



Mid 2006 will see children participating in creative play and discovery at the Jacob Ballas Children's Garden. Funded by the Jacob Ballas Trust, Reef Holdings Pte Ltd, Dr Rosslyn Leong and the Government, this "living" classroom will be complemented by programmes and workshops based on plants and nature themes.

Visitors to Labrador Park will now be able to embark on a historical journey and experience a chapter of Singapore's storied past through guided tours of the newly restored historical relics. The restoration of the two tunnels and the six-inch cannon was part of the third phase of re-development of Labrador Park and will form part of the history trail at the park. The tunnels are preserved in as close to their original state as possible to re-create the ambience of war-time, while multimedia and other interactive presentations will bring visitors back to the time of World War II.

Further afield, East Coast Park continues to be upgraded. This includes the widening of cycling tracks and footpaths, construction of new toilets and shelters and improvements to the lagoon area. When completed, visitors can look forward to water-based activities at the lagoon as well as a showcase of the diverse variety of bougainvillea at the proposed Bougainvillea Garden.

Meanwhile, the upgrading of the popular beachside Pasir Ris Park began in January 2004 and includes the reconstruction of the existing boardwalk. Other on-going improvements include the re-alignment of cycling tracks and footpaths and upgrading of park lighting.

The year also saw the completion of upgrading works at Tiong Bahru Park and Surin Avenue Neighbourhood Park. The 3-ha Tiong Bahru Park features new facilities such as an adventure-themed playground, fitness

**Left** The six-inch cannon was uncovered one metre below ground at the former Beach Road Camp in 2001.

**Right** The upgraded Tiong Bahru Park provides a venue for community bonding.

corner for senior citizens and a bird-singing corner while, residents around Surin Avenue can now enjoy a variety of recreational amenities such as a roller-blading track and a sail-shaped shelter at their doorsteps.

At Chek Jawa Wetlands, home to a diverse and unique agglomeration of ecosystems, NParks is working with the Chek Jawa Working Committee comprising representatives from Nature Society (Singapore), Raffles Museum of Biodiversity Research and Singapore Environment Council to look into the sustainable management of Chek Jawa. This will include trails, boardwalks and educational signages and materials on the value of conservation.

The McDonald's restaurant was designed to blend seamlessly into West Coast Park's existing landscape.

**Enriching Recreational Experiences** As part of efforts to enhance recreational experiences for park visitors, NParks continues to work with partners to provide a wide range of amenities to cater to the leisure needs of park visitors. Among the new amenities that came on-stream during the year was the new McDonald's restaurant which opened in April 2004 at West Coast Park. NParks worked closely with McDonald's on a 'dining-in-a-tropical garden'

concept which has become the international restaurant chain's showcase project.

At Fort Canning Park, the historic former Fire Chief Officer's residence near Hill Street now houses the Flutes at the Fort restaurant featuring Australian and Mediterranean cuisine. Meanwhile, Bishan Park is home to a new bicycle-cum-skate station while the Coffee Club at Orchard Fountain provides a respite for shoppers along Orchard Road.





**Bringing Parks Closer to the Community** The Park Connector Network continues to enjoy increasing popularity as a venue for recreational activities while also serving as alternative routes to amenities. As of March 2005, 27 stretches of park connectors spanning over 61 km have been built. The latest additions to this growing network are the Sembawang-Canberra Park Connector, the Bedok Park Connector Extension, Punggol Park Connector III and the Kallang Park Connector Extension. Another 12 km of park connectors, namely the Alexandra Park Connector II, Hillview Park Connector, Sembawang Park Connector Extension, Khatib Bongsu Park Connector Extension and the Tampines Park Connector II are expected to be completed by April 2006. Five other park connectors are in the pipeline and at the design stage.

In addition, NParks is currently building an overhead bridge across the Pan Island Expressway (PIE) to improve the connectivity of the Bedok Park Connector. This new link will allow seamless cycling from the Bedok Ria residential estate to the Bedok Reservoir Park. A second overhead bridge is also being constructed across the PIE at the Siglap Park Connector, to allow greater continuity. By end 2005, the public will be able to jog or cycle along a 10 km-long coastal stretch from Pasir Ris Park to East Coast Park. This link between the two major parks will open up new recreational opportunities for residents in the area.

**Left** Park Connectors make for an enjoyable walk or cycling, either as a form of recreation or an alternative route to amenities.

**Right** *Aeschynomene fluitans* – one of the new plants introduced by NParks.



**Building on Our Garden City Ambience** Although Singapore has long been known as the Garden City, keeping our greenery healthy and verdant requires continual care and nurturing. NParks' comprehensive programme of tree maintenance and replacement saw the planting of 31,548 new trees, the removal of 1,913 trees and their replacement with 5,533 more suitable specimens during the year. At the heart of the operations that maintain our Garden City ambience are the Plant Introduction Unit (PIU) and the Pasir Panjang Nursery (PPN). Based at the Singapore Botanic Gardens, the PIU plays a key role in increasing species biodiversity in our parks and roadside plantings. During the year under review, the PIU introduced 410 new species. Some of the more remarkable new species included *Camellia granthamiana*, an attractive small



forest tree from Hong Kong and Guangdong that can grow up to 8 m tall with large white flowers about 10-12 cm in diameter. Another promising introduction is *Aeschynomene fluitans*, aptly and colloquially known as the ‘Botswana Wonder’. This attractive aquatic plant is similar to the common *Mimosa pudica* or ‘Touch-me-not’, in that its leaves also close slowly when touched.

At the PPN, some 532,000 plants were propagated for use in our network of parks. Newer and less common species of plants were also chosen for planting in locations such as Fort Canning Park, Robinson Green, Braddell Road and Outram Road. These included *Tradescantia spathacea* ‘Dwarf Tricolor’, a squat succulent plant with pink and purple striped leaves, *Xanthostemon youngii*,

a small tree with lovely leathery foliage and dense heads of brilliant red flowers and a compact-growing *Aglaonema* cultivar with variegated green leaves and pinkish-to-red veins. The year also saw the second run of the very popular pictorial reference, “1001 Garden Plants in Singapore”, bringing the total print run to 19,000. The book features 1,200 species and varieties of plants available locally.

At the same time, the Singapore Botanic Gardens’ Orchid Breeding and Micropropagation Branch had a busy year, naming and registering 23 new orchid hybrids. In addition, its participation at the 18th World Orchid Conference in Dijon, France, in March 2005 saw it winning multiple awards, including the ACE Grand Champion for cut flowers.

**Left** Singapore’s luxuriant tree-lined roads form the backbone of our Garden City.

**Right** *Mokara Singa Gold* won a trophy for ACE Grand Champion for cut flowers at the World Orchid Conference.

Meanwhile, Singapore residents can look forward to a seamless green mantle of tree-lined avenues and boulevards as NParks further intensifies our streetscape greenery. To give greater character and differentiation to Singapore’s streetscape greenery, which forms the backbone of the Garden City, a Streetscape Greenery Master Plan (SGMP) pilot demonstration project was carried out in Punggol. Selected sections along five roads in Punggol have been planted according to the SGMP guideline for “coastal” treatment. In the coming year, NParks will embark on a comprehensive two-year pilot programme for the SGMP which will involve identifying selected expressways and major roads for planting.

Skyrise greenery is an important component of NParks' efforts to realise our City in a Garden vision.

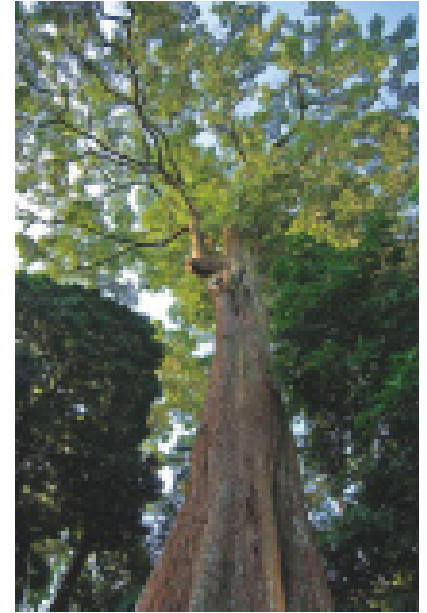
### Reaching Skywards and Keeping Cool

Where the SGMP concentrates on optimising greenery on the horizontal plane, Skyrise Greenery aims to bring greenery upwards onto and into our buildings, where people work and live. As part of efforts to maximise greenery in the face of increasing urbanisation, NParks collaborates with partners and other agencies to explore and leverage on new technologies to advance this initiative.

During the year, NParks, in partnership with the Housing and Development Board (HDB) completed a 12-month pilot

green roof project on an existing HDB multi-storey car park. The study showed that green roofs are beneficial to both the physical environment and the ambience of the surrounding area. For instance, green roofs were proven to reduce ambient air and roof surface temperatures, while also reducing glare reflected off the bare concrete roofs. To share these findings, NParks and HDB organised the Seminar on Skyrise Greening on 24 March 2005 which saw over 400 participants including architects, landscape architects, developers and academics.





NParks also partnered the National University of Singapore and the Building and Construction Authority in a study on the Urban Heat Island Effect in Singapore. One key finding of the study was the importance of greenery in mitigating the urban heat island effect. Surface and ambient temperatures correlated closely with the amount of greenery in Singapore, such that parks were found to be cool places to be in, compared to adjacent housing estates.

**Left** Mandai Road is one of five roads to be gazetted under the Heritage Roads Scheme.

**Right** The majestic *Terminalia subspatulata* is one of 35 trees that have been endorsed as Heritage Trees.

### Conserving Heritage Trees and Roads

As part of efforts to protect the important green landmarks of our Garden City, NParks launched the Heritage Trees Scheme in 2002. Under the Scheme, which aims to conserve Singapore's majestic individual trees that have special social, cultural or botanical significance, 35 trees have been endorsed by the Heritage Trees Panel. To educate the public about these trees as well as to protect them from lightning, NParks is progressively installing information boards and lightning conductors.

At the same time, legislation to gazette five roads under the Heritage Roads Scheme was passed by Parliament as part of the new Parks and Trees Act on 25 January 2005. The Scheme is aimed at conserving roadside landscapes with beautiful mature trees and greenery. The roads include Arcadia Road, Lim Chu Kang Road, Mandai Road, Mount Pleasant Road and South Buona Vista Road.

### Upgrading the Horticulture, Landscape and Arboriculture Industry

A dynamic and professional horticultural and landscape industry is integral to anchoring our competitive edge as a premier Garden City. To this end, NParks is committed to upgrading the horticultural and landscaping industry through skills development, job redesign, training, encouraging the hiring of locals as well as image upgrading. One of the key programmes developed to achieve this is the National Skills Recognition System (NSRS). To date, NParks has certified some 400 workers covering skills standards required for maintaining plants, pruning

hedges and shrubs, planting trees and shrubs and maintaining amenity turf. At the same time, 19 participants were successfully trained under NParks' Trade Certificate for horticulture supervisors.

During the year, NParks also worked with agencies like the Singapore Workforce Development Agency and National Trades Union Congress to conduct regular job placement exercises and dialogues with industry partners, as well as initiate programmes such as Employability Camps for both employees and supervisors to help foster a positive mindset. NParks also played a key role in placing 60 local job seekers as Landscape Technicians under the

Skills Training and Employability Enhancement for the Retrenched and unemployed workers (STEER) programme. Through these efforts, NParks has been able to raise wage level of landscape technicians from \$700 to approximately \$1,000.

As part of efforts to develop arboriculture expertise in Singapore, NParks worked with the International Society of Arboriculture (ISA) to certify tree-care professionals in Singapore. The third ISA Certified Arborist Course attracted over 100 applications from NParks staff and external parties, with 40 eventually being short-listed for the programme. To date, 100 Singapore arborists have been certified.

Singapore's award-winning booth at the World Orchid Conference featured a mesmerising display of orchids.





**Marketing the Garden City Brand Abroad** Formed to provide an avenue for value-added greenery services such as master planning and other landscaping and horticultural skills to overseas markets, NParks subsidiary, Singapore Garden City Pte Ltd is currently involved in several on-going projects in China, India and the Middle East. These include park consultancy services to the Guangzhou Nansha Development Zone, landscape design for the Wafi Hotel in Dubai, a greenery master planning consultancy for Al Reem Island in Abu Dhabi, and a housing project in Chennai. Looking ahead, Singapore Garden City Pte Ltd will continue to seek strategic partnerships with other government agencies and local industry players to maximise business opportunities.

**Showcasing the Garden City Internationally** To showcase NParks' expertise in the international arena, NParks continued to participate in international conferences and shows. At the Malaysian International Landscape and Garden Festival that was held in the Perdana Lake Gardens in Kuala Lumpur from 17-25 July 2004, NParks' landscape display, "The Merlion's Garden", simulated an underwater garden through the creative use and arrangement of plants and flowers. The display won NParks the Gold for the LAMAN Theme Award and Silver for the LAMAN Starlight Award.

**Left** Exporting expertise - Singapore Garden City Pte Ltd's streetscape greenery plan for Hangzhou Bay.

**Right** Training, skills development and job redesign are part of NParks' efforts to upgrade the horticulture and landscape industry.

Further afield in Dijon, France, NParks' participation at the 18th World Orchid Conference saw it garnering over 20 awards. This included a Gold Award for its orchid display in the Open Class Display Competition as well as the Best Illuminated Exhibit Award. Titled "Orchids Speak the Language of Dance", the design for the exhibit was centred on the concept of using the dazzling array of colours, sizes and forms of plants from the orchid family to represent the movements and essence of the traditional dances of Singapore's multi-cultural society. Held every three years, the 18th World Orchid Conference featured some 75 speakers from 30 countries as well as over 50 international landscape and orchid exhibits.