

Leading change in urban water management

The Friends of the Liesbeek began in 1991 with the intention of conserving and cleaning the river, also in providing public interest and education. These early intentions relied heavily on volunteers, but the work was simply overwhelming and interest waned. It made no sense in cleaning a river when the condition reverts within days. In 2004 private businesses were approached to donate towards a pilot project that eventually resulting in the establishment of the Liesbeek Maintenance Project. This project currently employs eight personnel and includes a qualified project manager with knowledge and skills in river restoration and an experienced supervisor responsible for managing a team of workers. This letter briefly describes some of the changes and thinking pioneered by the Friends of the Liesbeek; explains why these were necessary; and justifies why the Liesbeek Life Plan has potential to advance the connection between people and ecology, and the linkage to ecosystem services.

One of the earliest visions, also shared by the municipality at the time, was to ensure the construction of a pathway along the river (from source to sea) to improve access and enable public to be the 'eyes on the river'. Over the years these pathways, along with non-motorised transport routes, certainly improved access and may be indirectly responsible for improving the number and quality of public reporting of incidents along the river, but have had limited impact in transforming social and ecological spaces and in strengthening the connection between what happens on the land and resulting impacts on biodiversity. The contribution is valuable but limited. The contention is that environmental challenges of the 21st century requires substantial changes to the way society views and manages ecosystems. Worldwide research and experience suggests that an approach to river management requires far more adaptive, integrated, collaborative ecosystem-management approaches because the emphasis needs to be on improving society's ability to live within a social-ecological system. To do so, a key ingredient lies in understanding processes of transformation, and in particular, factors responsible for triggering and enabling transformation in ecosystem management and social innovation/enterprise.

The Friends of the Liesbeek learned at least three lessons. The first is to deal with the ongoing environmental degradation caused by pollution and general neglect. The second is to improve environmental awareness and education through guided walks, contributions to school, business and public programmes, and in making information available through social media and websites. Thirdly, it is to gently nudge or shift societal values towards an emergence of heightened interest in ecology, biodiversity and ecosystem services afforded by strategic interventions in the management of the river corridors. It is about bringing nature back to the river, making room for the river, and creating space for recreation amenities and improved aesthetics that foster interest that improves local ecosystems. The results are increasingly evident. There is growing capacity to undertake new neighbourhood initiatives, and promote dialogue among neighbourhood groups living alongside the river.

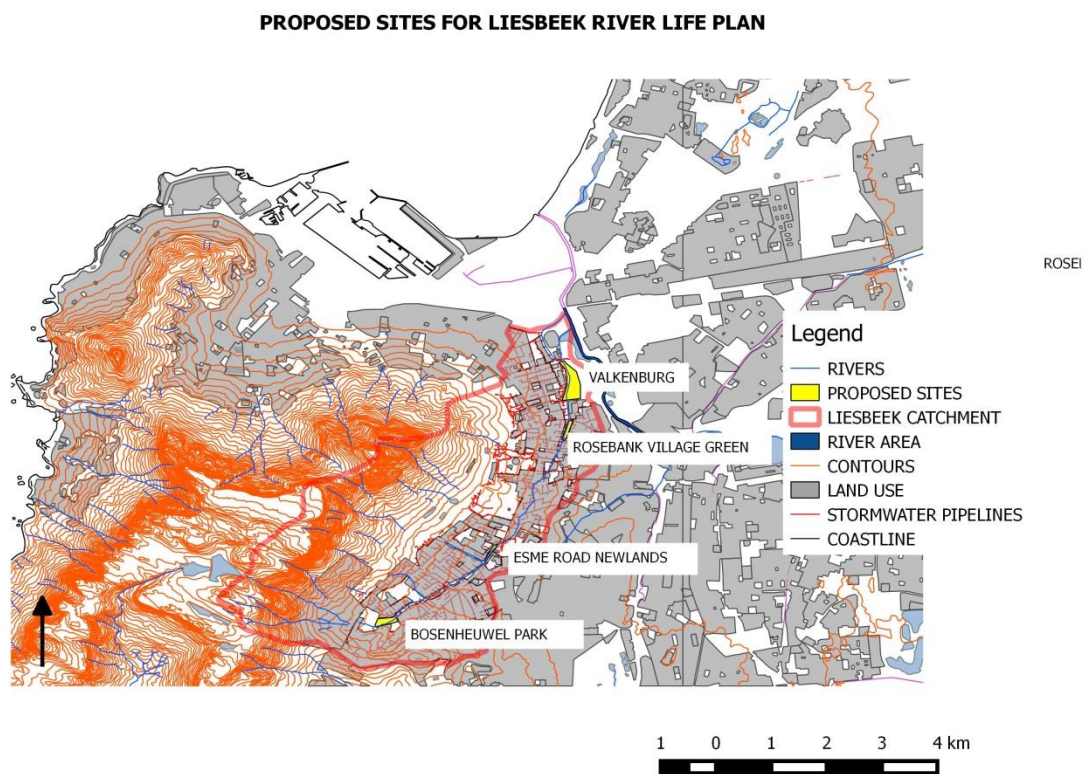
Restoration towards healthy urban rivers begins by building the connectivity between human behaviour and natural hydrological processes that starts around homes, streets, parks and open spaces. The goal is to enable people to develop creative ways of coexisting with river system.

It is for these reasons that the Liesbeek River Life Project aims to re-establish the ecological integrity of a river ecosystem and to restore the public and neighbourhood connectivity by dealing with the degradation, raising new interest and shifting values systems. The results are satisfying but are still woefully inadequate. Active contributions on the Friends of the Liesbeek Facebook social media pages suggests that the vision is on track.

In the past, the work of the Friends of the Liesbeek was mainly reactive rather on strategic planning. The

Liesbeek River Life Plan is an attempt to change the stance by offering designs that incorporate an acceptable strategy in which there are environmental (e.g. natural flow, sufficient bed load material) and socio-economic (e.g. public attitude) conditions that favour the restoration of the river. These sites for the proposed landscape designs will be based on priorities determined by public participation processes.

At this stage in the project cycle, various datasets have already been collected and mapped in GIS. The overall plan starts by identifying multiple connections between land and the river. Four sites along the river are being identified for possible interventions: Boschenheuvel Arboretum; Esme Road to Dean Street section; Mowbray/Rosebank Village Green; and the Valkenburg wetland in Observatory.



Selection of References

Biggs, R., F. R. Westley, and S. R. Carpenter. 2010. Navigating the back loop: fostering social innovation and transformation in ecosystem management. *Ecology and Society* 15(2): 9. [online] URL: <http://www.ecologyandsociety.org/vol15/iss2/art9/>

May, R. 2006. "Connectivity" in urban rivers: Conflict and convergence between ecology and design, *Technology in Society*, 28 (4), November 2006, Pages 477–488

Rohde, S. et al. 2006. Room for rivers: An integrative search strategy for floodplain restoration, *Landscape and Urban Planning*, 28 [1-2], October 2006, Pages 50–70