

BCA Universal Design Mark Awards 2015: More Buildings Designed with Inclusiveness in Mind

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Universal Design (UD) refers to the design of buildings and products that can be easily accessed and used by anyone, including the disabled and the elderly. A built environment that considers the needs of a broad spectrum of demographics is one which focuses on creating an inclusive society, where the young, elderly, and persons with limited mobility can continue to enjoy living in familiar surroundings with their families and friends. In the broad terms, UD can be described as “design for everyone”.

The global UD movement began in various countries after World War II. The United Nations supported the efforts under the principle of “equality for all”, which included anti-discrimination to persons with disabilities. By the 1970s, the barrier-free movement began a process of change in public policies and design practices, which were implemented in many developed nations a decade later. Gradually, the requirements were further broadened to include children, families, and women.

The 1990s and beyond saw the rise of inclusive design thinking. The Centre for Universal Design, North Carolina State University developed seven principles of Universal Design: equitable design, flexibility in use, simple and intuitive, perceptible information, tolerance for error, low physical effort, and size and space for approach and use.

Universal Design in Singapore

Compared with many developed nations, Singapore’s efforts in UD are still young. The Building and Construction Authority (BCA) has been working to remove barriers in the built environment, and to improve inclusivity in Singapore. Several overseas learning journeys to countries such as Japan, Denmark, Norway, and the United States have been conducted with industry delegations since. The Code on Accessibility for the Built Environment, an important driver behind the observable improvements to the accessibility in Singapore, has also been reviewed and expanded through the years since its inception in 1990.

Public and industry education campaigns have also been widely rolled out, especially in recent years. Key platforms include the annual Singapore Universal Design Week, as well as the “Unify to UDify” social campaign that promotes UD through social media, roadshows and advertisements.

The Universal Design Mark Awards

To champion the cause for a universally designed built environment, BCA initiated the annual Universal Design Awards in 2007 to accord recognition to building owners and designers for incorporating user-friendly features in their developments. Subsequently, to raise the bar on UD adoption, the UD awards evolved into the UD Mark awards in 2013.

The UD Mark is a voluntary certification scheme to recognize developers and architects who conceptualise and develop projects that enable everyone to enjoy inclusive living with their loved ones. The scheme assesses projects with criteria including process, user-friendliness, design integration, accessibility and interconnectivity, safety, as well as operations and maintenance. There are four categories: Non-Residential (New), Non-Residential (Refurbished), Residential (New), and Parks and Public Spaces. Developments are awarded one of the four UD Mark ratings: Certified, Gold, GoldPLUS and Platinum.

Since its inception, BCA has been giving out an increasing number of UD Mark awards each year, a sign of increasing commitment and dedication by the industry towards an inclusive society. From 26 in 2013, the number increased to 31 in 2014, and then 37 in 2015.

In 2015, the Platinum award, the BCA UD Mark's highest rating, went to three projects: d'Leedon, Westgate, and the Institute of Technical Education (ITE) Headquarters and College Central. There are several interesting UD features ubiquitous in these developments. For instance, 18 percent of d'Leedon's residential units facilitate ageing-in-place. The units are distributed across five blocks at different levels with specific features such as additional eye viewers at main doors for wheelchair users and children, stepless entrances, call-for-help buttons in bedrooms, retraceable hanging rods, and adjustable shelves for wardrobes.

At Westgate, a seven-metre-wide linkway on the ground level and six-metre-wide elevated pedestrian walkway on the second level connect the Jurong East MRT and bus interchanges with seamless connectivity beyond the usual. The Westgate mall has also installed ostomate sinks

in selected washrooms to enable people who have undergone invasive surgeries to empty their waste pouches.

ITE Headquarters and College Central has a design that caters for distinct segregation of vehicular and pedestrian traffic to ensure the safety of staff, students, and public. To facilitate future reconfiguration of space usage, a regular column grid with large spaces allows for flexible adaptation to future needs. Each workshop and school block also has repetitive modules that allow for future expansion.

Remarkably, the top UD Mark awards winners in 2015 have also been BCA Green Mark Award winners. Of the seven UD Mark Platinum and GoldPLUS award winners in 2015, five were Green Mark Platinum and two were Green Mark GoldPLUS award winners. These are developments for which living spaces are inclusive and at the same time environmentally sustainable—hallmarks of developments for the future.

Visit bca.gov.sg for more information.

D'LEEDON

Universal Design Mark Platinum Residential (New)

Award Recipients CapitaLand Group, Hotel Properties Limited and two other shareholders, Zaha Hadid Architects, and RSP Architects Planners & Engineers (Pte) Ltd **Completion Date** 2014

D'Leedon's UD philosophy lies in the integration of design approaches, spatial quality and accessibility to create a friendly and inclusive habitat for residents of different needs and age groups. The development incorporates a variety of amenities and outdoor communal spaces catered to promote social interaction and bonding, such as BBQ pits, resting pavillions, and play areas. There is a gymnasium which comes with water-based equipment, offering options for residents of different physical needs.

Eighteen percent of units in the development distributed over five blocks facilitate ageing-in-place, where different unit types have specific features cater to different age groups, needs and lifestyle preferences. Some of the features include an additional eye viewer at the main door for wheelchair users and children, stepless entrances, call-for-help buttons in bedrooms and bathrooms, retractable hanging rods, and adjustable shelves.

With its accessible facilities, d'Leedon creates a friendly and inclusive habitat for residents of different needs and age groups. d'Leedon was awarded the BCA Green Mark GoldPLUS in 2009.



Close to one-fifth of d'Leedon's residential units facilitate ageing-in-place (Photo: CapitaLand).



Westgate caters to families with children with several pro-family facilities and services (Photo: CapitaLand).

WESTGATE AND WESTGATE TOWER

Universal Design Mark Platinum Non-Residential (New)

Award Recipients CapitaLand Group, Benoy Ltd, and RSP Architects Planners & Engineers (Pte) Ltd **Completion Date** 2014

Westgate is an integrated development comprising a seven-storey shopping mall and a 20-storey office tower. The design epitomises seamless connectivity to align with the philosophy of Jurong Gateway. With a seven-metre-wide linkway on ground level and a six-metre-wide elevated walkway on the second level, commuters can connect to the Jurong East MRT and bus interchanges easily.

Perfect for family and community bonding, the mall has several pro-family facilities such as its Family Zone, two open-air playgrounds, nursing rooms with hot water, diaper changing tables, and separate children's restrooms. A loan service for strollers and wheelchairs is also available. Parents who need help with their children while they shop or work can make use of the child care centre and kids' club. Ostomate sinks are installed in specific washrooms, enabling people who have undergone ostomies to empty their waste pouches.

The premise has a naturally ventilated community space landscaped with art sculptures, water features and ample sitting areas. Above, overlapping glass canopies let in natural daylight while keeping out rain and direct sunlight, making it a popular space for community gatherings and events. Westgate and Westgate Tower was awarded the BCA Green Mark Platinum in 2013.

INSTITUTE OF TECHNICAL EDUCATION HEADQUARTERS AND COLLEGE CENTRAL

Universal Design Mark Platinum
Non-Residential (New)

Award Recipients Institute of Technical Education
and RSP Architects Planners & Engineers (Pte) Ltd

Completion Date 2012

The Institute of Technical Education (ITE) Headquarters and College Central is ITE's third regional comprehensive campus completed under the 10-year ITE master plan. Designed for 10,400 students and 1,400 staff, the college developed a vibrant and inspiring education environment to nurture creative learners and innovative workforce.

The open campus concept and Central Green Spine, along with its themed gardens, water features and ample seating, align with ITE's objective of being an integral part of the community easily accessible by the public. ITE staff and students, and even members of the public can have access to public amenities and retailers. With the introduction of user-friendly features, it is a suitable place for all age groups. For example, there are accessible ramps, grab bars, tactile guidance, loan of wheelchairs, and pro-family facilities like the family parking lots, nursing room and childcare centre.

To aid in directions, there are prominent signages and interactive information directories at strategic locations to help way finding within the compound. The segregation of vehicles and pedestrian traffic accords priority to the safety of staff, students and public users. There is also a dedicated pedestrian footpath and road crossing. Sheltered drop-off points and bus stop are available and car parks are easily oriented with the coloured zones. The ITE Headquarters and College Central was awarded the BCA Green Mark Platinum in 2013.



The ITE Headquarters and College Central has amenities accessible by both its students and members of the public (Photo: ITE).



Causeway Point has easy-to-read signages and family-friendly amenities (Photo: Causeway Point).

CAUSEWAY POINT

Universal Design Mark GoldPLUS
Non-Residential (Refurbished)

Award Recipients HSBC Institutional Trust Services (Singapore) Limited as Trustee of Frasers Centrepoint Trust and East 9 Architects & Planners Pte Ltd
Completion Date 2013

Causeway Point is a destination shopping mall located next to the Woodlands MRT station that was refurbished in 2013. Extensive efforts were put in to improve the connectivity within the mall and with adjacent buildings and infrastructure. Other additions include easy-to-read signages to help shoppers navigate the mall; wheelchair ramps and handicap-friendly features; family-friendly amenities such as nursing rooms, meeting points, rest areas and playground; and better-lit interiors with natural daylight. The mall also added tactile information, Braille, and intercom systems at strategic locations to assist the visually-impaired so that they can move around the mall independently. Causeway Point also received the BCA Green Mark Platinum award in 2011.



During the design process for Jem, consumer focus group studies were conducted to understand needs and requirements before features of the mall were finalised (Photo: Jem).

JEM

Universal Design Mark GoldPLUS
Non-Residential (New)

Award Recipients Lend Lease Retail Investments 3 Pte Ltd, Lend Lease Commercial Investments Pte Ltd, and SAA Architects Pte Ltd
Completion Date 2013

Jem comprises a 12-storey-high office tower and a mall with direct connection to the Jurong East MRT interchange, as well as adjacent buildings in Jurong Gateway. The 24-hour direct linkways and sheltered connections provide easy accessibility within and around the development.

Consumer focus group studies were conducted to understand needs and requirements before features of the mall were finalised. Workshops were also conducted to solicit user feedback on the usage of facilities through the use of mock-ups in actual spaces. For instance, nursing rooms, furniture, signage, handrails, and even the cascading sky park (JemPark) were simulated for assessment prior to development.

For families with young children, there are family-friendly amenities such as child toilets and basins, hot water dispensers, diaper changing stations, private feeding rooms with power points, and automated entry. Interactive directories with adjustable heights are available to suit people of different statures, including wheelchair users. Jem was awarded the BCA Green Mark Platinum award in 2012.

SEGAR GROVE

Universal Design Mark Gold^{PLUS}
Non-Residential (New)

Award Recipients Housing and Development Board and
Surbana Jurong Consultants Pte Ltd **Completion Date** 2013

Visible from the Kranji Expressway, Segar Grove is a public housing residential development with 528 units. It is located at Segar Road and is next to a park connector, which links it to the nearby Bukit Panjang Neighbourhood Park and the Bukit Timah Nature Reserve.

There is a large central space consisting of a sunken court that aids residents and visitors in their orientation within and around the precinct. There are facilities available at the landscape areas which cater to users of various ages, while being well-connected through covered linkways and footpaths. Purpose-designed wayfinding cues such as bright and contrasting precinct markers, block numerical signages, and directory maps are tastefully integrated within the development. Wayfinding facilities such as colour-coded lift lobbies and staircases are applied strategically to improve users' sense of direction, orientation and identification. Segar Grove received the BCA Green Mark Gold^{PLUS} award in 2011.



Segar Grove has a large central space and a court that residents can use to orientate themselves (Photo: HDB and Surbana Jurong Consultants Pte Ltd).

THE INTEGRATED BUILDING – CHANGI GENERAL HOSPITAL AND ST. ANDREW'S COMMUNITY HOSPITAL

Universal Design Mark Gold^{PLUS}
Non-Residential (New)

Award Recipients Ministry of Health and RDC Architects
Pte Ltd **Completion Date** 2014

The Integrated Building (IB) is the first purpose-built facility in Singapore jointly developed by an acute hospital, Changi General Hospital, and a community hospital, St. Andrew's Community Hospital. The IB is focused on providing optimised rehabilitation for patients, especially those who are elderly or recovering from stroke or traumatic injuries. It features a comprehensive range of diagnostic and rehabilitation facilities with an emphasis on providing a pleasant home-like environment to help facilitate our patients' transition back to home and the community.

The development adopts a "village community" concept. The environment was designed to be patient-centric, age-friendly, flexible and sustainable, thereby helping to optimise patients' recovery and independence. End-users such as staff, patients, and vendors were actively involved from design stage, giving valuable feedback on the usage in spatial design and requirements, visual cues, fall prevention facilities requirements, as well as orientation and memory needs of older patients.

The IB is built with a Therapy Garden which consists of slopes, ramps, curbs and steps, with the intention to mimic the outdoors. Patients are guided and empowered to manoeuvre these everyday obstacles in a safe environment. Patients can also gain confidence in skills required to resume daily activities through a mock-up apartment at the Centre for Independent Living. The Integrated Building was also awarded the BCA Green Mark Platinum in 2013. 



The Integrated Building was designed to optimise patients' recovery and independence (Photo: Changi General Hospital and Eastern Health Alliance).