

Bird Paradise & Mandai Wildlife West



Developer

Mandai Wildlife Group

Architect

RSP Architects Planners & Engineers (Pte) Ltd

Project Details

Mandai Wildlife West serves as the gateway to Bird Paradise and the upcoming Rainforest Wild Asia, offering playgrounds, diverse F&B options, and a welcoming arrival area. Inspired by a rich variety of flora and ecosystems, this public space provides an engaging experience for visitors.

Spanning 17 hectares, Bird Paradise is home to 3,500 birds from over 400 species. The park is designed to encourage discovery at every turn, featuring immersive walk-through aviaries representing different world habitats. Alongside highlights like a state-of-the-art penguin habitat and a 2,000-seat amphitheatre hosting animal programs, outdoor play areas, the park offers an enriching adventure for all.

Mandai Wildlife West and Bird Paradise follow a universal design approach of inclusiveness and brings everyone close to nature. Public areas are designed for seamless and barrier-free movements between activity zones. Accessible facilities, such as nursing and adult changing stations, cater to multi-generation families.

Features

Mandai Wildlife West

- A feature ramp is integrated behind the waterfall at the arrival node, providing a unique and barrier-free arrival experience between the Concourse and the Upper Deck level.
- On the Upper Deck, wide sheltered walkways ensure visitors with prams, trolleys or wheelchairs are seamlessly connected to the entrance of Bird Paradise and the future Rainforest Park, weaving through public playgrounds and F&B outlets. Additionally, free wheelchairs are provided for elderly and persons with disability.

Bird Paradise

- Within the walk-through aviaries, 'suspension' bridges and viewing platforms are strategically located and designed to be accessible, offering expansive views for everyone to enjoy.

- The railing along elevated walkway is designed to be porous which allows children and visitors on wheelchair to view from a lower angle. Bird feeders are located on the railing to enable close encounters with animals.
- Ample rest spaces are allocated next to activity zones, allowing visitors of all ages to comfortably interact with the animal exhibits and enjoy the surrounding scenery.
- Thematic pavilions, transition buildings, and viewing decks throughout the park serve as rest stops with plenty of seating for relaxation and rejuvenation.
- Entrance Plaza and Central Plaza are large gathering areas that provide easy orientation for the visitors to locate family-friendly amenities such as guest services, family toilets, nursing rooms and water refill stations.
- A complimentary in-park shuttle connects Entrance Plaza to Central Plaza, so that visitors can conveniently catch an Avian presentation or get to the F&Bs. The shuttle is equipped with clamps to secure guests who are in wheelchairs. A dedicated waiting area with seats is reserved for guests with special needs.
- Nursing rooms are provided with generous stroller parking and waiting areas outside. Side tables and ledges are designed for mothers to place their belongings conveniently.
- To enhance the experience for those with hearing impairments, the park provides hearing enhancement facilities at information counters, Learning Centres, and the 2,000-seat Sky Amphitheatre, ensuring that everyone can fully engage in the park's educational programmes and entertainment offerings.

Changi Airport Terminal 2 Expansion



Developer

Changi Airport Group
(Singapore) Pte Ltd

Architect

RSP Architects Planners &
Engineers (Pte) Ltd

Project Details

The Changi Airport Terminal 2 (T2) Expansion project sets out to add 15,500m² to the terminal building and increase Changi Airport's overall capacity to 90 million passengers per annum when the works are completed in end 2023. Spaces are added in both arrival, departure and transit areas to provide more room for travellers and visitors. The refreshed T2 sports greenery and natural elements at every turn in keeping with Changi's signature garden theme in its terminals.

Features

- Transformed check-in layout in departure hall featuring a spacious, common-use central Fast And Seamless Travel (FAST) zone, with more automated check-in kiosks and bag drop machines. The new orientation of the check-in islands sets out to intuitively direct departing passengers to the departure immigration hall after they have checked-in for their flights.
- The arrival and departure immigration halls are expanded and reconfigured with more automated lanes. The introduction of the special assistance lanes (SAL) by ICA, also enabled travellers with reduced mobility, family groups of up to four persons (e.g., parents with young children) to enjoy the convenience of using the automated immigration process together.
- Clear way-finding signs with contrasting colours and large pictograms, as well as digital landmark features are installed to aid passengers and visitors navigate around the terminal easily.
- Ample seating areas are nestled throughout the terminal. All passengers, whether departing, transiting, or arriving, can enjoy comfortable seating in an environment inspired by nature.
- Garden-like seating lounges are created in the arrival meeters and greeters hall, featuring double-volume landscaped seating areas illuminated with soft daylight. Thoughtful touches have been made to the new halls, with adequate resting points furnished with seats of different heights and armrests.

- Care@Changi programme was introduced to provide support and assistance for passengers with disabilities. Under this programme, one initiative which Changi Airport Group (CAG) undertook was to make travel easier and more inclusive for passengers with invisible disabilities (PIDs) such as autism and dementia. Our airport staff are trained to recognise and approach passengers with unique lanyards that discreetly identify them as PIDs.
- CAG also launched the 'Changi Airport Social Story' initiative as part of the Care@Changi programme. This is a customisable step-by-step airport guide that can be used by caregivers to familiarise passengers with special needs on various airport processes and to better prepare them for their journey at the airport.

One Punggol



Developer

People's Association

Architect

DP Architects Pte Ltd

Project Details

One Punggol is an integrated resident-centric hub envisioned as the beating heart of its new, ecologically sustainable community in the northeast of Singapore. The building's design, the co-location of its many facilities and the synergies it aims to create, are all focused on the underlying theme of 'diversity in unity' to appropriately serve Punggol town's rapidly expanding generation of modern, young workers and families.

Features

- One Punggol integrates with transit infrastructure by means of a new 500-metre linear park that has transformed a formerly under-utilised space below the railway into an outdoor community playground and exercise space.
- The building envelope is porous, weaving the interior with the exterior. Entryways without doors lead directly into naturally ventilated and covered spaces within the heart of the development. As a wayfinding mechanism to guide circulation, distinctive floor patterns are implemented at arrival points, transition areas, walking corridors, congregation spaces and landscape activity areas.
- The square acts as the heart of the development, a veritable agora for meeting and social interaction. Each of the various programmatic departments are provided visibility into the central atrium: this serves both as a means of orientation as well as a congregating space bringing together diverse agencies and users.
- Punggol Regional Library, as one of the largest co-locating partners, has an overarching theme of 'inclusivity', with focus on diversity of age groups and persons with disabilities (PWD). Library's first storey has a curated PWD collection where bookshelves are specially designed and check-out pod allowing direct passing of wheelchair users.
- Within the infant section of the library on the first storey, a family lounge is provided for parents to prepare food for their babies. The first and second storeys, where the infants and children's section is located, have calm pods that provide safe spaces for children to relax when needed. On the third and fourth storeys, where the adults' section is, there are changing beds inside accessible toilets.

FACTSHEET ON ACCESSIBILITY AND USER-FRIENDLINESS OF THE BUILT ENVIRONMENT

1. Approximately 25% of the Singapore population will be aged 65 or older by 2030.¹ It is therefore important to make Singapore an inclusive and age-friendly city, where people of all ages and abilities can move freely and participate in all aspects of life. Accessibility in the Built Environment (BE) is a key enabler, through the following key strategies:
 - a. Ensure minimum accessibility standards;
 - b. Drive accessibility upgrading for existing buildings;
 - c. Improve accessibility of public spaces; and
 - d. Promote universal design (UD)² adoption.

Promoting and Enabling UD Adoption

2. To promote and enable wider implementation of UD, BCA works closely with partners to accord recognition for voluntary adoption and raise industry capabilities.

- a. BCA UD Excellence Award

To spur the pursuit of exemplary UD implementation in buildings and innovations in user-friendly designs, projects that are outstanding will be recognised with the UD Excellence Award (UDEA). The UDEA replaces the voluntary UD Mark certification scheme and awards³ which ran from 2012 to 2021.

- b. Universal Design index Self-assessment Framework

BCA rolled out the Universal Design index (UDi) self-assessment framework on 1 June 2022, which includes a checklist⁴ of accessibility and UD features that developers and designers can use to

- (i) learn about and consider UD provisions that can be included in their projects; and

¹ Source: Singapore Department of Statistics), Population in Brief 2021.

² UD refers to “design for all”. In the context of the built environment, it seeks to create more inclusive building infrastructure that addresses the needs of all age groups (e.g. families with young children and infants, elderly persons) and persons with varying abilities (e.g. wheelchair users, ambulant disabled, those with visual/hearing impairments) to the greatest extent possible.

³ Under the UD Mark certification scheme and awards, BCA has given more than 270 UD Mark awards to almost 100 developers and architectural firms to recognise their efforts in user-friendly building design.

⁴ BCA has included the checklist in the list of documents that developers and QPs will have to submit as part of their application for Temporary Occupation Permit or Certificate of Statutory Completion on or after 1 September 2022.

- (ii) obtain an indicative measure of the level of inclusiveness of their developments.

In doing so, BCA aims to encourage developers and designers to provide accessibility and UD features beyond the prevailing requirements under the Code on Accessibility in the Built Environment. The framework will also enable BCA to gather more comprehensive data on building accessibility.

The public can also benefit from the information submitted by developers and designers in the UDi through an information portal at <https://go.gov.sg/bcaud-infoportal>. The public can obtain a sense of,

- (i) the level of user-friendliness of newly completed buildings, and
- (ii) the availability of selected user-friendly features to allow users with specific needs to pre-plan their visits to buildings.

c. Certification Course for UD Assessor (Enhanced)

BCA rolled out the UD Assessor course in 2012 to promote the appreciation and application of UD principles and to deepen the understanding of various disabilities among building professionals (e.g. architects, developers, facilities/project managers). To date, this course has trained more than 615 industry professionals.

To keep abreast of the latest UD initiatives and to enhance the awareness of senior-friendly design, the UD Assessor course has been enhanced in 2023 to include topics on designing to enable ageing-in-place and for persons with dementia. A refresher course is also available for previously certified UD assessors to update themselves with the latest developments in UD.

d. UD Design Guides

BCA has worked with public agencies to develop and introduce the “UD Guide for Public Places” in July 2016. The guide seeks to raise awareness on the needs of persons with disabilities, the elderly as well as families. It also provides guidance to designers on how to integrate UD principles into the planning of public buildings and facilities such as public transport, hawker centres and parks.

Incentivising Voluntary Upgrading of Private Sector Buildings

3. To improve the accessibility of pre-1990 privately-owned buildings, BCA introduced the \$40 million Accessibility Fund (AF) in 2007 to incentivise building owners to carry out voluntary upgrading. The AF co-funds up to 80% of the construction cost for basic

accessibility features⁵, and up to 60% of the construction cost for UD features⁶, capped at \$300,000 per development.

4. An interim payment option⁷ is now available for projects with a minimum value of \$200,000 and involving lift installation works. This one-time interim payment can be claimed at any point during the project, which will help building owners address cashflow challenges for costlier accessibility upgrading works.
5. In addition, the AF was enhanced to allow more building owners, with buildings that already have basic accessibility features, and which were built before the implementation of 2013's Code on Accessibility in the Built Environment (i.e., after 1990 and before 2013), to tap on the fund to put in more UD features. For this group of buildings, the AF co-funds up to 60% of the construction cost for UD features, capped at \$100,000 per development.
6. As of May 2023, about 20 million has been committed for more than 150 private building owners who have tapped on the AF to retrofit their buildings with accessibility features. BCA will continue to accept applications till 31 March 2027 to incentivise pre-1990 building owners to carry out basic accessibility upgrading works.

⁵ Basic accessibility features include (i) ramps/lifts to provide entry into the building and within the entrance level, (ii) accessible toilet, and (iii) signage to provide directions to the accessibility features.

⁶ Universal Design features include (i) elder-friendly features such as additional grab bars, (ii) family-friendly features such as child-friendly sanitary facilities, lactation rooms, diaper-changing stations, and (iii) features for persons with visual/hearing impairment such as hearing enhancement systems, braille/tactile features.

⁷This is applicable only for pre-1990 private buildings that are not affected by the basic accessibility requirements under the Building Control Act 1989.