

ENABLING WATER SENSITIVE URBAN DESIGN – FINDINGS FROM WINS

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ABSTRACT

At a time of increasing national focus on urban water quality, Stu Farrant from Morphum Environmental was awarded a 2018 Winston Churchill fellowship to undertake international travel and research to better understand the enabling factors which have supported globally leading cities in addressing the complex issues of urban water management. The fellowship supported travel to Hamburg, Copenhagen, Malmo, Stockholm, Portland, Seattle and San Francisco to meet with industry leaders and practitioners who have been instrumental in these city's transitions towards improved environmental and social outcomes through better and more integrated management of stormwater.

The research aim was to learn from cities which are proven exemplars of good urban water management to get a sound understanding of how they have successfully implemented change and how this can benefit cities across New Zealand in the coming years.

Specifically, the fellowship research investigated how;

- Environmental, social and economic drivers have motivated cities to improve urban water management.
- Regulation and policy tools have been developed and implemented to facilitate change.
- Institutional and industry capacity has been enhanced to ensure motivations and policy are translated into good practice.
- Different financial models have been developed and used to fund public and private investment in stormwater management infrastructure.
- Innovation and a culture of applied research is fostered to drive change and continued improvements.
- Environmental and engineering elements are successfully integrated with urban design, landscape amenity and other important considerations to deliver multiple benefits.
- Stormwater is managed to provide resilience to climate change and other chronic and acute shocks.
- Social sciences and behaviour change programs are used to educate the community to increase awareness, of the issues relating to urban stormwater management and increase the uptake of change and private investment.

Connections with representatives from municipalities, utilities and private practice provided insights into effective implementation and examples of how city scale change can transform the social, environmental and economic outcomes for communities. This paper presents the key findings from the fellowship and proposes how these might be used to shape future policy and practice across New Zealand.

As cities and towns across New Zealand grapple with the regulatory drivers of the NPS-FM, and increasing community aspirations for better water quality outcomes, the fellowship provided a timely opportunity to learn from international experiences where comparable drivers have motivated different responses. Covering issues of policy, non-regulatory tools, professional practice and community behaviour change the paper provides exemplars which demonstrate that institutional change and thought leadership are transferable to New Zealand to enable a shift in practice founded on lessons already learnt internationally.

KEYWORDS

Water Sensitive Design, Stormwater, Water Quality, Integrated water management