



Innovative stormwater management approach to reduce flooding impact

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Biography:

Sainath Tavate is a qualified Engineer who has worked in stormwater and construction industry for over 9 years. Sai was part of study conducted by Melbourne Water, EPA Victoria and South East Water in Yarra River catchment on quantifying the significance of input from stormwater on waterways. Sai's professional career includes Capital Projects Delivery, stormwater, water sensitive urban design, strategical Asset management, construction management, developments and Program Management in various Victorian Councils. Sai is a member of the Institute of Engineers Australia and Local Government Professionals and currently is a part of stormwater team of Knox City Council.

In many municipalities across Greater Melbourne, the demand to service a growing population with increasing urban form, is leading to more infill developments in areas already under pressure from flood risk. Increasing demands to provide effective and responsive stormwater infrastructure services are often compromised by a lack of space to augment the traditional pipe network, particularly in suburbs that were developed during the 50's and 60's urban boom. Unlike greenfield land spaces and urban growth areas, retrofitting these heavily developed areas with adequate stormwater infrastructure, in an environment of infill development and multi-units, is proving more and more challenging. These in turn are adding further burden on existing stormwater infrastructure, resulting in increases in flood affected properties, thereby compromising the city's liveability and quality of life.

At Knox City Council we are taking a sub-catchment view at these challenges. Looking for ways to apply water quality infrastructure principles and thinking, that is, distributed systems, to package up a suite of options at the precinct and private lot scale.

In partnership with South East Water, Knox Council is retrofitting trialing the use of distributed approaches to flood mitigation and stormwater management with new technology, through Talking Tanks on private lots (residential and industrial) and remote access to empty before the storm event; underground detention systems for open space irrigation benefits; and building flood resilience through pipe detention.

That is, a non "one size fits all approach" but a package of systems that collectively provide adaptive stormwater management, and responds to landscape limitations, demands for improved flood protection, urban intensification and cognisant of climate change scenarios for the forward 50+ years – this approach ultimately shifting our management from 'reactive stormwater' to 'proactive stormwater'.