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Editorial

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This issue has four papers and one book review that present insights on and research into a range of topics, including sustainable built environment development, energy performance of windows under climate change, post-construction thermal testing, domestic energy performance measurement and urban retrofitting for sustainability.

Hakiminejad *et al*. (2015) from the University of West London in UK and Andisheh New Town Development Company in Iran provide a review of sustainable built environment development in Iran. The review focuses on three technical aspects including policies and legislation, sustainable technologies, and sustainability assessment methods and techniques. For policies and legislation, the paper provides a brief review on the hierarchical structure of the administration system and sustainable urban development control. For the development and adoption of sustainable technologies, the paper provides technical details on not only the improvement on energy efficiency, which covers energy efficiency in the building sector, energy-efficient urban and architectural design, and heavy thermal mass materials, but also the development of renewable energy, which includes wind energy, solar energy, geothermal energy and energy from biomass. For sustainability assessment methods and techniques, the paper provides a brief review on main assessment criteria. This paper has a further discussion on four related issues including policies and legislation, sustainability assessment, energy efficiency and renewable energy, a comprehensive examination of the current situation of sustainable development of the built environment with regard to policy, technology and assessment issues in Iran, and provides technical insights for theoretical research and practical development towards sustainable built environment.

Yıldız (2015) from Balikesir University in Turkey presents research into energy performance of windows under climate change in Turkey. Through a well-designed experiment based on climatic data, building orientation, glazing type and window size, this paper describes an investigation on the effect of various window configurations on the energy behaviour of a typical type of school buildings in three cities in Turkey. Detailed parametric simulations were used and the results were compared in accordance with ISO 18292. The paper reveals useful findings based on simulation results for both research and practice, and these include that the contribution of windows to cooling loads is the highest when the value of the solar heat gain coefficient (SHGC) is high and its contribution increases due to climate change; the U-value of glazing is not as significant as the value of the SHGC for cooling; building orientation and window size are other important parameters that can affect the energy performance of windows; and it is more energy efficient for a building to be orientated in south or north directions for cost saving and better performance.

Johnston *et al*. (2015) from Leeds Sustainability Institute at Leeds Beckett University, UK presents recent research into post-construction thermal testing by providing the results and key messages obtained from undertaking a whole-building heat loss test (a coheating test) on seven new-build dwellings, which are located on five separate developments in the north of England and were designed to the minimum level 4 of the Code for Sustainable Homes (DCLG, 2010). All of the dwellings were tested as part of the UK Technology Strategy Board's Building Performance Evaluation Programme between February 2011 and March 2013. The paper shows the results from the coheating tests by measuring real thermal performance in comparison with design intent and predicted heat loss coefficient, and gives a conclusion that it is possible to construct dwellings where the building fabric performs thermally more or less as predicted, thus effectively bridging the traditional building fabric performance gap that exists in mainstream housing in the UK.

Swan *et al*. (2015) from the University of Salford, UK presents interview-based research into the practitioners' view on domestic energy performance measurement. The interview involved nine experts from the Innovate UK domestic building performance evaluation (BPE) panel, and the aim of the interview was to investigate their perspectives of the issues of the methods and practical issues of fieldwork and analysis in relation to domestic energy performance measurement. The paper reveals results from the interview in which invited experts identified critical issues of client demands, technical failure, costs and implementation in BPE practice. Research findings summarised in the paper can inform further research and practice.

Whitehead (2015) provides a book review on *Urban Retrofitting for Sustainability: Mapping the Transition to 2050* (Dixon *et al*., 2014). The book review highlights the book's contribution to the body of knowledge on urban sustainability as a useful source for policy-makers, urban designers and researchers. It provides a practitioner's insights on a wide range of issues including cases, energy, governance, history, infrastructure, planning, statistics and tools that the book has addressed, and comments to inspire further thinking and research on this topic.

I hope you find these papers stimulating and informative, and would be pleased to receive comments on this issue.

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