Stormwater Senate Inquiry

Attention:

Committee Secretary
Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600
ec.sen@aph.gov.au

From:

Simon Brink
Project Engineer
Manningham City Council

Introduction

Stormwater management is complex due to shared responsibilities across organisations and jurisdictions.

Within local government, stormwater management priorities are typically focused on mitigation of local issues such as flooding or local beach water quality. Achieving broader catchment scale water quality and environmental benefits is generally seen as worthwhile, but is generally not a funding priority.

Key difficulties to improving regional stormwater outcomes such as waterway health and other environmental values typically include:

- the high costs associated with achieving meaningful environmental improvements,
- lack of cost effective, low maintenance technologies,
- technical knowledge limitations.

As there are considerable resources needed to improve stormwater management and waterway health, an appropriate strategy is to identify best value initiatives and to focus limited resources on these areas.

Best Value Technologies

A review of a broad range of stormwater intervention technologies was undertaken by Manningham City Council in 2013 as part of water policy development. Of the wide range of water cycle improvement measures possible, 'detention enabled' water tanks clearly had by far the greatest overall benefits including:

- direct positive financial benefits to asset owners, with capital cost payback periods typically around 10 years,
- waterway benefits including reducing flood flow volumes and erosion prevention,
- reducing potable water demand,
- improved water supply security.

Technology and knowledge on water tanks systems is mature, such that there are minimal implementation risks.

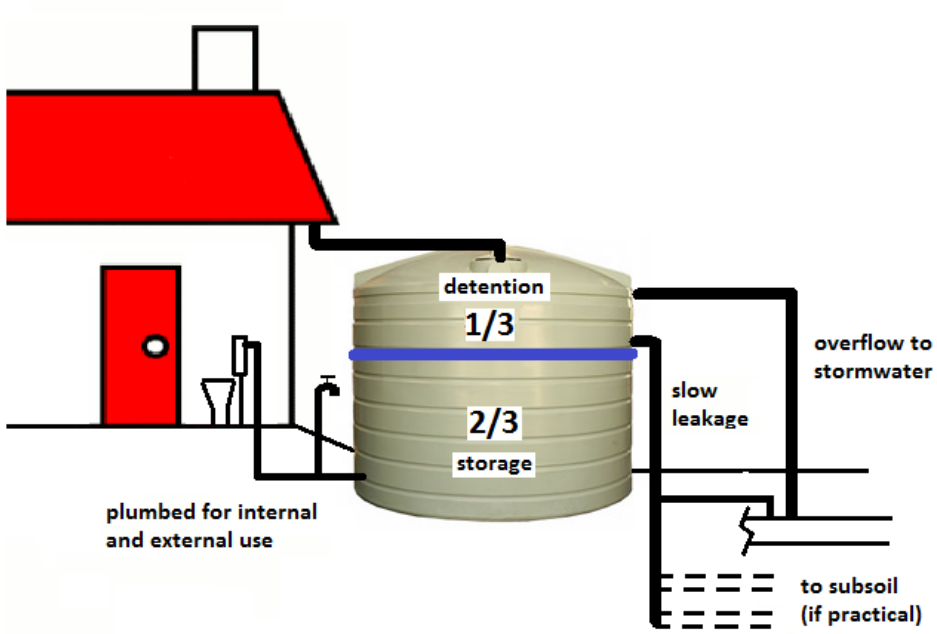

Figure – Detention Enabled Stormwater Tanks

As such, there are multiple benefits to encourage the installation of 'detention enabled' water tanks. This could be achieved by:

- Modifying building and planning requirements to require "detention enabled' water tanks for new developments.
- Financial incentives.
- Developing standards and codes of practice.

Water Sensitive Urban Design

State Government (Victorian) strategic direction on stormwater in recent years has been to improve bay and waterway health firstly by larger scale treatment systems, and in more recent years by promoting local water sensitive urban design systems.

A number of barriers remain to widespread implementation of local water sensitive urban design systems, and as such, these systems are currently unlikely to gain funding priority from local governments. Barriers include:

- the large number of assets required (~10,000+ for typical urban Councils),
- significant maintenance requirements for each asset,
- design complexities for each asset.

Until current 'issues' with water sensitive urban design systems are resolved, these systems are not ready for widespread implementation. To gain local government support for widespread implementation generally, the design of water sensitive urban design systems needs to be further developed to achieve the following:

- 'zero' or very, very low asset manager maintenance requirements,
- low cost modular and/or standard designs with low implementation risk.

Once this have been achieved, local governments are for more likely to start to pro-actively support practical implementation on an opportunistic basis, i.e. for new developments and in conjunction with other road works.

Continued premature roll out of water sensitive urban design systems that have ongoing functional and maintainability issues for asset owners is not likely to achieve desired objectives, regardless of funding models.

Attention needs to be placed firstly on practical asset-owner focused research and development, and secondly on retrofitting existing systems that are not functioning effectively or are impractical for asset owners in terms of long term maintenance implications. Only once this is achieved should widespread roll out proceed.

Conclusion

The transition towards water sensitive cities remains a highly worthy initiative.

Timeframes remain long term and there will be many challenges.

Clear focused, objective leadership at senior levels is essential to ensuring that this transition remains on track, and achieves best value for the community.