Bishan - Ang Mo Kio Park and Kallang River

Singapore

Bishan Park is one of Singapore’s most popular parks in the heartlands of Singapore. As part of a much-needed park upgrade and plans to improve the capacity of the Kallang channel along the edge of the park, works were carried out simultaneously to transform the utilitarian concrete channel into a naturalised river, creating new spaces for the community to enjoy. This project is part of the Active, Beautiful, Clean Waters (ABC Waters) Programme, a long-term initiative to transform the country’s water bodies beyond their functions of drainage and water supply, into vibrant, new spaces for community bonding and recreation.

At Bishan Park, a 2.7 km long straight concrete drainage channel has been restored into a sinuous, natural river 3.2 km long, that meanders through the park. Sixty-two hectares of park space has been tastefully redesigned to accommodate the dynamic process of a river system which includes fluctuating water levels, while providing maximum benefit for park users. Three playgrounds, restaurants, a new look out point constructed using the recycled walls of the old concrete channel, and plenty of open green spaces complement the natural wonder of an ecologically restored river in the heartlands of the city. This is a place to take your shoes off, and get closer to water and nature!
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Bishan Park Kallang River Restoration is part of the Active, Beautiful, Clean Waters (ABC Waters) Programme, a long-term initiative to transform the country’s water bodies beyond their functions of drainage and water supply, into vibrant, new city spaces for community and recreation.
MORE RIVER
MORE PARK

-under capacity
- no ecology
- dangerous
- no community benefit

40% increase conveyance capacity
30% increase in biodiversity
7 bioengineering techniques
recreational & community benefit

before

concrete drainage channel
2.7 km length

after

bioengineered river
3.2 km length
For the first time, people can get up close to Kallang River. “Recycle hill” is in the background, a look-out point built from the old concrete channel.
“Recycle hill” is a look-out point built from the recycled concrete channel.
3 new playgrounds create fun space for kids to test their boundaries in a funky, natural environment.

Important features of the old park were enhanced, including lots of space for tai chi and exercise groups.
Biodiversity has already increased by 30%. 66 species of wildflower, 59 species of birds and 22 species of dragonfly have been identified in Bishan Park; not bad for a city park.
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before

concrete drainage channel
2.7 km length

bioengineered river
3.2 km length
BEFORE  concrete drainage channel
max width 24 m

AFTER  bioengineered river
max width 100 m

MORE RIVER
MORE PARK

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recreational & community benefit
Central Watershed Masterplan
Singapore

For the city state of Singapore, water autonomy is a top priority and the driver behind an island wide urban water management strategy. A tropical rainforest climate provides plenty of water, however this falls in fierce downpours which create a challenging situation in terms of flood management and water quality. Singapore has no water source. The city is also densely inhabited, the quality of urban space directly effects quality of life. Engineering of the past has left a legacy of concrete. These hard engineering systems typically create physical barriers disruptive to local communities and ecological wastelands, depriving citizens of recreational space and wasting much needed fresh water.

Atelier Dreiseitl collaborated with Singapore’s Public Utilities Board to create a pragmatic new vision for water sensitive urban design in the tropics. Water management extends to streetscapes and the public realm, where a rich new blue-green design language creates fresh, comfortable city spaces which are part of the city’s ecological infrastructure. Extensive community consultation ensures that interventions are socially relevant. The ABC Central Watershed Urban Masterplan is a strategy for transforming Singapore into a resource rich and highly livable city. The ABC Central Watershed Urban Masterplan provides hope and inspiration for the world that we really can turn the corner and transform our concrete jungle input-junky metropolises into smart, liveable cities.

**Client:** Public Utilities Board & National Parks Board  
**Engineers:** CH2M Hill, Geitz und Partner  
**Expertise:** urban catchment masterplan, water sensitive urban design guidelines, community participation, pilot projects  
**Design:** 2006 - ongoing  
**Construction:** since 2009  
**Area:** Central Catchment 140 km²  
**GPS:** 1°21’49” N / 103°50’30” E