

# Case Study: Return of the 'Bottomless Pool' in Yosemite Creek, North Katoomba, Blue Mountains

## COUNCIL NAME

Blue Mountains City Council

## WEB ADDRESS

[www.bmcc.nsw.gov.au](http://www.bmcc.nsw.gov.au)

## POPULATION

79,812

## Overview

Decades of urban stormwater runoff resulted in the decline of Yosemite Creek's water quality, a loss of habitat and aquatic biodiversity and sediment filling the local favourite swimming hole; the 'bottomless pool' at the base of Minnehaha Falls. Council worked across the community to restore the creek and after 15 years the 'bottomless' plunge pool has been returned to the community, swimmable once more.

## Background

The driving force behind the project was the local Bushcare volunteers sharing their vision of restoring the pools in the system with Council. As a result Council developed the North Katoomba Catchment Restoration Program (NKCRP) which involved all key stakeholders and the community in a whole of sub-catchment restoration program. A catchment sediment audit identified the key point source inputs and diffuse sources of sediment came from the many kilometres of unsealed roads and fire trails in the catchment, numerous steep unsealed driveways and road verges.

## Implementation

The NKCRP focused on treating point and diffuse sources of sediment at key nodes throughout the system. Stormwater treatment systems and bio-filtration raingardens were installed to capture nutrients and rubbish from entering the system, the 'Save our Swamps' program was created to restore hanging swamp systems that were being incised by stormwater runoff, a community engagement program developed to provide sustainability training for local residents, and a business stormwater program targeted all industries in the catchment with audits and business action plans.

Another key objective of the NKCRP was to assist Council's transition towards a water sensitive city through the use of innovative low cost stormwater treatment systems. Several new community volunteer groups were formed to monitor water quality and participate in rehabilitation programs for the catchment. Community catchment days were held regularly to educate and engage residents in on-ground projects being undertaken. Catchment pledges were developed that encouraged the community in making changes on their own property and to adopt more sustainable practices.

Remediation works were undertaken to conserve local vulnerable, threatened or endangered ecological communities and species in the catchment. Bushland restoration works were designed and carried out to improve habitat connectivity and wildlife corridors. In-stream works focused on bank stabilisation, the restoration of pools and riffles to improve instream habitat and enhance aquatic biodiversity.



Photo: 'Bottomless Pool' at the base of Minnehaha Fall, filled with sediment in 2014 (left) and after 2016 (right).

## Outcomes

Key outcomes achieved by the program include:

- Formation of a North Katoomba Bushcare Catchment group with shared vision;
- Collaboration with a number of state agencies
- Council procurement of over \$500k in state and federal grant funding for the program using its Environment Levy as matching funding;
- Council's depot upgraded to include stormwater retention basins, an artificial wetland and stabilised all unconsolidated sediment;
- Installation of seven new stormwater quality improvement devices (SQIDs) at key nodes throughout the catchment;
- 500m of instream stabilisation work using rock lining, which restored pools and riffles and coir logs to stabilise banks;
- Sealing of 5km of eroding dirt road edge; and 3km of bare road verges mulched/turfed;
- 15km of unused trails closed and rehabilitated in North Katoomba;
- Illegal vehicular access to reserves blocked at 15 points to prevent damage from 4WDs;
- Severely degraded walking tracks in the catchment restored;
- Two disused Council quarries rehabilitated in North Katoomba and North Leura;
- Volunteers and Council removed weeds and rehabilitated over 15km of riparian corridor;
- Over 12,000 hours of volunteer work completed;
- Over 5,000 native species planted in riparian zones by contractors and Bushcare groups;
- Streamwatch groups and a new Swampcare group established for Yosemite Creek;
- Blue Mountains Living Catchments sustainability courses with over 100 residents;
- Over 250 catchment pledges signed by residents promising to implement actions;
- Over 45 driveways sealed or stabilised;
- Joint Council/Sydney Water initiative resulted in 55 houses installing rainwater tanks;
- 25 households joined the Bush Backyards program;
- A waterwise gardening and WSUD demonstration site established with rainwater tanks, drip irrigation, no dig gardening, permaculture and organic gardening workshops;
- Instream raingarden biofiltration systems were installed at headwaters of major tributaries;

- Bush Foods Garden established by local Aboriginal community;
- The 'bottomless' pool at the base of Minnehaha Falls has returned, measuring 25 metres in depth and fast becoming one of the most popular wild swimming holes in the Blue Mountains and NSW.

## Key Learnings

One of the key factors for the success of the program was the commitment by Council to undertake a long term approach to the restoration of the pools. The program and associated on-ground catchment works were delivered over 15 years to achieve the restoration of the pools.

A challenge to the long term success was actively engaging and supporting the local community and volunteers and adopting their vision for their catchment. The behavioural changes adopted by Council, local businesses and local residents were crucial in reducing new inputs of sediment. The ongoing monitoring and maintenance of the restoration sites by community volunteers is also invaluable.

The Blue Mountains is a unique city within a World Heritage National Park. Improvements in the catchment have a flow on beneficial impact on the Grose Wilderness Area and the Greater Blue Mountains World Heritage Area downstream.

## Contact

**Name:** Geoffrey Smith

**Position:** Healthy Waterways Program Leader

**Phone:** 02 4780 5751

**Email:** [gsmith@bmcc.nsw.gov.au](mailto:gsmith@bmcc.nsw.gov.au)

**This project was the 2017 winner of the Natural Environment Protection & Enhancement: On-Ground Works Award at the LGNSW Excellence in the Environment Awards**