Mrs Joanne M Leach B.Sc., M.Sc.

Researcher
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About

Since May 2012 Joanne Leach has been a researcher on the Engineering and Physical Sciences Research Council- (EPSRC-) funded programme grant Liveable Cities, which aims to create an holistic, integrated, truly multi-disciplinary city analysis methodology, which uniquely integrates wellbeing indicators, is founded on an evidence base of trials of radical interventions in cities, and delivers realistic and radical engineering solutions.

Prior to Liveable Cities, Joanne worked as a project manager on multi-disciplinary research projects in the field of sustainable urban environments. These included **VivaCity2020 (http://www.vivacity2020.co.uk)** and **Designing Resilient Cities (http://www.urban-futures.org)**.

Joanne's research interests are varied, but have a common focus: sustainable cities. These include understanding and assessing urban sustainability and liveability, futures thinking and designing for future resilience, crime and fear of crime and soundscapes. She is particularly interested in how to facilitate the decision-making processes of local authorities to ensure future resilience along a path of increasing sustainability and liveability.

Qualifications

- Currently studying for a PhD in Civil Engineering, University of Birmingham, Birmingham, UK
- M.Sc. (Distinction) in Design Management, University of Salford, Salford, UK, 2010
- BSc (Hons) International Business with a minor in mathematics, Trinity University, San Antonio, Texas, USA, 1995

Biography

Joanne joined the School in May 2008 to work on the EPSRC-funded research project: Sustainable Regeneration – from Evidence-based Urban Futures to Implementation. She is a highly experienced Programme Manager and researcher on cross-disciplinary research in sustainable urban environments (SUE) and has been involved in the high profile, EPSRC-funded SUE programme including SUE1: VivaCity2020, £2.9M; SUE2: Sustainable Regeneration, £3.1M; and the recently-awarded Programme Grant: Liveable Cities, £6.3M. She has been involved in numerous urban sustainability-related projects and initiatives, covering issues from crime to soundscapes.

She is currently involved in a UK Policy Commission on Future Cities and has recently co-authored consultation responses on UK infrastructure (commissioned by Lord Armitt), the UK's Sustainable Development Indicators (commissioned by defra) and the UK Lane Rental Scheme (commission by the Department for Transport). Her current research focuses upon city analysis methodologies, incorporating the broad range of sustainability issues and future resilience. She is particularly adept at working across disciplines, working within multi-disciplinary research teams (from civil engineers to social psychologists) to address wicked problems such as sustainability, resilience and climate change mitigation.

Teaching

Joanne supports students undertaking their 4th year undergraduate projects within the School as well as delivering lectures on sustainability to 1st year undergraduate students and contributing to the small group teaching programme.

Research

Current research project:

- **Liveable Cities**
  University of Birmingham
  May 2012 – April 2017

  A £6.3 million, 5-year, EPSRC-funded programme grant to identify and test radical engineering solutions that will lead to low carbon, resource secure future cities in which societal well-being is prioritised.

  See: **www.liveablecities.org.uk (http://www.liveablecities.org.uk)**

Previous research projects:

- **Sustainable Regeneration: from Evidence-based Urban Futures to Implementation**
  University of Birmingham
  May 2008 – April 2012

  A £3.1 million, 4-year, EPSRC-funded research project that developed a 5-step method to test the future performance of urban development and regeneration-related 'sustainability solutions' – actions taken today in the name of sustainability – in a series of possible future scenarios. The method is supported by a web-based

Interactive Tool.

See: **www.urban-futures.org (http://www.urban-futures.org)** .

- **Resilience Through Innovation: Critical Local Transport and Utility Infrastructure**
  University of Birmingham
  November 2010 – April 2012, part time

  A £200,000, EPSRC-funded scoping project into the research needed to bring about radical changes in thinking and practice for an assured future in the face of multiple threats/risks.

- **SUE Research Dialogues**
  University of Birmingham
  January – June 2010, part time

  A six-month, £80,000, EPSRC-funded research project into developing the Sustainable Urban Environments (SUE) research community as funded via three calls from the EPSRC.

  See: **suedialogues.wordpress.com (http://suedialogues.wordpress.com)**

- **Positive Soundscapes**
  The University of Salford
  December 2006 – September 2009, part time

  A 3-year, £1 million, EPSRC-funded research project into what comprises a positive urban soundscape.

- **VivaCity2020**
  University of Salford and Lancaster University
  October 2003 – April 2008

  A £2.9 million, 5-year, EPSRC-funded research project that through innovative and interdisciplinary research developed a toolkit of resources that can be used to navigate urban sustainability issues. The toolkit addresses sustainability issues by encouraging decision-makers to think about sustainability in a user-centred, holistic way, identifying overlaps and trade-offs as the drivers of decision-making.

  See: **www.vivacity2020.co.uk (http://www.vivacity2020.co.uk)**

- **Design Against Crime Solution Centre**
  University of Salford
  February 2007– April 2008, part time

  A small portfolio of research projects exploring the issues around crime and fear of crime.

- **Inclusive and Sustainable Infrastructure for Tourism and Urban Regeneration (InSITU)**
  University of Salford
  November 2005 – January 2007, part time

  A 15-month, £150,000, EPSRC-funded research project that developed and tested new tools and resources designed to deliver a more inclusive and sustainable infrastructure where tourism is being nurtured as a catalyst to regenerate disadvantaged areas that are rich in built heritage.

  Prior to her work in academia, Joanne spent eight years working within a Manchester advertising and design agency after moving to the UK from America.

Publications

- Leach JM, Boyko CT, Cooper RFD, Woodeson A, Eyre J, Rogers CDF (2014). Do sustainability measures constrain urban design creativity? Proceedings of the ICE: Urban Design and Planning. DOI: 10.1680/udap.13.00034
- Lee SE, Braithwaite PA, Severance S, Leach JM, Rogers CDF (2014) A Tale of Two Cities: A Study of the Energy Systems in Birmingham, an Industrialised City in central UK and Masdar City, a Developing City in the Middle East. CESARE 2014, Amman, Jordan, 24-27 April
- Lee SE, Leach JM, Bouch CJ, Hunt DVL, Rose K, Rogers CDF (2013). A City Design Framework to Elucidate Urban Challenges: Energy Flows of Birmingham. BHPB/Grand Challenge Symposium: Sustainable Resources for Sustainable Cities Symposium. UCL, London 5-6 November 2013
- Leach JM, Lee SE, Braithwaite PA, Bouch CJ, Grayson N, Rogers CDF (2013). What Makes a City Liveable? Implications for Next-Generation Infrastructure Services. In Infrastructue for a Better Future: A Forum for Vision, Leadership and Action. Wollongong, Australia, 1-4 October 2013. Wollongong: Smart Infrastructure Facility. 397 – 405
- DR Lombardi, JM Leach, CDF Rogers, R Aston, A Barber, CT Boyko, J Brown, J Bryson, D Butler, S Caputo, M Caserio, R Coles, RFD Cooper, R Coyne, R Farmani, M Gaterell, J Hale, C Hales, CN Hewitt, DVL Hunt, L Jancovic, I Jefferson, AR MacKenzie, FA Memon, R Phenix-Walker, TAM Pugh, JP Sadler, C Weingaertner and JD Whyatt (2012). Designing Resilient Cities: A Guide to Good Practice. IHS BRE Press, Bracknell, UK
- Rogers CDF, Lombardi DR, Leach JM and Cooper RF. (2012) The urban futures methodology applied to urban regeneration. Proceedings of the Institution of Civil Engineers – Engineering Sustainability 165(1): 5-20
- Boyko, C. T., Gaterell, M. R., Barber, A. R. G., Brown, J., Bryson, J.R., Butler, D., Caputo, S. Caserio, M., Coles, R., Cooper, R., Davies, G., Farmani, R., Hale, J., Hales, A.C., Hewitt, N., Hunt, D. V. L, Jankovic, L., Jefferson, I., Leach, J.M., Lombardi, D.R., MacKenzie, A.R., Memon, F.A., Pugh, T. A. M., Sadler, J.P., Weingaertner, C., Whyatt, J.D., & Rogers, C.D.F. (2012) Benchmarking Sustainability in Cities: The role of indicators and future scenarios. Global Environmental Change - 22 (1), 245-254 12/04/2011) (IF = 4.918, IF5 7.84) doi:10.1016/j.gloenvcha.2011.10.004
- Hunt, D.V.L.; Lombardi, D.R.; Atkinson, S.; Barber, A.; Barnes, M.; Boyko, C.T.; Brown, J.; Bryson, J.; Butler, D.; Caputo, S.; Caserio, M.; Coles, R.; Farmani, R.; Gaterell, M.; Hale, J.; Hales, C.; Hewitt, C.N.; Jankovic, L.; Jefferson, I.; Leach, J; Mackenzie, A.R.; Memon, F.A..; Whyatt, D.; Weingartner, C. and Rogers, C.D.F.; (2012) Scenario Archetypes: Converging rather than Diverging Themes. In Sustainability journal 4 (4), 740-772; doi:10.3390/su4040740
- Hunt, D.; Lombardi, R.; Atkinson, S.; Barber, A.; Barnes, M.; Boyko, C.; Brown, J.; Bryson, J.; Butler, D.; Caputo, S.; Caserio, M.; Coles, R.; Farmani, R.; Gaterell, M.; Hale, J.; Hayes, C.; Hewitt, N.; Jankovic, L.; Jefferson, I.; Leach, J.; Mackenzie, R.; Memon, F.; Pugh, T.; Rogers, C.; Whyatt, D.; Weingartner, C. Scenario Archetypes: Converging rather than Diverging Themes. In Proceedings of the 1st World Sustainability Forum, 1-30 November 2011; Sciforum Electronic Conferences Series. http://www.sciforum.net/presentation/720
- Leach JM, Rogers CDF, Cooper R, Cooper I, Luger J (2010) Sustainable Urban Environments Research Dialogues. University of Birmingham
- Leach, JM. 2009. Adapting design management tools and techniques to meet the needs of a small charity. MSc dissertation, University of Salford: Salford, Greater Manchester

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