10th Anniversary
Hong Kong Science & Technology Parks Corporation

Chairman's Message

In celebrating our 10th anniversary, we at Hong Kong Science and Technology Parks Corporation are extremely proud to have clearly demonstrated our capacity to promote innovation and technology development, the impetus driving Hong Kong towards becoming a world-class technology hub.

Over the past decade, HKSTPC has forged ties with key constituents and they have reciprocated with trust and confidence. Hong Kong Science Park is now home to over 340 technology companies and our incubation programmes have helped almost 280 start-ups – 80% of which are still thriving today.

To illustrate the progress that we continue to make, today we also celebrate the opening of Green 18 as a showcase for the application of green technologies, and we will continue to promote innovation, thus creating an environment conducive to Hong Kong's commitment to technological prominence.

Nicholas Brooke, BBS, JP, FRICS, FHKIS, RPS
Chairman
Hong Kong Science & Technology Parks Corporation

Hong Kong Science & Technology Parks Corporation 10th Anniversary Celebration

This article was published in BUILDING JOURNAL Hongkong June 2011


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景
樓
Green 18
Hong Kong 香港科技園
Science & Technology Parks
18 科技大道東
Science Park East Avenue

Green 18

A sustainable R&D office building

With Hong Kong Science Park's position as a world-leading hub for emerging technologies, it made sense for the owner to also show the way with sustainable building. The completion of Green 18 office block demonstrates how sustainability can work in a real-life practical way, which is the first of its kind in Hong Kong.

Green technology is one of the Science Park's focus areas – the others being electronics, information technology and telecommunications, precision engineering and biotechnology. Science Park provides the ideal location for green technology enterprises. Green 18 offers brand new premises that employ leading edge green building features.

Building design
Green 18 embraces many green features in its design to improve human health, build a better environment and enhance work performance. The BEAM Society has awarded Green 18 for achieving the provisional rating and platinum standard in accordance with the Building Environmental Assessment Method (BEAM) for new building (4/04 version).

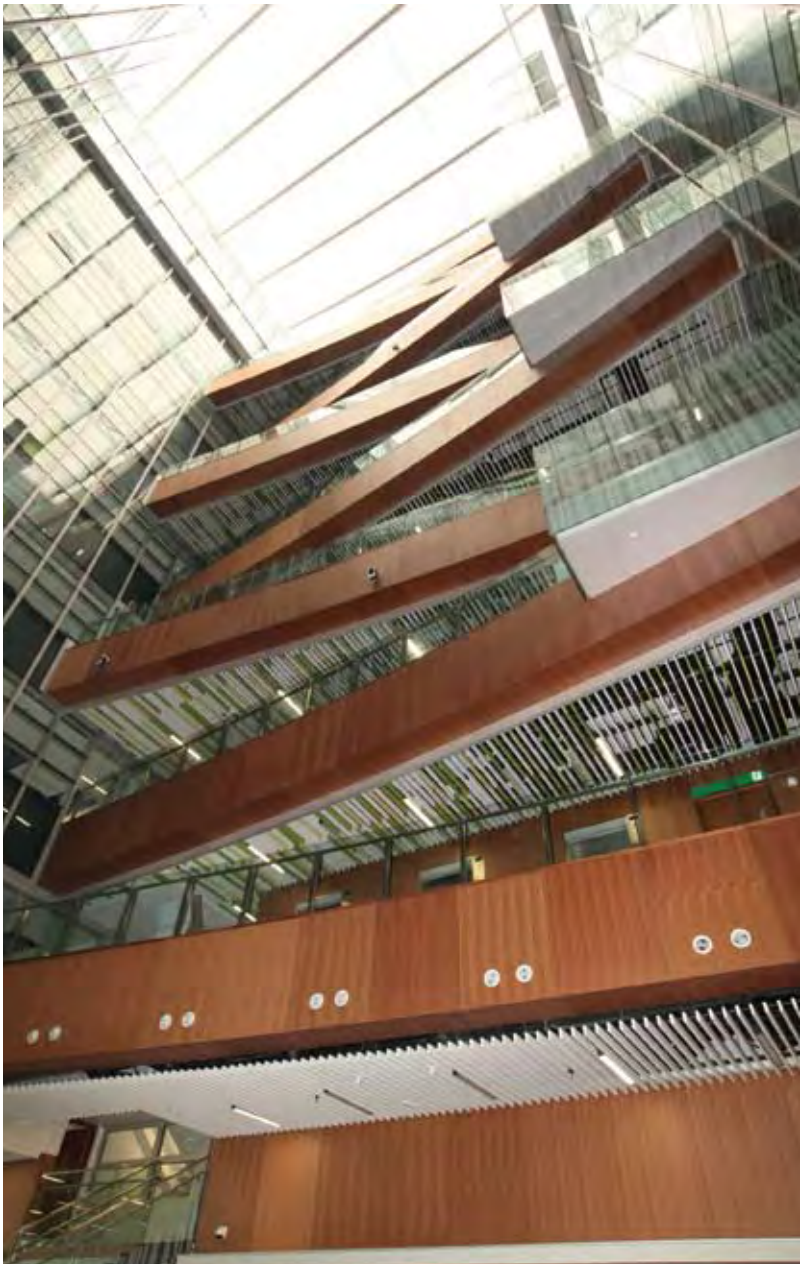
Naturally aerated ground floor and atrium
Green 18 has an idyllic "office in the park" feel to it, which is rare in the region. Occupants are welcomed to the building with attractive greenery and calming water features as they approach the ground floor entrance lobby.

To enhance the pleasant natural experience for office workers, the interior and exterior of the building is purposely blurred, with highly transparent walls and a lobby area where the landscaped surroundings actually enter the building. The microclimate created in this way creates better airflow inside the Atrium that reduces the need for air conditioning and offers pleasant environment to occupants and visitors.

Striking facade
Distinctive green glass cladding covers the exterior, extends above the roof gardens and wraps around the entrance to form an attractive canopy. The feature wall offers a backdrop to the Sky Garden and visually frames the ETFE (Ethylene tetrafluoroethylene) canopy roof.

Open office space and sky gardens
Modular office spaces are arranged around the atrium both to give unbroken access to the two sky gardens and roof garden. This not only allows a refreshing breeze, but also gives a pleasing view of Green 18's scenic surroundings.

Dynamic lift lobbies
Lift lobbies to each floor are arranged to open up to the atrium and create a pleasant



environment. A network of linked areas and a glass-enclosed staircase provide settings that encourage socializing.

The green roof

An unexpected delight awaits first-time visitors to Green 18. Arriving on the roof, you are met by luscious of shrubs and trees, making it a place to stay a while and relax. Perfect for rejuvenating lunch hours.

Sustainable features

Green 18 is the first R&D office building in Hong Kong to showcase green building technologies and the effective use of natural resources. Renewable energy facilities have been adopted throughout – including thermal panels, wind turbines, hybrid ventilation and an ETFE roof that maximizes sunlight penetration so its energy can be used.

Operable vertical louver facade

Louvers on the exterior of Green 18 can be adjusted according to the season. They act as a solar radiation filter to reduce the cooling load for the air conditioning system in the summer. In the winter, they help promote warming natural ventilation.

Versatile wind turbines
To provide maximum renewable energy from wind power, vertical axis wind turbines on the roof have a low wind speed threshold and can work in any wind direction.

Horizontal sun break & light pipes
Sun breaks over the exterior windows of Green 18 can block the sun when it's too bright or hot, yet can also allow in low winter sun rays to warm the interior. Light Pipes "collect" natural day light from the exterior then disperse into the interior via optical fibres to enliven the interior environment and provide free extra light.

Ethylene tetrafluoroethylene (ETFE) roof
ETFE creates an environmentally friendly roof for Green 18 because it has both a high transparency and outstanding insulating properties. And not only is it made from many recyclable materials – ETFE is recyclable itself and is the material used for the façade of the Beijing National Aquatics Centre 'Water Cube'.

Water efficiency and solar heaters
To save water, rainwater collected from the roof will be used for Green 18's gardens. And to save on electricity, roof-mounted solar water heater systems will provide hot water for showers and hand washing.

Fast Facts

Gross floor area:	8,700 to 13,000 sq ft per floor Each floor occupied by a single tenant
Number of storeys:	Seven above ground floor

client
Hong Kong Science & Technology Parks Corporation

architect
Simon Kwan & Associates Ltd

geotechnical and structural design consultant
AECOM Asia Co Ltd

main contractor
China Resources Construction Co Ltd

lift sub-contractor
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FAS Engineering Limited
Unit 607-8, 6F, Block B, Hoi Luen Industrial Centre,
55 Hoi Yuen Road, Kwun Tong, Kowloon.
Tel : 2107 4888 Fax : 2107 4555
Email : marketing@fas-hk.com Website : www.fas-hk.com

COLT
Approved Sole Representative

LOOKING FORWARD

with Hong Kong Science Park

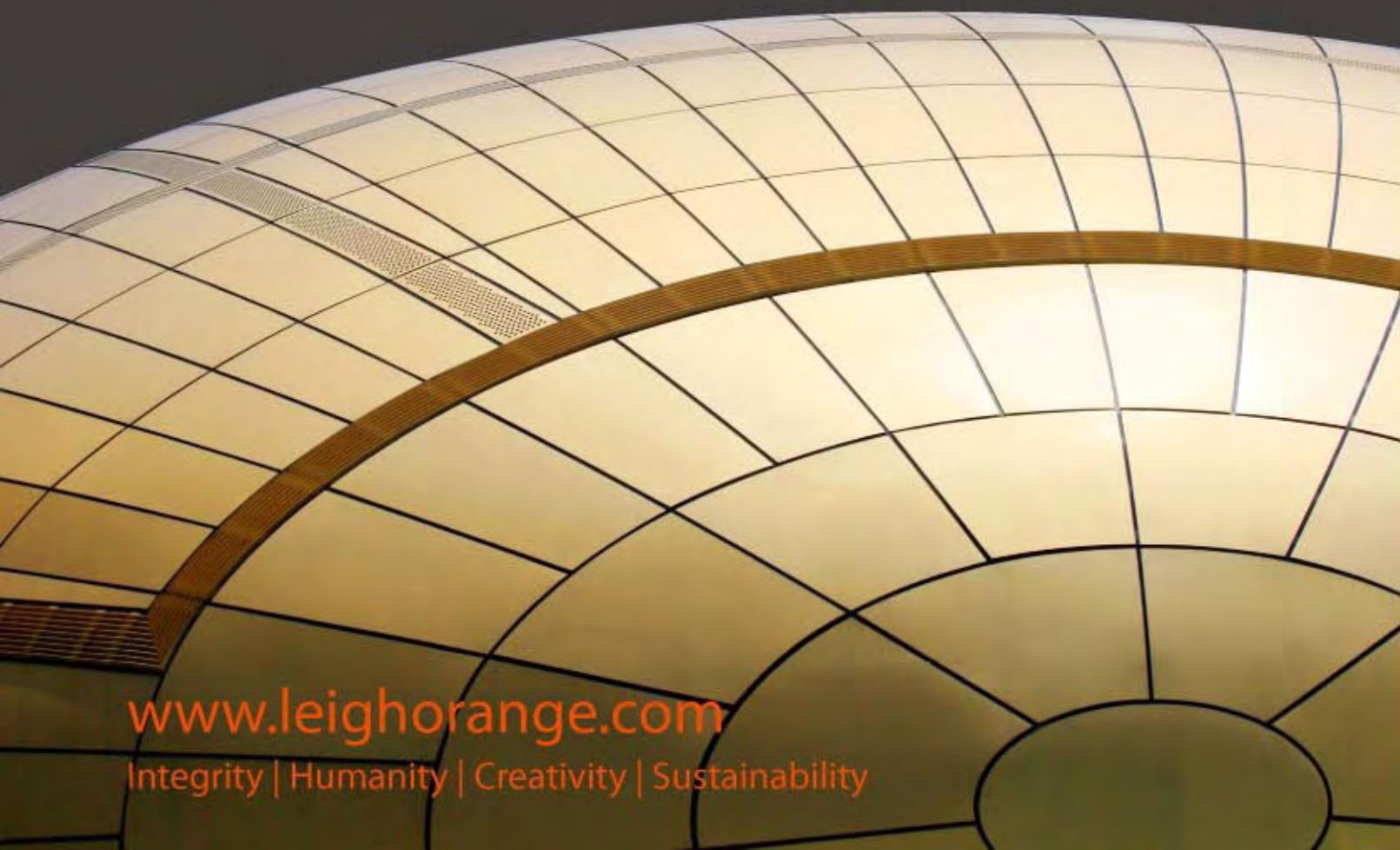
By constantly **looking forward** *Hong Kong Science Park* has placed itself at the forefront of innovation in Hong Kong.

Working alongside *Hong Kong Science Park* to realise its **far reaching** vision, Leigh & Orange is proud to have created the heart of the Science Park campus.

The minds of Hong Kong's finest innovators are now immersed in a best-in-class environment that satisfies their technical requirements whilst stimulating their **creativity** in a sustainable and environmentally-friendly manner.

Celebrating one of the most truly **inventive** moments of our age, the iconic *Charles K. Kao Auditorium* has been named after Hong Kong's most famous innovator and Nobel Prize winner – widely known as the 'Father of Fibre Optics'.

With the rest of the people of Hong Kong, we at Leigh & Orange look forward to many more decades of **daring innovation** from *Hong Kong Science Park*.



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RESIDENTIAL & MIXED-USE DEVELOPMENT

Shenzhen Gang Xia Redevelopment, China

The project is located within the new CBD district of Shenzhen. A large urban block that is sited adjacent to the newly built Convention Centre and the proposed iconic OMA 'Corona'. It is a mixed-use scheme that encompasses six 40-storey high-end residential towers, along side an equally tall office block. The concept moves away from traditional master planning rigueur of the podium and basement retail confined to the urban regular grid. Instead the basement is fully opened up to above to create a more pedestrian and user friendly environment whilst enforcing maximum porosity for the site and enhancing street-front rental space.

Xian Lake City Residential Project, China

The project sits on the site of a revived royal garden dating back to Qin Dynasty. The 'historical consciousness' of Xian is reflected by the incorporation of the 5 basic elements of traditional Chinese feng shui ideology and the strong axial linkage throughout the development. With the use of local construction technics and materials, and together with the design concept of 'an extended garden' by elevating the ground plane of greenery where all the vehicular circulation could be concealed underneath, the idea of sustainability is being carried through in the project.

EDUCATION

City University Creative Media Centre, Hong Kong

This crystal shaped building is set to create an inspiring environment for creativity with its use of an array of spaces rich in form, light and material. The facilities of this 25,000 sqm building include a multi-purpose theatre, sound stages labs, classrooms, cafes & restaurants, numerous exhibition spaces, as well as a fully landscaped garden.

MASTER PLANNING

Institutional

Hong Kong Science Park Phase 2, Hong Kong

A dynamic and innovative masterplan integrating organic freeform commercial facilities into a well structured grid. The building image and identity is of a high-tech nature and uses double-skin technologies.

Equine

Al Shaqab Equestrian Academy, Doha, Qatar

A centre of excellence designed in the shape of a horseshoe for the performance display, training and breeding of Arabian horses. It includes Olympic standard equestrian performance arena that hosts both indoor and outdoor show-jumping and dressage events as well as a warm up arena plus other facilities including a state-of-the-art veterinary centre, equine physiotherapy centre, laboratory, a racing museum and dedicated stabling for 350 horses. It also includes a separate facility to accommodate the heard of the Emirs' show horses and a breeding centre for the Emir's horses.

Infrastructure

MTR SCL Modification of MOL Station, Hin Keng, Hong Kong

L&O has been appointed as the architectural design consultant to undertake the design through scheme design stage to work completion, responsible for the modification of all stations of Ma On Shan Line to enable 8-car train operations including works at existing elevated stations and extension of the overrun, the new above-ground Hin Keng Station, associated ventilation structures and other ancillary facilities.

SPECIAL BUILDING

HSBC Data Centre, Tseung Kwan O, Hong Kong

A New Data Centre comprising 2 storeys of blast-proof Data Centre on a raised floor plenum designed to comply with Uptime Institute Tier IV requirements and ancillary support offices.

Founded in Hong Kong in 1874, Leigh & Orange is a large, well-established, international architectural practice offering high quality design and project management services to major local and overseas clients on a wide range of building types, in both public and private sectors.

Services include architecture, interior design, urban planning and project management. The practice, which operates throughout China and the Middle East, is certified under ISO 9001, ISO 14001 and OHSAS 18001. L&O operates an integrated quality management system covering quality environment and safety.

At L&O we adopt an innovative design approach for all projects, incorporating the latest intelligent building ideas in addition to the concepts of sustainability, energy conservation and minimizing the carbon footprint.

L&O ARCHITECTS

Hong Kong Science Park

Leading-edge office, laboratories and production facilities

Hong Kong Science Park (HKSP), planned as a sprawling research and development campus, occupies a 22 ha site at Pak Shek Kok, next to Tolo Harbour. The project is being developed in three phases. Phase 1, occupies 8 ha of the site and provide 120,000 sq m of GFA was opened in June 2002.

The masterplan developed by Simon Kwan & Associates divides the site into three areas designated as campus, core and corporate zones. "Campus" buildings are designed for medium-sized companies requiring up to 5,000 sq m of space each while corporate buildings are targeted at big tenants that will occupy entire buildings. All essential facilities from restaurants to exhibition hall and serviced apartments are provided in the core buildings.

Phase 1A

In Phase 1a, the three zones are made up of ten buildings: two campus buildings, one core building and four corporate buildings, two core buildings and the car park building. The first phase of the development covers 23,230 sq m of GFA.

HKSP is the first project in Hong Kong to be partially powered by solar energy.

Photovoltaic panels have been fitted to the façade of Icon Tower and the louvres on Building 2, one of the core buildings.

There are other green features. The curved roof panels, for example, have two layers designed to stop heat from entering the buildings. Building 2 also features a double skin facade. The triple glaze has an 800 mm space between the panes, to shunt heat upwards for dissipation. Cooling towers are designed to run in a closed re-circulation system and an underground waste disposal system will collect recyclable materials and rubbish separately. Building services equipment will switch on and off automatically as occupants enter and leave their offices. Recycled pavers are used to pave the roads.

Phase 1B

Phase 1b comprises Buildings 4a, 4b and 5, featuring spacious accommodation, advanced building services and careful consideration of environmental issues. An approach in the design of the overall development is to create a park-like setting with a relaxed, interactive and pleasant working environment. Science Park buildings are designed without fences or boundary walls in order to achieve this campus setting, and the exterior design of the Phase 1 buildings is coordinated to give a coherent appearance while at the same time allow individual identities on the site.

Phase 2

Officially opened in September 2007, Phase 2 covers a total GFA of 105,000 sq m. The HK$3.75 billion development is one of the largest facilities of its kind in the Pearl River Delta. Phase 2 comprises 11 high-tech buildings and more than 32,000 sq m of world-class laboratory space. In addition to its laboratory buildings, Phase 2 boasts more than 50,000 sq m of R&D office space.

Phase 2 development can be divided into three areas. Priority has been accorded to the fast-growing biotechnology sector, underscored by two laboratory buildings designed for biotechnology research. Area A contains two energy towers (Buildings 10, 13) and two laboratory buildings (Building 11, 12). The two energy towers will provide central air-conditioning for the entire Phase 2. The two laboratory buildings will be suitable for biotechnology usage.

Area B contains two laboratory/ R&D buildings (Buildings 14, 16) and two R&D office buildings (Buildings 15, 17). The communal supporting facilities, including retail, restaurants, auditorium, business centre, clubhouse and conference facilities will be provided in this area.

Area C contains three R&D office buildings (Buildings 18, 19 and 20). Restaurant spaces will be provided at the ground floor level of the buildings facing Tolo Harbour.

World-class auditorium

The Auditorium, with 288 seats, is designed as the icon for Science Park, centrally located in the centre of Science Park to receive VIPs entering from Forum while perceiving the graceful view of Central Lake and Tolo Harbour beyond. The Conference Centre comprises the zeppelin shaped Auditorium Main Hall, the flexible Auditorium Pre-function Hall suitable for conference registrations/ displays and exhibitions, and the professionally serviced Business Centre provides variously sized venues for major conventions to small grouped meetings.

Phase 3

Science Park Phase 3 is currently under site formation work. The total site area allotted for Phase 3 covers 6.24 hectares. Nine technology buildings, one energy building and amenity facilities are to be built; boasting a total gross floor area of around 105,000 sq m embracing green features such as photovoltaic features and wind power turbine in its design, the first batch of buildings is expected to be completed in late 2013.

In April 2010, the Finance Committee of the Legislative Council approved a total sum of HK$2,683 million in the form of equity injection and loan to Hong Kong Science and Technology Parks Corporation (HKSTPC) to support the development of Hong Kong Science Park Phase 3.

As the implementation of Phase 3 proceeds, HKSTPC expects more companies involved in green industries will be attracted to Science Park. Phase 3 can accommodate an additional 150 companies and 4,000 R&D related jobs will be created.

The construction of Phase 3 is also expected to provide around 5,000 job opportunities for the local construction industry.

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TOSTEM CORPORATION Hong Kong Branch
トステム株式会社香港支店
Unit C, 16/F., 169 Electric Road, North Point, Hong Kong.
Tel: (852) 2577 6368 Fax: (852) 2577 3207 E-mail: sales@tostem.com.hk