

MEDIA RELEASE

NEW GREEN MARK AWARD FOR EXISTING SCHOOLS

- Raffles Institution first to attain BCA Green Mark Gold^{Plus}, the highest so far for existing schools

1 Existing schools can be green too. The Building and Construction Authority (BCA) has worked closely with the Ministry of Education (MOE) to develop the new BCA Green Mark for Existing Schools, which places stronger emphasis on raising the awareness amongst students and educating our future generation on the importance of environmental sustainability and conservation.

2 Among the six pioneer schools, Raffles Institution is the only school that have clinched the 'Gold^{Plus}' award, the second highest Green Mark rating, under the BCA Green Mark for Existing Schools. Rulang Primary School and Paya Lebar Methodist Girls' Secondary School both achieved the BCA Green Mark Gold Award, while Stamford Primary School, Tampines North Primary School and Innova Junior College achieved the basic "Certified" level.

3 Dr John Keung, CEO of BCA said, "The BCA Green Mark scheme has come a long way in helping Singapore achieve environmental sustainability since 2005. Singapore's green building movement has evolved to a point where we now place more emphasis on users' behaviour and how they play an integral part in keeping buildings green. In this regard, we are glad to extend the BCA Green Mark scheme to existing schools and recognise those who have made an effort in environmental sustainability."

4 The Gold^{Plus} Award for Raffles Institution was the outcome of its efforts driven mainly by its students. It took the students half a year and three meetings weekly at

the initial stage to kick-start the project. Other than having energy efficient air-conditioners and lightings, solar water heaters and extensive greenery within the school premises, the school also adopted a comprehensive four-pronged approach to strive for energy efficiency and environmental friendliness. Outstanding student involvement and active engagement in environmental sustainability can be seen through its One Earth Club and community involvement projects.

5 Gold winner Rulang Primary School is among the top few schools in terms of low energy utilisation and is committed to reduce water wastage through rainwater and greywater harvesting. It also displayed leadership with its school-wide environmental programmes and by having strong partnership with overseas schools in environmental education.

6 Paya Lebar Methodist Girls' Secondary School, the other BCA Green Mark Gold winner, has green features such as real time energy management system and modular trays of greenery on the school's roof. It also has an energy education platform which allows students to participate in competitions relating to individual energy use.

7 Commenting on the efforts by the students of Raffles Institution, Dr John Keung said, "The level of participation by the students is indeed commendable. They have clearly shown exemplary leadership and drive in environmental sustainability. It is also the first time we see such strong motivation and participation by the users (the students) in driving the certification for Green Mark. We hope their story will inspire more schools to come on board this green building journey. BCA will continue to work closely with the schools to achieve the desired level of Green Mark rating possible."

8 BCA has formulated a Green Building Masterplan that sets out specific initiatives to achieve the national target to green at least 80% of the buildings in Singapore by 2030. Its current focus is on greening existing buildings. Under the second Green Building Masterplan, all old and new public buildings owned by government agencies have to attain the Green Mark Gold^{Plus} standard by 2020. To

help schools achieve the award and certification, BCA has developed the new criteria to include school policies, initiatives and facilities so that the criteria suit the operational characteristics of schools.

9 To further showcase Singapore's efforts in environmental sustainability and to offer an extensive sharing and learning platform for international green building experts and practitioners, BCA will be hosting the Singapore Green Building Week in September. The 2nd International Green Building Conference (IGBC), a biennial event, and the Build Eco Xpo Asia (BEX Asia) will be held at the Suntec Singapore International Convention & Exhibition Centre from 13 to 16 September this year.

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About the Building and Construction Authority

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore. At BCA, our mission is to shape a safe, high quality, sustainable and friendly built environment, as these are four key elements where BCA has a significant influence. In doing so, we aim to differentiate Singapore's built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, our vision is to have "the best built environment for Singapore, our distinctive global city". Together with our education hub, the BCA Academy of the Built Environment, BCA works closely with its industry partners to develop skills and expertise that help shape the best built environment for Singapore.

For more information, visit www.bca.gov.sg.

About the BCA Green Mark Scheme

The BCA Green Mark Scheme was introduced and launched in January 2005. It is a green building rating system, promoting the adoption of green building design and technologies to reduce the impacts of buildings on the environment. Under the BCA Green Mark scheme, buildings are assessed for energy and water efficiency, indoor environmental quality and environmental protection, and the adoption of other green features. Depending on the overall assessment, a building will be awarded one of the four Green Mark ratings; Green Mark certified, Gold, Gold^{Plus} or Platinum.

Annex A

FACTSHEET ON BCA GREEN MARK FOR EXISTING SCHOOLS

The BCA Green Mark for Existing Schools was designed to focus on encouraging sustainable practices and management, both in terms of the school education and culture as well as the daily operation and management of the school.

This scheme aims to spread and inculcate the ideas and teachings of environmental sustainability to our younger generation. Through the participation of the scheme, the school's staff and students will be exposed to these ideas and take on a more active role in the promotion and delivery of sustainable practices such as efficient use of energy and water.

There are five main areas of assessment, namely Energy Efficiency, Water Efficiency, Sustainable Awareness & Management, Indoor Environmental Quality and Other Green Features. A higher weightage is given for the educational syllabus and involvement of the staff and students in environmental sustainability.

Energy Efficiency

The bulk of the points will go to the energy usage intensity of the school, percentage of air conditioned areas and good passive design. A new section on education for energy use through classroom curriculums and awareness creation through posters, emails and guides have also been incorporated.

Water Efficiency

For water efficiency, the monitoring of water usage as well as the use of efficient water fittings will be the focus. A water efficiency index, in terms of litres per person per day has also been introduced to benchmark the water usage intensity of schools for comparison purposes.

Sustainable Awareness & Management

This is a unique area of assessment for the New Scheme and will have the second highest weight-age after Energy Efficiency. In this section, the involvement of staff and students in environmental programs and efforts, both internal and external will be assessed. This is the key differentiating area where schools demonstrate their commitment to environmental sustainability in terms of education as well as hands on activities at the school and community level.

Indoor Environmental Quality

Good indoor environmental quality is an essential area that has a significant impact on the overall well being of staff and students. In this section, the indoor air quality, indoor and outdoor thermal conditions, lighting level and noise level will be assessed.

Other Green Features

This is an area where schools are recognised for the use of innovative features which have positive environmental impacts.

Annex B

FACTSHEET ON BCA GREEN MARK

(as at 4 August 2011)

The BCA Green Mark scheme was launched in 2005 as a yardstick to rate the environmental sustainability of buildings in the tropics. A comprehensive suite of initiatives was subsequently introduced through BCA's first Green Building Masterplan in 2006 and the second Green Building Masterplan in 2009 to stimulate the growth of green buildings.

Over the past few years, the Green Building Masterplan and its host of initiatives are continually reviewed and enhanced towards achieving the national target of greening 80% of our buildings by 2030, and to maximise the potential for cost-effective energy savings in our built environment.

BCA Green Mark Schemes

The Green Mark scheme assesses buildings for:

- Energy Efficiency
- Water Efficiency
- Environmental Protection
- Indoor Environmental Quality
- Other Green Features and Innovation

There are four ratings under the scheme:

- Platinum
- Gold^{Plus}
- Gold
- Certified

During the first year, there were only 17 Green Mark building projects in Singapore. Now, six years down the road, and with various green policies and incentives put in place by BCA, the number of Green Mark projects has grown to more than 800. This translates to more than 23 million m² of Gross Floor Area (or 11% of the total Gross Floor Area) in Singapore.

As buildings account for about one-third of the total national electricity consumption, with existing buildings making up a large bulk of this stock, the 2nd Green Building Masterplan places special emphasis on the greening of these buildings. Besides commercial buildings, existing residential buildings, which contribute to more than half of the total Gross Floor Area in Singapore, is another area that BCA is focusing on.

Besides developing Green Mark schemes for buildings, BCA has also collaborated with various government agencies such as the National Parks Board (NParks) and the Land Transport Authority (LTA) to tailor Green Mark schemes to assess the environmental performance of areas beyond buildings, such as parks and rail transit systems. In addition,

the Green Mark has been extended to other types of developments, sub-developments as well as multi-developments within a location. The BCA Green Mark schemes now include the following:

BCA Green Mark Schemes for Buildings

- BCA Green Mark for Non-Residential Buildings (New and Existing)
- BCA Green Mark for Residential Buildings (New and Existing)
- BCA Green Mark for Landed Houses
- BCA Green Mark for Existing Schools

BCA Green Mark Scheme for Beyond Buildings

- BCA-NParks Green Mark for Existing Parks
- BCA-NParks Green Mark for New Parks
- BCA Green Mark for Office Interiors
- BCA Green Mark for Infrastructure
- BCA Green Mark for Districts
- BCA-LTA Green Mark for Rail Transit System

Green Mark Incentive Schemes

To encourage building owners to build green buildings and to retrofit their existing buildings to achieve greater energy efficiency, BCA has rolled out several incentive schemes for both new buildings and existing ones, as well as mandated minimum Green Mark Standards for Government Land Sales sites in selected strategic areas.

\$100 million Green Mark Incentive Scheme for Existing Buildings (GMIS-EB)

The \$100 million GMIS-EB provides:

- (a) A cash incentive for upgrading and retrofitting scheme that co-funds up to 35% (capped at \$1.5 million) of the costs of energy efficient equipment installed to improve the energy efficiency of existing buildings, and;
- (b) A 'health check' scheme, which is an energy audit to determine the efficiency of the air-conditioning plants. BCA will co-fund 50% of the cost for conducting this Health Check and the remaining 50% will have to be borne by the building owner.

Green Mark Gross Floor Area (GM GFA) Incentive Scheme

To encourage the private sector to develop buildings that attain higher Green Mark ratings (i.e. Green Mark Platinum or Green Mark Gold^{PLUS}), BCA and the Urban Redevelopment Authority (URA) introduced a set of Gross Floor Area (GFA) incentives in 2009. For developments attaining Green Mark Platinum or Gold^{PLUS}, URA will grant additional floor area over and above the Master Plan Gross Plot Ratio (GPR) control (up to 1% additional GFA for Gold Plus and up to 2% for Platinum).

\$5 million Green Mark Incentive Scheme – Design Prototype (GMIS-DP)

The GMIS-DP scheme is aimed at encouraging developers and building owners to strive for greater energy efficiency in buildings by placing more emphasis at the design stage. The scheme provides funding support for the engagement of Environmentally Sustainable Design (ESD) consultants to conduct collaborative design workshops and assist in simulation studies early in the project to achieve a breakthrough and optimal design for green buildings.

Higher Green Mark Standards for Government Land Sales Sites in Selected Strategic Areas

To maximise the potential for cost-effective energy savings in our built environment, projects developed on Government Land Sales (GLS) sites in Marina Bay and Downtown Core, Jurong Gateway in Jurong Lake District, Kallang Riverside and Paya Lebar Central are required to meet higher Green Mark standards as shown in the table below.

Selected Strategic Areas	Green Mark Certification for GLS Sites
Marina Bay	Green Mark Platinum
Downtown Core, including areas within the CBD located next to Marina Bay	Green Mark Gold ^{PLUS}
Jurong Lake District	
Kallang Riverside	
Paya Lebar Central	

Public Sector Taking the Lead

The public sector will be leading the way to achieve the highest Green Mark Platinum accolade for public sector buildings but more will still have to be done for us to achieve our greater goal of greening Singapore's built environment. We would require the strong collaboration of government agencies and stakeholders – to develop resource-efficient new buildings and to provide best solutions to retrofit the existing stock of buildings to improve their energy efficiency.

Building a Green Workforce

To meet the increasing demand for more green professionals and more advanced technologies in the oncoming years, we would need to develop a holistic training framework to build up our capabilities in this area. BCA Academy, the training arm of BCA, has put in place a range of training and development programmes ranging from certification courses like the Green Mark Manager Course and Green Mark Professional Course to post-graduate programmes offered in collaboration with renowned universities overseas.

Our aim is to train some 18,000 to 20,000 green specialists at the PMET level by 2020, in the development, design, construction, operation and maintenance of green buildings. These professionals will be the core competency leading Singapore towards a more sustainable future.

Why Green Buildings?

So why should we green our buildings? As part of the global community, Singapore must play its role to reduce the overall carbon footprint, particularly in our buildings. This is also in line with our national objective to achieve a 35% improvement in energy efficiency from 2005 levels.

For the private sector, there is also strong business case and a string of long term benefits for green buildings, especially if an integrated design approach is adopted from Day One. In general, the cost premium of new green building projects over the past years is about 0.3 to 1.0% for a basic Green Mark building and 2 to 8% for a Green Mark Platinum building. This premium is gradually decreasing with some economy of scale and more familiarity in the industry with green building design. This cost premium can be easily recovered through energy savings with a payback period of 2 to 8 years.

For building owners and occupants, the benefits of green buildings are clear for all to see. Energy and water efficient buildings not only translate to higher cost savings but Green Mark certified buildings also provide better indoor air quality and environments.

Gaining International Recognition

In a short span of five years, BCA has put in place two Green Building Masterplans consisting of policy levers, initiatives and incentives to drive Singapore's green building movement and have developed South-East Asia's first Zero Energy Building, which was retrofitted from an existing building.

Our greening efforts and policies are not only known locally but are also lauded overseas. In 2010, BCA became the first government agency outside North America to be conferred the prestigious Aspen Institute's Energy and Environment Award (Government) for our comprehensive policies and programmes in steering the industry towards the development

of green buildings and sustainable construction in Singapore. Earlier this year, in a study conducted by a private consultancy firm on Asia-Pacific cities, Singapore was also ranked first in green building policies, before advanced cities like Tokyo, Sydney and Seoul.

BCA's Green Mark scheme has also extended its reach beyond Singapore and is gaining popularity in over 10 countries within the region. To date, more than 120 projects in countries like China, Malaysia, Vietnam, Brunei, India, Thailand, Middle East, Indonesia. The Philippines and Africa have applied for the Green Mark certification.

More information on the Green Mark incentive schemes is available at
http://www.bca.gov.sg/GreenMark/green_mark_buildings.html.

More on the 2nd Green Building Masterplan is available at
<http://www.bca.gov.sg/GreenMark/others/gbmp2.pdf>