

Pillars

WE SHAPE A **SAFE**, **HIGH QUALITY**, **SUSTAINABLE** AND **FRIENDLY** BUILT ENVIRONMENT | ISSUE 02/MAR-APR 2013



**A
BEACON
OF
LIGHT TO
THOSE
SEEKING
DIRECTION**

Pillars

ISSUE 02 • MAR-APR 2013 • CONTENTS

PG 01 CEO'S MESSAGE



ROUNDUP

- 08 MASTER OF SCIENCE IN FACILITY AND ENVIRONMENT MANAGEMENT
- 10 CHAMPIONING A BETTER BUILT ENVIRONMENT FOR ALL
- 12 DATA CENTRES TAKE ON THE GREEN MANTLE

TALKING POINTS

- 13 NEW OVERSEAS TEST CENTRE IN HYDERABAD, INDIA

FEATURES

- 14 A SUITE GREEN BALANCE BETWEEN FORM AND FUNCTION

- 15 YOUTHS ARE NEVER TOO GREEN TO GREEN
- 16 ADOPTING THE EUROCODES

TAKE NOTE

- 17 IMPLEMENTATION OF CORETRADE SUPERVISOR DEPLOYMENT
- 18 NEW BACHELOR DEGREE PROGRAMME IN CONSTRUCTION MANAGEMENT
- 19 EXECUTIVE DEVELOPMENT PROGRAMME
- 20 THIS WILL ROCK YOU

HAPPENINGS

- 17 EVENT LINE UP

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DRIVING CHANGE AND MAKING A DIFFERENCE

Dear Readers,


A usual sentiment I hear from the ground is that employees think that they are the last persons to effect a change or bring about a positive shift in paradigm. Nothing is further from the truth.

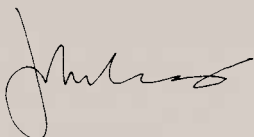
I look to no more than the job shadowing programme initiated in 2011. If it was not for the bright idea of one of our staff, this programme that has so far benefitted hundreds of students would never have materialised. You can read about the programme and its latest achievements in this issue.

The winds of change are the immutable realities of life and the spirit of adaptation is vital. March is a month that was flushed with news that will affect us all in the built environment sector. The adoption of the Eurocodes – a new set of standards for the structural design of buildings and civil engineering works is an integral move on the part of BCA to raise the standards of the industry and the standards of structural building design.

The move to this widely accepted standard comes after a period of rigorous and extensive reviews and studies conducted by BCA over a period of six years with industry professionals and the experts. In addition, BCA has also worked with other public agencies, industry associations and universities in organising training courses and seminars so that we can help bring our building professionals up to speed.

Besides being the vanguard of change and improvement in our industry, BCA has been actively heading out and doing our bit for the less fortunate of our society – the responses to and the positive results of the various CSR events attest to this.

In fact, some of my BCA colleagues have even taken on the initiative to organise their own CSR activities in line with their interests, be it towards the elderly, the handicapped or the less fortunate children who need warmth, care and kind words. I hope this sense of giving and heart for the community will continue and even spill over to our professional dealings in the midst of executing our core works and businesses. No effort is too small; no person is too lowly to truly make a difference. 



Dr John Keung
Chief Executive Officer



A BEACON OF LIGHT TO THOSE SEEKING DIRECTION

REMEMBER WHEN YOU HAD JUST GRADUATED FROM SCHOOL AND DISCOVERED THAT YOU HAD INSUFFICIENT INFORMATION TO MAKE AN INFORMED DECISION ABOUT THE BEST ACADEMIC OR CAREER PATH TO TAKE?

To help students discover their academic or career path, BCA introduced a Job Shadowing Programme, which gives students exposure to various career paths available in the built environment sector. It helps them to understand the differences between the various jobs and specialisations available. For instance, within the sector, there are architectural or engineering firms, builders, developers, and quantity surveying consultancies. This programme gives students a clearer picture of what each role entails, thus helping them to better align their academic choices with their future career and their interests.

Reception from the industry, junior colleges and students has been positive. From its inaugural intake of 14 students in 2011, the figure has nearly tripled to 40 today. The number of participating firms and junior colleges stand at 10 and 12 respectively.

Engineering firm Arup is one of the participating firms that is fully supportive of the programme.

“Partnering with BCA on its Job Shadowing Programme enables us to collectively raise the level of awareness of engineers as professionals. We see it as helping these young talents make more informed choices regarding a career that is both inspiring and rewarding.”

NURLIZA MADON, HUMAN RESOURCES MANAGER OF ARUP





Top and Right | Participants of Job Shadowing Programme having an interactive and fun time at the upcoming Sports Hub.

Bottom | Arup's engineer shares her personal journey with the students.

This year, as part of the Job Shadowing Programme, four students were offered internships with Arup's Infrastructure Building Services (Mechanical), Building Structures and the Acoustics consulting group. The internship durations ranged from between one week to a month.

Overall feedback has been very encouraging. "Students that we have so far are very bright and definitely have a lot of drive in them to become successful engineers," said Nurliza. "They are welcome back for internships at Arup if they pursue engineering in University in the future."

Given the optimistic growth of firms and student involvement in the Job Shadowing Programme, are there any plans to boost this figure? Tan Hoon Wee, BCA's Senior Manager who promotes built environment careers said, "It's very satisfying to see that the programme plays a big role in helping students choose their right career path based on their interests and goals. Looking ahead, BCA will be working with more universities and industry firms to enhance the Job Shadowing Programme and hopefully light the way forward for more students to develop a career in the built environment sector."



HEAR WHAT PARTICIPANTS OF BCA'S JOB SHADOWING PROGRAMME HAVE TO SAY

"I think that people should make a difference in society, and architecture has the potential to help people. Looking around, I see that there are buildings that are fancifully designed but lack functionality. The essence of architecture should be functionality as the purpose of buildings is to serve users, and I believe that I could make a contribution towards creating a better built environment by studying architecture."



"I'm the kind of girl that doesn't like to sit still. I like to take a hands-on approach and not just do the planning in the office. And this is why I'm excited about the engineering field, as I'll get to go on-site to construction projects. It's different from other jobs in that sense, and I'm lucky I have the chance to intern with Arup's Infrastructure group for a month."



LI FANG 18 years old
School of the Arts (SOTA), Singapore

Li Fang completed her studies in visual arts (sculpture) at SOTA recently. While waiting for her results, she applied to attend the orientation for the Job Shadowing Programme to allow herself to explore career options available in the built environment sector. Although she initially had her heart set on architecture, she wanted to talk to more people to learn more about the sector.

Li Fang found the orientation for the Job Shadowing Programme to be a fruitful experience. "Through the programme, I met up with many like-minded students who had the same interest. By talking to them, I came to a better understanding of myself, and now I have a clearer vision of the different career paths available in the built environment sector. After interning at DP Architects Pte Ltd for two weeks, I am now less afraid of stepping into a career in architecture, and have applied to study architecture at NUS as well as for the BCA-Industry Built Environment Undergraduate Scholarship."

ELIZABETH WONG 19 years old
Raffles Institution

Take one look at Elizabeth, and you can tell she loves the sun. The 19-year-old is a picture of health, with a glowing tan, courtesy of years of tennis. Elizabeth is the handywoman in the house, repairing any spoilt equipment that comes her way. The application of science to everyday life is one of the reasons why engineering fascinates her. "I get excited by working out how things work, even if I have to break them first to fix them!"

Given her strong interest in going into the built environment sector, Elizabeth is appreciative of BCA's Job Shadowing Programme. "It's a very good initiative as it exposes students to different paths available in the built environment sector. I especially like the part where they bring in fresh graduates to share their experience as it's very relevant to students like me who are moving on to the next stage in their academic path. It's easy to mould yourself into a company, but what's more important is to choose the right course."

THE BIRTH OF BCA'S JOB SHADOWING PROGRAMME



HELPING STUDENTS TO REALISE THEIR DREAMS

It is not often that one manages to find a career that marries the trinity of values, passion, and capability. But Ms Tan Hoon Wee, BCA's Senior Manager who promotes careers in the built environment sector, is a lucky lady in that regard.

Hoon Wee's interest evolved into her passion shortly after she joined the department in 2007. Two years ago, her daughter was looking to enter University. While Hoon Wee was helping her daughter to research on which course to take, she discovered that there was insufficient information available for students to make an informed decision.

Serendipitously, Raffles Institution approached her for assistance in finding internship opportunities for its students around the same time. It then occurred to her that a programme that offers exposure would be very helpful to those seeking direction on which academic/career path to pursue. Hoon Wee took the idea to her bosses, and two months later, the Job Shadowing Programme was born.

With the exponential growth in supporting firms and student interest, work has been busy but ultimately satisfying for Hoon Wee, who looks back on her efforts contentedly.

Top | Another fruitful session with future built environment professionals.

Left | Welcome to Sam Woh!

Bottom | Students given an up-close picture of the wheel tracking machine at Sam Woh.



“Moving forward, we hope to bring in more firms on this programme, to provide even greater exposure to students who are interested in a career in the built environment sector.”

MS TAN HOON WEE, SENIOR MANAGER, BCA

MAKING THE BUILT ENVIRONMENT SECTOR A PREFERRED CAREER CHOICE!

Since 2009, BCA has been hosting the annual Built Environment Scholarship, Training and Career Fair at the BCA Academy. This year, BCA took the initiative to set up a Built Environment Pavilion at Career & Education Fair 2013 at the Marina Bay Sands Expo & Convention Centre on 1–3 March 2013.

BCA and BCA Academy partnered with 18 industry firms, institutes of higher learning, and associations to form the Built Environment Pavilion. The event showcased scholarships, training, and job opportunities to encourage students and jobseekers to join the built environment sector. Industry firms also used this effective platform as an opportunity for organisation branding and outreach.

BCA took the opportunity to promote careers in the built environment sector and market its various manpower development programmes, which cater to undergraduates, diploma, ITE, 'A' and 'O' level students as well as existing industry practitioners.

Check out the whole list of BCA's Manpower Development Programmes, and embark on a competitive career progression path with us! [P](#)



BCA'S MANPOWER DEVELOPMENT PROGRAMMES

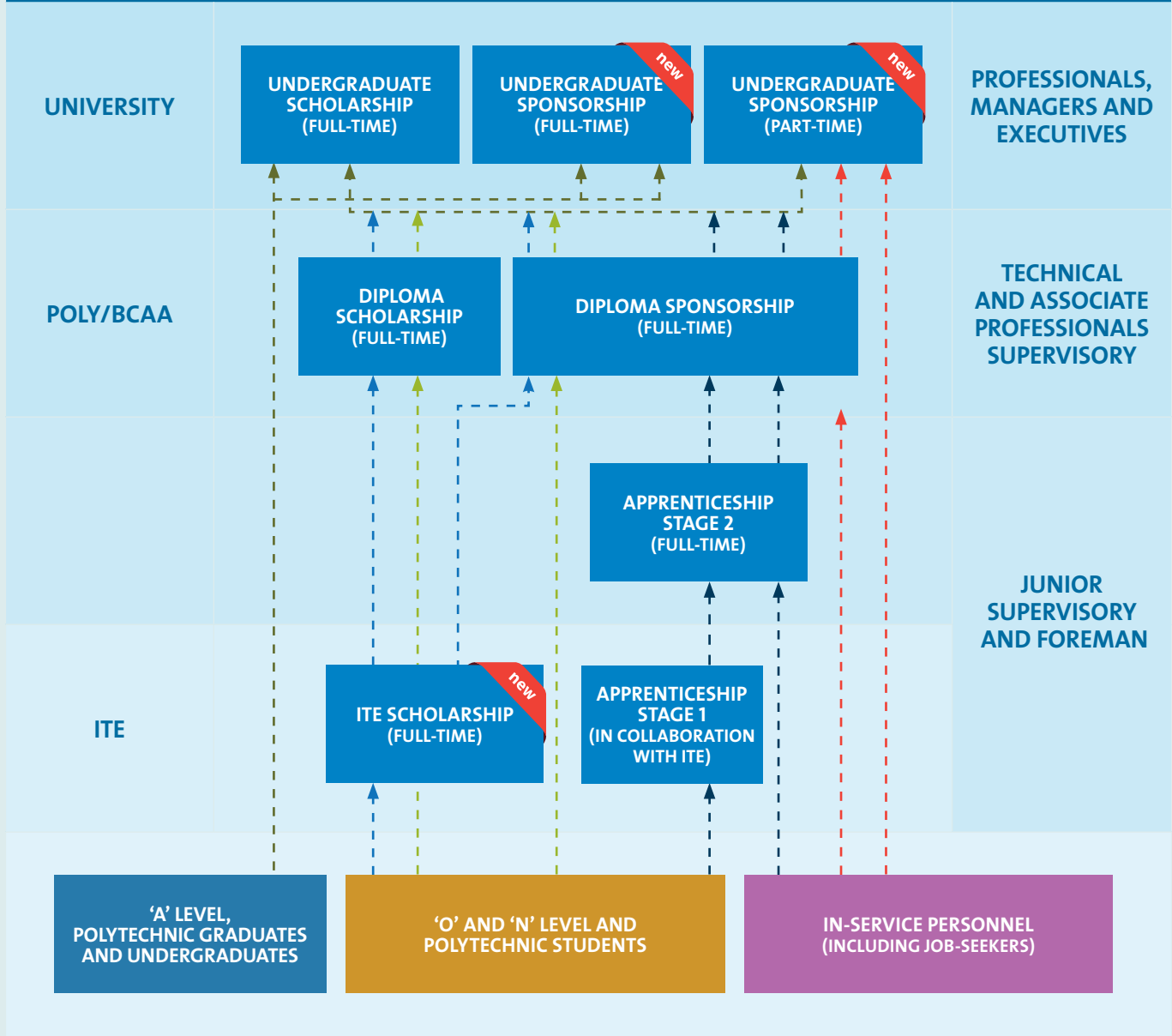
Under the Construction Productivity Roadmap, BCA has put in place a comprehensive suite of manpower development programmes covering all levels of the workforce to attract and retain locals in the built environment sector.

OVERVIEW OF BCA'S MANPOWER DEVELOPMENT PROGRAMMES

| Manpower Programmes | Target Audience | Benefits (with effect from 2013) (Co-sponsored by BCA and Industry Partners) |
|---------------------------------------|---|--|
| Undergraduate Scholarship (Full-time) | <ul style="list-style-type: none"> 'A' level holders Diploma holders Undergraduates in NUS, NTU and SUTD | <ul style="list-style-type: none"> Minimum S\$18,000 per local scholar per year, of which S\$6,000 is funded by sponsoring firm |
| Undergraduate Sponsorship (Full-time) | | <ul style="list-style-type: none"> Minimum S\$10,000 per local sponsored student per year, of which S\$3,000 is funded by sponsoring firm |
| Undergraduate Sponsorship (Part-time) | <ul style="list-style-type: none"> In-service personnel | <ul style="list-style-type: none"> Full course fees per sponsored local existing employee per year, of which 30% of course fees is funded by sponsoring firm |
| Diploma Scholarship & Sponsorship | Diploma Study Phase <ul style="list-style-type: none"> 'O' level holders ITE graduates Students in Polytechnics or BCA Academy | Stage 1 <ul style="list-style-type: none"> Scholarship – Full course fees and S\$900 monthly allowance per scholar per year, of which S\$4,000 is funded by sponsoring firm Sponsorship – S\$7,000 annual allowance, of which S\$2,000 per local student or S\$5,000 per foreign student is funded by sponsoring firm |
| | Post-Diploma Development Phase <ul style="list-style-type: none"> Graduates from Diploma Study phase Diploma holders in built environment courses | Stage 2 <ul style="list-style-type: none"> Equivalent monthly remuneration of at least S\$2,500 Structured On-Job-Training and Upgrading opportunities |
| ITE Scholarship | <ul style="list-style-type: none"> 'O' and 'N' level holders in ITE's full-time built environment courses | <ul style="list-style-type: none"> Full course fees and S\$500 monthly allowance per local scholar per year by BCA |
| Built Environment Apprenticeship | Tradesman Development Phase <ul style="list-style-type: none"> 'O' and 'N' level holders in ITE Traineeship | Stage 1 <ul style="list-style-type: none"> Minimum monthly salary of S\$1,400 per local apprentice Vocational training subsidised up to 80% by BCA Qualify for BCA's CoreTrade¹ Tradesman registration |
| | Foreman Development Phase <ul style="list-style-type: none"> ITE graduates from Tradesman Development Phase Local mid-career job seekers Local existing tradesmen | Stage 2 <ul style="list-style-type: none"> Equivalent monthly remuneration of at least S\$2,350 per local apprentice Part-time training subsidised up to 80% by BCA Qualify for CoreTrade¹ Foreman registration |

¹ The Construction Registration of Tradesmen (CoreTrade) is a registration scheme for skilled and experienced construction personnel in key and higher value-added built environment trades. It comprises three classes – Tradesman, Foreman and Supervisors.

MANPOWER PROGRAMMES AND PROGRESSION PATHWAY



BCA WOULD LIKE TO THANK THE FOLLOWING PARTNERS FOR THEIR KIND SUPPORT IN MAKING OUR BUILT ENVIRONMENT PAVILION POSSIBLE.

1. ACE PLP
2. DLE Pte Ltd
3. EM Services Pte Ltd
4. Keppel Land International Limited
5. Kimly Construction Pte Ltd
6. KTC Civil Engineering & Construction Pte Ltd
7. Land Transport Authority
8. Langdon & Seah Singapore Pte Ltd
9. MCC Singapore
10. Nanyang Technological University, School of Civil & Environmental Engineering
11. Penta Ocean Construction Co., Pte Ltd
12. Samwoh Corporation Pte Ltd
13. Singapore Contractors Association Limited
14. Singapore Institute of Surveyors & Valuers
15. Straits Construction Singapore Pte Ltd
16. Swee Hong Limited
17. Tiong Seng Contractors (Pte) Ltd
18. Woh Hup (Private) Limited

MASTER OF SCIENCE IN FACILITY AND ENVIRONMENT MANAGEMENT



PARTNERSHIP BETWEEN BCAA AND UNIVERSITY COLLEGE LONDON TO CREATE POSTGRADUATE PROGRAMME AUGURS WELL FOR THE BUILT ENVIRONMENT SECTOR

The ceremony held at the Marina Bay Sands Convention Centre took place on 25 January.

Initiated by the BCA Academy in 2010, in partnership with one of the world's leading universities, University College London (UCL), the programme was created to deliver a postgraduate Master of Science degree in Facility and Environment Management (FEM) in Singapore.

The programme was well-received by the built environment industry. Enrolment was encouraging with a total of 62 students from three cohorts thus far, including 20 graduates from the first cohort.

As future Facility Managers (FM), the graduates will be in a good position to contribute to an industry facing a growing need to incorporate sustainable practices and technologies to enhance productivity.

"The BCA-UCL Master of Science in Facility and Environment Management programme has equipped me with a broader and deeper understanding of the knowledge and operational skill set required for the proper management of buildings and the environment. In particular, I have acquired the right managerial tools to identify problems, analyse situations and formulate appropriate strategies to meet

"The rising trend towards sustainability and energy efficiency in our built environment will create job opportunities and a demand for well-trained facility managers to manage the operations and maintenance of green buildings equipped with modern facilities and green features."

DR JOHN KEUNG, CEO OF BCA

Top | Graduands donning their mortar boards at the graduation ceremony with BCA-UCL VIPs.

Bottom | Dr John Keung, CEO of BCA, delivering his Welcome Address and giving an update on the positive response to the Green Mark Incentive Scheme.



stakeholder requirements while supporting Singapore’s sustainability agenda for the built environment,” said Mr Lincoln Teo, Project Director with Times Properties Pte Ltd.


Since 2009, the BCA Academy has trained more than 1,500 ‘green’ FM practitioners, under academic programmes from Diploma to postgraduate courses as well as professional development and certification programmes such as the Green Mark for FM.

These training programmes for the FM sector are part of BCA’s Green Building Masterplan to nurture a pool of 20,000 green building professionals, including architects and engineers, and achieve the national target of greening 80% of buildings in Singapore by 2030.

Dr Keung then used the graduation as a platform to update on the current enhanced \$100 million Green Mark Incentive Scheme for existing buildings, which gives the initial support to encourage building owners to green existing buildings.

“The legislation is here to stay. If developers don’t do anything now, they will have to do it in any case when their chiller systems comes to the end of their useful life.”

DR JOHN KEUNG, CEO OF BCA

He also highlighted that the funding is expected to be fully committed by the first half of this year. 

“This programme offers an excellent upgrading platform for built environment professionals seeking to expand their capabilities in facility and environmental management. The curriculum is rigorous and provides a solid foundation on the various core aspects of subject, with a choice of electives to cater to specific interests.”

MR LINCOLN TEO, RECIPIENT OF THE INTERNATIONAL FACILITY MANAGEMENT ASSOCIATION (IFMA) GOLD PRIZE AND DISTINCTION GRADUATE OF THE FIRST COHORT

Top | Graduating student, Mr Sng Jin Soon, giving an encouraging speech on behalf of all graduands, urging them to become ‘catalysts of real changes’.

Bottom | Mr Quek See Tiat, Chairman, BCA, presenting the IFMA Gold Prize to the top graduand, Mr Lincoln Teo.



CHAMPIONING A BETTER BUILT ENVIRONMENT FOR ALL

BCA STARTS THE NEW YEAR WITH A STRONGER PUSH FOR CORPORATE SOCIAL RESPONSIBILITY



To spearhead volunteerism and encourage both BCA staff and the built environment sector to give back to community, two Corporate Social Responsibility (CSR) initiatives were introduced at the start of 2013. These included collaboration with firms in the built environment sector to carry out CSR activities as well as a staff-initiated CSR activity scheme to make it easier for staff to organise volunteering activities in smaller groups and for causes that they feel strongly about.

Funding is provided for activities under the new staff-initiated CSR activity scheme, and participating staff can make use of their two-day staff volunteer leave.

SAVH GETS A FREE MAKEOVER

In January this year, BCA collaborated with firms in the built environment sector to do a free makeover for the Singapore Association of the Visually Handicapped (SAVH). Boral Plasterboard (M) Sdn Bhd donated new ceiling boards and plasterboards, while construction company Ceilwell (S) Pte Ltd lent their expertise in replacing the ceiling boards at SAVH's food ration store.

As part of a staff-initiated CSR activity, a group of officers from BCA's Building Engineering Group also

Top | BCA's Building Engineering Group helped install new ceiling boards in SAVH.

Bottom | Ceilwell (S) Pte Ltd helped to repair the ceiling boards at SAVH's food ration store on 11 January 2013.





Top | BCA officers distributing goodies to SAVH members.

Right | With BCA's Group Directors Mr Koh Lin Ji and Ms Jeanna Das helping to replace the ceiling boards at SAVH's Recreation Room.



“The food ration store had been in a deplorable state for a number of years. There were gaps and openings between the plywood ceiling boards that were large enough for rats to enter...the new ceiling boards help prevent pests from invading the food ration storage room.”

MR TAN SIOW HWEE, ESTATE MANAGER, OPERATION SUPPORT SERVICES, SAVH

helped to install new ceiling boards at the Recreation Room as well as clean and paint the food ration store.

They also sorted out and delivered old clothing, food supplies, and home appliances to the visually handicapped at their homes. At the end of the day, the visually handicapped at SAVH even received Chinese New Year goodies and chatted with BCA officers. **P**



GIFTS FOR CHILDREN AT THE SALVATION ARMY, GRACEHAVEN

On 18 January 2013, the organising committee of the annual New Year celebration at the BCA Academy (BCAA) brought gifts for children at The Salvation Army, Gracehaven. BCAA staff will also be visiting Gracehaven in March to spend time and play games with the children.



DATA CENTRES TAKE ON THE GREEN MANTLE

14 MARCH GAVE NEW DATA CENTRE OPERATORS MORE REASONS TO GO GREEN, WITH THE OFFICIAL LAUNCH OF THE BCA-IDA GREEN MARK FOR NEW DATA CENTRES SCHEME AT THE GREEN DATA CENTRE FORUM 2013

“Aside from cost savings, green data centres may also open up market opportunities through increased credibility and recognition by clients for their environment-friendly initiatives. Going green is a win-win solution, and I hope that more data centre owners will be inspired by our inaugural award winners and come onboard the scheme.”

DR JOHN KEUNG, CEO OF BCA

Jointly developed by BCA and the Infocomm Development Authority (IDA), this new category is an addition to the BCA-IDA Green Mark Scheme first launched in October 2012.

The first of its kind in Asia, the BCA-IDA Green Mark for New Data Centres encourages new data centres to adopt energy-efficient design, technologies and systems in the planning and design phase. The scheme relies on energy modelling to assess the performance of a proposed data centre design.

Key criteria for assessment include energy efficiency, water efficiency, sustainable construction and management, indoor environment quality, and other green features. The data centres are rated Green Mark Platinum, Gold^{Plus}, Gold, or Certified.

“The data centre market is set to grow rapidly in the next few years, and this represents many opportunities for companies to step forward not only to do their part for the environment, but also to realise cost savings for their business,” said Dr John Keung, CEO of BCA, in his congratulatory message to inaugural winner, Abbott Laboratories Singapore.

The Abbott Laboratories data centre was rated Green Mark Gold for its efforts to introduce efficient design strategies such as the use of modular design that optimises performance by addressing phases in usage demand, the selection of energy-efficient IT equipment, and the deployment of virtualisation technology. **P**

Top | Proud winners of the Green Mark for Data Centres scheme strike a pose with BCA Chairman Quek See Tiat, BCA’s CEO Dr John Keung and IDA’s Deputy Chief Executive Leong Keng Thai.

NEW OVERSEAS TEST CENTRE IN HYDERABAD, INDIA

BCA HAS APPOINTED A NEW OVERSEAS TEST CENTRE (OTC) FOR SKILLS TESTING IN HYDERABAD, INDIA

With this new OTC, which started operation in November 2012, BCA now has 26 OTCs operating in India, China, Bangladesh, Thailand, and Myanmar. This is in support of BCA’s plan to ensure the supply resilience of skilled construction workers, notwithstanding the Government’s increasing efforts to steer the industry towards higher productivity and lower reliance on foreign labour.

The opening of the new OTC will help to diversify sources of labour from India. As Hyderabad is located in central India, the new OTC will offer closer access to workers staying in the area. The four existing OTCs located in Chennai, South India, will continue to serve workers from areas near the OTCs.

The new OTC is set up by the TTJ Design & Engineering Pte Ltd, a specialist builder in structural steelwork, and registered with BCA’s Contractors Registry. The OTC currently offers three construction trades for skills certification: structural steel, pipe-fitting, and electrical wiring installation. It will expand its range of trade tests to include welding and steel reinforcement trades, and will offer the new Construction Safety Orientation Course (Version 2.0) by mid-2013.

Mr Mushtaque Ahmed Mohammed Asgar, a construction pipe-fitter currently employed by Bintai Engineering Pte Ltd, passed the skill test in November 2012. He applauded the setting up of the new OTC, as the test facilities are extensive and its centralised location reduces his travelling time from his hometown near Mumbai as well as his expenses. **P**



| Name of OTC | Steel Reinforcement | Bricklaying | Plastering | Tiling | Electrical Wring | Plumbing & Pipe-fitting | Thermal Insulation | Ducting for A/C & MVV | Doors & Window (Timber) | Waterproofing | Suspended Ceiling (Acoustic) | Suspended Ceiling (Fibrous) | Pipe-fitting | Precast Kerb & Drainlaying | Structural Steel Fitting | Aluminum Formwork | Interior Drywall |
|-------------------|---------------------|-------------|------------|--------|------------------|-------------------------|--------------------|-----------------------|-------------------------|---------------|------------------------------|-----------------------------|--------------|----------------------------|--------------------------|-------------------|------------------|
| Hytech OTC | | | | | | | | | | | | | | | | | |
| Array RK OTC | | | | | | | | | | | | | | | | | |
| TAC Resources OTC | | | | | | | | | | | | | | | | | |
| Koon Seng OTC | | | | | | | | | | | | | | | | | |
| TTJ OTC (new) | | | | | | | | | | | | | | | | | |

Summary table of the five OTCs in India and their range of trade tests available.



INTERESTED CONTRACTORS MAY CONTACT:

- BCA Skills Certification Enquiry
Tel: 6248 9845
Email: bca_academy@bca.gov.sg (Applications)
- TTJ Test Centre OTC (Singapore Branch Office)
Tel: 8122 2363/8339 6357
Email: srirama.raju@ttj.com.sg/
theva.karan@ttj.com.sg (Fees and Test Details)

A SUITE GREEN BALANCE BETWEEN FORM AND FUNCTION

HAVE YOU EVER VISITED A GREEN CONDOMINIUM SHOW UNIT IN SINGAPORE? YOU MIGHT JUST BE SEEING ONE IN THE FUTURE IF THIS INNOVATIVE IDEA FROM STUDENT PARTICIPANTS OF THE BCA-CDL GREEN SPARKS COMPETITION COMES TO LIFE



The BCA-CDL Green Sparks Competition is a national green building competition organised by BCA and leading green developer City Developments Limited (CDL). It aims to engage local tertiary students in the national effort to green the built environment.

Held for the second time, the biennial competition saw an increase of 15% in participation, with a total of 23 team submissions received from five tertiary institutions. Participating institutions include the National University of Singapore (NUS), Nanyang Technological University (NTU), Republic Polytechnic (RP), Singapore Polytechnic (SP), and Temasek Polytechnic (TP).

“The Greenworks”, a team from NUS clinched the top prize at the finals at BCA Academy on 15 March. Teams “Endeavour” from TP and “SDE Sparklers” from NUS clinched the second and third prizes respectively. **P**

Top | Judges deliberating the principles behind team “SDE Sparklers” proposal.

Right | Winning team, “The Greenworks” from NUS with Ms Sim Ann, Senior Parliamentary Secretary for Ministry of Communications and Information and Ministry of Education, Dr John Keung, CEO of BCA, and Mr Chia Ngiang Hong, Group General Manager of CDL.

WHY A GREEN SHOW SUITE?

On average, the monthly utility cost for a 4,000 square feet show suite with a ceiling height of six metres is about S\$4,000. Given the operational period of show suites, which can range from six months to several years, a green infrastructure will reap substantial savings in the long term.

To help participants appreciate the challenges involved in green building design, participants had to tailor their concept proposals using the show suite of one of CDL’s upcoming residential development sites at Buangkok Drive/Sengkang Central as a case study.

This show suite is estimated to have a total floor area footprint of about 4,000 square feet.

The winners received their prizes from Guest of Honour, Ms Sim Ann, Senior Parliamentary Secretary for the Ministry of Communications and Information as well as the Ministry of Education, during the prize-giving ceremony on the same day.

WHAT MAKES A GREEN SHOW SUITE?

- Innovative green design and energy-efficient features.
- Aspects of passive and active design; passive design deals with environmental concerns such as maximising air circulation, while active design uses technology to create a sustainable living environment, e.g. water-saving features.
- Cost-effective combination of form and function.



YOUTHS ARE NEVER TOO GREEN TO GREEN

WHEN MARSILING SECONDARY SCHOOL CREATED A LARGE PHOTOVOLTAIC SHELTER FOR EDUCATIONAL PURPOSES, THE SCHOOL PROBABLY NEVER KNEW THAT IT WOULD GO ON TO WIN THE FIRST PRIZE IN THE INAUGURAL GREENOVATE CHALLENGE AT THE OPENING OF THE BCA GREEN BUILDING ROVING EXHIBITION AT ION ORCHARD ON 22 MARCH



Left | Walking the Guest of Honour, Ms Indraneel Rajah through BCA's Green Mark Scheme.

Bottom | Students from the winning Marsiling Secondary received the prize from Ms Indraneel Rajah, the Guest of Honour.

The school's solar panel structure is able to harvest up to 495 kWh a day or 180,675 kWh per year, effectively replacing the school's reliance on energy derived from fossil fuels by 28.4% annually. This amount of energy is enough to power the school for about four months, and translates to about \$2,500 in cost savings per year after taking into account solar leasing costs.

In addition, the judges agreed that the secondary school came across as a deserving first prize winner due to its efforts to optimise its air-conditioner pre-cooling system, encouragement of school-wide participation as well as demonstration of a strong understanding of and commitment to sustainability initiatives.


The Greenovate Challenge, which is open to all secondary schools, aims to engage youths in greening their schools. Its objectives are to generate interest and nurture green building advocacy in the young as well as help schools to embark on their own green building journeys.

The competition gave students the chance to work with eight Energy Service Companies (ESCOs), who provided free energy audits for the participating schools. Through this industry tie-up, students learned more about energy efficient methods and created action plans based on the energy audits.

Besides coming up with proposed actions to cut down energy consumption, save water and other resources as well as to raise awareness within the school, students had to



work out the cost estimates for each idea. Their action plans were endorsed by their principals prior to submission.

Congratulating the winners, Dr John Keung, CEO of BCA, said, "It is important to cultivate an eco-conscious mindset from young on the importance of a sustainable built environment. That is why BCA is constantly looking for ways to engage the youth to embark on their own green building journeys. Greenovate was created to allow students and schools to identify and overcome their own challenges, and I'm glad to see that they have stepped up to the challenge and have come up with good and practical green building solutions." 

ADOPTING THE EUROCODES

FROM 1 APRIL 2013, BCA WILL INTRODUCE THE EUROCODES AS SINGAPORE'S BUILDING CODES. PRIMARILY USED BY BUILDING PROFESSIONALS, THE EUROCODES IS A NEW SET OF STANDARDS FOR THE STRUCTURAL DESIGN OF BUILDINGS AND CIVIL ENGINEERING WORKS



The move to adopt the Eurocodes is in line with efforts to raise industry and structural building design standards by mandating the use of one of the world's most advanced and established building codes.

To help the industry transition to the new codes smoothly, BCA will allow building professionals to submit the structural plans of a building using either the Eurocodes or the British Standards for the two years after 1 April 2013.

On 1 April 2015, BCA will withdraw the current codes, which are based on the British Standards, from use. The Eurocodes will replace them as Singapore's prescribed building codes for structural design.

Comprising a series of 10 European Standards, the Eurocodes were developed over the last 30 years by experts from the European Union (EU), and are considered one of the world's most advanced structural design codes.

The existing British Standards, which were withdrawn from use in Britain in 2010, will no longer be updated.

All 27 member states of the European Union as well as Iceland, Norway, and Switzerland are using the Eurocodes as their prescribed building code.

Over the last six years, BCA studied how it was used by other countries and held extensive discussions with industry professionals and experts. BCA also worked with other public agencies, industry associations, and universities to organise training courses and seminars, so that our building professionals are familiar with the Eurocodes.

Bottom | A 12 person strong delegation to the UK allowed a further understanding of the Eurocodes. Besides BCA, the delegation also comprised representatives from SIA, ACES, SPRING, IES, LTA, SSSS, KTP and NTU.




Be sure to look out for upcoming courses, seminars, and workshops before the switch to the Eurocodes in April 2015 in order to get yourself familiar with this new building standard. **P**

IMPLEMENTATION OF CORETRADE SUPERVISOR DEPLOYMENT

THE CONSTRUCTION REGISTRATION OF TRADESMEN, OR CORETRADE, IS A REGISTRATION SCHEME FOR SKILLED AND EXPERIENCED CONSTRUCTION PERSONNEL, ADMINISTERED BY BCA

On 1 April 2012, BCA introduced a new registration class of CoreTrade Supervisors to extend the career progression path for CoreTrade personnel, and allow them to progress from Tradesmen and Foremen to the level of Supervisors. With effect from 1 April 2013, in addition to the deployment requirement of CoreTrade Tradesman and Trade Foreman, licensed Class 1 General Builders will be required to deploy a minimum number of CoreTrade Supervisors (in Architectural, Structural, and M&E Works) at their worksites for projects with a value of \$20 million or more and whose permit to carry out structural work is granted on or after 1 April 2013.

Builders are encouraged to register eligible construction personnel as CoreTrade Supervisors. Generally, an applicant with a minimum of eight years of local construction work experience is eligible for registration as a CoreTrade Supervisor. All eligible applicants are required to complete and pass a 35-hour supervisory course conducted at the BCA Academy.

For more details on the registration and deployment requirements, please download the latest CoreTrade Guidebook (version 2012) at <http://www.bca.gov.sg/CoreTrade/others/EnhancedCoretrade2012.pdf> 





Class Commences in July 2103

BACHELOR OF CONSTRUCTION MANAGEMENT (Building)

The construction industry is the industry of the future. Every construction project combines a variety of complex challenges. Construction managers coordinate the delivery of these projects, which requires a combination of technical understanding of construction processes and resource management, as well as managing their legal and financial aspects. The Bachelor of Construction Management (Building) launched by BCA Academy, in collaboration with University of Newcastle, will provide you with the skills and knowledge to carry out opportunities both in Singapore and across the world.

The new Bachelor of Construction Management (Building) programme incorporates substantial Building Information Modeling (BIM) teaching and projects which offer a niche specialty beyond the construction management discipline. Such degree programme with dual specialty in BIM and construction management will be the first of its kind in Asia-Pacific region and paves the way for wide and exciting career opportunities as BIM Managers, Project Managers, Quantity Surveyors and Facility Managers.

The Bachelor of Construction Management (Building) programme is conceptualised to be a problem-based learning pedagogy to train students to solve real world challenges, develop holistic understanding of construction project environment and portable life-long learning skills. To offer an accelerated pathway, an advanced standing articulation would be eligible for students with relevant diploma qualifications for full-time studies. In addition, a part-time programme would be available for working adults.

UNIVERSITY OF NEWCASTLE

The University of Newcastle in Australia, established in 1965, is recognised as a world-class institution that delivers quality in education and innovation in research. Internationally, the Academic Ranking of World Universities places Newcastle in the top four per cent of universities in the world, and the Times Higher Education World University Rankings and QS World University Rankings place Newcastle in the top three per cent. Both the Times Higher Education and QS also rank Newcastle in the top 50 universities in the world under the age of 50.

Educating first-rate graduates is the University's most important role. The degrees from University of Newcastle are designed to ensure that its graduates will be globally competitive and career-ready in their fields.

The School of Architecture and Built Environment has an international reputation for pioneering problem-based learning, research-led learning, and online and blended learning in both undergraduate and postgraduate built environment programs. There are more than 1200 undergraduate and postgraduate students studying architecture, construction management, industrial design, property economics, project and disaster management. Importantly, the school has supported many international students to achieve academic success over the last 40 years and it has a distinguished record in teaching innovation and partnerships with industry.

The school enjoys the highest level of professional accreditation and its graduates are well regarded by industry and employer groups. The School is home to the Centre for Interdisciplinary Built Environment Research which complements the school's research strengths in creative endeavour; an approach which results in state and national exhibitions, design awards and citations.

A PROFESSIONALLY ACCREDITED PROGRAMME

The programme is fully endorsed by professional bodies and is recognised internationally. It currently holds accreditation from:

- AIB – The Australian Institute of Building
- AIQS – The Australian Institute of Quantity Surveyors
- CIOB – The Chartered Institute of Buildings
- RICS – The Royal Institution of Chartered Surveyors
- SISV – The Singapore Institute of Surveyors and Valuers



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Visit <http://www.bcaa.edu.sg/BCM.aspx> for more detail.


 A large, modern building with a white facade and a prominent triangular roof section. The words "BCA ACADEMY of the built environment" are written in red on the side of the building. The sky is blue with scattered white clouds.

BCA ACADEMY
of the built environment

2013 INTAKE

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Class commences in September 2013



A POSTGRADUATE PROGRAMME FOR GREEN PROFESSIONALS IN SINGAPORE

Master of Science in **SUSTAINABLE BUILDING DESIGN**

The Master of Science in Sustainable Building Design is a 2-year part-time programme jointly organised by the University of Nottingham, UK, one of the top universities in the world, and the BCA Academy. This programme aims to build up a talent pool of green building professionals with expertise and capabilities in the area of green building design.

Visit www.bcaa.edu.sg/MScSBD.aspx

Class commences in September 2013



THIS WILL ROCK YOU



MOVE OVER, QUEEN. BCA'S SINGAPORE GEOLOGICAL OFFICE IS LOOKING TO "ROCK" THINGS UP WITH A ONE-DAY SEMINAR, "INTEGRATED ADVANCE TESTING AND DATA ACQUISITION FOR 3-D GEOLOGICAL MODELLING OF SINGAPORE", ON 16 APRIL AT THE BCA ACADEMY

Spearheaded by speakers from BCA, British Geological Survey (BGS) and Kiso-Jiban Consultants Co. Ltd, the seminar shared on the latest geosciences mapping system that will create 3D geological models as well as site investigation technologies used currently to profile the terrain.

To further improve the site investigation information exchange, storage and retrieval processes, the seminar introduced the customised electronic format, AGS(SG), for site investigation data in Singapore. Its implementation will promote greater sharing and use of geo-data in Singapore. **P**

Top | Geological field trip in progress for BGS reps.

Right | BGS reps discussing on harvested rock samples with BCA staff and on-site contractors.

SEMINAR TOPICS

1. AN INTEGRATED APPROACH FOR BETTER CHARACTERISATION OF THE GROUND FOR DEEP UNDERGROUND DEVELOPMENT

By Er Kiefer Chiam and Mr Ko Ko Lat, BCA

The presentation focused on integrating conventional methods of site investigation with advanced borehole geophysical logging techniques.

2. SPECIALISED INVESTIGATION TECHNIQUES AND THEIR APPLICATIONS

By Mr Yoshihiro Yokoi, Kiso-Jiban Consultants Co Ltd

The presentation focused on the following techniques, amongst others: stress measurement using hydraulic fracturing, overcoring, and acoustic emission methods.

3. BRITISH GEOLOGICAL SURVEY'S SYSTEM FOR INTEGRATED GEOSCIENCE MAPPING (SIGMA) FOR GEOLOGICAL DATA VISUALISATION, RECORDING, AND INTERPRETATION

By Dr Kathryn Goodenough, British Geological Survey

BGS expounded on the new methods to capture digital geological information using SIGMA (System for Integrated Geoscience Mapping).

4. APPLICATION OF 3D GEOLOGICAL MODELS USING GSI3D AND GOCAD

By Dr Andrew Newell, British Geological Survey

BGS demonstrated the creation of 3D geological models using software GSI3D and GoCAD.

5. ESSENCE OF SEDIMENTOLOGICAL CORE LOGGING AND ENGINEERING GEOLOGICAL LOGGING

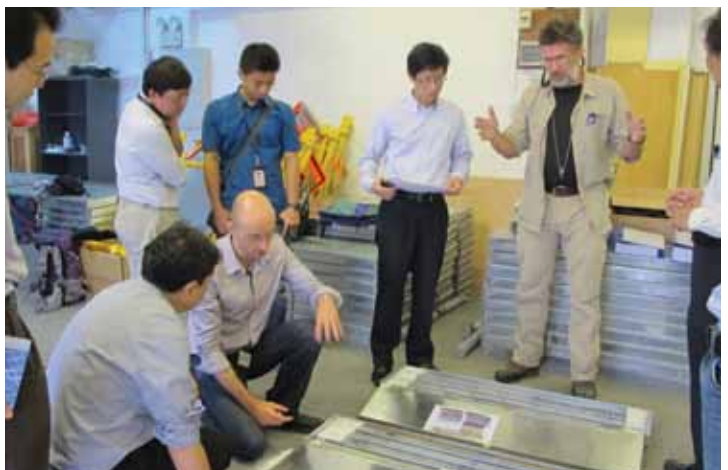
By Dr Andrew Newell, British Geological Survey

Systems used for observing and recording geological features in cores was covered.

6. SUBMISSION OF SITE INVESTIGATION DATA IN AGS(SG) FORMAT

Mr Zaw Min Hlaing, BCA

With effect from 1 July 2013, the construction industry will be required to submit site investigation data to BCA in a new AGS(SG) electronic format. This presentation will highlight key features of the new AGS(SG) format and some common mistakes observed in the AGS submission process.



EVENT LINE UP

Good Industry Practices
(Waterproofing for
External Wall)
2 APR

Certification Course for Green
Mark Facilities Manager
(15th Run)
2 APR-3 JUN

BCA-REDAS-SGBC Green
Building Seminar 2013:
Unfold the True Values of
Green Retrofits (NEW)
4 APR

Management of Water and
Environmental Services for
Estate Managers (NEW)
8-10 APR

GMP CORE Module – Energy
Efficient Air-Conditioning
for Commercial Buildings
(12th Run)
8-10 APR

Good Industry Practices
(Marble/Granite/
Ceramic Tiling)
9 APR

Develop A Risk Management
Implementation Plan
(bizSAFE Level 2) (67th Run)
11 & 12 APR

1-Day seminar on Advantages
of Early Contractor
Involvement (ECI) Procurement
Approach (NEW)
12 APR

Workshop on Protection
against Lightning for Buildings
(2nd Run)
15 & 16 APR

bizSAFE Level-4 Course
Develop a Workplace Safety
and Health Management
System Implementation Plan
(4th Run)
15, 16, 22 & 23 APR

Good Industry Practices
(Timber Flooring)
16 APR

1 Day Seminar on Integrated
Advance Testing and
Data Acquisition for 3-D
Geological Modelling of
Singapore (NEW)
16 APR

1 Day workshop on Core
Logging and Geological
Interpretation for Engineering
Works (NEW)
17 APR

Green Mark Refresher Course
(2nd Run)
18 APR

Contract Drafting –
The Technicalities and
Legalities (11th Run)
19 APR

3 Day Course on Project
Management (6th Run)
19, 24 & 25 APR

Carnegie Mellon University
(CMU)-BCA Executive
Development Program 2013:
Leadership in Environmental
Sustainability (4th Run)
22-27 APR

Workshop for Company
CEO/Top Management
(bizSAFE Level 1) (20th Run)
23 APR

2 Day Course on Design
of Steel Buildings using
Eurocode 3 (3rd Run)
23 & 24 APR

GMP Elective Module –
Energy Efficiency & Efficient
Drive (4th Run)
25 & 26 APR

Requirements for Environmental
Sustainability in Buildings
and The Green Mark Scheme
(23rd Run)
26 APR

Ensuring Safe Design
and Construction –
Contraventions and
Enforcement (In Compliance
with Building Control Act &
Regulations) (NEW)
26 APR

Develop A Risk Management
Implementation Plan
(bizSAFE Level 2) (68th Run)
29 & 30 APR

BMSMA for Building
Management Personnel
(7th Run)
9 & 10 MAY

Workshop on Managing
Project Teams Effectively
(5th Run)
13 & 14 MAY

Master of Science in
Sustainable Building Design by
The University of Nottingham
(5th Intake)
Starting in SEP
(Registration closes on 30 APR)

Master of Science in Facility
and Environment Management
by University College London
(4th Intake)
13 & 14
Starting in SEP
(Registration closes)

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