

Special issue: Urban nature for resilient and liveable cities

Title: Guest Editorial

It is a transforming experience to imagine that in 50 years, our current built environment might look as foreign to our grandchildren as the computers of the 1960s look to us today. We can already see emerging attempts to create cities that are resilient and liveable in the face of physical stresses including population growth, increasing climate variability, resource shortages and pollution. The capacity for transforming every aspect of development towards resilience and liveability goals is profoundly exciting, from heating and cooling through to energy generation, water reticulation, food production, transportation, communication and recreational spaces.

Within this milieu, the importance of nature as an intentional and functional component of our built environment has been an emergent conversation over the last several decades by seminal authors including Wilson, Kellert, Heerwagen, Beatley and Newman. Biophilic urbanism proposes that nature be integrated to deliver significant social, environmental and economic benefits to cities and their inhabitants. However, actioning this proposition can be challenging with a variety of barriers including competing land use demands, misaligned stakeholder motivations, incompatible regulatory landscapes, economic externalities, political willpower, and a lack of awareness.

Through six papers, this special issue aims to enquire into the biophilic urbanism and urban greening agendas, within the context of the 21st Century challenges and opportunities. Building on the 2015 special issue that focused on sustainable urban renewal (Shen, 2015; Newman *et al*, 2015, Reeve *et al*, 2015), this special issue focuses on research and actions that contribute to the mainstreaming of nature as an integral design component within cities and their surrounds.

An opening seminal commentary by Kellert reminds us of the importance of biophilia in our evolution as a species, and the need to reintroduce nature into human 'habitats'. Kellert concludes the need to adopt a new paradigm to guide radical change in both urban structures and the decision and design processes that shape them.

A second seminal commentary by Birkeland argues the need for a new sustainable design paradigm that must be heuristic, not simply descriptive or inspiring. Connecting the conversation with net positive development, Birkeland advocates the importance of increasing the quantity of nature in our cities to expanding sustainable social options and increasing ecological base.

A paper by Litke uses the city of Birmingham to explore and discuss challenges and opportunities for integrating biophilic design into the built environment, inspired by leading green cities such as San Francisco, Portland and Oslo.

A paper by Young considers the potential to ignite people's sense of responsibility and stewardship for the environment, as well as their inherent connection to nature, through a universal framing of 'paradise'.

A paper by Tan *et al* (the first of two linked papers 'Part A') examines land development practices on secondary forests in Singapore, highlighting the emergence of a contentious issue that requires careful management.

A paper by Hwang *et al* (the second of two linked papers 'Part B') uses urban ecological principles to address development impacts on secondary forest sites, suggesting five sets of design strategies for coping with the impact of secondary forest loss in Singapore.

This collection of papers provides a context for further discourse herein about how cities around the world could transform over the coming decades. The papers also provide a clear call for action, to overcome the identified barriers for mainstreaming biophilic urbanism.

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References:

Newman, P. (2015) "Transport infrastructure and sustainability: a new planning and assessment framework", *Smart and Sustainable Built Environment*, Vol 4 Iss: 2, pp.140 - 153

Reeve, A., Desha, C., Hargreaves, D. and Hargreaves, K. (2015) "Biophilic urbanism: contributions to holistic urban greening for urban renewal", *Smart and Sustainable Built Environment*, Vol. 4 Iss: 2, pp.215 – 233

Shen, G. (2015) "Special issue on sustainable urban renewal in high-density cities", *Smart and Sustainable Built Environment*, Vol. 4 Iss: 2