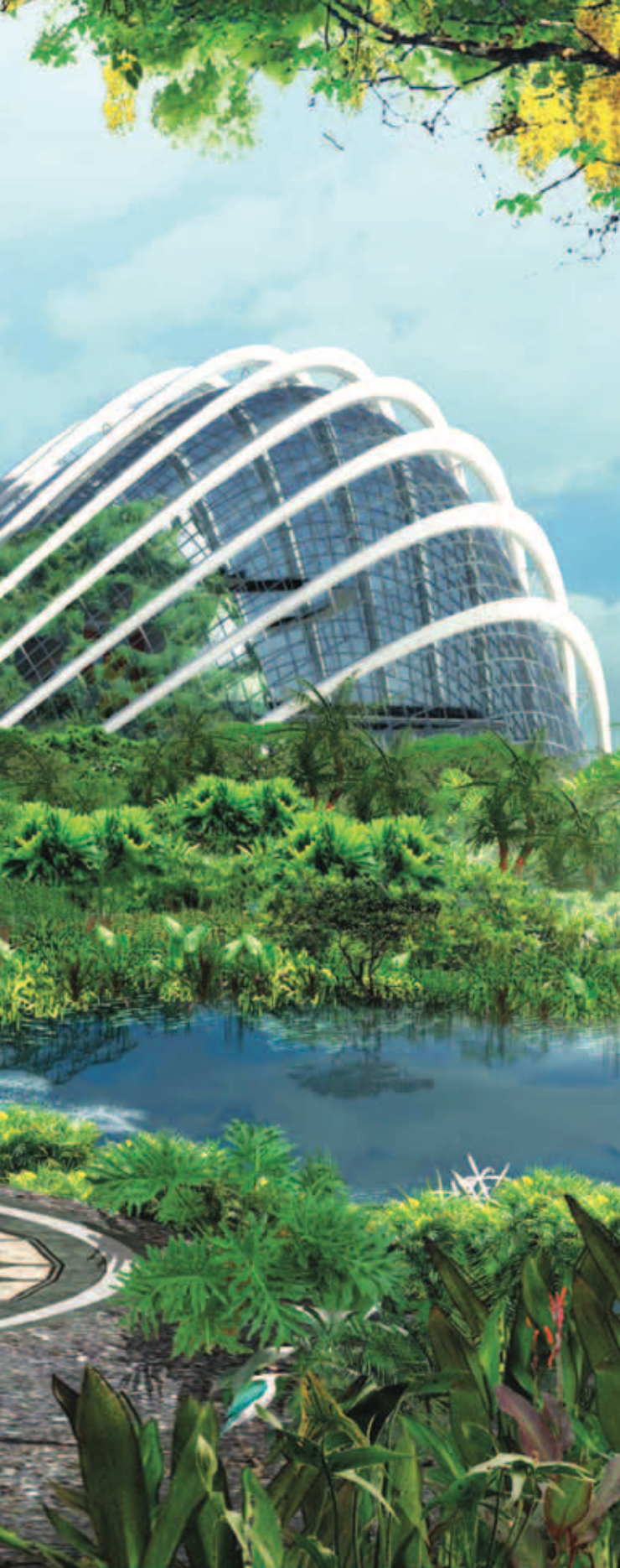




# GROWING GREEN





Widely known as a Garden City, Singapore is a sprawling urban metropolis set in the lush rainforests near the equator. The progress of our nation state has not come at the expense of our very valuable asset – the natural greenery that has earned us the title in the first place. NParks is committed to maintaining Singapore as one of the greenest cities in the world. With the support of the community and industry partners, and driven by a commensurate direction, NParks is continuously embarking on new developments that are aimed at Growing Green, and making sure a relaxing green space is never far away from every person in Singapore.

(on left)

Artist's impression of Gardens by the Bay, which is slated to open in phases from end-2011.





When completed, the Learning Forest at the Singapore Botanic Gardens will feature elevated walkways that allow visitors to view and explore the forest canopy from a unique vantage point, high above the forest floor. *(Artist's impression)*

## An Exceptional Forest Experience

With an additional 9.8 hectare extension bringing the total area of the Singapore Botanic Gardens to almost 74 hectares by the end of 2012, the 150 year old garden will boast a new Learning Forest. This addition, facilitated by donors, will showcase unique indigenous flora and magnificent giant trees. It will be developed into an important ex-situ conservation area of valuable plant genetic material for posterity.

Upon its completion, the Learning Forest will be connected to the Botanic Gardens' existing rainforest patch to form an enlarged ecosystem, located minutes away from Singapore's premier shopping street. Nature-loving visitors will be able to walk through the extremely diverse Learning Forest which will include a wetland habitat, and enjoy an exceptional rainforest experience. There will also be night tours, specially organised so that visitors can observe plants, fauna and the rainforest ecosystem in their nocturnal dimension.

These new botanical attractions provide opportunities for the Gardens to further its core mission of 'connecting plants and people', through new outreach and educational programmes.

The Learning Forest features a variety of tropical trees, including gigantic trees with the potential to reach 55m or more.



## Home of the Winged Beauties

HortPark celebrated its first anniversary in May 2009 by unveiling its latest attraction – the Butterfly Garden. The 150 square metre addition to the park comprises an enclosure and an outdoor garden, which nearly 20 species of colourful indigenous butterflies call home.

Adults and children alike can observe the butterflies up close, and learn about their stages of development, from larval to adult.

The Butterfly Garden also serves as a living laboratory for NParks' Butterfly Species Recovery Programme. Here, research can be conducted on the compatibility of plant species to the breeding of some variants of butterflies. These include the Clipper (*Parthenos sylvia*) and the Common Sergeant (*Athyma perius*), which are extinct in Singapore.



At the Butterfly Garden, visitors can observe and experience the different stages of metamorphosis through a viewing window. They can also enjoy guided walks into the enclosed area.



The artworks on this and the following pages were created for the annual CIB Schools Arts Competition. Organised by the Community In Bloom (CIB) programme, this competition encourages artistic and innovative ideas on promoting gardening and nature appreciation.



**A PATH TO SUCCESS**  
**Suhartika Bte Kmail**

*Navel Base Secondary School*

Inspired by a trip to Mount Stong in Kelantan, this artwork depicts the value of perseverance in attempting to reach the summit of the mountain.



**BLOOMS**  
**Billy Novia Prima**

*Hong Kah Secondary School*

The purple blooms receding in space reflect a mood of happiness, calmness and beauty – the effect that nature has on us.



**BLOOMING IN HARMONY**  
**Shih Yong Ling Priscilla**

*Damai Secondary School*

A close-up view of a community garden, planted with various species of flowers and with birds resting nearby.



## Blooms Along the Bay Front

The Gardens by the Bay mega-project, due to open in phases from end-2011, is well underway. Upon the full completion of the three gardens, some 101 hectares of reclaimed land at Marina Bay will be transformed into a lush paradisiacal garden.

The Gardens will feature the SuperTrees: ranging from heights of 25 to 50 metres, these structures will tower over the natural canopies and support a variety of plant life that will enshroud the SuperTrees like a living skin. These will technologically mimic the ecological functions of dominant trees in the rainforest, like harnessing solar energy and influencing the ambient temperature and rainfall of their surroundings.

The Gardens' Conservatory Complex will house a huge diversity of flora, including those that are not indigenous to Singapore. A Cool Dry biome, Flower Dome (1.2 hectare) and a Cool Moist biome, Cloud Forest (0.8 hectare) will display plants and flowers from the Mediterranean and Tropical Montane environments respectively.

This flagship project by NParks demonstrates how garden design has evolved beyond landscaping and horticultural technologies, and has become an amalgamation of a multitude of disciplines ranging from architecture to bioengineering.

## 8.1km of waterfront along Singapore's new Downtown was allocated to Gardens by the Bay.

Gardens by the Bay is Singapore's latest green legacy. This project builds upon more than 40 years of concerted greening efforts, advancing our efforts to transform Singapore into a City in a Garden.





## A World-Class Skate Park by the Beach

NParks and the Ministry of Community Development, Youth and Sports have developed the Xtreme SkatePark @ East Coast – the first skate park in Singapore of world-class competition standards. It is also the region's only skate park located by the beach, and within a park setting.

The Xtreme SkatePark held its inaugural international event, the Singapore Extreme Championship 2009, on 29 and 30 August 2009. The event saw 75 competitors from seven Asian countries participating over two days.

This project has enhanced Singapore's standing on the international extreme sports scene, and serves as a platform for youths to showcase their skills in the disciplines of Aggressive In-Line Skating, BMX Freestyling and Skateboarding.



Besides standard obstacles like stairs and handrails, the skate park features a 3.6 metre deep vertical bowl where seasoned in-line skaters and BMX freestyle enthusiasts can defy gravity.



Elite professional athletes demonstrated their skills at the opening of the Xtreme SkatePark, to an audience that included Prime Minister Lee Hsien Loong, Minister for Community Development, Youth and Sports Dr Vivian Balakrishnan, and Minister for National Development Mah Bow Tan.

Singapore is home to over 2,000 species of plants, 370 species of birds, 280 species of butterflies and 98 species of reptiles.



At the opening of Dairy Farm Nature Park, students from Raffles Girls' Secondary School demonstrated their projects to Minister Mah Bow Tan and Mrs Mah.

## Integrated Nature Education

Set in a rustic environment with trails for hiking and mountain biking, Dairy Farm Nature Park houses the Wallace Education Centre, a converted cowshed from the days of the dairy farm turned into a comprehensive centre for the study and appreciation of nature. Dairy Farm Nature Park is intended as an alternative venue to Bukit Timah Nature Reserve, designed to reduce the number of visitors to the latter and minimise the damage to its fragile ecosystem.

Officially opened on 5 September 2009, this park offers the Wallace Environmental Learning Lab (a holistic outdoor learning programme established by NParks

and Raffles Girls' Secondary School, where students learn about Singapore's natural heritage), and an interpretative centre. The park also features a nature trail where visitors can learn about the native flora and fauna of the park through the eyes of English naturalist Alfred Wallace, as well as a wetland converted from a quarry.

In line with NParks' commitment to environmental sustainability, Dairy Farm Nature Park demonstrates the use of recycled materials for buildings and fixtures. Bitumen from roads and expressways was put into hiking trails, and solar power is harnessed for use in the Wallace Education Centre.

The Singapore Quarry lies at the south-western end of the 63 hectare Dairy Farm Nature Park. This tranquil setting, with its scenic view, is home to many fauna. There is a family of Little Grebes, a critically endangered bird, as well as many species of dragonflies including rare ones.







Future visitors to Central Catchment Nature Reserve and Bukit Timah Nature Reserve can also make use of the overhead Eco-Link. A hiking track will be developed on one side of the bridge, as a recreational green belt for human visitors to enjoy.

## Ecological Interplay

NParks is developing the Eco-Link, an ecological corridor that will span across the Bukit Timah Expressway, allowing access for genetic interaction between flora and fauna from Bukit Timah Nature Reserve and Central Catchment Nature Reserve. Conceptualised in consultation with the Nature Society (Singapore), other nature groups and the Land Transport Authority, this project aims to restore the ecological balance in the ever-shrinking natural habitats and reduce the rate of loss of biodiversity.

Measuring 50 metres at its narrowest point, the Eco-Link will be planted with native trees and plants linking it to the surrounding forests. This will enable small animals to travel freely between the two nature reserves, dispersing seeds and pollinating flowers, thus aiding in expanding the gene pool of indigenous species.



### MUREX SNAILS AGAINST THE RED TIDE

Tey Kai Yi

*Raffles Girls' Primary School*

This piece is an expression of the artist's hope that people would stop polluting the sea, giving animals a chance to live in clean waters, and rare animals to thrive.



### FLOWERS IN BLOOM

Celest Ong, Chua Jiesheng, Lim Junwei and Dheramitra

*Yuhua Primary School*

For flowers to be nurtured, they must be treated as living beings. Love them and they will bloom beautifully just for you.



### FRAGILITY OF BIRDS

Sabrina Stewart, Casandra Er, Wang Fangci, Gay Hui Lin

*Raffles Girls' Primary School*

Representing birds from all over the world, this sculpture is a reminder that birds are an important part of nature.



## A New River in Bishan Park

A collaborative project between NParks and PUB will see the concrete canal that spans the length of Bishan Park converted into a meandering river. This river will seamlessly integrate with the park, creating more recreational space for all.

When this project is completed in 2011, Bishan Park will boast a host of new amenities that are targeted at community-centred activities. There will be three new playgrounds: the Adventure Playground with a range of play-climbing facilities for active teenagers; the Bubble Playground to delight younger children; and the Water Playground that educates children about conserving water. The park will also have eateries, a river promenade for events and gatherings, and a lookout point for visitors to appreciate nature.

Plants with natural water-cleansing properties will be carefully selected and used at a cleansing biotope in the park. These plants will not only beautify the surroundings, but also maintain the water quality of the ponds and river without the use of any chemicals that may upset the ecological balance. In addition, some of the biotope's water will be recycled for use at the Water Playground.

The revamped Bishan Park is also intended to attract a variety of wildlife to settle and thrive in a stable natural habitat.

Prime Minister Lee Hsien Loong marked the commencement of the ABC Waters @ Kallang River-Bishan Park project on 3 October 2009. Construction is now underway.

## By end-2010, 150km of Park Connectors will have been completed.

NParks will introduce more community spaces and amenities into the new Bishan Park for all to enjoy. The park will also be home to diverse wildlife, with habitats created to encourage certain species to settle and thrive there. *(Artist's impression)*







The Western Adventure PCN caters to all types of users, from adventure-seekers to nature lovers and families. It is part of the overall Park Connector Network which brings people closer to parks and nature areas, enhancing recreational opportunities for all.

## Wild West Adventure and Family Fun

The 20 kilometre Western Adventure Park Connector Network (PCN) is the second loop of park connectors to be completed. It links up eight parks in the western part of Singapore: Choa Chu Kang Park, Villa Verde Park, Zhenghua Park, Dairy Farm Nature Park, Bukit Batok Nature Park, Bukit Batok Town Park, Limbang Park and Bukit Panjang Park.

The Western Adventure PCN offers a diverse range of recreational facilities, from rugged mountain biking and rock climbing, to family-oriented playgrounds and educational trails.

In addition, the Western Adventure PCN was designed to attract biodiversity. Over ten species of butterflies and 50 species of birds have been sighted along this park connector network.

For the year in review, over 124 kilometres of park connectors have been completed, with 40 kilometres currently in design and construction. NParks aims to develop a green network around the island, connecting existing parks as well as the upcoming Gardens by the Bay.



### NATURE Nicholas Tan

*First Toa Payoh Primary School*

Inspired by the greenery all around, this painting depicts the world through the eyes of a child. Among the typical flowers and trees, there lies a unique bird.



### BEAUTY FROM HECTIC LIFE Deng Jia

*Raffles Girls' Secondary School*

People tend to neglect the nature around them, not appreciating its beauty. Gardening is a way to relax and take time off from work to enjoy life.



### NATURE'S WONDERS Ryan Tan

*St Gabriel's Primary School*

A snake gliding past adds a little adventure to a quiet walk in the park. This reminds the artist of the different wonders of nature.





Set in the heart of town, Dhoby Ghaut Green is a vibrant event space, as well as a green lung where shoppers and passersby can rest and enjoy the verdant surroundings.

Almost half of Singapore is covered by greenery. This includes parks, nature reserves, roadside greenery and vacant stateland.

## Green in the City

A serene green space along the Orchard Road shopping belt, Dhoby Ghaut Green offers respite from the bustle of the city, as well as a venue for community events, celebrations and performances.

Developed by the Urban Redevelopment Authority (URA) and managed by NParks, Dhoby Ghaut Green was the brainchild of Mr Chan Soo Khian of SCDA Architects. It has won him the Designer of the Year award in Architecture and Urban Design at the inaugural President's Design Award, as well as The International Architecture Award for 2010 from the Chicago Athenaeum: Museum of Architecture and Design, and The European Centre for Architecture and Urban Studies.



Dhoby Ghaut Green was launched by (from left) CEO of the Housing and Development Board Mrs Cheong Koon Hean (then-CEO of URA), Parliamentary Secretary for National Development Dr Mohamad Maliki Osman, and NParks Deputy CEO Ms Peggy Chong.





The Kings of Freedom exhibit was made possible by Robert and MeiLi Hefner (pictured above). This piece of history from the Cold War depicts two kings, drawn by graffiti artist Dennis Kaun in the weeks following the fall of the Wall.

## The Kings of Freedom

Four complete sections of the original Berlin Wall, owned by The Hefner Collection, now stand at Bedok Reservoir Park. On long-term loan to Singapore by Robert and MeiLi Hefner, this relic of the Cold War features artwork entitled The Kings of Freedom. It portrays spray-painted images of two kings, one brightly-coloured and the other in drab grey and blindfolded, representing the contrast in conditions of the citizens of West and East Germany during the height of the Cold War.

While lending a touch of history and culture to Bedok Reservoir Park, the Kings of Freedom project also aims to educate the younger generation about the significance of the Berlin Wall, and in turn celebrates the triumph of freedom and creativity over oppression. This installation was unveiled by Minister for Foreign Affairs George Yeo on 8 January 2010, and was made possible through donations by Far East Organization and Frasers Centrepoint.



### A WINDOW TO LIFE Farah Nur Feriena Bte Kusairi

*Naval Base Secondary School*

This piece was inspired by a learning trip to Spain, which opened the artist's eyes to the beauty of nature and the desire to bloom in confidence and maturity.



### HAPPINESS

#### Isabel Heng, Cheah Pui Kuan

*Raffles Girls' Primary School*

This sculpture's hands represent happiness and different races. The blooming tree shows all the plants in the community. Together, they live in harmony, creating beautiful scenery and a peaceful environment.



### MY DREAM

#### Jamie Lim Yi Qi

*Raffles Girls' Primary School*

This piece depicts the artist's dream of paradise, where the sky is peacefully blue and the field is evergreen. They signify calmness and love. If it were possible, the artist would want to be the bird, always free and roaming, overlooking Mother Nature's creation.