



The Influence of Statutory Land Use Planning on Water Sensitive Urban Design Practices

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OVERVIEW

Australian governments have recognised water sensitive urban design (WSUD) in the national urban water reform agenda, and have included provisions intended to encourage WSUD practices in statutory land use planning regimes. However, detailed empirical investigation of the extent to which statutory planning actually influences WSUD practices is lacking. The research described in the paper addresses this gap.

The research found that statutory planning is an important factor in the adoption of WSUD practices. The research also found that statutory tools that include specific, quantitative targets more strongly encourage the adoption of WSUD practices, compared with tools that lack such targets.

Much commentary favours a WSUD concept that encompasses the complete urban water cycle, and links this with the urban design process. However, the extent to which current statutory land use planning regimes recognise this broad concept varies.

The research found that the capacity of statutory land use planning to encourage WSUD practices is enhanced when statutory planning explicitly encourages the adoption of these measures at the localised, street scale. This encourages the transition, central to the WSUD idea, to a combination of centralised and decentralised systems, compared with the previous reliance on large-scale urban water infrastructure.

The research also found that statutory land use planning interprets the WSUD concept, by encouraging specific practices. These practices reinforce our assumptions about what WSUD might be. This process acts as a barrier to the acceptance of wider visions of WSUD, incorporating the complete urban water cycle, integrated with land use planning.

OBJECTIVES

The key objective of the research was to understand to what extent, and in what ways, statutory land use planning influences the implementation of WSUD practices in Australia. In other words, how does statutory land use planning facilitate, or hinder, the adoption of WSUD practices?

The research provided new knowledge about the influence of statutory planning on the implementation of WSUD in Australia. This will inform changes to statutory planning laws, so they better support the adoption of WSUD.

METHOD

The research examined how statutory land use planning influenced WSUD practices in four residential subdivisions, two in Western Australia and two in Victoria.

An innovative feature of the research was that it examined how statutory land use planning influenced four discrete 'components' of WSUD practice. This permitted a closer analysis than previous investigations, which considered WSUD practice as an undifferentiated whole.

Information was gathered by physical inspections, interviews and document analysis.

The use of four cases, discrete components of WSUD practice and different sources of information provided clear, novel insights into how statutory planning influences WSUD practice.

RESULTS

The research found that statutory land use planning is an important factor in the adoption of WSUD practices. The research also found that statutory tools that include specific, quantitative targets more strongly encourage WSUD practices, compared with tools that refer to measures that 'should' be considered.

The capacity of statutory planning to encourage WSUD practices is further enhanced when statutory planning explicitly encourages the adoption of these measures at the localised, street scale. This encourages the transition, central to the WSUD idea, from the previous reliance on large-scale urban water systems, to a combination of centralised and decentralised systems.

CONCLUSIONS

Statutory planning encourages WSUD practices, but this influence is constrained when planning focuses on specific parts of the urban water cycle. The specific WSUD practices fostered by statutory planning gain acceptance over time, creating a barrier to seeing wider visions of WSUD.

These limitations can be mitigated by including a physical scale, requiring decentralised infrastructure to be used. The capacity of statutory planning to encourage WSUD practices could also be enhanced by including targets related to, for example, urban heat island mitigation, integrating with water cycle targets. Accomplishing this will require different disciplines to work together, to build tomorrow's cities.