



## Strategic Investment in Runoff Management Through Spatial Decision Support Tools

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To support the health of local waterways and Port Phillip Bay Melbourne Water manages runoff quality and quantity impacts across its jurisdiction through a range of activities. These include capital works and maintenance as well as partnerships and grant support through the Living Rivers and River Health Incentives programs. Outside of Greenfield development areas, urban and rural runoff management practices are often governed by opportunistic approaches because place-based master plans and prioritisation frameworks are not available. This can limit considerations of: 1) Melbourne Water's overall vision and the outcomes it needs to achieve for a catchment and the health of its waterways, and 2) the feasibility of management actions (e.g. constructed wetlands, raingardens, litter traps, riparian revegetation) in support of these.

In order to assist Melbourne Water and its partners in making strategic runoff management investment decisions, we partnered with Jacobs to a) develop an Areas of Interest framework and tool to identify and prioritise areas where stormwater is and/or may become a primary threat to waterway values and bay health and b) for a given area of interest develop a spatially-based feasibility tool that draws on the suitability framework developed by Kuller et al. (2017). To develop the Areas of Interest a set of key threats to key values in the 2013 *Healthy Waterways Strategy* and moderators to these threats were identified and available datasets collated. These were integrated into a stormwater prioritisation database where areas of interest were identified. The feasibility tool can then be used to undertake an assessment that considers relative construction and maintenance costs as well as two place-based perspectives: 1) technology operation (e.g. biophysical, planning & governance) and 2) the needs of a location (e.g. ecosystem regulation, liveability). For a given area of interest, the tool will support investment decision makers and catchment planners to assess the ability of a range of runoff management actions to meet a given set of user-defined objectives (e.g. flow-regime management, water quality improvement, urban greening, habitat provision).