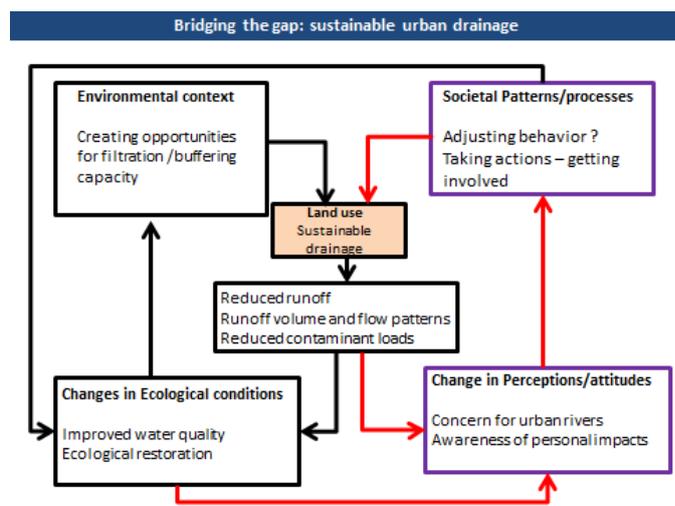


# The Liesbeek River Life Plan: landscapes that enrich and enable public attitudes and actions

Letter #4 September 2014 Kevin Winter

The restoration of riverine landscapes in an urban setting needs to simultaneously enrich ecosystems and services, and also enable public to interact 'differently' in that space. There is no quick switch – we know that - but perhaps there are lessons that can be learned from recent technological developments that have changed behaviour thus reducing the demand on water and managed the separation of solid waste. For example, multiple waste bins make source separation and collection easier to manage and in some countries this simple (obvious) idea has changed the way the public manage their waste. In another example, the dual flushing toilet mechanism has reduced water demand in households. In both cases, technology and accompanying management systems have contributed towards more sustainable resource management and, arguably, resulted in a shift in behaviour. Could landscape design do something similar? The Liesbeek River Life Plan, Letter #2, showed how it might be possible to strengthen social and ecological interactions so as to enable people to recognise the need for shifting public behaviour away from detrimental activities on land. The diagram showed a conceptual framework comprises a range of variables (boxes) and processes (pathways and arrows). It showed how changes in land use could influence ecological patterns and processes resulting in changes in ecological conditions. Similarly, these changes have potential to change human behaviour for better (e.g. positive attitudes) or to the detriment of the environment (e.g. negative behaviours that are detached and even threaten ecological processes). In the context of the Liesbeek River Life Plan, what could be done to reconfigure the riverine and adjoining landscape to restore the ecology and services, and change human behaviour?

In an MSc thesis completed recently by Elizabeth Ward, she showed that over 70% of residents (n=69) in Observatory and Newlands were fully aware that stormwater systems were designed to carry only stormwater. They also acknowledged that stormwater was contaminated by a variety of sources including water from swimming pool backwash, residential garden runoff, and water from vehicle washing, etc. However, over half of these residents allow their swimming pool backwash to drain into the street (52%) or the garden area (23%). Many residents apply garden fertilizer (72.06%) - in spring and summer (96.08%). Not unsurprisingly, the researcher found an increase in nutrient concentrations in stormwater in both suburbs during springtime. This could be attributed to the runoff of fertilizers (Phosphate increased by 89%; Ammonia 46%; and Nitrite 37%). It is interesting too that the majority of the residents (75%) who were interviewed in the study, claimed that they visited the Liesbeek River at least once a month and expressed some concern for the ecological health of the river (84%).



Landscape design needs to incorporate sustainable urban drainage (SUDs). It could be a visible 'switch' enabling improved quality of runoff and a more measured flow rate from the land to the river. In addition, SUDs brings attention to the use of green infrastructure that has many positive benefits including its contribution to public education. Social awareness of the condition of the Liesbeek helps, but is insufficient in changing public behaviour.

## References

Ward, E. 2013 Public Knowledge and Stormwater Quality in Cape Town, South Africa: a case study of the Liesbeek. Unpublished MSc thesis, University of Cape Town