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The Biophilic Waterway Design Guideline: filling the gap in stormwater design standards

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Biography:
Teneale is a graduate civil engineer working in the stormwater field. She has a technical background in the design of civil infrastructure, digital engineering and drainage design, including water quality and stormwater management. Whilst recently becoming an Infrastructure Sustainability Accredited Professional (ISAP), Teneale aims to implement efficient, safe and sustainable designs and waterways for everyone to enjoy. She will be discussing the gaps in current guidelines and presenting proposed waterway design guidelines which promote social outcomes.

Abstract:
The link between exposure to nature and improved human health outcomes is now relatively well accepted by both professionals and the community at large. Urban waterways present an opportunity to provide interactive greenspace within an urban setting, while serving multiple benefits to the community.
Even though we understand the 'why', those involved with urban waterway design and rehabilitation are still lacking a definitive 'how' to achieve these outcomes in practice. Engineers are bound by guidelines addressing the design or rehabilitation of urban waterways for fish passage, public safety, erosion protection, flood mitigation, water quality improvement and flood safety. By comparison, very little guidance currently exists to inform the design of the beneficial elements of interactive waterways.
The paper 'More than flooding and nutrients: a study of the mental health benefits of waterways' (Fletcher, 2016), started the journey by presenting a range of qualitative design elements. This presentation will push further and present a quantitative guideline to be used in conjunction with other standards to achieve the best overall outcomes for the community and environment.
Desirable waterway outcomes are determined based on community surveys within the greater Brisbane region and field investigations of a range of sites within the Brisbane City Council and Moreton Bay Regional Council areas. Waterway features that promote interaction and social benefits will be presented as a pictorial and quantitative guide to guide waterway designers to better outcomes.