City Sprouts overhauled the former canteen into an open air multi-purpose community space, with the canteen stalls redesigned into a unique food concept. This versatile space will enable City Sprouts and its partners to host community events such as educational seminars, farmers' markets, and knowledge sharing workshops. These events and outreach programs are selectively curated to not only increase public awareness and foster empowerment about environmental and social issues, they seek to equip participants with relevant skills to take measurable actions. In view of the pandemic situation, City Sprouts’ plan is to resume their events and programs in phases starting from August 2020 onwards. They plan to begin with their weekly farm tours, monthly Farm Day Out (both family and junior versions). Furthermore, the food outlets operate with the overarching theme of fresh, local produce and sustainability. On top of exploring farm-to-fork initiatives, these outlets have been adopting eco-friendly packaging and contributing their food waste to City Sprouts’ in house compost pile, which will then go back to our farmers for cultivation.

Additionally, City Sprouts’ sister company SGBC Member GWS Living Art, a specialist in vertical greenery is also housed in Sprout Hub. Having established its foundations in green roofs and green walls, GWS Living Art will be focusing on refining its technologies and products in its new headquarters. Through such a relationship, City Sprouts has and will continue to benefit from cross-collaborations in events and sustainable activations.

CELEBRATING BUILT ENVIRONMENT SUSTAINABILITY

The WorldGBC Asia Pacific Leadership in Green Building Awards celebrate iconic green buildings pushing the envelope in sustainability, inspiring companies that have integrated sustainability into the core of their operations, and women leadership in the green building space.
The biennial Awards, first held in 2014, showcase and celebrate the achievements of businesses and innovators leading on sustainability in buildings across the Asia Pacific region. Presented by the World Green Building Council and its Asia Pacific Regional Network of Green Building Councils, the Awards programme will recognise five winners across three award categories:

- The Business Leadership in Sustainability Award rewards companies that push boundaries, integrate sustainability into their business models and make an outstanding contribution to a sustainable built environment.
- The Leadership in Sustainable Design and Performance Award is presented to pioneering green building projects that set new benchmarks for sustainability. There are three sub-category winners for commercial, institutional and residential buildings.
- The Women in Green Building Leadership Award, was presented for the first time in 2018 to an inspiring female leader. In a traditionally male-dominated industry, the Award recognises the pivotal role that women play in nurturing and activating their communities, and delivering change.

Additionally, to reflect the growing momentum of WorldGBC’s global projects – namely the Better Places for People and Advancing Net Zero projects – the Awards confer special recognitions for businesses and projects that have gone above and beyond. The Better Places for People Special Recognition will be awarded to companies that have truly embraced health and wellbeing practices; and the Advancing Net Zero Special Recognition will be awarded to projects that have demonstrated an ambitious and holistic solution to achieving net zero operational carbon emissions.

The winners of the Asia Pacific Leadership in Green Building Awards 2020 will be determined by an independent jury committee composed of prominent international experts in the fields of green buildings, architecture, engineering design, energy, economics and sustainability.
As of 2019, 14 percent of DBS' operational energy consumption is sourced from renewable sources. The bank's total electricity consumption also fell by more than 1,600 MWh despite an increase in real estate footprint. All of DBS' office premises and retail branches in Singapore are certified to Building and Construction Authority Green Mark standards, with two premises awarded the Green Mark for Healthier Workplaces certification – and were the two largest such projects certified at that time by nett lettable area.

As a significant financer of renewable energy, the bank had 17 deals of loan size of over SGD 1.3 billion in 2018. In 2019, DBS financed about SGD 1.7 billion of renewable and clean energy-related loans.

DBS reinforced its commitment to grow its sustainable financing business by launching Asia’s first real estate sustainability-linked loan of SGD 300 million with CapitalLand. DBS is the first financial institution in Singapore to issue a green bond with the Marina Bay Financial Centre Tower 3 as one of the first green assets. DBS is also the sole bookrunner for Singapore’s first green bond with City Developments Limited and the sole lead manager and bookrunner in Asia’s first green bond issuance by National University of Singapore.

DBS is the first Singapore bank to adopt circular procurement in its own procurement practices. Some of its key initiatives include eliminating the use of single-use plastic bottles and reducing packaging for laptop delivery. Globally, DBS has been formally recognised for its sustainability efforts. DBS is included as an index constituent of the Dow Jones Sustainability Index (Asia Pacific), FTSE4Good Global Index and is just one of two Singapore-based companies named in the Bloomberg Gender Equality Index for two years running.

Amid the global pandemic, DBS partnered The Food Bank Singapore to launch Singapore’s first virtual food banking app to enhance support for individuals and families affected by the crisis. In April 2020, DBS launched its SGD 10.5 million DBS Stronger Together Fund to help communities hard hit by Covid-19 across the region. Through the fund, the bank provided about 4.5 million meals and care packs to affected individuals across its six key markets, namely Singapore, Hong Kong, China, India, Indonesia and Taiwan.

Over the years, DBS has organised and sponsored sustainability-related innovation hackathons, such as Unleash (2018) and NUS-DBS Social Venture Challenge (2014-2018). In August 2018, DBS started a countrywide RecycleMoreWasteLess public awareness campaign in Singapore to educate the public on the importance of responsible consumption and correct recycling habits. The campaign was multi-faceted, and included working with various celebrities, media, NGOs, businesses and social enterprises. The campaign saw more than 53,000 people take the pledge to Recycle More, Waste Less.

Engagement with key stakeholders helps DBS define its strategic priorities. The bank holds regular conversations with institutional investors, employees, industry associations such as ABS, customers, communities, NGOs and regulators. DBS also participates in sustainability-related forums organised by policy makers, banking associations, academic institutions and share our thoughts on specific ESG matters.

In 2019, DBS was one of the pioneer founders of Singapore’s first industry workgroup to promote sustainable procurement – the National Sustainable Procurement Roundtable (NSPR). The NSPR is committed to promoting sustainable procurement in Singapore, with the aim of building a sustainable supply chain that efficiently meets sustainability objectives.

DBS also co-chaired the working group in consultation with the Monetary Authority of Singapore (MAS) on the development of Environmental Risk Management Guidelines which would outline expectations on governance, risk management and disclosure. The bank continues to engage corporate customers on green financing instruments, with sessions held to raise awareness on good ESG practices and making positive impact.
PARKROYAL COLLECTION Pickering by UOL Group Limited was built with the aim to be the city’s greenest hotel. Its hotel-in-a-garden concept features over 15,000 sqm of lush gardens, waterfalls and planter walls that constitute more than twice the hotel’s total land area. Other innovative sustainability features include the zero-energy sky gardens, the use of rainwater or NEWater for landscape irrigation, motion and rain sensors, recycling bins in every hotel room, as well as the use of natural materials such as wood and glass in the hotel design. Living up to its green promise, PARKROYAL COLLECTION Pickering has been winning prestigious accolades across the globe, placing the hotel and Singapore as world leaders of green high-rise buildings.

Designed as an urban resort, PARKROYAL COLLECTION Pickering is filled with lush green sky gardens and living facades that changes with the seasons. In the spirit of giving back to the city, it was in the hotel’s vision to perform an added civic duty by serving as public architecture in the way it monumentally opens up its porte-cochere as an axis and ceremonial gateway that physically and visually links Singapore’s business and historical districts, while extending the horizontal green of the adjacent park vertically into the building as one continuous sweep of urban parkland.

The vertical landscaping and elevated gardens effectively serve as multiple levels of new city parks in the sky that can be enjoyed both up close and afar. These elevated gardens are not only visually attractive; they also present many environmental and social benefits, forming spaces for interaction and for building of communities in dense urban high-rise developments.

“We were honoured to receive the SGBC-BCA Sustainability Leadership Awards 2019. UOL adopts a holistic approach towards greening the urban habitat and endeavours to contribute our part as a developer to improve urban lives and the planet. Since its opening in 2013, PARKROYAL COLLECTION Pickering has become an iconic green landmark within the existing urban landscape,” said Mr Liam Wee Sin, UOL Group Chief Executive.

To retain a sense of human scale, the building’s massing and details were calibrated to the intricacies of the city by mirroring the density and height of the surrounding shop houses, taking visual references from the height of the ubiquitous tree canopies, and responding to the site’s context in terms of the size and orientation of its tower blocks. The historic streetscape proportions were also further reinforced by the way the building is horizontally segmented by the great open veranda on the 5th storey and by the projecting shelves of the sky gardens above at 4-storey intervals.

The property is designed to relate to the existing Hong Lim Park, extending the greenery from Hong Lim Park to the sky gardens in the hotel. This also improves biodiversity in the city centre. Keeping the hotel-in-a-garden design concept in mind, PARKROYAL COLLECTION Pickering introduced extensive amounts of landscaping into the building estimated to be 215 percent of the site area or equivalent to the footprint of the neighbouring Hong Lim Park.

Dense layered and large-leaf exotic planting like Monsteras, Alocasias and Calatheas combined with ferns and palm varieties were selected for the sky gardens, attracting birds, dragonflies and butterflies to the garden spaces. Apart from wildlife, humans are drawn to the building evidently seen with people whipping up their phones to snap pictures of the iconic building.

Taking regional climate into consideration and designs, the building works for the tropics, with ample shading from the sky gardens and large voids for good cross ventilation. The hotel has 50 percent of the hotel corridors and 100 percent of the office
Celebrating Built Environment Sustainability

common toilets naturally ventilated. The building is orientated such that it receives minimal heat gain from the western sun. The unique contours are inspired from regional geological formations like the tropical paddy fields and cave formations.

PARKROYAL COLLECTION Pickering also broke new ground by being the first development in Singapore built using Cobiaz technology, a system that reduces concrete usage by placing ‘void formers’ made of environmentally friendly recycled plastic. The Cobiaz Void Formers were installed within the non-structural loading areas of the slab to reduce concrete usage, and a downstream effect of reducing the weight of the building, therefore requiring smaller structural members. Reducing concrete usage equates to lesser carbon footprint to produce and deliver concrete for construction. The hotel is also one of the first commercial buildings to adopt this system in Singapore, and serves as a good case study.

The property also innovates by using plants as building material instead of architectural materials such as concrete:

- Green walls and sky garden act as insulation against heat gain to walls and ceiling, greenery with large foliage for shading and screening at the podium.
- Overflowing creepers along the hotel corridor act as a shading curtain, as well as a living light chandelier at the sky gardens oculus.

For all its efforts in sustainability, PARKROYAL COLLECTION Pickering has been awarded with the Building and Construction Authority Green Mark Platinum rating, the nation’s highest certification level for green buildings.

Developer: UOL Group Limited
Architect: WOHA Architects Pte Ltd
Façade Consultant: Meinhardt Façade Technology (S) Pte Ltd
Lighting Consultant: LPA Lighting Planners Associates Inc.
Green Mark Consultant: LJ Energy Pte Ltd
Landscape Consultant: Tierra Design (Singapore) Pte Ltd

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LEADERSHIP IN SUSTAINABLE PERFORMANCE & DESIGN – INSTITUTIONAL

Kampung Admiralty is Singapore’s first one-stop integrated complex that maximises land use and the benefits of co-locating a mix of public housing for senior citizens and other facilities and services under one roof. The compact site prompted a layered ‘club sandwich’ approach. The result is a “Vertical Kampung (village)”, with a Community Plaza sheltered by a Medical Centre supporting a rooftop Community Park overlooked by apartments for seniors. These three distinct layers juxtapose the various building uses to foster diversity of cross-programming and frees up the ground level for activity generators. The proximity to healthcare, social, commercial and other amenities support inter-generational bonding and promote active ageing in place.

Kampung Admiralty demonstrates innovation in intensifying land uses with a varied mix of public spaces and social facilities and healthcare and private homes, creating new ground levels of useable and accessible greenery in a built-up environment. The different layers in Kampung Admiralty create new ground levels of useable landscape spaces within the development. Passive Environmental Strategies are used to create comfortable tropical public spaces. All public spaces and apartments are designed for natural ventilation and hence not reliant on air-conditioning. The precast façade has deep sunshading and all the roof surfaces are landscaped to reduce thermal load.

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The extensive rooftop green space, with green plot ration of 4.5 provide a natural and bio-diversified environment for wildlife habitats. A community farm and herb garden are allocated within the development to allow residents to enjoy gardening. Fruit trees such as Limau Purut are planted to evoke kampung (village) livelihood memories. Overall, 110 percent landscape replacement and 150 percent community space in relation to site area have been achieved. With a planting palette that encourages bio-diversity, significant numbers of species of insects, birds and fruit bats have been observed. A biodiversity survey was commissioned a year after completion and the species are found to be performing better when compared to an existing ground level public park.

Kampung Admiralty is designed to be porous so that natural daylight and ventilation is introduced to all common spaces. The view, easy access to nature and landscape promotes a biophilic environment and helps to create a sense of well-being to residents, users and visitors. Indoor operative temperature is maintained at 24 to 26 degrees Celsius. Relative humidity is less than 65 percent for consistent indoor thermal comfort. Indoor fresh air is regulated with built-in demand control algorithm in the Building Management System (BMS).

The building’s design provides good insulation against noise and air pollution by:

- Locating the podium block of enclosed spaces strategically in order to shield the apartments from road and train noise
- Locating the kitchen exhaust to roof top to bring the food fumes and smell away from apartments and users’ space
- High uncluttered ceiling spaces to Community Plaza and Hawker Centre promote effective cross ventilation and channel air upwards through a daylight opening
- Landscape Courtyard brings natural light to circulation and waiting areas of the Medical Centre

Kampung Admiralty is steered by multi-agencies with a singular vision to integrate their programmes both in design and in post occupancy programming. Each agency brings their best practices and yet resolve to integrate them in a coherent framework. For its efforts in sustainability, Kampung Admiralty has been awarded with the Building and Construction Authority Green Mark Platinum rating, the nation’s highest certification rating for green building.

Developer: Housing & Development Board
Architect: WOHA Architects Pte. Ltd.
C&S Consultant: Ronnie & Koh Consultants Pte. Ltd.
M&E Consultant: AECOM Pte. Ltd.
Quantity Surveyor: Davis Langdon KPK (Singapore) Pte. Ltd.
Landscape Consultant: Ramboll Studio Dreiseitl Singapore Pte. Ltd.
Green Mark Consultant: AECOM Pte. Ltd.
Contractor: Lum Chang Building Contractors Pte Ltd
Completed in 2018, the 944-unit Coco Palms condominium is nestled in the neighbourhood of Pasir Ris, surrounded by lush tropical greenery and extensive water area. The project consists of 12 12-16 storey blocks set within a resort atmosphere with an emphasis on clean, sleek and modern architectural form balanced with wide open spaces and natural landscaping.

Coco Palms was sensitively designed and sustainably built throughout its entire lifecycle – from using innovative design and eco-friendly materials during design and construction, to embracing expansive lush landscaping and multiple green spaces, to its myriad energy- and water efficient features.

In terms of site planning, the buildings are positioned and oriented in such a way that most of the 944 apartment units are able to take advantage of the prevailing wind directions, ensuring good natural ventilation for the better part of the day.

The bathrooms in most apartments were prefabricated to improve productivity and reduce waste. The project’s energy-efficient features include energy-efficient air conditioning system in all apartments, motion sensors in common areas, and solar powered LED bollards at landscaped areas. Its energy-efficient lifts with VVVF drive and sleep function mode help conserve electricity.

For water efficiency, the Coco Palms project features include innovative rainwater harvesting and recycling system, which helped Coco Palms garner the ABC Waters Certification from PUB. Amongst its myriad green spaces, the solar gardens at Coco Palms help generate electricity. To encourage greener modes of transport, residents can use electric vehicle charging points and sheltered bicycle parking lots.

The condominium clubhouse “Club Cocomo” is a 3-level facility space kept within the parameters of the building, offering both generosity of communal-use facilities and vast visuals of the central lagoon-like swimming pool.

Coco Palms has attained Building and Construction Authority’s Universal Design GoldPlus rating with the following unique features among others:

- Main location map (way finding) at 1st Storey drop-off area
- Accessible Ecocube farm
- Smart storage in apartment units
Housed in an enviable neighbourhood with myriad amenities, good transport networks and leisure options, Coco Palms is ideal for individuals, couples and families. There is excellent accessibility to the city via MRT, buses and expressways such as ECP, PIE and TPE. Coco Palms is also a short drive to shopping and lifestyle attraction Jewel Changi Airport, IKEA Tampines, Giant and Courts, which are one-stop stores for home essentials. Leisure and recreational options abound at the nearby Pasir Ris Park, Tampines Biking Trail and Downtown East.

Testament to its sustainable design, Coco Palms has received a string of accolades including the BCA Green Mark GoldPLUS Award.

Developer: Hong Realty (Private) Limited
Project Manager: City Developments Limited
Quantity Surveyor: Arcadis Singapore Pte Ltd
Architect: AXIS Architects Planners Pte Ltd
C&S Consultant: Parsons Brinckerhoff Pte Ltd
M&E Consultant: Meinhardt (Singapore) Pte Ltd
Landscape Consultant: Tinderbox Landscape Studio Pte Ltd
Project Interior Designer: AXIS ID Pte Ltd
Main Contractor: Woh Hup (Private) Limited