



CIB NEWS ARTICLE

International Council for Research and Innovation
in Building and Construction

Providing a global network for international exchange and cooperation in research and innovation in building and construction, in support of an improved building process and of improved performance of the built environment.

April 2009

CIB Full Member Profile

BCA - Building and Construction Authority, Singapore



The Building and Construction Authority (BCA) is an agency under the Ministry of National Development, championing the development of an excellent built environment for Singapore. "Built environment" refers to buildings, structures and infrastructure in surroundings that provide the setting for the community's activities.



Mission and Vision

BCA's mission is "to shape a safe, high quality, sustainable and friendly built environment". Safety, Quality, Sustainability and User-Friendliness are four key areas where BCA has a very significant influence on the built environment and they distinguish Singapore's built environment from those of other cities. Hence, BCA's vision is to have "the best built environment for Singapore, our distinctive global city".

Strategic Thrusts

In line with BCA's mission and vision, strategic thrusts are:

- To aim to be a caring and progressive organisation that values its people, the innovative spirit, integrity, and service excellence.
- To ensure high safety standards and promote quality excellence in the built environment.

- To champion barrier-free accessibility and sustainability of the built environment.
- To lead and transform the building and construction industry by:
 - Enhancing skills and professionalism
 - Improving design and construction capabilities
 - Developing niche expertise
 - Promoting export of construction related services.
- To forge effective partnerships with the stakeholders and the community to achieve our vision.

BCA's Role

BCA has a vision for Singapore's cityscape. It is to shape the best built environment for Singapore. For this, BCA has aligned its thrusts strategically along four key areas. They are: enhancing building safety, raising construction quality, promoting sustainable buildings and construction and, last but not least, enhancing user-friendliness.

These four strategic thrusts are succinctly summed up in BCA's mission statement which is to shape a Safe, High Quality, Sustainable and Friendly Built Environment. BCA's mission statement underlines the importance to contribute to economic progress and the quality of life in Singapore.

Safety

BCA is the authority for ensuring the structural safety of both existing and new buildings. BCA authorizes building and structural plan approvals in the design stage of a building and at the construction stage, the issue to commence work is permitted. At the completion of a new building, occupation of the building can be effected only after the Temporary

Occupation Permit (TOP) or the Certificate of Statutory Completion (CSC) has been obtained from BCA.

To ensure buildings are structurally safe for continued occupation, BCA administers a system of periodic inspection of existing buildings. Structural investigations of potentially dangerous buildings and unauthorized structures will be carried out whenever the need arises.



BCA administers the Building Control Act to ensure safety of buildings and the Building Maintenance & Strata Management Act to govern the maintenance of all buildings and management of strata-titled properties. The Building Control Act was amended in Sep 2007 to regulate new items, including temporary earth retaining structures.

A new Design and Engineering Safety Excellence Award has also been launched to recognise Qualified Persons for structural works and other members of the project team for achieving excellence in design for safety in construction, operations and maintenance.

High Quality

BCA is committed to the task of enhancing the quality of our built environment. To encourage the industry to strive for improvements in the workmanship and quality standards of residential homes, BCA promotes greater adoption of the two benchmarking standards for quality amongst developers, builders and consumers. They are the Construction Quality Assessment System (CONQUAS) and Quality Mark Scheme.

BCA's CONQUAS and Quality Mark scheme have led to significant improvements in the workmanship standards and the quality of the built environment. Since the introduction of the Quality Mark scheme in 2002, a total of 23 developers had joined to bring about 16,000 residential units to be endorsed by the Quality Mark.

Foreseeing a steady increase in the adoption rate of Quality Mark for residential units, BCA has been building up a substantial pool of builders to be trained in Quality Mark. This will pave the way for the industry to deliver residential homes of consistently high quality to meet the expectations of homeowners.

Sustainability

BCA champions a sustainable built environment, through pushing for more Green buildings in Singapore and facilitating the switch to sustainable construction.

BCA's Green Buildings Masterplan maps out our strategies and initiatives for more green buildings to be built. These buildings are more energy and water efficient, with high indoor environmental quality. Current efforts to promote environmental sustainability in buildings are mainly through the BCA's Green Mark for Buildings Scheme introduced since Jan 2005 and the Green Mark Incentive Scheme (GMIS) which offers cash grants for new buildings and existing ones undergoing major retrofitting. A \$50 million MND Research Fund for the Built Environment was also launched to support research in green building technology.

The public sector had also taken the lead by requiring that all new public sector building projects to be Green Mark certified with effect from 1 April 2007. In fact, all new buildings and existing buildings undergoing major retrofitting will have to meet with the minimum Green Mark certified standards from April 2008 onwards.

To create a consumer-driven demand for high quality green buildings, the BCA Green Mark Info-Portal (www.greenmark.sg) was launched in March 07. The website aims to educate homeowners on the various green building features and their benefits.

BCA is also embarking on a flagship R&D project with the National University of Singapore to retrofit an existing block at the BCA Academy and transform it into an energy self-sufficient building. Funded from the MND Research Fund and EDB's Clean Energy Research and Test-bedding programme, this Zero Energy Building at BCA Academy will serve as a test-bed to integrate various state-of-the-art Green Building Technologies in actual building. Slated to be completed in 2009, it will also become the hub for researchers in the study of energy efficiency and green buildings.



A Sustainable Construction Masterplan was mapped out to reduce Singapore's heavy reliance on concrete by 30 to 50 percent over the next five years and replace it with more sustainable alternatives. With this aim in mind, three main initiatives have been put forth:

- Address design and regulatory issues to facilitate sustainable construction

- Focus on promoting R&D in the use of recycled materials
- Stepping up the promotion of sustainable construction methods to industry and consumers

BCA plays a critical role in working with industry stakeholders to facilitate the adoption of sustainable construction in building projects. This means builders will be encouraged to adopt construction methods and materials that are environmentally friendly and optimize recycling and reuse of materials.

Barrier-free Accessibility

BCA has a part to play in making Singapore an inclusive society by creating a user friendly built environment that addresses the needs of all age groups and people of different abilities including temporary disability.

Since 1990, all new buildings and existing ones that undergo major addition and alteration works must comply with BCA's Code on Barrier-Free Accessibility in Buildings. The Code, now known as the Code on Accessibility in the Built Environment, has since been amended to include requirements on interconnections between buildings and from buildings to infrastructures to improve the level of accessibility in our built environment. The main objective of the amendment was to allow the elderly persons to "age-in-place" and continue to enjoy living in familiar surroundings with their relatives and friends.

However, there remains a large stock of older buildings that were built before the Code came into effect in 1990 and these buildings were not provided with barrier-free access. Such buildings will remain 'inaccessible' unless major renovation works are carried out.

To address barrier-free accessibility in a holistic manner and to facilitate "Ageing in Place", BCA has mapped out a Barrier-Free Accessibility Masterplan. BCA works with public agencies to take the lead in reviewing and improving the accessibility of their older buildings. For private buildings, BCA is promoting voluntary upgrading for barrier-free accessibility with a \$40 million Accessibility Fund set aside by the government for existing buildings. Efforts to promote voluntary upgrading will be focused on key areas such as Orchard Road, Shenton Way and Bras Basah Road.

To further ensure that accessibility features and facilities in buildings remain usable, a new provision was incorporated in the Building Control Act in Sep 2007 to disallow building owners and occupiers from altering, removing or obstructing any physical features that are provided to facilitate movement of persons with disabilities. This new 'continued compliance' provision took effect in Feb 2008.

In support of building an inclusive society that caters to the diverse needs of all users, BCA has also been actively promoting universal design principles in the built environment through seminars, courses and guidebook.

In 2007, BCA introduced the Universal Design (UD) Award, in collaboration with the Singapore Institute of Architects and the Handicaps Welfare Association, to recognize buildings that have demonstrated high levels of accessibility by adopting universal design elements to cater to people of different ages and abilities.

Transforming the Industry

BCA aims to develop a knowledge and skilled workforce to support the construction industry in its drive to shape the best built environment for Singapore. It closely monitors the industry's manpower needs and tailors training courses for construction personnel at management, supervisory and technical levels and develops training and testing programmes for construction workers.

From as early as 1984, the BCA Academy (then known as the Construction Industry Training Institute) was set up to provide good quality construction training and education. Today, the BCA Academy of the Built Environment remains the industry's premier training and education institution. More than just imparting requisite skills, knowledge and information, the Academy also fosters the creative spirit and innovative mindset in the industry's workforce and businesses to ensure that the skills and expertise required to shape a safe, high quality, sustainable and friendly built environment are readily available.



The Academy, through its Centre for Building Research, also conducts applied research and serves as a platform to promote research collaborations relating to sustainable development. With the launch of Singapore's first Zero Energy Building at the BCA Academy in October 2009, the Academy will further consolidate its position as the education and building technology research hub of BCA.

To support and streamline the procurement of construction services for the public sector, BCA shortlists consultants and registers contractors on behalf of the government. It maintains the Public

Sector Panels of Consultants and registers more than 5,000 contractors and suppliers in its Contractors Registry System. BCA also helps to promote the export of construction related services through project facilitation, consortia formation and liaising with overseas government counterparts.



BCA recently formulated the Construction Registration of Tradesmen Scheme as part of the Builders Licensing Scheme to build up a permanent core of skilled workers. BCA's Contractors Registry System requirements were strengthened to better monitor firms' financial health and a third party credit rating system was introduced for firms in the top three grades to help them objectively measure and manage their financial and credit standing. BCA also set up a new entity, BCA International in 2007 to serve as a vehicle to promote and secure the export of construction related services for the industry and export Singapore's expertise in building control and industry development.

Contact

For further information please contact:



Dr. Edward Anggadajaja
Senior Research Officer, Centre for Building Research
E-mail: Edward_ANGGADJAJA@bca.gov.sg
Home Page: www.bca.gov.sg

Address:
Building and Construction Authority
200 Braddell Road
579700 SINGAPORE
Tel: +65 62489867
Fax: +65 62580558