

Editorial: Urban development and sustainability

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The original motivation for this themed issue of *Urban Design and Planning* on urban development and sustainability was prompted by a key question that often faces today's academics and practitioners: by how far, and through what means, can our towns and cities be planned for the future to promote social inclusivity, economic efficiency and environmental sustainability? These objectives may often be complementary but may also be in competition when designing urban systems. Perceptions of their relative importance can also vary significantly over time and space. Over the lifetime of this themed issue, we have already witnessed a noticeable shift towards prioritising economic sustainability over environmental and social issues due to the current global economic crisis. These changing priorities only add to the many challenges already faced by urban designers and planners.

In terms of cities themselves, outer areas such as outer suburbs, urban fringes and satellite settlements are of particular interest and concern because these are areas where the majority of people live, most new development is focused, and where high levels of car dependency, social exclusion and growth exist. Tensions can often arise when formulating sustainable development policies. Promoting a 'compact city' approach with higher densities served by good public transport can conflict with the desires of firms and households to relocate away from urban centres. It is certainly worth considering how far technology, more specifically the widespread availability of the Internet, will enable households in the future to become more footloose in their location choices as it becomes less important to be as close to traditional work, retail and leisure facilities. Transport has a key role to play here. Not only is technology making the vehicles we drive less polluting (at least at the point-of-use), but more significantly drivers are being eased out of the driving task and replaced by advanced assistive driving technologies. This may make travelling time seem more productive as an activity which could impact on the acceptance of longer journey times, potentially adding further impetus to households' preferences to disperse away from traditional urban centres. These technological innovations are changing what we do and where we chose to do it, and could have serious implications for the planning and development of our towns, cities and rural areas in the decades to come.

Given these pressures, much debate surrounds the ability of alternative designs of inner- and outer-town and city areas to achieve economic, environmental and social sustainability and this themed issue targets a number of specific questions that prompted a large and strong field of abstracts from the sustainability community around the world. By its very nature, urban development and sustainability is extremely diverse, and the final selection of papers aims to reflect this diversity within a common theme of urban design and planning.

The opening briefing paper (Simpson, 2011) intertwines the three pillars of economic, environmental and social sustainability when describing how a multi-disciplinary team of architects, economists and planners have developed a programme for the historic city of York in the UK to achieve long-term economic sustainability in an environment that is attractive to businesses, residents and visitors alike. The paper focuses on the plan and proposals that have been developed in consultation with key stakeholders, and also the Chicago 'city beautiful' programme that provided the inspiration for the project.

One of the key questions posed in the original call for abstracts concerned how alternative spatial designs should be analysed and evaluated to encompass economic, social and environmental considerations, for example at local, urban and environmental scales. The first paper to address this issue (Mulligan *et al.*, 2011) uses a case-study approach to demonstrate a tailored approach to assessing sustainability in large-scale projects which attempts to accommodate the wide diversity that often exists in terms of project constraints and the motivations of key stakeholders. The transferability of the approach and lessons from the three case studies for its use in a wider range of applications are discussed. The second paper on the theme of sustainability assessment (Walsh *et al.*, 2011) discusses a systems approach to assess climate change mitigation and adaptation at the city-scale using London as a focus. The authors describe an integrated assessment approach to simulating socio-economic change, climate impacts and greenhouse gas emissions over the twenty first century. The aim of the assessment approach is to help inform the decision-making process and the development of effective packages of planning proposals for larger urban areas.

Two international case studies from Amsterdam and New York city provide the focus for the third paper in this issue from Van der Veen and Korthals Altes (2011) who explore how sustainable development can be promoted through the use of formal contracts rather than public law procedures. The authors argue that the contract approach offers a more dynamic, flexible and collaborative approach and seek to test this in two very different legal environments via the case studies, but also identify a number of interesting potential risks with their approach.

Social sustainability is the theme of the next two papers. Afacan and Afacan (2011) discuss the problems of increasing social exclusion and inequality and how urban design can play a vital role in overcoming these issues. 'Mat urbanism' is proposed as an approach to urban form to encourage sustainable communities and enhance quality of life, and considers various aspects of its application from the micro-scale (such as individual buildings) through to the macro-scale of entire cities as a way of planning and developing our towns and cities in the future. The second paper (Greed, 2011) is an attempt to investigate how well issues of diversity and equality are incorporated in the development of sustainable communities. The paper focuses on urban design issues affecting two specific sectors of the community, namely women and the elderly, and argues that design in the future needs to be far more inclusive to reflect the needs of and constraints on these key groups.

Environmental sustainability, specifically carbon sequestration, is the focus of the penultimate paper from Renforth *et al.* (2011) who consider how soil could be used in urban areas to capture potentially very significant amounts of carbon and how it may be included in the planning of new and existing developments. The authors point out that this potential may be difficult to realise due to the major regulatory and accreditation challenges it presents for the planning system. The final paper from Cronin and Guthrie (2011) reflects that sustainability and urban design is not confined simply to the relatively affluent towns and cities of the developed world, but is a global issue affecting many areas suffering from extreme poverty in the developing world. Two different approaches to upgrading water and sanitation facilities as part of Kibera slum upgrading

in Nairobi, Kenya are discussed. The authors present a comparative analysis of the two approaches to investigate their ability to increase sustainability, and identify the opportunity for engineering solutions to achieve the twin goals of tackling poverty and achieving sustainable urban development.

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