

MEDIA RELEASE

BCA GREEN MARK AWARDS: MORE ARE RIDING THE GREEN BUILDING WAVE

- *More developers and building owners are choosing to green their buildings and are achieving higher-tiered BCA Green Mark ratings*
- *The Green Mark experience opens up opportunities for Singapore consultants to venture into overseas green building markets*
- *Exemplary developers recognise the value of BCA Green Mark and are going the extra mile in engaging tenants to go green*

Singapore, 20 May 2018 – The Building and Construction Authority (BCA) will be giving out the Green Mark Award to 420 projects this year, a significant increase from the 347 awarded last year. Nearly half of the awards conferred this year will achieve the higher-tiered BCA Green Mark Platinum and Gold^{PLUS} ratings.

2 The increasing number of Green Mark projects show that building developers and owners are recognising the value and benefits of green buildings, which include lower operating cost throughout a building's life cycle. Many building owners also recognise the importance of maintaining their buildings green and are returning for Green Mark recertification every three years. Notably, one in five of the Green Mark awards this year is given to such existing buildings.

3 Mr. Hugh Lim, BCA CEO said, "2018 is designated as the Year of Climate Action in Singapore. This year's awards demonstrate the growing community of stakeholders in the Built Environment who are indeed taking action to address climate change. BCA and industry have jointly set high green building standards and capabilities which we continue to improve year after year. Thanks to the collective efforts of industry partners such as the Singapore Green Building Council, developers and building owners are becoming more aware of the environmental, social and economic benefits of green buildings and are willing to invest in higher-tiered Green Mark buildings. We will continue to encourage greater collaboration between industry and communities in setting higher benchmarks for sustainable practices in our built environment."

Green Mark Champions: HDB, MHA and Frasers Property

4 The **Housing & Development Board (HDB)** will be conferred the **Green Mark Platinum Champion** award this year, the first public agency to receive this award. As the master planner and developer of Singapore's public housing, HDB has an overarching Sustainable Development

Framework to guide the development of new HDB towns and projects, so as to push the boundaries of design, sustainability and liveability to enhance residents' quality of life and living environment. Thus far, more than 360 HDB projects have met Green Mark standards. This is about a quarter of Singapore's green buildings by floor area, the largest single contribution by far from a developer.

5 Among HDB's 21 Green Mark projects this year is SkyResidence @ Dawson, which will be conferred the BCA Green Mark Platinum Award, the highest accolade under the BCA Green Mark scheme. Energy efficient lighting with motion sensors at the staircases, regenerative lifts, separate chutes for recyclable waste at blocks and eco-pedestals for toilets in flats are some examples of features adopted within the estate to manage energy, waste and water more efficiently. [<More details on HDB in Annex B>](#)

6 The **Ministry of Home Affairs (MHA)** and **Frasers Property Singapore**, will also join the ranks of the **BCA Green Mark Champions**. These two organisations have shown their strong commitment to environmental sustainability through the number of projects which have attained the BCA Green Mark awards.

7 To date, MHA has received 16 BCA Green Mark awards. The Sentosa Fire Station was the first fire station to attain the BCA Green Mark Platinum Award in 2015. This year, both the Woodlands and Tuas Checkpoints have achieved the Green Mark Platinum ratings through the retrofitting of their chiller plants, as well as installation of energy efficient LED lighting and solar photovoltaics (PVs). Together, these measures are expected to save around 30% and 50% of energy each year, for Woodlands and Tuas Checkpoints respectively. [<More details on MHA in Annex B>](#)

8 The other Green Mark Champion, Frasers Property, has bagged 26 Green Mark awards thus far. One of the winning projects this year is Northpoint City, which recently completed an asset enhancement initiative for its North Wing while introducing a second precinct known as the South Wing. Northpoint City employs both passive design and active solutions for its green features. Besides incorporating lush greenery, the building is designed with a high performance building envelope such as low emissivity double-glazed glass to reduce heat gain into the building. To cut down on the energy consumption, there is also a highly efficient air conditioning and lighting system, as well as sensors in the stairway. These features helped Northpoint City achieve the Green Mark Gold^{PLUS} rating. Another shopping mall under Frasers Property, Causeway Point, will retain its Green Mark Platinum status this year, after returning for their second recertification. Causeway Point was first conferred the BCA Green Mark Award in 2011. [<More details on Frasers Property in Annex B>](#)

Green Mark experience opens up opportunities for Singapore consultants overseas

9 Since the BCA Green Mark scheme was introduced in 2005, Singapore consultants and developers have consistently raised our industry's standards and built up their green building

capabilities. To date, close to 50 Singapore-based firms are involved in many of the 300 overseas Green Mark projects in 14 countries.

10 One such consultancy firm is **Building System & Diagnostics (BSD) Pte Ltd**. They are one of the pioneers in the green building arena, having started out in 2003 by providing advisory services in the areas of sustainable building design and energy optimisation solutions, amongst others. Besides Singapore, they currently have branches in Malaysia, China and Myanmar. BSD has provided consultancy services to more than 160 Green Mark projects thus far, including 46 this year. [<More details on BSD in Annex C>](#)

11 Mr Tan Phay Ping, Co-Founder and Managing Director of BSD said, “The BCA Green Mark is well sought after in the region due to its robust assessment methods and its focus on the tropics. With our strong foundation and track record in Singapore, BSD decided to venture overseas as there was growing demand for expertise in green building design in the region.”

Greening from the inside: Exemplary building owners go the extra mile in engaging tenants to go green

12 While the Green Mark Awards are conferred to exemplary building projects, BCA also recognises landlords who have gone the extra mile in getting their tenants to go green.

13 A case in point is City Square Mall - the building itself has gone through three rounds of Green Mark recertification and consistently retained its Green Mark Platinum rating. The landlord, **City Developments Limited (CDL)** recognises the value and benefits of green buildings and premises, and has been actively engaging its tenants to green their restaurants, retail outlets and offices.

14 In recognition of its efforts in getting at least 70% of City Square Mall’s tenanted area certified under BCA’s Green Mark schemes, CDL will be accorded the top-tiered **Green Mark Pearl Prestige Award** for City Square Mall this year. They will also be receiving another two Green Mark Pearl awards for Republic Plaza Tower 2 and Manulife Centre. Additionally, **CapitaLand Group** will be receiving their first Green Mark Pearl Award for Capital Tower, for their efforts in engaging their tenants to green over 50% of the building’s total tenanted area. CapitaHub, CapitaLand’s headquarters located within Capital Tower, achieved the Platinum rating under the Green Mark for Office Interior scheme in 2016.

15 With the latest batch of Green Mark projects, Singapore has ‘greened’ more than one-third of its buildings’ total gross floor area. This brings Singapore another step closer to the national target of greening 80% of all buildings by 2030.

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About BCA

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore. BCA’s mission is to shape a safe, high quality, sustainable and friendly

built environment, as these are four key elements where BCA has significant influence. In doing so, it aims to differentiate Singapore's built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, its vision is to have "a future-ready built environment for Singapore". Together with its education arm, the BCA Academy, BCA works closely with its industry partners to develop skills and expertise that help shape a future-ready built environment for Singapore. For more information, visit www.bca.gov.sg.

ABOUT THE BCA GREEN MARK CHAMPION

The **BCA Green Mark Champion Award** was launched at BCA Awards 2008. This award recognises developers with strong commitment towards corporate social responsibility and outstanding achievements in environmental sustainability. It is given to developers who have a substantial number of Green Mark buildings at Gold level and higher.

Besides demonstrating a strong commitment towards corporate social responsibility and environmental sustainability, developers must meet these criteria to qualify:

Total no. of buildings rated	BCA Green Mark Champion	BCA Green Mark Platinum Champion	
		Platinum Champion	Platinum ^{STAR} Champion
Green Mark Gold & above	At least 10	At least 50	-
Green Mark Gold^{PLUS} & above	At least 6	At least 30	-
Green Mark Platinum	At least 3	At least 15	At least 50

ABOUT THE BCA GREEN MARK PEARL AWARD

The BCA Green Mark (GM) Pearl Award is a prestigious Award that recognises the strong commitment of building owners/ landlords and tenant organisations of the same project or building, working in tandem to achieve greater environmental sustainability within the building.

The Awards, launched in 2015, aims to:

- a) Emphasise the importance of total building performance of the building/ project covering both the building core and shell and its interior tenanted spaces
- b) Accord recognition to building owners/ landlords that have made an effort and taken active steps to work with their tenants/ occupants to shape their behaviour and operational practices
- c) Encourage building owners/ landlords to ensure that the green building is operating and performing as designed, both from the outside (i.e. common areas and building services within the building owner/ landlord's control) and inside (i.e. tenanted spaces)
- d) Recognise building owners/ landlords who demonstrate environmental stewardship

Award Tiers

Held annually, the Award is given to landlords who have helped their tenants secure BCA Green Mark certification for their tenanted premises. To be eligible for this Award, one of the key requirements is to have at least 50% of the tenanted space within the building to be Green Mark-certified. The building must be at least Gold^{PLUS} or higher in Green Mark rating. There are two tiers of the Award namely:

- **Green Mark Pearl Award**
- **Green Mark Pearl Prestige Award**

The awards are given out to the following three building types:

- i) Commercial offices
- ii) Retail malls
- iii) Business park developments

Please visit our BCA website for more information on the eligibility criteria and general terms of participation https://www.bca.gov.sg/GreenMark/others/GM_Pearl_Award_2018.pdf

GREEN MARK CHAMPIONS

Green Mark Platinum Champion: Housing & Development Board

As the largest master planner and housing developer in Singapore, HDB constantly pushes the frontiers of technology and carries out extensive R&D to build sustainable and smart towns. To further HDB's efforts in sustainable development, HDB developed an overarching Sustainable Development Framework to guide the development of new HDB towns and projects, so as to push the boundaries of design, sustainability and liveability.

The framework drives sustainability in the environmental, social and economic spheres, and defines the 10 outcomes that HDB aims to achieve (i.e. reduce carbon footprint, better waste, water and electricity management, enhance greenery and biodiversity, encourage cleaner and greener transportation, build inclusive and vibrant communities, and plan for sustainable growth etc.). This is also fully aligned with the national Singapore Sustainability Blueprint. For example, in both new and existing housing estates, HDB consciously plans to incorporate lush greenery and sustainability-driven features in the estate. These environmental features such as LED lighting with motion sensor controls, centralised chutes for recyclables, energy regenerative lifts, dual bicycle racks, eco-pedestals in the bathrooms of all flats and so on, focus on effective energy, water and waste management, so as to provide a cleaner and better living environment for residents.

Furthermore, in tandem with Singapore's 'Smart Nation' vision, HDB capitalises on the latest information and communication technology to advance the 'science' behind how we plan, design and manage our towns and estates. The focus is on the development of smart applications in five key dimensions — smart planning, smart environment, smart estate, smart living and smart communities.

HDB plans with the environment in mind, designing blocks to minimise heat gain and harness air movement to provide good air circulation and reduce reliance on air-conditioning. To advance the planning of our towns, HDB uses smart technology. Using three-dimensional town modelling software and environmental simulation tools, HDB can better understand how environmental conditions interact with the layout and design of the town to derive configurations that will create a comfortable living environment for our residents. Complex decision making modelling tools help us to select the most cost effective and optimal initiatives for our towns to achieve our sustainability goals.

HDB is also piloting smart technologies to optimise the functions of key estate services, such as through the introduction of smart pneumatic waste collection systems, smart lighting and smart fans to optimise energy consumption. Within the home, HDB is augmenting the infrastructure of flats to allow smart home technologies to be incorporated seamlessly, giving residents a better quality of life.

HDB has also been building capabilities to tap on solar energy as a source of renewable energy. Solar PV systems installed on the rooftops of apartment blocks can generate clean energy for common services such as lighting, lifts and water pumps. This also contributes to the reduction of our carbon footprint in the long-run. With close to 10,000 apartment blocks located island-wide, HDB is currently the largest stakeholder and forerunner in the installation of solar PV system in Singapore. By 2020, HDB targets to have solar PV panels installed on about 5,500 of these HDB apartment blocks. This will help to generate around 265GWh of clean energy annually.

Green Mark Champion: Ministry of Home Affairs

As they pursue their mission to keep Singapore safe and secure, the Ministry of Home Affairs (MHA) and Home Team Departments are also committed to playing their part in the national effort to build a sustainable future for Singaporeans. MHA's buildings and infrastructure facilities not only serve operational requirements but are also environmentally sustainable. To date, they have achieved seven Green Mark Platinum awards, one Green Mark Gold^{PLUS} award and eight Green Mark Gold awards.

The Sentosa Fire Station was the first fire station to attain the Green Mark Platinum award in 2015. It adopted passive and active design strategies in the building design such as using cool paint to reduce solar heat gain; achieving a low ETTV value through the choice of material and glass; optimising natural ventilation; installing photovoltaic panels and a solar thermal system on the rooftop and LED lighting for the entire development.

The Selarang Park Complex and the Woodlands Division Headquarters are other examples of projects that have achieved the Green Mark Platinum award. These projects adopt a green approach in their design, taking into consideration energy and water efficiency, environmentally-friendly products and improved indoor air quality. The Selarang Park Complex was designed to achieve energy savings of up to 30% through the use of a highly efficient air-conditioning system, LED lights, a heat pump for hot water generation and passive design of the building façade to reduce heat. The Woodlands Division Headquarters includes a high efficiency chiller plant which was made possible with intelligent controls and variable speed drives.

The Tuas and Woodlands checkpoints achieved the Green Mark Platinum award in 2018 through the retrofitting of central chiller plants and introduction of other green features. Both checkpoints were retrofitted with high efficiency chiller plants under the Guaranteed Energy Savings Performance contract. The use of energy efficient LED lights was progressively introduced to replace all the existing non-LED lights. Photovoltaic panels under the HDB's SolarNova leasing scheme are also progressively being installed at both checkpoints. The checkpoints are also certified water efficient under PUB's Water Efficient Building Certification.

Moving forward, all MHA buildings will be gradually retrofitted with energy efficient LED lightings through our upcoming MHA-wide re-lamping exercise. MHA is also working with the National Environment Agency (NEA) and Housing Development Board (HDB) respectively to implement the Guaranteed Energy Saving Performance (GESp) contract to enhance the performance of chiller plants and to install solar panels across our Home Team facilities. These showcase MHA's strong and long-term commitment in contributing to Singapore's environmental sustainability.

Green Mark Champion: Frasers Property Singapore

Frasers Property Singapore has built and sold more than 18,000 homes in Singapore. It oversees a portfolio of 12 shopping malls, and 11 office and business properties.

Through the years, Frasers Property Singapore has been committed to building sustainable developments through conscientious and pioneering designs, and delivering positive value for people through the spaces we create and manage.

Every property that Frasers Property develop has internationally-recognised standards of environmental design and performance, with the aim of reshaping environmental impact, improving indoor air quality and reducing energy, water, and material usage.

They uphold clear guidelines and policies in all our properties, to help improve energy efficiency, and to reduce water consumption and waste generation in operations.

This is exemplified by Causeway Point and the upcoming Frasers Tower on Cecil Street, both recipients of the Green Mark Platinum-award. Frasers Tower is a highly anticipated Premium Grade-A development and boasts environmentally-friendly features such regenerative high-speed lifts, energy-efficient air-conditioning, and intelligent lighting systems complete with motion sensors and photocell sensors. These features are expected to achieve more than 30 percent in energy savings.

To date, more than 20 of their properties have been recognised with various Green Mark awards. Most recently, Waterway Point and Watertown received the Universal Design Mark Gold Plus award, while Seaside Residences and Northpoint City each attained the Green Mark Gold^{PLUS} award. Northpoint City strives for healthier, greener spaces with a high-efficiency chilled water plant, recycled water for toilet flushing, and efficient heating and cooling systems for cleaner air.

ABOUT BUILDING SYSTEM & DIAGNOSTICS (BSD) PTE LTD

Building System and Diagnostic Pte Ltd (BSD) evolved from research collaborations between the National University of Singapore and the Building and Construction Authority (BCA) Singapore. Since 2003, BSD has been providing specialised advisory services in the fields of sustainable building design, construction and operations, energy optimisation solutions and improving overall sustainable building performance. Over the years, BSD's consultancy teams in Singapore, Malaysia, Myanmar and China have contributed to more than 160 Green Mark projects.

Its co-founder and Managing Director, Mr Tan Phay Ping believes in the symbiotic relationship of nature and our built environment, where buildings should always be designed, built and operated with resource conservation in mind. Recognising the value of modelling tools at design stage, Phay Ping has been instrumental in promoting the use of computer simulations to optimise building designs. He was also actively involved in green-related research and development works (such as studies in cool paints, photo-catalytic coatings, cool pavements, green roofs and carbon calculator), some of which have contributed towards formulation of BCA's Green Mark criteria. His passion and continuous dedication in sustainable green buildings culminated to his conferment of the BCA Green Building Advocate in 2012.

Being one of the pioneers in Green Building industry, BSD recognises that for a greener future to naturalise, the importance of successful implementation and management of innovative sustainability concepts and technologies should not be overlooked. The BSD team led by Phay Ping and his partner Yong Ping Quen started on its path towards creating a human-centric and systems-connected built environment. Early design involvement where design advisory is heavily substantiated with evidence-based performance modelling allows the building design to evolve progressively and predictably. An outcome-based approach ensures that the team works towards developing a building that meets targets of resource efficiency and occupants' comforts. BSD has adopted these principles in achieving value for its projects and clients.

Some of their prominent developments include Mapletree Business City 2, Suntec City, Changi Airport Terminal 4, Marina Bay Sands Integrated Resort, Asia Square Towers 1 and Tower 2.