise time, cost and occupant involvement, it is important that monitoring and evaluation techniques focus on 'need to know' rather than 'nice to have' factors.

David Harvey Room 15:45	**Stephen Passmore** National Refurbishment Centre and Energy Saving Trust *Reality of energy savings in housing refurbishments* Stephen will draw on evidence from the Energy Saving Trust technology field trials; the monitoring and evaluation of the Technology Strategy Boards Retrofit for the Future programme and case studies from the National Refurbishment Centres to explore monitoring strategies and energy savings.
David Harvey Room 16:00	**Kirsten Burrows** PRP Architects *Evaluating whole-house retrofit for future projects* Kirsten will be discussing the findings of her research relating to sustainable domestic refurbishment with the Energy Technologies Institute and the Optimising Thermal Efficiency in Existing Housing project. She will also present the lessons learned from whole house retrofit projects undertaken by the practice, including those refurbished under the Retrofit for the Future competition and subsequent monitoring and evaluation of these projects. In doing so, she will offer insight into how the successes and obstacles encountered during these projects can help to inform future retrofit work.

WORKSHOP 2: Researching and evaluating low carbon communities

Ian Taylor Room 15:30	**Nigel Ingram** Joseph Rowntree Foundation *Learning from Derwenthorpe low carbon community: opportunities and challenges*

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Conference Abstracts

EVALOC International 'Energy and Communities' Conference

Ian Taylor Room
15:45

Professor Roy Alexander
University of Chester

Learning from evaluation of a low carbon community in Blacon, Chester
Professor Roy Alexander, Tamara Hunt, (University of Chester) and Ged Edwards (Sustainable Blacon).

The Blacon Smart Energy Community LCCC Programme explored changes in household energy use and behaviour in response to a community intervention and education programme. It provided the opportunity to work with a large number of households and evaluate the effectiveness of 'soft' (communication) and 'hard' (technological) interventions. Data gathered via questionnaires, group discussion, monthly energy meter readings, historic energy records and electricity monitors enabled comparison of perceived and actual changes in energy consumption. Most households reduced energy consumption but these savings were almost matched by a minority's increases. Technological interventions had limited influence, with simpler technology proving more effective. Awareness of climate change increased with a positive influence on energy consumption and behaviour. The community approach was valued and there was evidence that energy saving behaviours became 'normalised' and percolated beyond participants. Many new volunteers engaged with longer-term social capital benefits. Maintenance of participation and obtaining historical consumption data from energy suppliers proved to be key challenges.

Ian Taylor Room
16:00

Richard Hauxwell-Baldwin
Researcher, University of East Anglia

Evaluating low carbon communities funded by the LCCC programme

A conflict exists in the LCCC between the instrumental application of community as a delivery-mechanism for government policy on pro-environmental behaviour change based on individualistic, rationalist understandings of human behaviour and the normative understanding of community based on social relations and identification with place held by residents in the three communities studied for my research. This conflict presented a significant challenge when trying to evaluate the role of community in encouraging pro-environmental behaviour.

Applied instrumentally, community offered participants a limited mechanism by which to alter the patterns of what constitutes normal behaviour within their households towards low(er) carbon living. Community as a means of governing pro-environmental behaviour change at a distance was shown to have been largely ineffective as a result of the dominance of the problem framing of carbon management that focuses on small-scale behaviour change and the delivery of technological fixes aimed at improving carbon efficiency to consumer-citizens.

Conference Abstracts cont...

EVALOC International 'Energy and Communities' Conference

WORKSHOP 3: Communities and Green Deal: challenges and opportunities

TS Eliot Theatre
15:30

Professor David Strong
David Strong Consulting Limited

Green Deal: opportunities for engagement

Despite the uncertainties associated with the Green Deal, it is likely to represent a major opportunity for large and small business alike. Of particular importance is the ECO which could result in £1.3bn per annum being invested in energy efficiency measures. The impact on the supply chain will be profound with a number of innovative business models already starting to emerge.

TS Eliot Theatre
15:45

Bridget Newbery
Centre for Sustainable Energy

What communities could do in preparing for Green Deal?

Enabling communities to participate in Green Deal will be a key factor in its success. At the same time as making a huge difference to our homes being warmer and our energy bills being manageable, it offers potential for increased local employment and opportunities for community groups to generate revenue. This session will cover some of the things that community groups, local enterprises (and councils who want to support them) will need to do, including:

- understand Green Deal, the ECO and associated rules and regulations
- be familiar with energy saving improvements, and what improvements are most suited to the local housing stock and to particular homes
- develop skills and knowledge to communicate energy saving information and encourage Green Deal take up
- be able to identify, and negotiate with or signpost to, appropriate partners

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Conference Abstracts

EVALOC International 'Energy and Communities' Conference

TS Eliot Theatre 16:00

Matt Gregg, Rohini Cherian and Prof Rajat Gupta
Low Carbon Building Group, Oxford Brookes University

Preparing for Green Deal: carbon mapping households in Bicester

The role of carbon mapping in helping communities realize their potential for improving the energy efficiency of their housing stock, through schemes like the Green Deal, is presented using a case study of the Local Energy Assessment Fund (LEAF) funded Grassroots Leads Energy Efficiency (GLEE) project in Highfield, Bicester. DECoRuM®, a GIS-based toolkit for measuring, modelling, mapping and managing energy use and carbon emission reduction, was used to analyse 374 houses in the Highfield area, resulting in community-wide estimates of current carbon emissions, and an evaluation of potential improvement and retrofitting using incremental packages. The results of this study were used to increase community awareness through local events and to inform community scale decisions on retrofit schemes.

SESSION 5: Closing plenary

TS Eliot Theatre 16:45

Dr Paul Rouse
Economic and Social Research Council, UK

Energy and communities research and practice: future challenges and opportunities

The session will pay specific attention to longer term research agenda for the social sciences, within the context of interdisciplinary and whole systems research. Thoughts on both the challenges of undertaking interdisciplinary work in the area and which specific future areas may warrant funding will be addressed in the context of evolving new initiatives such as Future Earth, Horizon 2020 and the Belmont Forum.

TS Eliot Theatre 16:45

Chris Church
Chair of Low Carbon Communities Network

Engaging with community energy action: future opportunities

The Posters

EVALOC International 'Energy and Communities' Conference

Various posters are to be displayed in the **Sir Howard Stringer Room** and can be viewed during the refreshment breaks throughout the day. They cover a variety of research projects covering community and energy. We invite you to peruse the displays and we hope that you enjoy the variety of projects shown. They are split into two themes:

- EVALOC low carbon communities project
- RCUK funded research projects under the Energy Research Programme on 'Energy and Communities'
- The Low Carbon Building Group, Oxford Brookes University current and past research projects
- Other research projects on energy and communities such as UNLOC project on understanding local and community governance of energy

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Advisory Board Members and International Experts

Advisory Board Members

Name	Organisation
Paul Rouse	Economic and Social Research Council
Andy Deacon	Energy Saving Trust
Paul Ruyssevelt	Technology Strategy Board
Patrick Allcorn	Department of Energy and Climate Change
Andrea Collier	Department for Environment, Food and Rural Affairs
David Gunn	Climate Challenge Fund
Chris Welby	Good Energy
Phillip Charles	Construction Industry Research & Information Association
Jon Bootland	Good Homes Alliance/Sustainable Development Foundation
Saskya Huggins	Low Carbon West Oxford
John Barnham	Hook Norton
Dennis Reeves	Middlesbrough
Brian Simpson	Middlesbrough
Dan McCallum	Awel Aman Tawe
Kay Beagley	Kirklees
Ged Edwards	Sustainable Blacon
Paula Vandergert	Resilient Communities

International Visiting Experts

Name	Organisation
Prof Jonathan Fink	Portland State University, USA
Trevor Graham	City of Malmo, Sweden
Dr Michael Ornetzeder	Austrian Academy of Science
Dr Jenny Palm	Linkoping University, Sweden

Conference Information

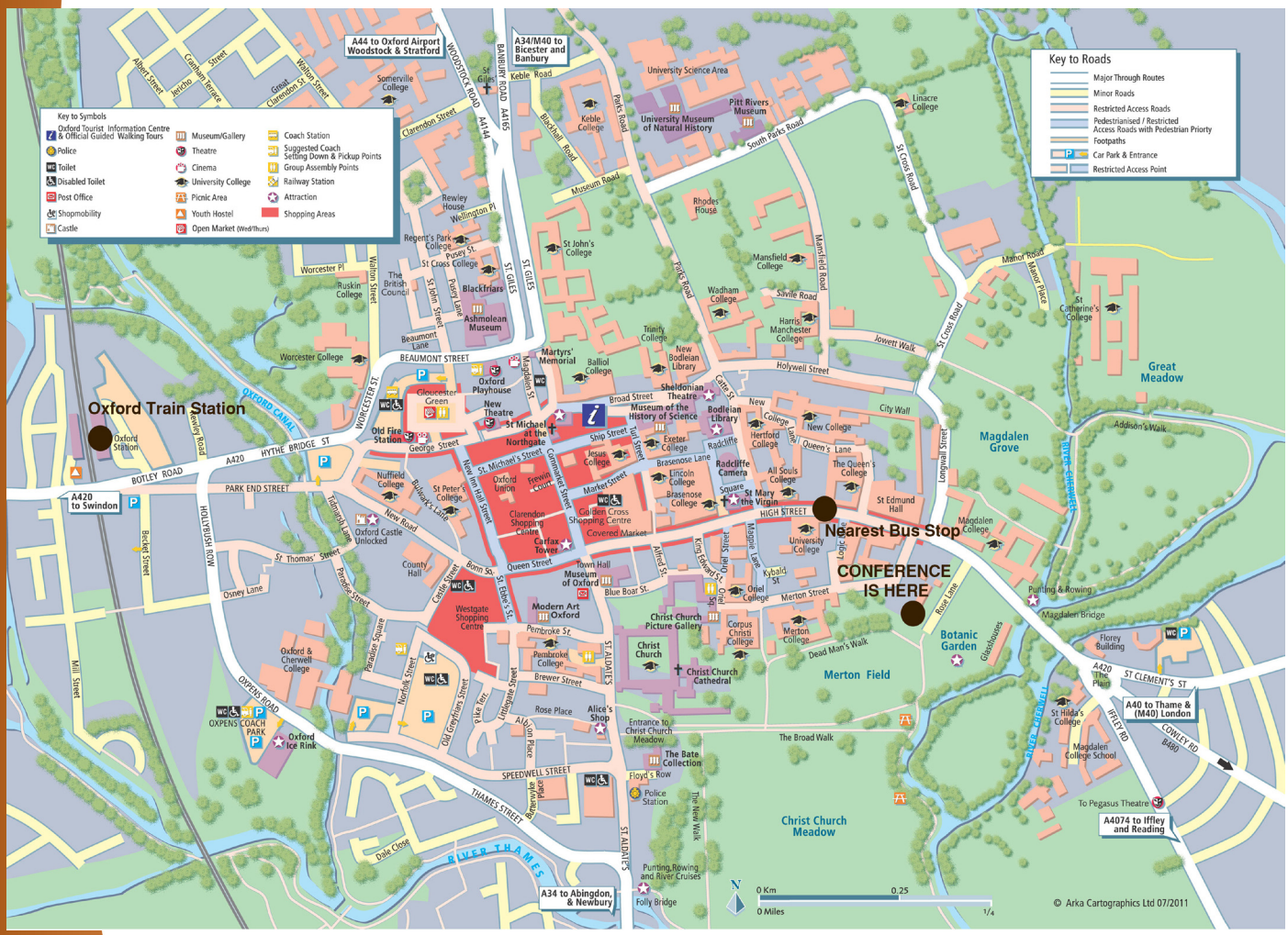
EVALOC International 'Energy and Communities' Conference

Travel/Accommodation

The TS Eliot Theatre is a conference centre in the grounds of Merton College, Oxford. It is fully accessible but if you have any particular requirements please let us know. The main entrance to the conference theatre is on Rose Lane off the High Street.

Merton College is well situated in the centre of Oxford with both bus and train facilities nearby. There are no parking facilities on site and would advise public transport to be optimised.

There are many hotels and B&Bs in Oxford city centre from which to choose. In particular searching for locations in the city centre or on Abingdon Road will provide accommodation along bus routes and within walking distance of both the venue and train station.



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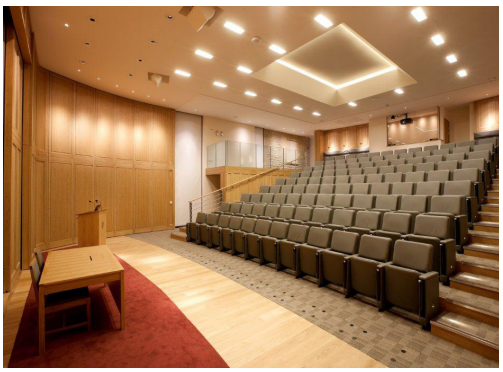
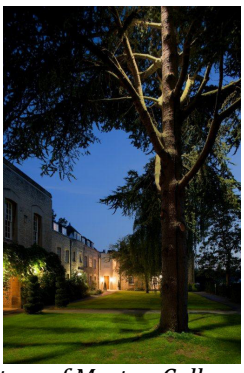
Conference Information

EVALOC International 'Energy and Communities' Conference





Images courtesy of Merton College

The Venue

TS Eliot Theatre, Merton College

The TS Eliot Theatre has been awarded a BREEAM Excellent rating by the BRE in recognition of the high environmental standards to which the building was designed. The building has been constructed using elements with good thermal performance and low air leakage to minimise energy required to heat or cool the building. This is of paramount importance when designing a 'low energy' building. A low-energy evaporative cooling plant is used to provide air conditioning and contribution to the excellent BREEAM rating.

All spaces have been designed to be bright light spaces filled with natural daylight and not requiring the use of excessive electric lights in daylight hours. The use of high quality elements meant that the heat loss through the glazing can be minimised whilst the daylight gain is maximised. Luminaries, where possible, use high efficiency lamps. Lights in seminar rooms, corridors and bathrooms are all on presence detectors. The building's roof is designed as a robust, light-weight energy efficient warm roof with a Terne Stainless Steel finish which will weather to the appearance of a soft lead but without the weight, embodied energy or environmental impact of lead processing. Materials, where possible, have been recycled from the part demolition of South Lodge and other surrounding buildings. Other materials used in the project were supplied by local suppliers where possible.

Catering at Merton College

Our Head Chef sources all products locally from quality suppliers:
Vegetables – Roots of Oxford (Osney)
Fish – Hayman's Fisheries (Osney Mead, Oxford)
Meat – John Lindsey (Oxford Covered Market)
Bread – Natural Bread Company (Botley, Oxfordshire) and De Gustibus (Abingdon, Oxfordshire)
Eggs – GJ Lyall (New Yatt, Witney, Oxfordshire)

The TS Eliot Theatre's excellent acoustic and environmental design provide a unique facility for conferences, and we are delighted to welcome you to it for the Energy and Communities Conference on 12th September 2012.

Conference Information

EVALOC International 'Energy and Communities' Conference

Conference Registration/Information Desk

Conference registration will take place between 9:30 and 10:00am on Wednesday 12th September 2012 in the main reception area. The desk will be staffed until the conference begins but for any queries throughout the day please approach any EVALOC team member (identifiable by their badges). Please visit the desk to sign in and receive your badge.

Parallel Workshops/Meeting Rooms

The location of the workshops may be changed on the day and will be indicated in the delegate pack.

Badges

For security and networking, please ensure you wear your conference badge throughout the day. Replacement badges may be obtained from the registration desk or from an EVALOC team member. Please return your badge at the end of the day so that they can be reused.

Colour coding of the badges is as follows:

Red:	Invited Speakers
Blue:	Organising committee/EVALOC team members
White:	Conference Delegates

Conference Materials

A delegate pack containing the final programme will be provided at registration. Please ensure you retain your pack as we will not be able to offer replacements.

Programme

Any last minute changes to the programme will be indicated at registration. We reserve the right to make changes to the programme.

Conference Catering

Tea and coffee refreshments will be served throughout the day at intervals indicated on the final programme in the main reception area.

Lunch is also provided in the Merton College Dining Hall. It is a sit-down 2 course meal and we ask that any dietary requirements are given to the EVALOC team via the website registering service. The route to the Dining Hall will be signposted but do not hesitate to ask an EVALOC team member for directions.

Drinks and nibbles are also provided at the end of the day.

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Conference Information

EVALOC International 'Energy and Communities' Conference

Oral Presentation Availability

We aim to make the presentations available to delegates electronically after the conference, subject to consent being received from the speakers.

Posters

The posters can be viewed throughout the refreshment breaks and we welcome people to take their drinks into the Sir Howard Stringer Room to peruse the various research projects.

Language

The language of the conference will be in English and translation will not be provided.

Notes

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‘ENERGY AND COMMUNITIES’

An international conference from the EVALOC project

Website:
www.evaloc.org.uk

Twitter:
@evalocuk

Facebook:
EVALOC low carbon communities

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