

CAPACITY BUILDING

Water the ultimate winner in inaugural awards

The inaugural #cocreate Blue-Green Cities Design Awards celebrated projects with a strong design element and with water as the principal focus. Article by Sue Matthews.



Supported by The Umvoto Foundation (TUF), volunteers from Indawo, Abantu, Injongo eKhayelitsha conduct regular clean-ups in the Griffiths Mxenge community of Khayelitsha in Cape Town

The water community was shocked and saddened to learn in July 2021 that COVID-related complications had claimed the lives of Rowena Hay and her husband, Dr Chris Hartnady. As founder and MD of the earth science and groundwater consultancy Umvoto Africa, Rowena led a number of research projects funded by the Water Research Commission (WRC), and was a past member of the WRC Board. Among her many accolades was the WRC Knowledge Tree Award in the category 'Empowerment of Communities' in 2015.

Since then, Rowena had taken her altruistic endeavours a step further by establishing a non-profit company, The Umvoto Foundation. More commonly referred to as TUF, its aim is to support the development of community capacity in achieving clean and healthy ecosystems through advocacy and outreach work, and by fostering an understanding of social responsibility.

In fact, TUF's vision says it well: "A clean and healthy water system supports vibrant, safe and resilient communities. Our water sources and ecosystems are restored, respected and actively cared for by present and future generations."

So, it seems a fitting tribute to Rowena's legacy that an initiative supported by TUF was not only the overall winner in the 'Best Community-based Project' category of the inaugural #cocreate Blue-Green Cities Design Awards, but also won awards for the most valued water-sensitive innovation and the most valued water champion project.

Indawo, Abantu, Injongo eKhayelitsha, which means 'Place, People, Purpose in Khayelitsha' was started by Busiswa Nomyayi and four other women in November 2019, shortly after Busiswa attended a stewardship training course hosted by TUF and

learned how waste impacts water systems. The group began doing weekly clean-ups on their street in the Griffiths Mxenge community of Khayelitsha in Cape Town, and with TUF's support were able to secure equipment such as wheelbarrows, rakes, brooms, gloves and safety boots.

In 2021, TUF facilitated partnerships between the group and local artists to beautify the street. One painted a colourful wall mural while another covered concrete benches made from recycled building rubble with a mosaic design incorporating nature-related elements and traditional patterns. The group planted flowers and vegetables alongside the benches, with the intention of encouraging residents to respect their environment and avoid littering. More recently, a vegetable patch was started by TUF and the group at the adjacent primary school. The gardens provide an opportunity to engage community members on environmental issues such as biodiversity, stormwater runoff, water pollution and aquifer recharge.

The group needed to buy additional equipment for their expanding team, so they started a stall across the street from the mural in December 2021, and TUF organised a collection drive for second-hand clothing that they could sell. Recognising that recycling could provide another income stream, TUF asked the City of Cape Town's Solid Waste Management Department to assist the group. The City not only provided recycling bags but also hosted a waste minimisation and recycling training workshop in April 2022 for clean-up groups from Khayelitsha and Macassar.

In September 2022, TUF submitted an entry for the #cocreate Blue-Green Cities Design Awards, which were part of the #cocreate DESIGN FESTIVAL. The festival is an initiative of the Mission Network of the Kingdom of the Netherlands in South Africa, and the Consul General of the Netherlands in Cape Town, H el ene Rekkers, was pleased with the outcome. "The depth of knowledge-sharing that has come out of this festival has been inspiring, and we hope that it will ignite a flame that motivates us to do more as civil society, as government organisations and as the private sector to ensure that we are sensitised to the importance of water," she said.

The Craft and Design Institute in Cape Town helped organise the festival, which was curated in partnership with the University of Cape Town's Future Water Institute, the City of Cape Town and the Institute for Landscape Architecture in South Africa (ILASA). Held over two days in October, it was the culmination of four Creative Exchanges held from April to September under the theme 'Designing African blue-green cities for all'.

The awards aimed to celebrate inspirational initiatives that represent best practice in terms of water sensitive design and the transition to water sensitive cities in South Africa. All finalists had to submit a poster of their project that was displayed at the festival, and also present an 'elevator pitch' of three to five minutes. While the festival attendees voted on the best posters, the pitches were judged by a panel consisting of Prof Neil Armitage from UCT's Department of Civil Engineering, Accelerate Cape Town CEO Ryan Ravens, and ICLEI Africa Regional Director, Kobie Brand. The event was live-streamed to water-aware design practitioners and other stakeholders from around the world.



Busiswa Nomyayi and Fahad Aziz receiving the Best Community-based Project award from H el ene Rekkers, Consul General of the Netherlands Consulate in Cape Town, and Ian Neilson, the City of Cape Town's Water and Sanitation Portfolio Committee Workshop Chairperson.

When the awards were announced at the end of the festival, Busiswa Nomyayi and TUF's Fahad Aziz were delighted to accept the winner's trophies, which were hand-crafted from wire and beads. The runner-up for best community-based project was the Papenboom Meadow project in Newlands, Cape Town, with landscape architect Clare Burgess accepting the award on behalf of the Newlands Residents Association (NRA).

The meadow is a strip of public open space that originally formed part of the much larger Papenboom Estate, granted to Rutger Mensing in 1695 to set up the Cape Colony's first brewery. Mensing selected the site partly because it had a spring of clean water for his beer-making. The so-called Kommetjie Spring is still used by a brewery today, as some of its water is piped just over a kilometre downslope to the South African Breweries facility in Newlands, although it is apparently only used for cleaning purposes nowadays. Most of the spring's water is used to irrigate the SACS school sports fields, just over the road.

For the past few decades, the spring has been hidden within a collection chamber under a concrete cover, and a small overflow had been blocked off until the NRA community project kicked off in 2011. At the group's request, this flow was channelled underground to bubble up into a pond dug near the head of the original watercourse. The pond not only emulates a natural spring outlet, but also provides a waterbody deep enough to fill buckets for irrigating indigenous arum lilies, shrubs and trees, which were planted as part of the meadow's transformation from an overgrown site frequented by vagrants to a safe space that can be enjoyed by all. Invasive canna lilies, morning glory and bugweed were cleared, and paths and boardwalks constructed, allowing visitors to wander along the restored stream course and through a shady grove of poplars. A fynbos circle has recently been established at the front of the site alongside the famous Foresters Arms pub, affectionately known as Forries.

Awards were also given in the category **Best use of water as a design informant**. The winner was the water point upgrade project at the Europe informal settlement, which is built on an uncapped landfill site wedged between the N2 and Klipfontein

Road, about 5 km from Cape Town International Airport. The settlement has limited access to potable water from communal taps, no waterborne sewage reticulation, a lack of safe space for recreation, and is prone to flooding and ponding in winter due to poor infiltration and the absence of a drainage system.

The Rotary Club of Noon Gun therefore initiated a project that drew upon the skills of three of its members – landscape architect Amy Thompson and architects Jackie James and Claire du Trevou. Along the main pedestrian access route to Klipfontein Road, two new paved plazas were created, equipped with seven ergonomically designed water points and providing space for socialising and recreation, and a drainage channel was installed beneath a permeable walkway. Since domestic greywater was habitually discarded by residents onto walkways, which contaminated pooled stormwater and created a health hazard, a greywater separation system was constructed as well. Two to four households now share a gully, which conveys greywater to an underground pipe and through a silt trap before entering the municipal stormwater system along Klipfontein Road. Engineering services for the project were provided by JG Afrika, with funding obtained through Rotary International.

The runner-up in this category was a project to upgrade High Street in Hermanus from a tarred, car-dominant road that was prone to seasonal flooding into a paved, shared street where pedestrians can stroll, cafés can have sidewalk seating and retail businesses can thrive. This was made possible using a dual (hard and soft) stormwater system incorporating principles of sustainable urban drainage systems (SUDS), with trees and planted infiltration areas. The design by GAPP Architects and Urban Designers was implemented by Element Consulting Engineers for Overstrand Municipality.

In the category **Best student/research project**, the winner was Tahir Rakeip, who is currently a Master of Architecture student at UCT but submitted his honours project, titled 'Knowing Water: Facilitating knowledge transfer through social practice and the natural environment'. The project was motivated by flooding problems in the Cape Flats area of Cape Town, and proposes converting a stormwater detention basin in Delft into a bioretention pond that would provide natural habitat around a permanent water body. The pond would partially remove pollutants from stormwater, while beautifying the area and creating a space for rest and reflection. The site design included an early childhood development centre (ECD), a fynbos research satellite office and a vegetable garden. The envisaged garden could be tended by community members and irrigated using water from the pond, with the vegetables either sold or used as a food supply for the ECD.

The runner-up was Oliver Brown, a candidate architect for the Department of Public Works, based in Durban. His award was for his Master of Architecture project 'Islamic Tirthas: a river pilgrimage in the cradle of Islam in the Cape in Sandvlei and Macassar, Cape Town'. The dissertation re-imagines a new heritage route that starts just upstream of the Eerste-Kuil River confluence, continues through the farmlands of Sandvlei towards the kramat of Sheikh Yusuf Al-Makassari, and ends at Macassar Beach on the False Bay coastline. Sheikh Yusuf, who arrived at the Cape as an exile in 1694, is widely regarded as

the founder of Islam at the Cape. The conceptual route includes a series of water infrastructures – such as weirs, bridges, water storage and flood detention facilities – that are inspired by traditional Islamic design.

Other finalists shortlisted for the awards included the Paterson Park stormwater renaturalisation project by Chris Brooker and associates for the City of Johannesburg, a project on retrofitted infiltration basins by Craig Tinashe Tanyanyiwa and Rachelle Schneuwly from UCT's Future Water Institute, the Table Mountain Water Source Partnership project represented by WWF-SA's Klaudia Schachtschnieder, and Youth Visions for a Changing Climate – a collaborative project in Cape Town involving street artists, academics, facilitators and conservationists.

Following the award ceremony, Kirsty Carden, the interim Director of the Future Water Institute, remarked: "The #cocreate Blue-Green Cities Design Awards have provided a wonderful opportunity to reflect on best practice in creating water-sensitive, liveable and resilient spaces in South Africa – and give us hope for better things to come."



As part of the community project, the group planted gardens alongside benches constructed from building rubble and then decorated by a mosaic artist.



Water from the Kommetjie Spring fills a pond constructed near the head of the old watercourse and then flows along the edge of the meadow in the restored stream.