

Landscape Excellence Assessment Framework (LEAF) Certification 2016: Re-envisioning Green

Images as credited

Organised by NParks, the Landscape Excellence Assessment Framework (LEAF) certification scheme aims to recognise both existing and upcoming development projects with outstanding greenery. This certification is the first of its kind in Singapore to be dedicated to greenery, assessing landscape design, greenery provision, and greenery management with the goal of encouraging more greenery to be integrated into Singapore's urban landscape.

This year's crop of projects tackles sustainability in its many forms, often approaching greenery with a pioneering hand, and a sensibility tailored to the people who will interact with and inhabit the spaces within. Recognising efforts by residential, commercial, and healthcare spaces the LEAF certification is proof that greenery has a significant place in a modernised city like Singapore.

UPCOMING PROJECTS

Oasis Terraces Outstanding Project

Award Recipient Housing & Development Board, Multiply Architects LLP, Serie Architects, WNE Integrated Design Pte Ltd, Rich Construction Company Pte Ltd, Nature Landscapes Pte Ltd
Completion Date 2018

Text by Housing & Development Board

The landscape concept for Oasis Terraces has three key elements: the inclined gardens, roof garden, and rain garden. These gardens are designed to educate the public on and inspire them through nature.

When completed, the inclined gardens will feature a series of trapezoid cascading multi-coloured gardens that capitalises on the scenic view of the Punggol Waterway. Variegated foliage created using plants species with different colours and sizes will be used to create dynamic horticultural displays. Visitors walking up the inclined gardens can expect a toddlers' playground, a water playground, an adult fitness corner and a community garden on the upper floors.

At the rain garden, the general public can find respite in this quiet outdoor space and learn the importance of recycling rainwater. Educational signs about the concept of the rain garden will also be located around the area.

Besides the gardens a variety of bird- and butterfly-attracting plant species and small trees will also be planted within the development along corridors and in façade planters to bring people closer to nature.



1. Leading from the 1st to the 6th storey, the inclined gardens in Oasis Terraces will feature a dynamic color scheme and variegated foliage of plant species. (Image: Housing & Development Board).

SkyOasis @ Dawson Certified

Award Recipient Housing & Development Board,
Surbana Jurong Consultants Pte Ltd, Master Contract
Services Pte Ltd **Completion Date** 2020

Text by Housing & Development Board

Located in Dawson Estate, SkyOasis @ Dawson comprises six residential blocks ranging from 26 to 45 storeys that offering a total of 1,192 residential units. It integrates nature into the living environment to realise the vision of “Housing-In-A-Park”. The development is designed with sky gardens and eco-decks amidst lush greenery, where residents will enjoy added convenience with an eating house, shops, a childcare centre and a senior citizen centre located within the precinct.

Sited prominently at the start of the Alexandra Canal Linear Park, the development is designed to encourage residents to engage in outdoor activities and appreciate nature. The precinct’s greenery extends towards the linear park via the eco-deck on the rooftops of the car park and commercial facilities. This provides residents with seamless connectivity and a sweeping view of the surrounding landscape. In addition to the recreational and communal activities already available along the linear park, SkyOasis @ Dawson will house a wide range of amenities like adult and elderly fitness stations, a children’s playground, slide terrace and an adventure slope for older children to enjoy.

The intermediate sky gardens at the 45-storey blocks create unique relaxation spaces adorned with interesting plant species and simple geometric-shaped planter boxes with seating areas. Away from the hustle and bustle of city life, the sky gardens will serve as ideal spots for quiet contemplation and create an “urban relief” for residents.



2. Featuring lush greenery and sky gardens, SkyOasis @ Dawson is a development that integrates nature into the living environment. (Image: Surbana Jurong Consultants Pte. Ltd.)

3. With its unique historical context, the development has to amalgamate extremely high density dwelling with an appreciation of the site’s heritage and history of having been the town square of Queenstown. (Image: Surbana Jurong Consultants Pte. Ltd.)



SkyResidence @ Dawson Outstanding Project

Award Recipient Housing & Development Board,
Surbana Jurong Consultants Pte Ltd,
Teambuild Engineering and Construction Pte Ltd,
KC Leow Construction & Engineering Pte Ltd
Completion Date 2020

Text by Housing & Development Board

Located in Dawson estate, SkyResidence @ Dawson sits alongside Margaret Drive and Commonwealth Avenue where the old Queenstown Town Centre was located. When completed, it will comprise eight residential blocks of up to 47 storeys, offering a total of 1,217 residential units of 2-, 3-, 4- and 5-room premium flats.

One of the key features in this development is the central public space, which is designed to inject vibrancy into the precinct. The former market building will be conserved and converted for commercial use while the existing mature Angsana trees retained to provide greenery and shade. Residents can enjoy a variety of common spaces with lush landscaping at various levels. The central public space will be well-shaded and provided with play equipment to encourage social interaction among residents.

SkyResidence @ Dawson will also include a “Green Ribbon”, a unique 500 mmeandering garden connecting all eight residential blocks from the 2nd to 8th storey to bring residents closer to the canopies of mature trees. The “Green Ribbon” comprises three themed gardens: the Tropical Forest Garden, Fragrant Garden and Rock Garden. These gardens integrate the play facilities into the landscaping to create different experiential communal spaces that vary in height and open up to the sky at segments. The “Green Ribbon” also offers space for a variety of recreational and communal activities, such as jogging or exercising at the adult and elderly fitness stations.

In addition, two sky terraces (Sunset Terrace and Sunrise Terrace) will adorn the higher levels and provide good views of the city and the surrounding area. These terraces will give residents spaces to relax and enjoy nature away from the hustle and bustle of city life, reinforcing the “Housing-in-a-Park” vision.

EXISTING PROJECTS

Bedok Residences Certified

Award Recipient CapitaLand Group, DCA Architects Pte Ltd, COEN Design International Pte Ltd
Completion Date 2015

Text by CapitaLand Group

Bedok Residences is an oasis within the hustle and bustle of vibrant Bedok Central. The 583-unit residential development offers unrivalled convenience and connectivity, sitting atop Bedok Mall, one of the largest shopping malls in the area, with direct access to the Bedok transportation hub. Developed into a lush setting achieved through the use of natural elements in treatment and design, the landscaped deck is a definitive oasis for residents.

Verdant foliage interspersed with soothing watercourses draw residents into a world of total harmony. Complementing the abundance of open space is a plethora of facilities tucked discreetly among the lush environment. A feeling of sensory intimacy is given to the landscape, enhancing the thrill of imaginative experiences through the interlocking of spaces. An environmental deck with six themed gardens allows residents to enjoy the beauty and wide variety of native and non-native plants. Residents can also contribute to the landscaping of the development via community gardening. Extensive green walls at the tennis court provide a lush, verdant backdrop to a good game. Meanwhile, the green rooftop over the clubhouse and gymnasium blends in with the landscape of the e-deck. As part of the initiative to retain valuable existing flora and fauna, two mature *Dalbergia oliveri* trees were retained and transplanted to the e-deck.

Sustainability is integral to the concept of landscape management at the residential development, with a focus on low maintenance and labour reliance in the long term. With auto-irrigation and a rainwater harvesting system in place, the plants have also been deliberately selected to form a rich and harmonious combination.



Enabling Village Outstanding Project

Award Recipient SG Enable Ltd, WOHA Architects Pte Ltd, SALD Pte Ltd (Salad Dressing), Sunray Woodcraft Construction Pte Ltd, PLANTWERKZ PTE LTD, Camphora Pte Ltd **Completion Date** 2015

Text by SALD Pte Ltd

Enabling Village is located in Redhill, Singapore. The site has the advantage of being located in an area with an abundance of natural earth, which is quite rare in Singapore's landscape industry. Accordingly, the large collection of native and rare species of plants and trees is integral to the land. Of the 68 species of trees, 51 are native, with a total of 161 trees in number. Enhancing the biodiversity of flora and fauna within an urban environment was the main focus from the outset. The vast assortment of plant species attracts various birds and insects, which have made Enabling Village their home. Hornbills occasionally visit the site, as well as kingfishers, butterflies and damselflies. 60 trees were retained from the existing site, creating a green niche for wildlife and humans. One can stroll through the peaceful green corridors and experience a series of framed views of the landscape. A noticeable change in the colours, textures and size of the leaves can be observed along the corridors.

Several vibrant gardens and buildings are orientated around a total of four individual ponds. The intricate landscape architecture brilliantly creates the illusion that the ponds are inter-connected. The waters of these ponds are the main element in sustaining the landscape, and showcase a working natural cleansing system. Enabling Village achieves clean and clear water through a rigorous phytoremediation system. Marginal and aquatic plants increase the quality of the water by removing toxins and contaminants. Other than a single small pump to create small movements in the waters, the ponds are completely self-sustaining. No water filter is used in the whole project. Enabling Village is designed with the aim to strike a balance between protecting the biodiversity and meeting the needs of the visitors.



4. The 509-unit residential development sits atop Bedok Mall, one of the largest shopping malls in the area. (Image: COEN Design International Pte Ltd).

5. Rethinking the community space with biodiversity (Image: Salad Dressing).



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Ng Teng Fong General Hospital and Jurong Community Hospital Outstanding Project

Award Recipient Ministry of Health/Jurong Health Services, CPG Consultants, HOK, studio505, VIA+ Signature Pte Ltd **Completion Date** 2015

Text by CPG Consultants

Ng Teng Fong Hospital and Jurong Community Hospital provide a seamless and integrated continuum of care with the strategic co-location of a 700-bed acute hospital and outpatient clinics with a 400-bed community hospital to provide better patient care, greater efficiency and easier access to facilities. The cluster is designed with several landscape features like ward planters, high-level gardens, internal landscaped courtyards and skylights at office areas, offering both patients and staff quality spaces closer to nature. The ward planters are aligned and positioned to be viewed from each patient's window, creating a unique façade in the process.

Plants are selected for their form, colour, rigidity and ease of pest control. Different varieties of low-maintenance species were used in the ward planters and were customised based on the lighting preferences and shade tolerance. All ward planters can be accessed through common utility areas without affecting the wards or high traffic areas.

Other gardens include the Healing Garden and the community garden. The Healing Garden has been provided with seats and facilities that can enable stabilised ICU patients to enjoy the garden. A Jelutong walk incorporating heritage trees connects the community garden located close to the nearby public housing giving easy access to the public, and is nurtured by volunteers and community partners.

6. Panoramic view of the integrated hospital campus from Jurong East Street 21. (Image: CPG Consultants Pte Ltd).

7. View of OUE Twin Peaks from Grange Road. (Image: OUE Ltd).

OUE Twin Peaks Certified

Award Recipient OUE Ltd, DP Architects Pte Ltd, Bensley Design Studio, Hyundai Engineering & Construction Co. Ltd, PLANTWERKZ PTE LTD
Completion Date 2015

Text by OUE Ltd

Located at 33 Leonie Hill Road, OUE Twin Peaks comprises two identical 35-storey residential towers built on one of the largest prime sites near Orchard Road. The development has been designed with a unique resort-within-the-city concept, distinguished by lush landscape features usually only seen in world-renowned resorts such as those found in Phuket, Bali and the Maldives.

Woven through with greenery and water features from ground level to the roof terraces, OUE Twin Peaks offers the perfect balance of urban living and tranquillity. A sanctuary in the city on the doorstep of the prime shopping belt of Orchard Road.



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SAFRA Punggol Certified

Award Recipient SAFRA National Service Association, Surbana Jurong Consultants Pte Ltd, Hytech Builders Pte Ltd, Flora Landscape Pte Ltd **Completion Date** 2016

Text by Surbana Jurong Consultants Pte Ltd

SAFRA Punggol is the first eco-friendly SAFRA club to receive the prestigious Building and Construction Authority Green Mark Platinum award. It is an ideal destination for NSmen and their families to have fun and unwind with a wide range of lifestyle facilities and programmes.

The overall planting scheme assimilates into the Punggol Landscape Masterplan. The composition of planting and plant selection blend with the nearby riverfront and Sentul Crescent. Lush tropical planting with different layers of matured *Livistona* palms, *Plumeria* trees and various flowering shrubs welcome the visitors at the main drop-off area. Layered, terracing levels of selected planting were also employed to replicate the terrains around Punggol Waterway.

Adaptable riverside plant species are planted in the landscaped areas of the 2nd storey to link SAFRA Punggol with Punggol waterway. A mixture of forest tree species and native riverside species such as *Dyera*, *Barringtonia*, *Hibiscus tiliaceus*, *Coccoloba* and *Dillenia* shrubs have been arranged to create a lush tropical environment. The cascading architecture concept also allows the peripheral planters to be exposed to sunshine and rain, thus reducing the watering needs. The span and width of these planters also allow for the provision of maintenance path access.

An efficient, fully automatic irrigation system with rain sensor also covers the building and peripheral external planting to reduce the need for manual maintenance.

8. Cascading Architecture of SAFRA Punggol facing Punggol Waterway. (Image: Surbana Jurong Consultants Pte Ltd).

9. 200 original rainforest trees were conserved during construction, with 450 more trees planted after that. (Image: Siloso Beach Resort).

Siloso Beach Resort Outstanding Project

(First certification in 2013, recertified in 2016)

Award Recipient Siloso Beach Resort Pte Ltd, Tan + Tsakonas Architects, SBR Landscape and Construction **Completion Date** 2006

Text by Siloso Beach Resort Pte Ltd

Siloso Beach Resort is a unique Eco Resort located on Sentosa Island. The construction of the resort was done in such a way to minimise damage to the environment, with minimal digging into the terrain and over 200 of the original trees conserved. Many of these trees have been incorporated into the resort's design, especially in the resort's Villa Wing where almost all 12 villas have multiple trees growing through them. Following the resort's construction, another 450 trees were planted in order to add to the existing greenery.

Giving guests the feeling of being close to nature was a key priority, and thus the resort was designed to maximise open-air space, with only 28% of the site being covered. Similarly, the landscaping of the resort was done in a way to complement the natural forest setting, to incorporate primarily native species, and to enhance biodiversity. The resort hosts many other green features, including 16 ponds that support the growth of biodiversity such as frogs and dragonflies that can help control the mosquito population. There is also a sustainable farming project, which grows leafy vegetables without the use of any pesticides or chemical fertilisers, providing 10% of the resort's vegetable needs. The in-house vermicomposting operation, which recycles the resort's fruit and vegetable food waste, provides high-quality natural fertiliser for growing edible plants and for important landscaping areas.

Besides a unique built concept surrounding nature, the resort has also been active with educational programmes that showcase its sustainable business concept to stakeholders. Eco tours are regularly conducted and emphasise other aspects of biodiversity and conservation values.



The Palette Certified

Award Recipient Hong Realty (Private) Limited, Architects 61 Pte Ltd, COEN Design International Pte Ltd, Hyundai Engineering & Construction Co. Ltd, Eco Garden Pte Ltd **Completion Date** 2015

Text by COEN Design International Pte Ltd

Hong Realty (Private) Limited, in a joint venture with City Developments Limited and Hong Leong Holdings Limited, developed The Palette, a residential condominium nestled within the new residential enclave of Pasir Ris Grove.

Extending over a spacious 461,315-square-foot estate, the development comprises 12 residential towers with a total of 892 apartment units. To complement the existing topographical conditions of the land, the site was defined into four terraced zones of varying levels, creating a gentle slope down from east to west.

The Palette incorporates various green design and sustainable innovations and embraces eco-friendly features to raise environmental awareness among residents and allow them to appreciate nature from within and beyond the site.

In 2012, the development was recognised for its sustainable design and green features by the Singapore Building and Construction Authority with the Green Mark GoldPLUS Award.

The Palette stands out for its vibrant blue and green landscape, which contrasts with its sleek and contemporary façade.

Upon arrival at The Palette, you are immediately greeted by a five-metre-high extensive green wall that acts as a visual and nodal point, leading visitors through the arrival plaza. Poised within a lush landscape, a green trail allows visitors to tread through the estate while flanked by nature. Venturing into the development, The Palette's iconic landscape featuring expansive cascading pools and towering palm trees immediately transports residents into a tropical paradise.

Here, residents can enjoy being up-close with nature in one of the many horticulture-themed gardens and pavilions such as the Birds of Paradise garden and Harp Pavilion, or relax in one of the hammocks found in the lounge of the Exotic Palm Garden. The Eco Pond with a timber boardwalk allows an even closer interaction with biodiversity, while the nearby Spice Botanics lets residents come together to grow herbs and enjoy communal bonding.

In terms of architectural design, apartment units are mostly north-south oriented to optimise prevailing wind breeze and reduce excessive solar gain. Planters are also provided in apartment units to integrate gardens within the city lifestyle.



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10. The Palette's lush landscape and cerulean pools blend seamlessly to transport residents into a tropical paradise. (Image: COEN Design International Pte Ltd).

11. Entrance reflective pool with playful glass sculptures. (Image: ONG&ONG Pte Ltd).



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The Rainforest Outstanding Project

(First certification in 2013, recertified in 2016)

Award Recipient City Developments Limited, ADDP Architects Ltd, ONG&ONG Group, Nakano Singapore (Pte) Ltd, Garden Beau Pte Ltd **Completion Date** 2014

Text by ONG&ONG Group

The Rainforest is an executive condominium set amidst landscaped grounds evocative of a nature reserve.

A key concept of the landscape design is to create a beautiful, landscaped space that protects and propagates our native flora, which are being edged out by urbanisation and the popular use of exotic plants. It revolves around creating a landscape that provides relief, recreation and relaxation to homeowners while showcasing the diversity of native flora in Singapore. Selected native plant species have also been used to attract the local fauna as a way of rejuvenating the woodland corridor. They will be given sanctuary in this enclave just as it offers a garden for the homeowners to enjoy.

Water bodies such as the biopond and bioswale were introduced, offering attractive microenvironments as platforms for education. The biopond enables various plants and animals to re-establish the ecological biodiversity within the development while the bioswale captures and filters surface drainage runoff before discharging into the drainage system during heavy downpours. The informative signage at the pond and bioswale in the garden helps to educate residents about these ecosystems.

Westgate Outstanding Project

Award Recipient CapitaLand Group, RSP Architects Planners and Engineers Pte Ltd, COEN Design International Pte Ltd, Shimizu Corporation, Nature Landscapes Pte Ltd, GreenHouse Design & Build Pte Ltd **Completion Date** 2013

Text by CapitaLand Group

Developed by CapitaLand, Westgate is a dynamic seven-storey lifestyle and retail destination that is the heart of an integrated development, which also includes a high-rise office tower. A striking architectural centrepiece that serves as a new icon for Jurong Gateway, Singapore's up-and-coming second CBD and largest regional centre, Westgate is strategically connected to both the Jurong East MRT station and bus interchanges. Amongst a slew of architectural features, Westgate's 1,350 square metres of verdant vertical greenery stands out, serving as a visual nature respite for visitors and commuters passing through the transport hub.

In addition to the façade greenery, natural greenery is brought inside of Westgate. Shoppers can enjoy a stroll through the naturally ventilated garden courtyard and take in the delightful whimsical sculptures and colourful water fountains.



Spanning about 1,000 square metres, Westgate Wonderland, located on the fourth level of the mall, is Singapore's largest outdoor thematic playground in a mall. The customised play equipment immerses children in a larger-than-life garden surrounded by oversized replicas of flora and fauna, including gigantic insects, musical flowers, a 10 metre-tall tree house and an enormous watering can that sprays water. This unique and amazing fun space aims to educate and develop children's awareness towards the living creatures and beauty of nature while having a fun time in this garden-inspired playground. 