

Pillars

WE SHAPE A **SAFE**, **HIGH QUALITY**, **SUSTAINABLE** AND **FRIENDLY** BUILT ENVIRONMENT | ISSUE 03/MAY–JUNE 2013

CELEBRATING ACHIEVEMENTS BY THE INDUSTRY



Pillars

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COMING TOGETHER FOR A BETTER BUILT ENVIRONMENT

Dear Readers,

I recently came across this story:

An anthropologist was playing a game with some African tribal children. He put a basket full of fruit near a tree, and told the children that whoever came in first in a race to the tree would win the fruit. When he told them to run, they took each other's hands and ran together. Then, they sat together enjoying their treats. When the anthropologist asked them why they had run like that, instead of competing to have one of them win all the fruits, they said, "UBUNTU, how can one of us be happy if all the others are sad?" (UBUNTU is a concept in South African Xhosa culture that means, "I am because we are".)

This story illustrates an important philosophy that I hope our built environment sector will adopt as we continue to co-create safe, high quality, sustainable, and friendly spaces for everyone in Singapore.

The industry is in a truly unique position to make a positive difference to living environments in our communities. In May, we celebrate achievements made by outstanding built environment professionals who have contributed towards the built environment. We acknowledge and recognise their efforts at the 2013 BCA Awards, a significant annual event for the built environment industry.

With a total of 293 awards given out this year to eminent projects and companies, the 2013 BCA Awards also introduced new categories, which you can read a short preview of in this issue.

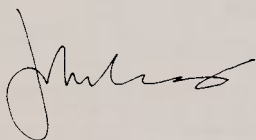
We also commemorate a 25th anniversary in construction excellence this year, a quarter-century since the inception of CONQUAS[®], a construction quality assessment system, which has come a long way to become an industry benchmark synonymous with quality and workmanship. This issue covers our journey in achieving high construction quality in our built environment both locally and abroad. Our latest edition of CONQUAS[®] clearly demonstrates that high construction quality and productivity can go hand-in-hand.

The last couple of months have seen us doubling our efforts to reach out to and educate the public on the concept of Universal Design (UD) and its applications in everyday life. Indeed, a world-class built environment is one that is enabling and inclusive, allowing everyone including the young, elderly, and persons with special needs to enjoy an active and independent lifestyle.

The "Unify to UDify" campaign has been launched on our social media platforms. A series of road shows has also been set up at major shopping areas and residential hubs in Singapore to allow the public to pledge their support for the movement.

In our next issue, look out for the story of how BCA and SCAL members came together to renovate the premises of a non-profit welfare organisation — another good example of our collective efforts to make a positive difference to our community.

Let us continue to show the region and the world what the built environment sector can do together! **P**



Dr John Keung
Chief Executive Officer



CELEBRATING ACHIEVEMENTS BY THE INDUSTRY

THE FILM INDUSTRY HAS THE OSCARS; THE MUSIC INDUSTRY, THE GRAMMIES. FOR THE BUILT ENVIRONMENT SECTOR IN SINGAPORE, THE MONTH OF MAY IS MARKED BY A SIGNIFICANT AND IMPORTANT EVENT FOR INDUSTRY PROFESSIONALS, CONSTRUCTION FIRMS, AND BCA — THE ANNUAL BCA AWARDS



Left | The new UD Mark now rewards builders for inclusive designs.

Bottom | Universal Design is the way to go for future construction projects.

The BCA Awards is a prestigious annual event that accords accolades to firms and professionals who have worked tirelessly to create an excellent built environment.

The BCA Awards 2013 would be all the more memorable and red letter, as we commemorate 25 years of construction excellence. Since the inception of CONQUAS® in 1989, it has seen swift adoption as our national yardstick for evaluating the construction quality of new buildings (read page 5 for more on CONQUAS®).

NEW AWARDS FOR A NEW YEAR

This year's BCA Awards welcomes new award categories that further highlight BCA's key areas of focus for the next few years.

The first of these is the Universal Design (UD) Mark Award. Launched in October 2012, the UD initiative hopes to raise the bar for UD adoption, and raise greater public awareness of user-friendly buildings. A total of 26 certifications for both built and ongoing developments was awarded this year.

The Construction Productivity Awards also saw two new categories introduced this year, namely "Projects" and "Advocates".

The Advocates category recognises outstanding developers, consultants, and builders for their achievements in improving productivity at the firm level. It is a combination of the previous "CPA – Best Practices and Innovations" and the "CPA – VAP", to give more focus and recognition to the contributions of the various stakeholders.



Developers, consultants, and builders are awarded for their adoption of design, construction methods, processes, and technologies that have had significant productivity impact on their projects.

On the other hand, the Projects category recognises project teams that have demonstrated productivity in their construction development projects from design to the end of construction.

The award aims to spur designers to come up with labour-efficient designs, encourage the adoption of labour-efficient construction methods, and credit project teams for their excellent project planning and coordination in enhancing productivity.

In this issue of Pillars, we bring you a preview of some of the winners in these new categories. Look out for our full coverage of the BCA Awards 2013 that will follow in the July issue of Pillars!

UD MARK AWARDS TOP WINNERS

Reflections at Keppel Bay — Platinum Award

Residential (New) Category

Owner/Developer Keppel Bay Pte Ltd

Architect DCA Architects Pte Ltd

Reflections at Keppel Bay, a private residential development, stands out not only for its iconic architectural presence, but for the outstanding execution of its user-friendly provisions. The development boasts a comfortable and relaxing living environment that enables the enjoyment of all through the integration of lush landscaping, rest areas, and leisure pools as well as elder and family-friendly provisions.

This spirit of continual improvement to further enhance user-friendliness, even after receiving the BCA UD Awards 2012 (Silver), is commendable, and is also exemplified in execution.

United World College of South East Asia (East Campus) — Platinum Award

Non-Residential (New) Category

Owner/Developer JTC Corporation

Architect P&T Consultants Pte Ltd

The United World College of South East Asia (UWCSEA) is a second-time recipient of the highest accolade, in recognition of its strong commitment to put user needs at the heart of its corporate philosophy.

The former BCA UD Awards 2012 Gold winner continued to enhance the user-friendliness of its integrated campus, which houses students between ages four to 18. Its philosophy of creating a supportive and inclusive learning environment shines through in its user-centric provisions and in its execution of details. Safety, accessibility, and way-finding are among UWCSEA's top priorities in its creation of a relaxing and conducive environment for both students and staff alike.

Changi Airport Terminal 1 — Gold^{Plus} Award

Non-Residential (Refurbished) Category

Owner/Developer Changi Airport Group (S) Pte Ltd

Architect Architects 61 Pte Ltd

Following an extensive refurbishment, Changi Airport Terminal 1 now features not only a rejuvenated look but an optimisation of pedestrian flow at key areas to enhance the airport experience for both travellers and visitors.

Recognising the diverse user groups the Terminal receives and the evolving needs of today's travellers, Changi Airport Group has introduced greater user-friendliness and facilities that are relevant to their needs.



THE CPA – ADVOCATES AWARD TOP WINNERS

DEVELOPER CATEGORY

City Developments Limited — Platinum Award Winner

City Developments Limited (CDL) is a leading developer and long-standing advocate for sustainability and high construction productivity in Singapore. Their recently completed developments include W Hotel, Quayside Isle, and Volari. CDL has been working with their consultants and builders to adopt sustainable, easy, and safe-to-build best practices in their projects to raise construction productivity.

Key Productivity Initiatives:

- The adoption of pre-fabricated bathroom units (PBU) in CDL's residential developments is one of their key productivity initiatives. The use of PBU has improved construction productivity by about 77%, and reduced construction waste while improving water tightness of the bathrooms. To date, CDL has installed close to 8,000 PBU in their residential developments.
- CDL has pioneered the adoption of drywalls since 2000. Drywalls are easier and less labour-intensive to install, and provide a better quality finish compared to traditional brick walls. To date, CDL has constructed and handed over more than 7,000 residential units with drywalls.
- Since 2011, CDL has pioneered the adoption of the Building Information Model (BIM) in the planning and construction phases of their projects. The use of BIM helps facilitate better teamwork between consultants and builders, improving the overall productivity, safety, and quality of projects. Quayside Isle was the first CDL project designed using BIM. Since then, all new projects by CDL adopt BIM at both design and construction phases.
- CDL has also inculcated productive construction methods in their builders. These include the “No External Scaffold” and “No Struts to Basement” methods, which are more labour efficient, easier to construct, and provide a better quality finish.

CONSULTANT CATEGORY

ADDP Architects LLP — Merit Award Winner

ADDP Architects advocates buildable design and constructability that contribute to construction efficiency and productivity in their private and public residential projects. Their recently completed projects, Parc Emily, Wilkie Studio, and Cliveden @ Grange, won the “BCA Construction Productivity — Projects” Platinum awards in 2011 and 2012.

Key Productivity Initiatives:

- ADDP Architects is equipped with experience and knowledge in designing buildable systems such as Pre-fabricated Bathroom Units (PBU) and drywalls in their residential projects. The buildable design score for projects like Parc Emily, Wilkie Studio, and Cliveden @ Grange were 88, 84, and 86 respectively.
- The firm also actively shares knowledge with the industry through seminars, and contributes articles to different publications.

BUILDER (OPEN) CATEGORY

Chip Eng Seng Contractors (1988) Pte Ltd — Gold Award Winner

Chip Eng Seng Contractors (1988) Pte Ltd places strong emphasis on sound project planning and harnesses productive construction methods and technology to improve productivity. The constructability score for their recently completed projects were above the minimum legislated score of 50.

Key Productivity Initiatives:

- Chip Eng Seng Contractors advocates the use of precast concrete components extensively in their projects. This minimises the in-situ structural works on-site and reduces reliance on foreign workers. The firm has their own precast yards to produce a wide range of precast components. The first precast yard was set up in Tampines in 2003, while a second yard was set up in Senai, Malaysia in 2010.
- Since 2007, the firm has adopted the use of system formwork including table forms, jump forms, and aluminium forms in their projects, to improve productivity.



Top | Precast materials allow for faster construction and increase in productivity.

BUILDER (PRIME) CATEGORY

DLE M&E Pte Ltd — Merit Award Winner

DLE M&E Pte Ltd is a one-stop, integrated contractor for M&E services. The firm is committed to improving productivity through detailed site planning, optimising the use of mechanisation, and a strong focus on training to upgrade the skills of their workers.

Key Productivity Initiatives:

- With co-funding from the Mechanisation Credit (MechC) Scheme, DLE purchased scissor lifts to improve the efficiency of electrical conduit installation. This method has since replaced the traditional method of erecting scaffolds, which is highly labour-intensive.
- DLE also places great emphasis on training and skills-upgrading. The firm has successfully utilised the Construction Productivity & Capability Fund (CPCF) to subsidise training costs.



ACHIEVING QUALITY EXCELLENCE IN OUR BUILT ENVIRONMENT

Since the implementation of BCA's CONQUAS® (Construction Quality Assessment System) 25 years ago, Singapore has progressed to become a distinctive city with a reputation for high quality buildings.

CONQUAS®, which was launched in 1989, has helped to raise the quality of the built environment. It provided the industry with a unique assessment framework to measure and benchmark construction quality.

CONQUAS® is widely recognised by the industry as the de-facto national yardstick for evaluating the construction quality of new buildings. Since its inception, more than 3,250 new construction projects with a cumulative contract value of over \$134 billion have been assessed using this quality assessment system. Currently, 95% of private residential and commercial buildings in Singapore subscribe to it. The system is subject to regular reviews and fine-tuning to keep pace with changing technology, standards, and user expectations. Following several revisions, the CONQUAS® 8th edition was launched in late 2012.

The quality of the built environment has improved steadily and industry average CONQUAS® scores have risen significantly from 67.9 points in 1989 to 86.6 points in 2012.

CONQUAS® also has its fair share of overseas admirers, who appreciate the value the assessment provides in raising the quality and marketability of their projects. It is now popularly adopted overseas, with close to 350 building projects assessed using CONQUAS® in countries such as Malaysia, China, Thailand, Australia, and India.

In 2002, BCA took CONQUAS® a step further, and introduced the Quality Mark for Good Workmanship Scheme (QM). This scheme, which targets residential developments, helps developers deliver high quality homes following CONQUAS® standards. While CONQUAS® is based on a sampling approach, QM adopts a 100% check of each unit's finish quality. A typical unit undergoes around 480 checks during the assessment on the internal finishing, and all the bathrooms in each unit are subject to a water-tightness test to ensure zero leakage. This provides greater assurance of workmanship quality to home buyers. Findings show that, in general, QM projects experience 40% less defects per unit as compared to non-QM projects. Since its launch, the scheme has proven to be popular, with more than 60,000 private sector residential units committed to or assessed under QM. In 2012, 60% of all private residential units launched for sale subscribed to QM.

Many outstanding developers and builders have walked this quality journey with us. BCA is launching the BCA Quality Excellence Awards to recognise developers for their commitment to delivering high quality residential developments, and builders for their support in delivering projects committed to by developers. Our quality journey would not have come this far without their partnership, support, and commitment. As we celebrate the achievements of these awardees, we hope this will encourage many others to follow, and propel the industry to new heights of quality excellence. **P**

A “UDIFIED” RESPONSE

IN TIME TO COME YOU MIGHT JUST FIND YOUR ENTIRE NEIGHBOURHOOD TRANSFORMED INTO AN INCLUSIVE LIVING ENVIRONMENT, IF THE RESIDENTS OF BCA’S YOODEE TOWN HAVE ANY SAY IN THE MATTER



Left | There were game segments where the public can play and walk away with goodies.

Bottom | The young must be in the driving seat for change.



Dubbed “YooDee Town — The Universe of Universal Design”, this public outreach event was held at Marina Square between 25 and 28 April. It is part of an ongoing campaign by BCA to introduce and encourage the adoption of Universal Design (UD) values with regards to our built environment.

Officially opened by Acting Minister for Manpower and Senior Minister of State for National Development Mr Tan Chuan-Jin, it is the first of such exhibitions organised by the construction regulatory body.

UD entails the design and building of homes and work areas that allow the existence of facilities and features that cater to people of all ages and abilities.

Examples of UD can be as simple as the inclusion of slopes along walkways to accommodate wheelchairs, or more handholds and railings for the elderly to hold on to as they walk.

The exhibition allowed the public to see how their homes, parks, toilets, and lifts, among other facilities, can be made conducive for the young and old, families with infants, and people with different abilities as well as needs.

Colourful exhibition panels featuring UD facts and trivia also featured the mascots Dotz and Hexa, two cute residents of YooDee Town, created to appeal to the young and encourage them to participate.

There were also displays of UD features that can be incorporated in parks, shopping malls, car parks, and lifts to make them more accessible and convenient for families with infants. The main aim of YooDee Town is to spread the message, “Universal Design is for everyone”, island-wide over the next two years.

Besides allowing the public an up-close-and-personal experience with UD, YooDee Town is also a platform for BCA’s other social UD campaign — “Unify to UDify”. The campaign complements traditional mediums of public outreach such as road shows and advertisements with social media such as Facebook, harnessing it as a vehicle to promote UD awareness among Singaporeans.

The objective of the campaign is to encourage Singaporeans to pledge their support for UD, and create a demand in the industry so that more will consider Universal Design in our public spaces, buildings, and homes.



Top | Presenting interesting UD facts and efforts to the public.


Left | 'Grats, you are our next UD ambassador!

Bottom | Encouraging children to get into the UD movement!



You can now log on to BCA's UD page on Facebook (www.fb.com/UnifyToUDify), and learn about what you can do to achieve a friendlier and more inclusive built environment. Visitors can find out more about public spaces with UD features in Singapore, and are encouraged to pledge their support for UD via a Facebook application.

BCA's Chief Executive Officer Dr John Keung says: "Buildings and public spaces are important elements of an inclusive and friendly built environment, BCA aims to bring Universal Design closer to everyone — home-dwellers as well as industry professionals and practitioners. It drives our nation's efforts in building a City for All Ages, and encourages the development of a friendly and inclusive living environment for people of all ages and with different needs."

Watch out for YooDee Town, coming to a space near you from July 2013! 

"BCA aims to bring Universal Design closer to everyone — home-dwellers as well as industry professionals and practitioners. It drives our nation's efforts in building a City for All Ages, and encourages the development of a friendly and inclusive living environment for people of all ages and with different needs."

DR JOHN KEUNG, CEO OF BCA



SPREADING THE GREEN MESSAGE AT THE HEART OF ORCHARD

FOR ONE WEEKEND IN MARCH, SHOPPERS AT ION ORCHARD WERE TREATED TO A SHOWCASE OF GREEN AND SUSTAINABLE LIVING PRACTICES AND ENVIRONMENTS IN SINGAPORE

The Green Building Exhibition 2013 took place at the central basement plaza of the popular shopping joint from 22–24 March. It was an outreach effort by BCA to engage the public on topics such as green buildings and careers.

Set displays on how to create green living environments in homes and offices provided inspiration and encouraged people to adopt a green lifestyle through changes to their buying habits or product preferences.

The exhibition also touched on Singapore’s 2nd Green Building Masterplan and the Green Mark Scheme, both of which further cement BCA’s commitment to a greener and more sustainable built environment in Singapore.

Senior Minister of State for Law and Education, Ms Indranee Rajah, graced the event and gave out awards to the winning schools for their participation in the inaugural Greenovate Challenge (read more about it in the March issue of Pillars). **P**



Top | Do you know that even using the right types of paint can help save the environment?

Left | Offices are also a prime location to get into the green movement!

Right | Tips abound on making your home into a green living environment!



MINISTER KHAW: CRANE OPERATORS ARE CRITICAL TO CONSTRUCTION PRODUCTIVITY

CRANE OPERATION IS A VALUABLE SKILL IN THE CONSTRUCTION SECTOR, AND GOOD CRANE OPERATORS ARE HARD TO COME BY. THE ROLE IS INTEGRAL TO SINGAPORE RAISING WORKSITE PRODUCTIVITY THROUGH MECHANISATION, AND LOOKS SET TO BECOME A PROFESSION IN DEMAND. READ WHAT MINISTER OF NATIONAL DEVELOPMENT MR KHAW BOON WAN HAD TO SAY ABOUT THE GROWING INTEREST IN THIS TRADE



Top Left | Mr Imran, a licensed tower crane operator, at his new commercial project in Woodlands.

Top Right | A Tower Crane (saddle jib) hoisting precast concrete panels.

We need to up construction productivity urgently.

One key strategy is to promote standardisation and prefabrication. In prefab construction, building components are made in the factories and transported to construction sites where they are hoisted by cranes for assembly. To support this productivity strategy, we need many crane operators on-site. For example, for each HDB block under construction, the contractor needs to deploy one crane on the ground. This level of deployment is not excessive, as the percentage of precast materials used in the construction of BTO flats can be as high as 70%.

Some Singaporeans are joining this highly mechanised and specialised trade as crane operators. Mr Imran, in his late 20s, is one such licensed tower crane operator. He joined Cranetec Pte Ltd last year. We need more Singaporeans to join this highly specialised and rewarding career.

Based on a 2012 BCA survey, the gross monthly salary (including overtime pay and allowance) of a relatively new crane operator can reach \$4,000. Those with more

years of experience can take home a monthly gross pay of \$6,000 to \$7,000.

Today, there are about 3,600 active crane operators in the built environment sector, operating various kinds of cranes: Crawler, Mobile, and Tower cranes. Half of these operators are Singaporeans. But we need more, a few hundreds more, as we ramp up our BTO programme.

To attract more locals to the trade, BCA recently launched a one-year Crane Apprenticeship Programme (CAP). It comes with an attractive remuneration package and upgrading opportunities. The crane apprentice will undergo a 12-day crane operation training and skill certification at the BCA Academy before embarking on the CAP, once he has obtained his crane licence from the Ministry of Manpower.

CAP is receiving positive response, with its first batch of six CAP apprentices starting the programme this month.

One of them is Mr Steven Kok, a 28-year-old father of three young children. He is looking to hone a skill that would provide him with good job prospects and attractive remuneration. He will soon be starting work with his employer, Leo Ong Construction Pte Ltd. Once he has gained sufficient experience, he intends to upgrade his skills and learn to operate other types of cranes.

We need more Imrans and Stevens so as to reduce our reliance on foreign crane operators. This is a good job with attractive remuneration. **P**

Adapted from Minister Khaw's blog entry at <http://mndsingapore.wordpress.com/2013/05/02/crane-operators-are-critical-to-construction-productivity/>



Left | Crane operators undergoing training on a crawler crane (left) and mobile crane (right) at the BCA Academy.

REACHING FOR GREATER HEIGHTS OF PRODUCTIVITY AND EXCELLENCE

THE BCA WORK PLAN SEMINAR 2013 WAS HELD ON 27 MARCH 2013 AT THE BCA ACADEMY. MORE THAN 220 PARTICIPANTS FROM THE BUILT ENVIRONMENT SECTOR WERE IN ATTENDANCE



Top I CEO Dr John Keung chairing an interactive discussion panel.

In the opening address, Mr Quek See Tiat, Chairman, BCA, highlighted the built environment sector's achievements, and urged the industry to leverage on technology, productive methods of construction, and efficient work processes to achieve a quantum leap in productivity.


This was followed by a presentation by Mr Neo Choon Keong, Group Director of Manpower and Strategic Policy Group, BCA. He presented an

overview of BCA's 2013 work plans, and how BCA would continue to lead the built environment sector through its various initiatives to deliver a Built Environment that is of high safety, quality, sustainability and user-friendliness in a productive manner.

BCA also invited speakers from the industry to relate how their firms work with BCA to achieve higher standards in their building projects. Mr Tang Kok Thye, Associate Partner of ADDP



Architects LLP and Green Architect of the Year 2012, described how his practice weaves green designs into their building projects. Mr Ong Hock Leong, Managing Director of Swee Hong Engineering Construction Pte Ltd, shared how the company instils a productivity mindset in its staff, and on their leveraging on technology to achieve higher productivity and quality.

The seminar concluded with an interactive discussion panel chaired by Dr John Keung, Chief Executive Officer of BCA. The discussion panel featured a live online Q&A platform, where audience could post questions to the discussion panel using their smartphones. Coupled with the interesting presentation topics, the discussion sparked a lot of interesting responses from BCA audience. 



Top | Chairman Mr Quek See Tiat addressing the seminar participants.

Right | Mr Tang Kok Thye ADPP presenting on Green Architecture.

Below | Mr Ong Hock Leong Swee Hong presenting on productivity improvement.

Bottom | Group Director Mr Neo Choon Keong sharing BCA's work plan.





KNOWING THE DANGERS

OVERLOADING IN BUILDINGS AND UNAUTHORISED WORKS

BCA conducted a regular dialogue session on 15 April with over 50 Professional Engineers (PEs) who are active in carrying out appraisals of existing buildings. This round of dialogue saw a lively exchange of views and suggestions that was extremely fruitful. The session touched on two important areas.

WHEN IS IT TOO HEAVY?

Overloading can lead to structural defects, and in a worst-case scenario, a localised, or even a total collapse.

Under the Building Control Regulations, no building shall be subjected to any load beyond its design loads as indicated in the approved detailed structural plans and design calculations relating to the building.

Some industrial building owners load their buildings with machinery and goods' storage. Some even go as far as to build mezzanine floors or storage racks and shelves to maximise the storage area, without realising that they are overloading the building.

UNAUTHORISED WORKS

To increase the functionality of small living spaces, interior designers often propose the removal of walls or the addition of a mezzanine floor. The Building Control Regulations stipulate that any works involving the removal of structural elements or increased loading require the submission of plans and approval from BCA.

There have been a few cases of unauthorised structural works in the course of renovation.

Such unauthorised work can be avoided if renovators and PEs are vigilant in complying with the Building Control Regulations.

PEs were reminded during the sharing session that structural elements should not be removed or altered during renovation.

Parties found guilty of violating the Building Control Act and Regulations may be liable to a fine not exceeding \$200,000 or to imprisonment for a term not exceeding two years, or both. **P**



“When inspecting industrial buildings, PEs should pay particular attention to heavily loaded areas, and address the loading and structural conditions in the Periodic Structural Inspection report. Building owners should abide by the building control regulations and limit loadings to the allowable live loads of the building design.”

MR CLEMENT TSENG, DIRECTOR OF THE ENFORCEMENT AND STRUCTURAL INSPECTION DEPARTMENT OF THE SPECIAL FUNCTIONS GROUP

TOWARDS A BETTER BUILT ENVIRONMENT: A SHARING SESSION WITH QP AND ARCHITECTS 2013



Since 2008, BCA has been holding annual sharing sessions with Architects and Qualified Persons (QP). This year's sessions were conducted between April and May.

This initiative aims to increase professionalism and competency in the industry, through the sharing of observations in plan submissions and TOP inspections.

These sessions give architects the opportunity to seek clarifications and provide feedback on how rules and processes can be improved.

The agenda has since expanded to include upcoming changes to processes and feedback on designs that may have posed problems to users upon implementation. **P**

THIS YEAR'S TOPICS FOR SHARING ARE:

- Impending changes to Approved Documents and Code on Accessibility
- Common non-compliances observed
- Requirements of environmental sustainability and buildability
- Clarifications on recent circulars
- Introduction to the upcoming online TOP booking portal

Top | Mr Chin Chi Leong, Group Director (Building Plan and Management), addresses an attentive audience on the meeting agenda.

EIGHT GREEN PROFESSIONALS RECOGNISED AT THE BCA AWARDS 2013

Eight professionals with a strong passion for creating a green built environment received the prestigious BCA-SGBC Green Building Individual Awards at the annual BCA Awards 2013 held at Resorts World Sentosa on 16 May. This year, there were four award winners and four Commendation Award recipients.

The award recognises professionals and practitioners from the built environment sector who have shown strong commitment and contribution to propelling sustainable built environments in Singapore forward.

A new category — the Young Green Building Individual Award — was introduced this year to recognise the outstanding contributions of our younger professionals in shaping a sustainable built environment.

Congratulating the winners, BCA's CEO Dr John Keung said, "We have a record of eight award recipients who have made significant contributions to the built environment sector with their passion and enthusiasm. This year, we introduced the inaugural Young Green

Building Individual Award and the Commendation Award to recognise more young green practitioners who have demonstrated a strong commitment to sustainability, and who are on their way to making even greater contributions to the green building agenda. They are our outstanding industry practitioners, and as role models for our younger generation, energise and inspire them to scale new heights in sustainable development."

Young Green Building Individual Award winner Dr Kelvin Lee is passionate about the recycling of waste materials. He led his research team at Samwoh Corporation to develop numerous recycled materials for construction applications, such as building, road, and airfield pavements.

Another winner, Dr Uma, spearheaded the development of GM-Pro, software tailor-made in collaboration with Integrated Environmental Solutions (United Kingdom) and BCA for Green Mark calculation purposes, which enhances the overall productivity of Singapore's green built environment industry.

WINNERS AT A GLANCE



1. Young Green Building Individual Award (2013)
Dr Kelvin Lee Yang Pin
 Technical Manager,
 Samwoh Corporation
 Pte Ltd



2. Young Green Building Individual Award (2013)
Dr Uma Maheswaran
 Vice President,
 Jurong Consultants Pte Ltd



3. Green Advocate of the Year Award (2013)
Mr Mann Young
 Head of Sustainability,
 Asia, Lend Lease



4. Green Engineer of the Year Award (2013)
Er Russell Cole
 Director,
 Arup Singapore Pte Ltd

GREEN BUILDING INDIVIDUAL AWARD 2013 (COMMENDATION)

5. Er Teh Poh Suan
 Director
 (Building Research),
 Housing and
 Development Board



6. Mr Owen Wee Liam Choo
 Vice President
 (Architectural),
 Surbana International
 Consultants Pte Ltd



7. Mr Jerry Ong Chin-Po
 Vice President
 (Architecture),
 CPG Consultants Pte Ltd



8. Ms Jaye Tan Jia Yee
 Architect,
 DP Architects Pte Ltd



He actively champions the use of Building Information Modelling, a 3D modelling software for integrated design delivery in green and sustainable buildings.

With a passion for contributing to a greener built environment, Green Advocate of the Year Mr Mann Young constantly introduces new innovative technologies and programmes in hopes of seeing a positive revolution in the built environment sector.

Engineer Russell Cole received the Green Engineer of the Year award, for playing a role in developing iconic green buildings in Singapore that have proven to be industry landmarks in sustainability.

Significant contributions by the four inaugural Green Building Individual Commendation Award recipients include Mr Owen Wee's initiative in the design of the first storm water management system in a public housing project, Er Teh Poh Suan's formulation of policies and guidelines on sustainability and energy initiatives relating to public housing projects, Mr Jerry Ong's development of sustainable hospital model designs, and Ms Jaye Tan's use of sustainable construction methods and materials in her energy-efficient building designs.

Mr Tai Lee Siang, co-chairperson of the assessment committee and the Immediate Past President of the Singapore Green Building Council (SGBC), commended the winners for their breakthrough efforts in driving the green building movement.

He said, "SGBC is very pleased to recognise our award winners for their leadership in personally championing this role. For the newer entrants to the building and construction industry in particular, our award winners will serve as role models to show the influence that an individual can have on our collective built environment." P

"This year, we introduced the inaugural Young Green Building Individual Award and the Commendation Award to recognise more young green practitioners who have demonstrated a strong commitment to sustainability, and who are on their way to making even greater contributions to the green building agenda."

DR JOHN KEUNG, CEO OF BCA



RAMPING UP THE KINDNESS

WHEN A CONSTRUCTION PROJECT MANAGER WITNESSED THE ELDERLY HAVING DIFFICULTIES GETTING TO THEIR DESTINATION, HE AND HIS TEAM WENT BEYOND THEIR JOB SCOPES TO HELP THESE AGED FOLKS



Mr Goh Eng Hwee, a 42-year-old Project Manager in China Construction, was part of the team working on the Kaki Bukit Station, part of the third stage of the LTA's Downtown MRT Line project.

Mr Goh's work site was located near Techview Building along Kaki Bukit Avenue 3. The building houses Dignity Kitchen — a food court management school that focuses on the training of the disabled and the disadvantaged to be food stall operators. Incidentally, Dignity Kitchen also frequently organises lunch and tea parties for the elderly. This results in a steady commuter traffic of those with mobility issues, some even needing to take detours to arrive at Dignity Kitchen.

"At one of the meetings with the property management team of Techview Building, I saw a group of elderly alighting from the coach parked along the road. Most of the elderly were assisted by a form of walking aid, and some were

wheelchair-bound. I realised that they would have to go through a turfed area before they would be able to reach Dignity Kitchen, [and that this would] further hamper their progress," says Mr Goh.

Mr Goh quickly sought the agreement of LTA to construct a ramp for the elderly and disabled. To Mr Goh's delight, his notion was quickly met with approval from LTA.

"I informed the property management team and Dignity Kitchen about the ramp leading to Techview Building. And of course, China Construction management was also in full support of this initiative!" recalls Mr Goh when asked about the process that led to the building of the ramp.

Thereafter, the construction of the ramp and the installation of its accompanying handrails took only three days to complete, but it looks set to save elderly and disabled commuters an inordinate amount of time in getting to their destination.

"It was a great experience. Seeing the elderly using the ramp each day makes my day, and gives me a moment of peace and fulfillment. As you know, working in the construction industry, we are faced with challenges every day, and there are hardly moments where your mind can 'take a break'. Seeing the elderly benefitting from our small gesture gives me a great measure of comfort," says a beaming Mr Goh. **P**



"Seeing the elderly benefitting from our small gesture gives me a great measure of comfort."

MR GOH ENG HWEE, PROJECT MANAGER IN CHINA CONSTRUCTION



TIME FOR SKILLS UPGRADE!

DID YOU KNOW THAT BASIC SKILLED (R2) WORK PERMIT HOLDERS (WPHS) WHO HAVE WORKED IN SINGAPORE FOR 10 YEARS OR MORE WILL NEED TO HAVE THEIR PERMITS UPGRADED TO HIGHER SKILLED (R1) BY 31 DEC 2013, OR THEY WILL NEED TO LEAVE SINGAPORE WHEN THEIR WORK PERMITS EXPIRE?

Currently, higher skilled WPHs can stay in Singapore for up to 18 years.

To become higher skilled R1 workers, WPHs can register for BCA's Construction Registration of Tradesmen (CoreTrade) or Multi-Skilling schemes.

BCA advises all employers to register their WPHs for upgrading as soon as possible to secure early testing and training dates for registration.

To defray the cost of upgrading, BCA will co-fund up to 80% of the training and testing fees for eligible workers under the Workforce Training and Upgrading (WTU) scheme. Employers will also enjoy lower levies for their higher skilled (R1) workers.

Employers looking to register their WPHs for upgrading can fill up application forms at the BCA

Academy, or visit www.bca.gov.sg/coretrade/reg (CoreTrade) or www.bca.gov.sg/multiskill (Multi-skilling) to make an online application.

For more information regarding the CoreTrade and Multi-skill schemes, please visit our information websites at www.bca.gov.sg/CoreTrade/coretrade_introduction.html (CoreTrade) or www.bca.gov.sg/MultiSkilling/MultiSkill_Main.html (Multi-skilling).

Our officers can answer your queries at our enquiry hotlines: 6730 4428 (CoreTrade) or 6730 4500 (Multi-skilling).

Don't delay, sign up to upgrade your workers today! 

**SCAN THE QR CODES
BELOW WITH YOUR
SMARTPHONES
TO ACCESS THE
INFORMATION WEBSITES!**

CoreTrade



Multi-skilling



HFT Stuttgart
University of Applied Sciences

BCA ACADEMY
OF THE BUILT ENVIRONMENT



HFT Stuttgart - BCA Executive Development Programme 2013

Innovations in Sustainable Design & Technology

FREIBURG • STUTTART • FRANKFURT • MANNHEIM

The HFT Stuttgart-BCA Executive Development Programme: Innovations in Sustainable Design & Technology is designed to provide a strategic platform for leading building professionals in the area of green building design and technology.

The 5-day intensive programme conducted in Germany is presented by Stuttgart University of Applied Sciences (HFT Stuttgart), which is one of the most renowned institutes for applied research and development in building acoustics, heat insulation, thermal building physics and the utilisation of solar energy.

Programme Duration
22 - 26 July 2013

Programme Fee (GST not applicable):

S\$ 4,500 / S\$ 4,000*

* Promotional fee is only applicable for:

- 'Early Bird' who register on or before 14 Jun 2013;
- Group of 3 or more participants;
- BCA Alumni Card Holders; and
- BCA Young Leaders.

For more details on

- Administration and Logistic Matters: Mr Jeffrey Tan
DID: 6248 9934 / Email: jeffrey_jh_tan@bca.gov.sg
- Programme Details: Ms Tai Yoke Ying
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Visit www.bcaa.edu.sg for more details.

FOCUS AREA

- Solar Cooling
- Photovoltaic
- Energy Efficiency
- Zero & Plus Energy
- Smart Grid
- Energy Contracting
- Sustainable Construction

KEY PROJECT VISITS

- **Heliotope** (Rotating solar "tree-house" designed & built by German Architect, Rolf Disch, as a test bed for solar systems)
- **Quartier Vauban** (Selected by the EXPO 2010 Shanghai team as the "Best Practice Example Sustainable City Planning")
- **Fraunhofer Institute for Solar Energy Systems** (Largest solar energy research institute in Europe)
- **Grünbühl-Sonnenburg District** (Best practice example of sustainable urban development concept of Ludwigsburg)
- **Tanus Tower** (Climate friendly skyscraper under construction)
- **MainTor Quarter** (MIPIM Award 2012 - Best German Project)

Collaborators:



CMU-BCA Executive Development Programme 2013



In April 2013, Mr William Tan, MD of BCA Academy, led an industry delegation to the US on an intensive 6-day programme to learn about leadership in environmental sustainability, jointly organized together with the Carnegie Mellon University (CMU). The CMU-BCA Executive Development Programme aims to accelerate the development of Singapore's industry leaders in green stewardship roles, through exposure to the forefront of green building practices in the US.

This year's programme, which is into its 4th run, brought the delegations to Pittsburgh and Seattle to learn from the US experts their experience and knowledge in sustainable development through sharing sessions and visits.

Highlights of the programme were site visits of selected exemplary green buildings in Pittsburgh and Seattle, guided by the building's owners and design team leaders. Delegates were able to have a first-hand experience and understanding of the building's sustainability approach, and had opportunities interacting and networking with their US counterparts.



U.S. Army Corps of Engineers, Seattle District Headquarters (Honor Award in the 2012 Beyond Green™ High-Performance Building Awards)



“ I highly recommend this programme – it is inspiring, especially for the new approach to sell the ‘softer’ aspects of sustainability, which we learnt from US experts. The trip also showed us the commitment and passion of the people involved in driving sustainability, especially the CMU professors, with their well-demonstrated “T-shaped” knowledge – there is depth, there is breadth. ”

LARRY CHENG
Director / Senior Principal Architect, HDB Building Research Institute



△ Dennis Hayes (standing), president of the Bullitt Foundation and founder of Earth Day, briefing the delegations on the inspiration which motivated the development of Bullitt Center, Seattle. ▷



▽ David L Lawrence Convention Center, first and largest convention center to receive LEED Gold Certification for New Construction.




△ Phipps Conservatory (LEED Silver Certification)

www.bcaa.edu.sg

GEAR UP FOR SINGAPORE CONSTRUCTION PRODUCTIVITY WEEK 2013!

SINGAPORE CONSTRUCTION PRODUCTIVITY WEEK (SCPW) 2013 IS THE HALLMARK EVENT CELEBRATING THE CONSTRUCTION INDUSTRY’S PRODUCTIVITY, INNOVATION, AND TECHNOLOGY

From 29 July to 2 August 2013, Singapore Expo and Max Atria will be abuzz with plentiful activities including the Skilled Builders and Building Information Modelling (BIM) Competitions, the BuildTech Asia 2013 Exhibition, Build Smart Conference, and the International Panel of Experts-Building Information Modelling (IPE-BIM) Meeting.

SCPW 2013 offers a great platform for suppliers, developers, architects, consultants, and builders to come together and exchange ideas on transforming the construction industry by moving towards higher levels of productivity. 

THIS WEEK’S PROGRAMMES AT A GLANCE!

KEY EVENTS	DATE
Building Information Modelling (BIM) Competition	29 July 2013
International Panel of Experts-Building Information Modelling (IPE-BIM) Meeting	30 July–1 August 2013
BuildTech Asia 2013 Exhibition	31 July–2 August 2013
Build Smart Conference	31 July 2013 (Productivity) 1 August 2013 (BIM)
Skilled Builders Competition	31 July 2013
Productivity Race	2 August 2013



FOR MORE INFORMATION, CONTACT:

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or

Dr Leong Chee Lai

Tel : 6325 2099

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FOR EXHIBITION ENQUIRIES AT BUILDTECH ASIA 2013, CONTACT:

Ms Oh Li Ling (Sphere Exhibits)

Mobile : 9776 7477

Email : lingoh@sph.com.sg

EVENT LINE UP

Workshop on Material Recycling for Sustainable Construction (5th Run)

8 & 9 JUL

2-Day Course on BIM Planning (Building Developers and Facility Managers) (6th Run)

8 & 9 JUL

Half-Day Course on Best Practices for Green and Gracious Builder

9 JUL

NEW

Supervision of Piling Works for Engineers and Supervisory Personnel (18th Run)

9, 11, 16 & 18 JUL

(EVENINGS)

Workshop on Preparing & Defending Loss & Expense Claims (12th Run)

11 JUL

Good Industry Practices (Timber Flooring)

16 JUL

Workshop on Seismic Design of Building Eurocode 8

16 JUL

NEW

Certificate Course in BIM Modelling (Architecture Track) (35th Run)

16-19 JUL

Graduate Certificate in Workplace Safety and Health (7th Run)

17 JUL 2013-26 FEB 2014

Contract Drafting – The Technicalities and Legalities (12th Run)

19 JUL

Certification Course for Green Mark Facilities Manager (16th Run)

23 JUL-5 SEP

(EVENINGS)

HFT Stuttgart-BCA Executive Development Programme 2013 – Innovations in Sustainable Design & Technology (4th Intake) (Venue: Germany)

22-26 JUL

GMP-ELECTIVE – Efficient Eco-Lighting Design for Buildings (15th Run)

25 & 26 JUL

Build Smart Conference 2013

- Productive Technologies and Processes
- Innovate-Integrate-Transform with BIM

31 JUL & 1 AUG

(09:00-18:00)

NEW

Develop A Risk Management Implementation Plan (bizSAFE Level 2) (71st Run)

29 & 30 JUL

Certification Course for Structural Steel Engineer (StEr) based on Eurocodes 3 & 4 (4th Run)

12 AUG-16 OCT

Good Industry Practices (Painting)

13 AUG

Management of Water and Environmental Services for Estate Managers (2nd Run)

19-21 AUG

Certification Course for Site Investigation Supervisors (8th Run)

19, 20, 26 & 27 AUG

Workshop on Site Management of Precast Concrete Construction (11th Run)

19, 22 & 26 AUG

Good Industry Practices (Aluminium Window)

20 AUG

Workshop on Programme Risk Management – Technical Use of Programmes to Control, Manage and Optimise the Project (5th Run)

22 AUG

Workshop for Company CEO/Top Management (bizSAFE Level 1) (22nd Run)

23 AUG

(AFTERNOON)

Requirements for Environmental Sustainability in Buildings and The Green Mark Scheme (25th Run)

30 AUG

CONTACT:
BCA ACADEMY – BUSINESS DEVELOPMENT UNIT

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**MARK YOUR
CALENDAR**

build SMART

CONFERENCE 2013

31 JULY – 1 AUGUST 2013

MAX ATRIA @ SINGAPORE EXPO, PERIDOT ROOM

Featuring a host of local and international speakers, the Build Smart Conference 2013 is an excellent platform for industry players to learn about best practices, construction productivity trends and case studies.

Organised by BCA Academy, the two-day conference will focus on "Productive Technologies and Processes" and "Innovate-Integrate-Transform with BIM" on Day 1 and 2 respectively.

CONFERENCE PROGRAMME

DAY 1 - 31 JULY 2013

PRODUCTIVE TECHNOLOGIES & PROCESSES

Track 1 - Improving Management Practices & Regulatory Updates

Track 2 - New Construction Technologies Updates

DAY 2 - 1 AUGUST 2013

INNOVATE - INTEGRATE - TRANSFORM WITH BIM

For more details, visit www.bcaa.edu.sg

ORGANISED BY:

Building and Construction Authority

BCA ACADEMY
of the built environment

BCA-REDAS-SGBC Green Building Seminar 2013

UNFOLD THE TRUE VALUES OF GREEN RETROFITS

From the second half of 2013, building owners will have to fulfill three requirements under the Building Control Act:

- Achieve minimum Green Mark standard for existing buildings when a cooling system is installed or retrofitted;
- Carry out three-yearly energy audit on building cooling systems; and
- Submit building information and energy consumption data annually.

The BCA-REDAS-SGBC Green Building seminar this year will unfold the true values of green retrofits. Speakers will share their knowledge and experience from various aspects of retrofitting buildings for sustainability.

3 JULY 2013 • 9AM - 1PM
BCA ACADEMY

FEE (inclusive of GST): S\$180.00 / S\$165.00*

- * Discounted fee is only applicable for:
 - REDAS & SGBC members;
 - BCAA Alumni Card Holders; and
 - BCA Young Leaders.

For registration, visit: www.bcaa.edu.sg

