GREEN EVOLUTION: FROM BUILDINGS TO CITY
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We shape a safe, high quality, sustainable and friendly built environment.
KEYNOTE SPEECH BY DR JOHN KEUNG, CHIEF EXECUTIVE OFFICER, BUILDING AND CONSTRUCTION AUTHORITY AT THE SINGAPORE INSTITUTE OF PLANNERS’ ONE-DAY CONFERENCE CUM BOOK LAUNCH, FRIDAY, 8 JULY 2011, JTC SUMMIT, CONFERENCE THEATRETTE

GREEN EVOLUTION: FROM BUILDING TO CITY

Introduction

Distinguished guests

Ladies and Gentlemen

A very good morning.

I am delighted to join you today at this conference centred on eco-planning and sustainability.

I would like to start by thanking the Singapore Institute of Planners (SIP) for inviting me to address you today and share on a topic that is close to my heart, an advocacy that I began as a planner in my younger days.

I would also like to congratulate the Institute for the launch of a book very relevant in today’s changing environmental context.

As planners, we have seen a great deal of changes to our urban landscape and its transition to sustainability in the recent decades. The current global concern over climate change has created greater impetus for us, professionals responsible for the built environment to respond to the pressure to make urban development more sustainable.

For me, it is amazing to be part of the evolution of the green agenda and witness how this has advanced from talking about the single building to now encompassing the wider urban landscape and the city as a whole.

The Green Evolution: From Building to City in Singapore’s Context

It is without a doubt that eco city planning and sustainable development are inextricably linked. The built environment is responsible for much of the world’s consumption of raw materials, primary energy and emitter of carbon emissions.
In Singapore, this is no different! A key component in our sustainable development plan is the target set by the Inter-Ministerial Committee on Sustainable Development (IMCSD) which aims to have 80% of all buildings in Singapore, both new and old, achieve at least the basic Green Mark Certification by 2030.

The BCA Green Mark Scheme was launched in 2005 as a bold initiative to move our industry towards environmentally-friendly buildings. It is one of the first green building rating systems in the world designed for the tropical climate. The scheme helps strengthen Singapore’s position as a global city committed to balancing its development with care for the environment. Its influence was aimed initially at the singular ‘green building’ level.

It was no doubt a good start but it is not enough. Sustainability should be seen from a holistic point of view, building green is the thread linking the entire development cycle from planning, design, to demolition and reuse. A green building is not green if it is located away from public amenity; it is not green if it cannot be adaptable to future changes or uses, or its materials not reusable at the end of the building’s life.

The Green Mark scheme looks into Energy Efficiency, Water Conservation, Environmental Protection and Indoor Environmental Quality. The scheme also recognises and supports attempts made within the land parcel to improve its environmental performance. As a result, a Green Mark building not only benefits the building occupants and users at the ‘building’ level but also has a positive, green impact on the environment.

The BCA Green Mark scheme now boasts over 755 local building projects with a gross floor area of 23 million square metres and 123 overseas projects with a gross floor area of 15 million square metres.

This is no mean feat in the short span of just 6 years. With this rapid uptake and dramatic improvement in the industries’ green building capabilities, we have managed to develop a common language in the form of the BCA Green Mark schemes that breaks down professional barriers, allowing developers, architects, planners, consultants, contractors, facilities managers and the public to understand and be involved in the green building movement.

**BCA Green Mark – More than a rating tool**

But is the BCA Green Mark scheme just an environmental yardstick to rate buildings, very much like the other rating tools?

What sets BCA Green Mark apart from them?
To me, the answer is straight-forward. The BCA Green Mark scheme is not just a singular and common green metric for measuring environmental sustainability of buildings in the Tropics. It is the linchpin upon which we build an entire policy framework to accelerate the pace of our green building movement as embodied in our Green Building Masterplan.

With this masterplan we wish to share with the industry and other policy makers around the world our approach in promoting environmental sustainability.

This is a holistic and balanced approach, integrating legislative requirements, capability building and incentives to drive a successful green building movement.

Within this policy framework, the Government has committed to walking the talk and using Green Mark as a push for the Government to take the lead to show the industry what can be done. We have mandated our existing public sector buildings obtain Green Mark Gold Plus certification by 2020, and our New public sector Buildings obtain Green Mark Platinum certification.

We further showcased the potential of the existing building stock by retrofitting one of our BCA Academy buildings into a global showcase; Southeast Asia’s first zero energy refurbished building. This is not only an exemplar project but a living laboratory to continue to seek out and develop green building technology suitable for the tropics.

About a year ago, BCA became the first government agency outside North America to be conferred the prestigious Aspen Institute’s Energy and Environment Award (Government) for its comprehensive policies and programmes in steering the industry towards the development of green buildings and sustainable construction in Singapore. Recognition as such serves as an affirmation that we are moving in the right direction in shaping a sustainable built environment in Singapore.

**Sustainable High-Quality Districts – A concentration of green buildings**

To do this and to make Singapore a model green city, BCA has moved beyond Green Mark buildings onto Green Mark districts with a concentration of exemplary green buildings. Sustainable urban districts that we can look forward to include the Marina Bay and Downtown Core, Jurong Gateway in Jurong Lake District (Pictured), Kallang Riverside and Paya Lebar Central. With the higher Green Mark standards set as land sales conditions for all new developments in these new strategic growth areas, it will help accelerate the adoption of environmentally-friendly green building technologies and building design practices. I am glad that our planners and URA have joined us in creating a green city complementing green buildings with green infrastructure.
Let me make this clear. Green buildings are simply not sustainable on their own! A sustainable built environment demands that green buildings must be developed with green infrastructure and amenities such as schools, libraries, recreation facilities, theatres, restaurants and retail. I firmly believe that Singapore is ready and is starting to move towards this green paradigm, of green districts, parks and other facilities to enable us to achieve social, economic and environmental sustainability.

To this end, BCA has launched new assessment frameworks beyond buildings in the last two years.

The BCA-NParks Green Mark for Parks scheme, for example signifies the first inter-agency Green Mark collaboration which aims to inspire and promote environmental sustainability in Park, and to raise stakeholders’ awareness on the importance of examining social, economic and environmental sustainability in civic landscape areas. We have continued this theme with the BCA-LTA Green Mark for Rapid Transit Systems in which we have assessed and awarded Green Mark Gold to the MRT Circle Line.

The Green Mark for Districts Award is an initiative by BCA launched in 2009 to promote and recognise environmentally-friendly and sustainable practices in the planning and implementation of district developments. It seeks to achieve a holistic and integrated approach in the planning and design of multiple buildings, neighbourhoods, and infrastructure within the district from the masterplanning stage.

Green Mark for Districts helps individual buildings leverage on a more sustainable district platform, leading to an improved environmental performance and cost effectiveness. Green Mark for Districts projects show a 10%-40% of energy savings and more than 40% of water savings. Green Mark for Districts has been used to assess residential districts, business parks and entertainment areas within Singapore and overseas.

Our Criteria has gained the interest of overseas masterplanners due to its flexible yet robust assessment methodology. We have assessed an office park in Indonesia in which the feedback from the architects was that the journey through the assessment aided the client in developing a keen interest in sustainable practices which they will continue to adapt and apply to their future developments. This includes supporting the development of their local green building rating system.
We continue to develop and evolve the District criteria, the scheme pushes beyond energy efficiency, reductions in waste, and carbon emissions, to also look at biodiversity, social amenity, green transport, self sufficiency, conservation and restoration, as well as community consultation. We are working with the various agencies to incorporate the whole of government approach leveraging on such initiatives as the Singapore Index, ABC waters, as well as our various involvements with the URA and HDB, including the planning of Punggol Eco-Town.

We envisage this scheme to be one of the tools that developers, planners, architects and those involved in the development of a district, precinct or neighbourhood can use for measuring sustainability at master planning level from Day 1, to lay the foundation of many passive design and district level green features.

The updated version of our Green Mark for Districts is set to be launched later this year.

**Sino-Singapore Tianjin Eco-city – A Model for Sustainable Development**

Moving beyond Singapore shores, the Sino-Singapore Tianjin Eco-city, the second flagship project between Singapore and China, is another model for sustainable development.

As the second flagship bilateral project between the China and Singapore governments after the Suzhou Industrial Park, the development of the Eco-city aims to demonstrate the determination of both countries in tackling global climate change, strengthening environmental protection, conserving resource and energy, and building a harmonious society.

The approach adopted in developing this eco-city is a pragmatic one with the view of scalability and replicability for other eco-cities.

BCA has been actively involved in the Tianjin Eco-city project. In particular, in setting up the green building standard and management system for the eco-city to ensure that all the buildings developed will be green buildings. Through our collaborations with the Chinese government agencies and industry leaders, we have successfully developed the the Green Building Evaluation Standard (GBES) based on the fundamentals of the BCA Green Mark scheme, as well as our international green building research which is now absorbed as part of the mandatory building code in Tianjin Eco-city. We are also developing a Central Business District (CBD) version of our Green Mark for Districts which is aimed to be utilised within Tianjin.
Guidelines governing the operations and maintenance of green buildings are also being developed to ensure that green buildings in the Eco-city function optimally for as long as possible.

We have also jointly developed and launched the green building training programme with the Tianjin Institute of Urban Construction especially for officials and professionals involved in the eco-city project.

That's not all. We are playing a key role in developing a low carbon emission, green commercial building within the Eco-Business Park in the Tianjin Eco-City. Called the "Low Carbon Living Lab", the building aims to be a low carbon building and to achieve the Tianjin Eco-City Green Building Evaluation Standard’s prestigious Platinum rating. If successful, this can be replicated for other buildings in the Eco-Business Park.

**Role of Planners in the Changing Environmental Context**

**Urban Challenges in Singapore**

Given all these exciting green developments, what is the role of planners in Singapore today? No doubt, our planning achievement in the last 5 decades has been the envy of many in both the developed and the developing world. As planners, we should be glad that we have in the short span of a few decades transformed Singapore from a Third World slum into a First World metropolis.

Planners of today are faced with different challenges, the planning system is evolving, and our environment is changing. We need to respond to the many challenges posed by climate change.

There is also a need to reduce the city’s ecological footprint caused by our car-dependence and waste production. We also have a duty as a member of the global community to find ways to mitigate climate change to secure our long term future. This is a huge responsibility for planners. But what should we do next?

**Sustainable Urban Development as Engines for Growth**

I must admit I do not have all the answers. Nonetheless, there are at least two things we must do more. First, we, as planners and architects must critically evaluate, revisit and review our current planning guidelines and policies, to ensure that besides achieving social and economic objectives, we must place environmental sustainability as the key driver behind them.
We must critically ask ourselves whether our current planning guidelines in zoning and plot ratio control, for example, unintentionally hinder sustainable development.

Second, as Planners, are we conscious of our duty to ensure future layouts and land parcellation plans in our towns and estate make full use of our natural elements to facilitate downstream green building design? Why are we not using the Green Mark for Districts scheme as the starting point for planning our towns and districts? We must all question, are we doing enough? How can we do it better to enable the development of green districts and green buildings while optimising the use of land?

I am glad to note that there are some moves in this direction. URA, for example, is conducting workshops, and various studies with the private sector and academia to identify environmentally sustainable urban strategies that can be applied within our tropical climate.

I am also very encouraged by URA, HDB and JTC’s new efforts to move in a big way to make use of the Green District concept to plan and design their new development areas. I would like to urge all planners and the SIP to give these efforts the strongest possible support and participate actively in these planning reviews and studies.

Looking ahead, I believe there are immense opportunities for Singapore planners and architects not just in the local scene but in the region and abroad to look at rejuvenations, retrofits and redevelopments of towns and cities based on sustainability principles to spur social development and economic growth.

There are also tremendous growth opportunities in green buildings and districts in the region for us to contribute and to take a leadership position in their sustainable development.

The upcoming Singapore Green Building Week in September this year organised by the BCA has a whole host of green building events involving government officials, industry experts and decision-makers from the APEC, ASEAN, and the World GBC and many other related organisations, This is a major national and international event and an excellent platform for our planners and architects to explore opportunities in the region.
Conclusion

Finally, I wish to take this opportunity to applaud the efforts of the Singapore Institute of Planners (SIP) for its work to lessen the city’s impact on climate change through sustainable urban planning. We have a long journey ahead of us, but we are taking the right steps.

With that, I look forward to our bright and green future as we advance together towards not just an economically, socially, and ecologically vibrant and sustainable Singapore but also a leadership position in the sustainable development of our region.

Thank you.