

Mandai Rainforest Resort by Banyan Tree



Developer and Owner

Mandai Wildlife Group

Architect

Ar. Wong Chiu Man
WOW Architects Pte Ltd

Project Details

Mandai Rainforest Resort by Banyan Tree represents Singapore's first Super Low Energy resort, offering an immersive nature experience across 4.6 hectares nestled within the Mandai Wildlife Reserve, Singapore's wildlife and nature destination. The resort features 338 rooms, including standard rooms, family rooms with bunk beds, and 24 treehouses that cater to varying needs of travellers. Inspired by native liana plants, the resort's organic architecture blends seamlessly with the surrounding rainforest and creates flowing spaces that bring guests closer to nature while ensuring universal accessibility.

The resort's design and development was undertaken with careful consideration to the surroundings, based on principles and parameters outlined in the Environmental Impact Assessment (EIA) conducted for the Mandai rejuvenation project. The development site previously housed staff quarters, an animal quarantine facility, and a sewage treatment plant, all of which were decommissioned to make way for the resort.

Universal design principles are integrated throughout, featuring barrier-free access via gentle ramps and connected walkways ideal for strollers and wheelchair-users. Specially designed rooms include connecting doors for caregivers and families, while public spaces offer intuitive wayfinding through preserved heritage trees and distinctive textured pathways. The All-Day Dining venue provides flexible spaces that can be sectioned for private events, while a Discovery Forest rooftop garden offers multi-sensory experiences accessible to all visitors.

Sustainability and education are core to the guest experience, with features including natural ventilation systems, solar panels, and water-efficient landscaping. Interactive Energy Displays within each room empower guests to monitor their power use, with gentle reminders when consumption levels exceed eco-thresholds. Every design decision reinforces the commitment to a low-impact, high-comfort guest experience.

ANNEX A – FACTSHEET ON WINNING PROJECTS OF BCA UNIVERSAL DESIGN EXCELLENCE AWARD 2025

Features

Inclusive Arrival and Connectivity

- The resort provides a seamless barrier-free journey from a dedicated carpark to all facilities, with accessible and family parking lots strategically located near lift lobbies
- Sheltered walkways with gentle gradients connect all areas, accommodating guests with strollers or wheelchair-users
- Elegant drop-off areas feature generous waiting areas and comfortable seating
- Complimentary buggy service that is able to accommodate wheelchairs, offers comfortable transportation throughout the resort grounds

Accessible Accommodation and Dining Facilities

- The resort features 5 accessible rooms, 7 elder-friendly rooms, and 72 spacious family rooms, thoughtfully distributed across the development
- The 24 treehouse pods offer unique nature experiences at different heights, with both elevated and ground-level options available
- Accessible and elderly-friendly rooms are paired with connecting rooms for caregivers and families
- Elder-friendly rooms incorporate night lighting, emergency systems, and intuitive controls for a comfortable, secure stay
- The All-Day Dining venue features flexible sectioned spaces and child-friendly dining areas, creating an inclusive experience

Nature Integration with Inclusive Design

- A sunk fence, also known as a “*ha-ha wall*”, was also incorporated to provide a vertical barrier between the resort and a corridor for native wildlife to pass while preserving the view of the forested areas and reservoir
- Open-sided corridors and walkways feature distinctive textures for intuitive wayfinding while maintaining natural ventilation
- Mature trees on-site serve as natural landmarks for orientation throughout the resort
- Panoramic glass lifts provide stunning forest views while ensuring comfortable and safe vertical circulation
- The barrier-free Discovery Forest at rooftop garden offers multi-sensory experiences through tactile plants and educational signage

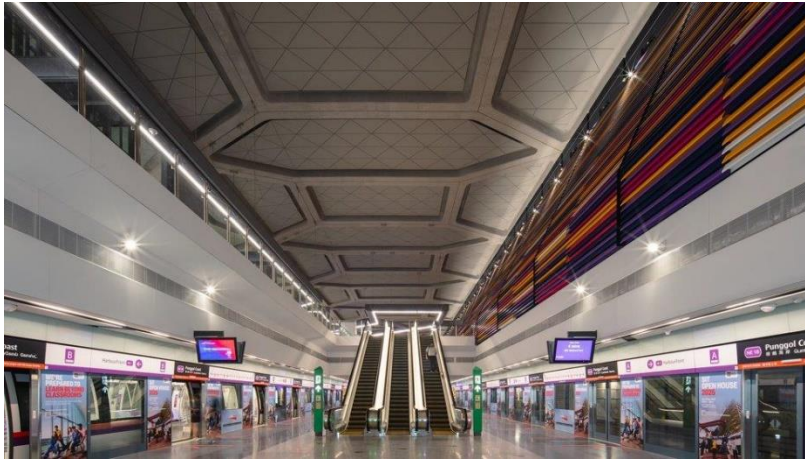
Family-Friendly Amenities and Support

- The Ranger's Club provides dedicated children's facilities in a nature-inspired setting, thoughtfully designed with amenities such as nursing rooms
- The children's playground integrates naturally with landscaped berms for safety and visibility
- Comfortable rest areas with varied seating options along public spaces and nature walks

Other UD Features

- Hearing enhancement systems are installed at key touchpoints including the check-in counter and function rooms
- Other accessible sanitary facilities include ambulant-friendly toilets, grab bars, and child-sized amenities throughout public areas
- All washrooms feature tactile maps to assist persons with visual impairments
- Clear wayfinding with tactile indicators, braille, and intuitive signage ensures easy navigation for all guests

North East Line - Punggol Coast Station



Developer

Land Transport Authority
(LTA)

Architect

Ar. Michael Ong
Land Transport Authority
(LTA)

Project Details

Punggol Coast Station (PGC), the terminal station on the North East Line (NEL), incorporates Universal Design features to provide seamless connectivity and accessibility for residents, commuters, and visitors to the JTC Business Park, Singapore Institute of Technology, and Punggol Coast Mall.

Designed by the Land Transport Authority's (LTA) in-house design team and constructed in tandem with Punggol Digital District (PDD), PGC is the first station to be conceptualised using design thinking, meeting universal design excellence for public transport infrastructure. The station features two distinct exits that are seamlessly integrated and connected to Punggol Digital District and the surrounding residential developments. Exit 1 provides seamless connection to the bus interchange via a sheltered linkway. Exit 2 features an innovative Outdoor Civic Commons - a sheltered and naturally ventilated sunken courtyard, designed as a flexible community space.

The centralised Passenger Service Centre serves as both an orientation focal point and service hub, while intuitive wayfinding is achieved through clear sightlines, strategic lighting and architectural elements, to create an enjoyable journey for all users.

The station also features an artwork titled "Trajectories" by local artist, Zul Othman (ZERO). Inspired by his personal experiences growing up in Punggol and now living in Northshore, the piece captures the past, present and future of Punggol through a visual time lapse of Punggol's developments.

ANNEX A – FACTSHEET ON WINNING PROJECTS OF BCA UNIVERSAL DESIGN EXCELLENCE AWARD 2025

Features

Community-Centric Design

The Outdoor Civic Commons, a sheltered and naturally ventilated welcoming courtyard with amphitheatre seating, serves as an inclusive community space for events and social interactions, which adds to the station vibrancy.

District Connectivity

2 barrier-free exits that are seamlessly integrated– one connected to Punggol Coast Mall and bus interchange via a sheltered linkway, another integrated with Punggol Digital District's Nexus for direct access to surrounding developments.

Intuitive Wayfinding

Clear sightlines combined with strategic lighting, architectural elements, standard tactile guiding system and easy signage navigation system.

Enhanced Accessibility

Centralised Passenger Service Centre serves as primary orientation focal point with clear sightlines to both exits and platforms.

Equipped with hearing enhancement system, spacious lifts with audio announcements and large lift buttons, and wide fare gates accommodating wheelchairs and guide dogs.

User-Focused Design

Wide, levelled circulation spaces throughout the station accommodate fast-moving and slow-paced commuters

Generous platform seating areas with comfortable armrest/ backrest, complemented by family-friendly facilities such as family and accessible toilets.

Collaborative Design Process

Facilities were refined through active engagement with social service agencies and elderly communities to ensure an inclusive design for all.

Singapore Institute of Technology Punggol Campus (Campus Heart)



Developer

Singapore Institute of
Technology

Architect

Ar. Wong Mun Summ
WOHA Architects Pte Ltd

Project Details

Campus Heart at the Singapore Institute of Technology's (SIT) Punggol Campus represents a pioneering approach to inclusive educational architecture, creating a barrier-free environment that seamlessly connects academic, industry, and community spaces within the Punggol Digital District. The development surrounds a publicly accessible community park, also known as the Punggol Heritage Trail, establishing a "Campus-in-a-Park" identity that prioritises universal access and social integration.

The campus features an innovative multi-level accessibility strategy with two distinct public ground levels. The first level accommodates vehicles and services with direct connections to Punggol Coast MRT station and bus interchange, while the second level creates a fully pedestrianised environment with 24/7 accessible through-block links. The signature Collaboration Loop at Level 5 and Campus Boulevard at Level 2 provide seamless, all-weather connections between buildings.

Universal design excellence is demonstrated through inclusive features including lectorials—hybrid lecture-tutorial halls that foster collaboration and interactions among students—with hearing enhancement systems, flexible seating arrangements in public spaces, and enlarged accessible toilets with shower facilities. Family-centric amenities include child-height sanitary facilities, lactation rooms, and connectivity to prayer rooms within the district. Intuitive wayfinding is achieved through the Punggol Heritage Trail as a landmark with clear sightlines, distinctive architectural treatments, and integrated Braille and tactile indicators throughout.

Community integration is enhanced through thoughtfully designed social spaces including amphitheatres, Sky Terraces with varied seating options, and lectorials accessible to the community and working professionals. These spaces promote dignity, autonomy, and equal participation in campus life, transforming traditional educational infrastructure into an inclusive social environment that welcomes users of all ages and abilities.

Features

ANNEX A – FACTSHEET ON WINNING PROJECTS OF BCA UNIVERSAL DESIGN EXCELLENCE AWARD 2025

Campus Flow and Connectivity

- A unique dual-level ground plane separates vehicles and pedestrians, creating a serene pedestrian realm above while maintaining convenient MRT and bus access below
- Welcoming entrances blend seamlessly with the Campus Boulevard, where generously covered walkways offer comfortable journeys with strategic rest stops
- The "Campus-in-a-Park" concept preserves existing greenery, allowing the publicly accessible Punggol Heritage Trail to remain lush and serves as the heart of campus life
- Strategically designed parking places accessible and family lots near lift lobbies, ensuring effortless transitions from arrival to destination

Learning Spaces That Inspire

- Social amphitheatres cascade through the buildings, creating natural gathering spots that encourage spontaneous interaction
- Sky Terraces provide tranquil break-out spaces where students can study or relax amid natural ventilation and green views
- Flexible learning environments feature adjustable furniture and hearing enhancement systems, ensuring everyone can participate fully
- Generous corridors flow through academic blocks, creating inviting spaces for movement and impromptu discussions

Connected Community Spaces

- The signature 2km Collaboration Loop at Level 5 weaves through both the campus and the Punggol Digital District, offering weather-protected connections with periodic rest stops
- Canopy Walk bridges span between Campus Heart buildings, providing scenic routes that celebrate the campus' natural setting
- Integrated end-of-trip facilities support active mobility with convenient shower facilities and bicycle parking

Inclusive Support Features

- Carefully designed washrooms incorporate features for diverse needs, from enlarged accessible facilities to child-friendly amenities
- Prayer rooms are accessible via the Collaboration Loop and lactation rooms in the library block provide private, comfortable spaces
- The approximately 800-seat food court combines flexible seating arrangements with vibrant community space
- Thoughtful details like ambulant-friendly washbasins with additional grab bars support independent use

Intuitive Navigation

- Distinctive building designs and SIT's signature red accents create memorable markers throughout the journey
- The Punggol Heritage Trail acts as a natural wayfinding anchor, with clear sightlines guiding movement
- Braille and tactile indicators integrated into handrails and wall signage
- Large, clear wayfinding signage throughout through-block links

Singapore Institute of Technology Punggol Campus (Campus Court)



Developer

Singapore Institute of
Technology

Architect

Ar. Seah Chee Kien
RSP Architects Planners &
Engineers (Pte) Ltd

Project Details

The Campus Court at the Singapore Institute of Technology's Punggol Campus creates an inclusive waterfront campus environment in the Punggol Digital District. Located along the Punggol Promenade Nature Walk, the development thoughtfully integrates with its surroundings through a series of stepped buildings that cascade towards the waterfront, creating accessible green spaces at various levels while maintaining visual connectivity with Coney Island.

The campus design prioritises universal accessibility through a clear organisational strategy. A central landscaped boulevard serves as the main spine, with academic, recreational and administrative blocks arranged along intuitive axes. This arrangement, combined with the separation of vehicular and pedestrian circulation, creates a safe and welcoming environment that encourages community interaction and supports diverse learning styles.

Teaching facilities, learning spaces, laboratories and communal areas are designed to be fully accessible, while extensive outdoor amenities create opportunities for recreation and social engagement. The development's integration with the Park Connector Network further enhances its role as a community asset.

Sustainability and user comfort are integrated through passive design strategies including north-south orientation, natural ventilation, and extensive greenery. These features, combined with smart building systems and a district cooling network, create a campus environment that is both environmentally responsible and comfortable for all users.

ANNEX A – FACTSHEET ON WINNING PROJECTS OF BCA UNIVERSAL DESIGN EXCELLENCE AWARD 2025

Features

Seamless Campus Connectivity

- Barrier-free pathways connect from Punggol Coast MRT through the campus to waterfront spaces
- Elevated walkways and bridges provide sheltered journeys while offering scenic views of Coney Island
- Smart separation of vehicles and pedestrians creates safe, pleasant walking experiences along landscaped boulevards
- Gentle ramps and strategically placed lifts ensure comfortable vertical circulation throughout
- Color-coded zones and clear signage guide users effortlessly from arrival points to destinations

Inclusive Learning Spaces

- Auditoriums integrate varied seating options with hearing enhancement systems for diverse user needs
- Tech-enabled classrooms feature flexible furniture arrangements supporting different learning styles
- Outdoor learning environments blend with wheelchair-accessible community gardens
- Multi-purpose halls incorporate inclusive seating arrangements for various activities
- Information counters with accessible heights and communication support welcome all users

Family-Centric Amenities

- Generously-sized accessible washrooms with comprehensive support features throughout campus
- Well-equipped lactation rooms offering privacy and comfort for nursing mothers
- Family-friendly washrooms featuring child-protection seats and diaper changing stations
- Universal access drinking fountains positioned at convenient heights along major routes
- Thoughtfully distributed ambulant-friendly facilities supporting independent use

Community Connection

- Direct connection to Park Connector Network encourages active mobility and recreation
- Multiple sheltered pathways ensure comfortable campus exploration in all weather
- Regular resting areas with varied seating heights and grab bars promote inclusive interaction
- Multi-sensory wayfinding through Braille, tactile indicators, and visual cues aids navigation
- Clear sightlines and distinctive architectural elements create easily readable spaces

7 Science Park Drive, Geneo



Developer

CapitaLand Development

Architect

Ar. Siah Puay Lin
Surbana Jurong
Consultants Pte Ltd (in
collaboration with Serie +
Multiply)

Project Details

Located at the gateway of Singapore Science Park I, 7 Science Park Drive exemplifies how universal design can enhance a mixed-use development combining premium business spaces with hospitality. The development integrates approximately 28,800 square meters of business park workspace with Singapore Science Park's first lodging facility - the 250-unit Citadines Science Park Singapore.

Accessibility and comfort are thoughtfully considered throughout both public areas and private spaces to support a positive experience for all. All lifts are designed for universal access, connecting car parks, hotel floors, and business facilities through lobbies enhanced with visual and auditory cues. The development's strategic location, just five minutes from Kent Ridge MRT station, is complemented by fully sheltered linkways that integrate with the broader Science Park precinct.

Guest rooms showcase inclusive design through varied configurations including accessible, elderly-friendly and family-sized options. These spaces feature user-responsive elements like intuitive layouts, night lighting, and low-glare materials. Common areas incorporate hearing enhancement systems, extra-large accessible washrooms, and regular resting points with diverse seating options.

The development's wayfinding strategy blends international hospitality standards with tactile cues, while well-lit surfaces and acoustic treatments in corridors help reduce disorientation. These thoughtful features create an environment where business innovation and universal accessibility work in harmony to serve a broad spectrum of users - from corporate professionals to families and individuals with varying abilities.

Features

ANNEX A – FACTSHEET ON WINNING PROJECTS OF BCA UNIVERSAL DESIGN EXCELLENCE AWARD 2025

Integrated Accessibility Network

- Fully sheltered linkways seamlessly connect to Kent Ridge MRT station and bus stops
- All 11 lifts feature universal access with visual beacons and auditory signals
- Wide corridors incorporate acoustic treatments and clear sightlines
- Colour-coded car parks with safe pedestrian pathways enhance navigation
- End-of-trip facilities include accessible showers and changing areas

Inclusive Room Design

- Accessible and elderly-friendly rooms on every floor exceed minimum requirements
- Dual-key units accommodate extended families and caregivers
- Guest rooms feature intuitive layouts with bathroom night lights
- Pull-down wardrobes in accessible rooms
- Connecting door options allow flexible family arrangements

Thoughtful Common Facilities

- Hotel lobby at Level 10 is equipped with hearing enhancement systems
- Extra-large washrooms provide generous maneuvering space
- Comfortable waiting areas offer varied seating heights
- Interactive digital directory includes wheelchair-accessible routing

Family-Centric Amenities

- Well-equipped nursing rooms at Level 1 (business park) and Level 10 (hotel)
- Child-friendly facilities include diaper changing stations
- Family parking lots positioned near lift lobbies
- Comprehensive wayfinding system combines hospitality standards with tactile elements
- Low-glare materials and clear sightlines enhance visual comfort