



LEEDS BECKETT UNIVERSITY LEEDS SUSTAINABILITY INSTITUTE

Highlights from 2019 showing some of the work of the LSI

January

BEIS Smart Meter Enabled Thermal Efficiency Ratings (SMETER)

Together with Loughborough University, University College London and Halton Housing, the LSI have won a bid to carry out testing the ability of Smart Building Performance Technologies.

The Leeds Sustainability Institute, building performance team at Leeds Beckett University are engaged in a £5 million government funded research project to develop and test smart meters for homes.

May

BBC Sunday Politics Yorkshire and Humber

Professor Chris Gorse, Director of the Leeds Sustainability Institute, was invited to join prospective MEPs and others to discuss how leaving the EU might affect the UK with regard to research and climate change. Issues raised in this programme included the levels of pollution in Leeds and measures being taken to improve air quality.

September

The SEEDS International Conference and RISE Awards 2019

On September 11th the first day of the International **SEEDS** (Sustainable Ecological Engineering Design for Society) Conference took place in the University of Suffolk in Ipswich. The Technical University of Dublin was also a major partner in the conference and the Conference Chair was Professor Lloyd Scott from the TUD. On the evening of 11th September, the **RISE** (Research; Innovation; Sustainability; Enterprise) Awards took place with the **SEEDS** Conference Dinner and industry professionals mixed with academics at a glittering awards dinner, which was enjoyed by all, particularly those receiving the awards!



Entrants to the RISE Awards sent in posters based on Research, Innovation, Sustainability and Enterprise. These posters were judged in different categories by Professor Lloyd Scott, Professor Chris Gorse, Justine Oakes and John Flynn. Haven Power, who brought along one of their electric cars to the event, sponsored the RISE Awards. You can view the posters and more information on the RISE Awards and SEEDS Conference by following [this link](#).

October

BEIS Smart Meter Enabled Thermal Efficiency Ratings (SMETER)



Condensation risk areas



Blower door test



Thermal imaging

Together with Loughborough University, University College London and Halton Housing, the LSI are testing the ability of Smart Building Performance Technologies. The LSI building performance team at Leeds Beckett University are engaged in a £5 million government funded research project to develop and test smart meters for homes. The LSI is recognised as a lead expert in the area of building energy efficiency and performance research.

The Technical Assessment Contractor was awarded to a consortium made up of:

- Loughborough University (Principal Investigator)
- UCL
- Leeds Beckett
- Halton Housing

Links

[Smart Meter Enabled Thermal Efficiency Ratings \(SMETER\) Innovation Programme](#)

[Halton helping to transform how thermal performance of homes is measured](#)

Leeds Sustainability Institute wins £2.7 million research project

The Leeds Sustainability Institute (LSI) at Leeds Beckett University were successful in an open tender competition from the Demonstration of Energy Efficiency Potential (DEEP) project commissioned by the **Department for Business, Energy and Industrial Strategy** worth £2.7 million over 2 years.

It builds on the LSI's previous successful projects on building performance fieldwork research, undertaken for the UK Government including: investigating the effectiveness of solid wall retrofits, identifying how party wall heat transfer affects energy efficacy and testing novel innovative wall insulation products. DEEP will be delivered by the LSI with support from **Salford University, the University of Loughborough and Lucideon Ltd.**

DEEP will be one of the largest single research projects into building performance evaluation of domestic retrofits ever delivered in the UK and is the culmination of decades of incremental improvements in domestic energy efficiency standards and legislation, informed by building performance research undertaken by the LSI and other UK universities and research institutes.

LSI carry out research for Leeds City Council into High Rise Flats

This research seeks to evaluate the in-use performance of electric heating and hot water systems in high-rise flats. Electricity use, internal conditions and occupant experience will be monitored over a 2-year period in 20 flats (10 flats per block in two blocks) to provide insight into the way that occupants heat their homes and manage their energy use. The data collected will provide much needed awareness of thermal comfort in high-rise flats in both summer and winter, and how this affects occupant energy use and overall satisfaction.

The findings of this research will provide Leeds City Council with detailed information on energy use and occupant experience within high-rise flats. This may be used to facilitate evidence-led policy and decision making towards reducing the local carbon emissions associated with high-rise flats. The data produced will also enable evaluation of occupant comfort and satisfaction.

November

Huge Congratulations go to the three researchers from the Leeds Sustainability Institute who have gained their doctorates in the last six months.

Dr Melanie Smith, Senior Lecturer in the School of Built Environment, Engineering and Computing – whose PhD was entitled, "A study of building surveying praxes to inform design of thermal retrofit"



Dr Matthew Brooke-Peat, Course Director, School of Built Environment, Engineering and Computing – whose PhD was entitled, "Assessing the Impact of thermal Bridging on Building Fabric Performance. "



Dr Martin Fletcher, Research Fellow, School of Built Environment, Engineering and Computing – whose PhD was entitled, "Improving the Measurement, Evaluation and Understanding of Thermal Comfort in Sport Facilities"



Dr Matthew Brooke-Peat has also just become the **Vice President Education for the Chartered Institute of Architectural Technologists (CIAT)**

December

£6.8 million awarded to H21 for second phase of hydrogen network research

H21, the UK gas industry programme focused on converting the network to carry 100% hydrogen, has been awarded a further £6.8 million in Ofgem innovation funding to support a second phase of research and development, part of which will involve testing on an unoccupied section of gas network. The collaborative industry project is establishing the critical safety evidence to prove a hydrogen network is a viable alternative to the natural gas network heating UK homes and businesses today.

Led by Northern Gas Networks, in collaboration with Cadent, Wales & West Utilities, SGN and new project partners National Grid Transmission, H21's second stage will begin in January 2020. It marks a significant step towards securing a decarbonised heating solution, following the Government's 2050 net zero pledge. **Leeds Beckett University** also joins the consortium for Phase Two, alongside DNV GL and the Health & Safety Executive.

2017 Best Paper Award – Indoor and Built Environment Journal (IBE)

Professor David Johnston's Paper entitled, "Estimating the background ventilation rates in new-build UK dwellings – Is n50/20 appropriate?" was awarded best paper of 2017 by this prestigious journal.