

Central Watershed Masterplan

Singapore

For the southeast-Asian city state of Singapore, water autonomy is a top priority and the driver behind the need for 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 in a highly populated city environment. Singapore has no other water source.

Engineering of the past has left a legacy of concrete channels, rivers of by-gone eras. Empty most of the time, during a rain storm these channels fill within minutes and unchecked torrents of freshwater race out to sea. This dangerous situation creates linear 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 urban water management in the tropics. The ABC Central Watershed Urban Masterplan aims to transform Singapore into a resource rich and water productive city.

Many other cities across the world are facing exactly the same challenges. 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

Design: 2006

Area: 140 km²



Cities today are facing the Same big Challenge..

When Raffles arrived in Singapore in 1819 the Singaporeans lived more on and with the water than on land. Subtropical downpours and limited freshwater resources have been a natural given that was managed sustainably. In the following decades and especially in the last 40 years this intuitive relationship changed dramatically. Increasing problems with flooding due to the growing urbanization have been solved with concrete channels, fresh water shortages with a supply pipe of river water from Malaysia. These solutions are temporary and create further problems...



pollution



no nature



flooding



drinking water shortage



separated communities



high energy consumption



poor resources



political instability

How Can We make Our Cities resource rich and at the Same time great, and Safe places to live and do business?

A resource productive City means a Smart, liveable City

These days Singapore is aware that it can only survive if it solves these problems within their island nation. Rainwater is a resource and needs to be collected, treated and managed wherever possible – decentralization is the magic solution. Concrete channels that disconnected people from people and nature from the city need to be transformed into water and nature habitat infusions. Thanks to the ABC Central Watershed Masterplan, the city is taking positive steps into an bright, independent future.



holistic city vision



ecological infrastructure



arts and culture



community



education



health

ATELIER DREISEITL

Thanks to the Central Watershed Masterplan Singapore can Capture 100% of its drinking water Needs through rainfall.

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The creation of the ABC (active, beautiful, clean) Urban Design Guidelines for water sensitive urban design is a significant tool which facilitates widescale implementation of the Central Watershed Masterplan. Applications include streetscapes and canals where there is great potential to combine improving Singapore's dense urban living conditions of Singapore with resource management.

The Kallang River Restoration and Bishan Park is a highly visible pilot project which transforms a 3 kilometer section of the Kallang River from a concrete drainage channel into a meandering river with dynamic natural river processes. Singapore's busiest park has become a river landscape subject to natural rhythms and with lots of space for people, nature and fresh river water. The sinuous length of the river and the flood spaces extend the storage capacity of the whole river system while natural treatment systems improve water quality. The Kallang River has been transformed into a water management asset, part of the decentralized Central Watershed Masterplan vision which safeguards Singapore's drinking water supply for the future.

Who we are: Atelier Dreiseitl is multi-cultural team of landscape architects, artists and engineers specialised in sustainable urban development.

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Smart cities combine resource management with creating healthy public realm.





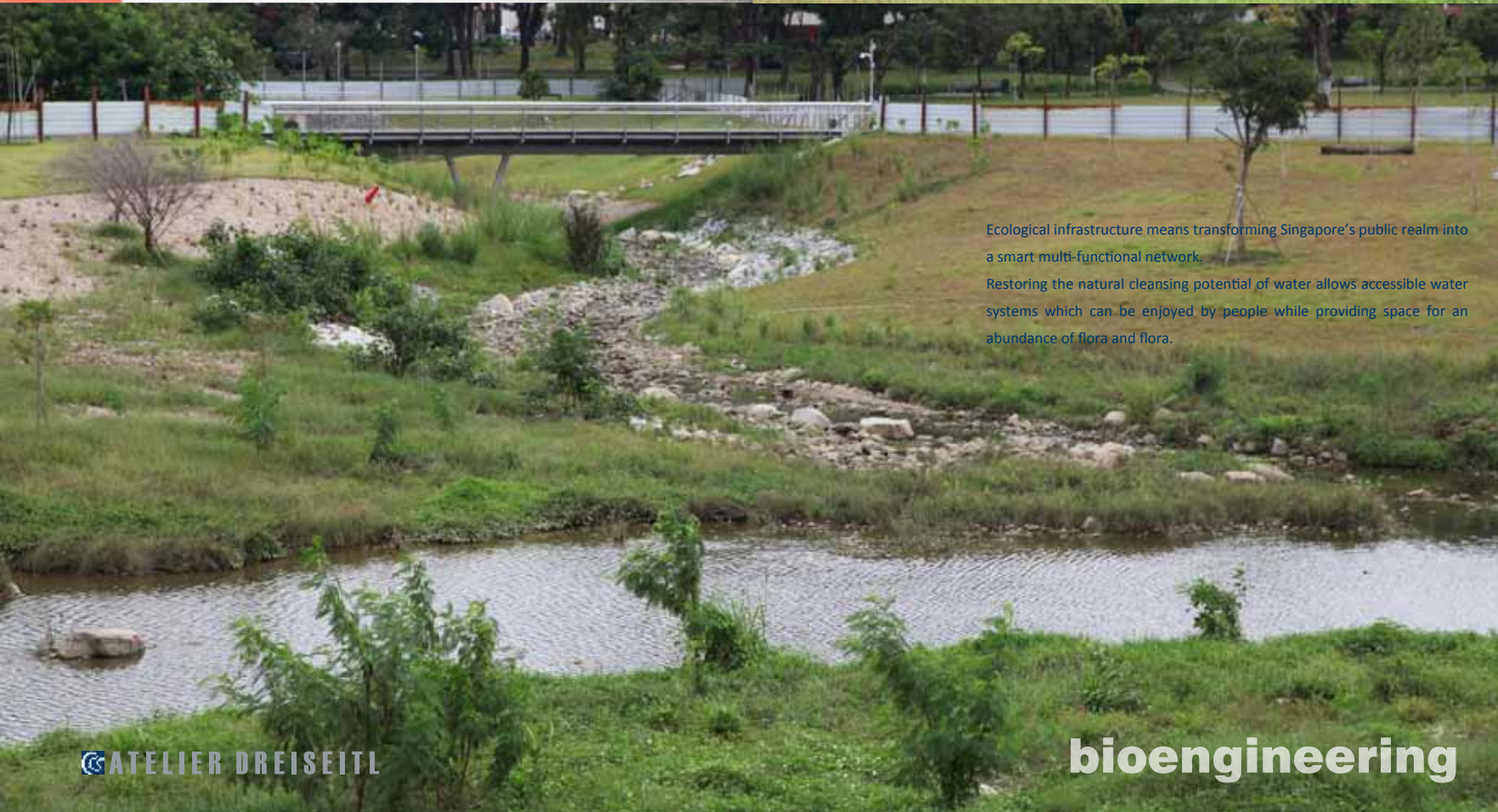
natural play



healthy parks



ACTIVE, BEAUTIFUL, CLEAN WATERS
DESIGN GUIDELINES



Ecological infrastructure means transforming Singapore's public realm into a smart multi-functional network.
Restoring the natural cleansing potential of water allows accessible water systems which can be enjoyed by people while providing space for an abundance of flora and fauna.

