

# Improving Flood Resilience: The Blue-Green Advantage

Thursday 18<sup>th</sup> February 2016, Newcastle Centre for Life

## Speaker Biographies



**ADAM BAYLIS** is the Environment Agency's lead for research into surface water and groundwater flooding. He has 13 years' experience working in both national and local roles. His role includes managing research projects run by the Environment Agency and working with industry partners like UK Water Industry Research. He also supports academic research projects like the Blue-Green Cities project. Adam believes that Blue-Green infrastructure must become a key component of our cities if we are to manage future flood risk sustainably.



### **COUNCILLOR GED BELL – Cabinet member for Investment and Development**

Ged Bell was first elected to Newcastle City Council on 2 May 1996. He is a Labour Councillor for Kenton Ward. Following the election of a Labour administration in May 2011, Ged was appointed as Deputy Cabinet Member for Culture and Leisure, then in 2014 became Cabinet member for Investment and Development responsible for leading on future development and investment in Newcastle, including major projects, infrastructure and the capital programme. He is also responsible for promoting the skills and jobs programme, and is also the lead on the Climate Change agenda. This is the second time he has been in Cabinet/Executive. Previously he was responsible for Culture/Sport and Tourism.



**CHRIS DIGMAN** (PhD) is a Technical Director at MWH and visiting Professor at the University of Sheffield. He works across the wastewater and stormwater arena to manage flood risk and reduce pollution. He has co-authored numerous industry guidance documents that support practitioners to manage storm water sustainably using a combination of grey, green and blue infrastructure. Most recently he has co-developed CIRIA's tool to value the multiple benefits of sustainable drainage (BeST).



**MARY DHONAU** (OBE Hon DSc Hon RICS) has been flooded herself on many occasions and has extensive experience in supporting and advising the victims of flooding during their recovery. Mary is the Chief Executive of the 'Know Your Flood Risk' campaign, the Chair of the Flood Protection Group for the Property Care Association and a member of the Regional Flood and Coastal committee for Anglian Northern. She also runs a consultancy (MD Associates) specialising in raising awareness of flood risk, how to militate against it and recover from it. She regularly works alongside Local Authorities during community engagement events and was recently employed to engage with communities at risk of surface water flooding, as part of the 'Pathfinder Project' for Northamptonshire County Council.



**KIT ENGLAND** (LLB Hons. MA AIEMA MCIPR) is a Policy and Communication Business Partner at Newcastle City Council, and has worked on Climate Adaptation for over six years. He chairs the Core Cities Climate Resilience and Adaptation Working Group, who worked with Defra to broker the Cities agreement in England's adaptation plan; subsequently Kit was seconded to Defra to advise on urban issues. More recently, he supported an independent review of Newcastle's response to severe flooding in 2012 and worked with the Joseph Rowntree Foundation on the development of 'ClimateJust'. Kit has also worked with the European Institute of Technology (EIT) to explore opportunities for private financing of adaptation, and is currently working to integrate adaptation into projects across the North East's ERDF programme.



**GLYN EVERETT** (PhD) is a Research Fellow in the Centre for Floods, Communities and Resilience (CFCR) at the University of the West of England (UWE). He has worked on projects around education, natural history and flooding for over ten years. Glyn's work focusses on the importance of involving public voices in flood risk management, to both gain from local expertise and to ensure that devices satisfy local preferences, thereby hopefully encouraging greater public engagement, understanding and behaviour change. As a wheelchair-user, Glyn is also interested in exploring the positioning of disabled people with regard to emergencies in the built environment.



**MARIE FALLON** is the Environment Agency Area Manager for Northumberland, Durham and Tees, responsible for the Agencies activities in the North East, including River and Coastal Flooding, water quality matters, and regulating industrial activities. Marie has an extensive 28 year local government career including Corporate Director of Environment for Cumbria County Council, Interim Director of Place Shaping and Enterprise at London Borough of Enfield and Director of Regeneration at Newcastle City Council. Marie chaired the Strategic Recovery Group following the 2009 Cumbria floods and co-ordinated and controlled the multi-agency recovery efforts. Marie also ran her own consultancy business; one of her assignments saw Marie leading Calderdale Council's recovery efforts following the 2012 summer flood. In recent months Marie and her team, working with other agencies, have responded to four flood events since the end of November 2015 in the North East as well as supporting colleagues around the country.



**RICHARD FENNER** (PhD) is a Reader in Engineering Sustainability in the Department of Engineering's Centre for Sustainable Development at Cambridge University. He has published more than 100 papers, books and chapters, including a new book on *Sustainable Water* published in February 2016. Richard is a Chartered Civil Engineer and CIWEM Fellow specialising in water, sanitation and sustainability issues in both developed and developing countries, with a focus on urban drainage and water asset maintenance. He is the recipient of several awards from the ICE including the George Stephenson Gold Medal, R A Carr Prize and James Watt Medal. His role in the Blue-Green Cites project was to lead aspects of the work on system integration and multiple benefit evaluation of blue-green flood management assets.



**VASSILIS GLENIS** is a researcher in the School of Civil Engineering and Geosciences, Newcastle University. His research has been founded on two major technical capabilities: firstly, numerical modelling skills for hydrodynamic applications including urban flooding and drainage networks and secondly, advanced programming skills including object oriented languages, parallel programming, databases and the Cloud. He has developed the detailed hydrodynamic model CityCat for modelling and analysis of high resolution, pluvial, fluvial and tidal surge flooding. A fully-coupled subsurface drainage component has been developed recently. The model promises a paradigm shift in capability and use for urban flood risk assessment and design by incorporating Blue-Green infrastructure. CityCat has been applied in the UK (e.g. London, Newcastle, Leeds), Australia (Melbourne), Argentina (Cordoba) and across 571 European cities.



**CHRIS KILSBY** (PhD) is Professor of Hydrology and Climate Change in the School of Civil Engineering and Geosciences, Newcastle University. He has worked on hydrological risk in urban and catchment settings for over 20 years using a variety of physically based and statistical approaches. This work has increasingly been in the context of climate change impacts and sustainable adaptation responses. Recent work includes leading the Weather Generator component of the UKCP09 national climate scenarios and the development and use of extreme rainfall scenarios for urban drainage assessment at city scale. As well as developing storm scenarios, he has used the CityCAT urban water model for demonstrating Blue-Green adaptation in cities.



**JESSICA LAMOND** (PhD) is an Associate Professor in flood management within the Centre for Floods, Communities and Resilience (CFCR) at the University of the West of England (UWE). She works on understanding socio-technical aspects of structural and non-structural responses to flood risk in the built environment including blue-green infrastructure



**MALCOLM MORGAN** (PhD) is a Research Associate at the Centre of Sustainable Development in the University of Cambridge Department of Engineering. He has been working on the Blue-Green Cities project since February 2015. While he originally trained as a Civil Engineer at the University of Warwick, his research at Cambridge has focused on the assessment of sustainability in the urban form and how 'Big Data' can be used to increase understanding of, and allow the improvement of, the urban form. His work on Blue-Green Cities has involved the development of a GIS toolbox to evaluate the multiple benefits of Blue-Green infrastructure.



**EMILY O'DONNELL** (MSc, PhD) is an early career Research Fellow at the University of Nottingham with a PhD in glacial geochemistry and experience in glacial science, ecology, water chemistry and water management. Emily is currently the lead researcher and project coordinator on the multi-disciplinary, multi-institution Blue-Green Cities project and associated "Clean Water for All" initiative (UK-US-China collaboration). Emily's current research focuses on identifying uncertainties and barriers to the implementation of Blue-Green sustainable flood risk management solutions. Emily is working closely with local government stakeholders in Newcastle, UK, and Portland, USA, to develop sustainable visions for urban surface water management by maximising the opportunities to achieve multiple benefits of Blue-Green approaches.



**FOLA OGUNYOYE** is the Leading Professional for Flood Resilience and Technical Director at Royal HaskoningDHV. A Chartered Engineer and Fellow of the CIWEM, Fola has 25 years' experience at the water's edge; optimising the value of water for communities, infrastructure and industry, while making them resilient to its increasing extremes. Fola has delivered many flood and coastal plans, strategies and award-winning schemes to reduce risk and improve resilience of communities and infrastructure to extreme natural events. He has also been involved in developing many water sensitive, water adaptive and water resilient developments and infrastructures across the UK, Europe, USA and Africa. Fola led or supported the development of new methods, tools and guidance, including on SuDS, flood protection systems, fluvial design, culverts, weirs and channel management.



**JOHN ROBINSON** graduated from Newcastle University in 1975 and became a Chartered Engineer in 1984. During the early part of his career he was involved in a variety of construction projects, from tunnelling to heavy steel structures for the North Sea oil industry. He then worked for Tyne & Wear County Council and Gateshead Council before moving to the private sector and working on the design of infrastructure and highways projects. He returned to the public sector in 2003 with Newcastle City Council working in highway maintenance. Since 2005 he has played a role in managing their response to flooding events as Principal Engineer. The Flood and Water Management Act 2010 was a challenging time for him with the introduction of Lead local Flood Authorities.



**CLARE ROGERS** (MSc MRICS PCAP) is a Chartered Surveyor and has been Director of Estates at Newcastle University since 2000. Prior to that she managed residential and commercial property in central London and had a short spell as a senior lecturer in Planning and Valuation. Clare's team won the Times Higher Outstanding Estate Team Award for strategic planning and progress with key estate metrics, and was highlighted by the Funding Councils as an exemplar of outstanding estate progress. Since the Toon Monsoon in 2012 Clare has worked with her team to mitigate campus flood impact and with academics and other stakeholders to plan ahead for flood management on the jointly owned Science Central site and more widely.



**PAUL SHAFFER** is an Associate at CIRIA where he coordinates initiatives that promote the sustainable use and management of water with a focus on sustainable drainage and flood risk management. His work in this area includes the development of guidance, conferences and training designed to help overcome the challenges of implementing good practice. He is a keen advocate of delivering multiple benefits from SuDS and believes early engagement with the right design team enables multi-beneficial SuDS to be delivered on any site.



**COLIN THORNE** (PhD) is Professor of Physical Geography at The University of Nottingham. He is Principal Investigator for the EPSRC funded Blue-Green Cities Research Consortium. Colin also advises the government on flooding; he was Principal Investigator of the Flood Foresight Project, which looked ahead to flooding in the 2040s and 2080s; and he assisted Sir Michael Pitt with his Review of the 2007 summer floods. In 2014, Colin assisted the government during the 2013-14 winter floods. Colin also researches and advises on flooding internationally and is working with the city of Calgary, Canada, which is recovering from the devastating flood of June 2013.



**RICHARD WARNEFORD** is an experienced Water Industry professional with 30 years' experience in water and wastewater operations (treatment and networks), engineering and project management, commercial activities, asset management and employee relations. Richard is a Chartered Civil Engineer, has an MBA from Durham Business School and is a Board Member of the UK Water Industry Research (UKWIR). As part of Northumbrian Water's Management Team, Richard's role is as the Company's Waste Water Director. Richard has a keen interest in partnerships and collaboration and sees this as crucial to the success of Northumbrian Water and our region.



**DAVID WILKES** (C.Eng, CWEM, BSc, FCIWEM, MICE) is a chartered civil engineer, Global Flood Resilience Leader for Arup, and Arup Director working on international river, coastal and integrated catchment management projects. David has specialised in coastal, tidal and inland flood risk management for almost 40 years. Prior to Arup, David worked in the public sector for 30 years, including the Environment Agency, where he was responsible for operations at the Thames Barrier and the 120 miles network of London storm tide defences. David is currently Project Director for the Leeds and Skipton Flood Alleviation Schemes, and for four projects associated with the Humber Estuary Strategy. He was Project Director for developing the practice guide to accompany PPS25 and for the Cabinet Office report on Flood Resilience of National Infrastructure.