HIGHLIGHTS OF THE YEAR

2024 Performance Highlights

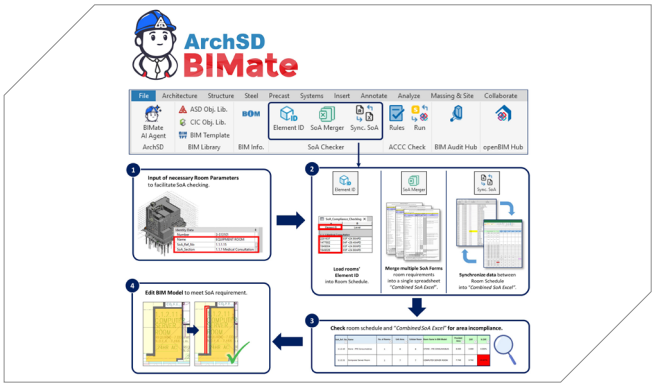
At the ArchSD, we seek continuous improvements in our sustainability performance. Our annual plan is centred on 4 strategic focus areas that drive low-carbon transformation, enhance project performance, empower talents while bringing positive impacts on the well-being and prosperity of local communities and individuals.

Innovation

Pioneered the application of advanced technologies – including BIM, MiC, robotics, drones, new materials, artificial intelligence (AI), Internet of Things (IoT) and Augmented Reality (AR) – across new works projects and facilities upkeep. These digital tools and innovative construction methods enhanced project performance and advanced our capabilities in smart advisory services, site supervision, safety, sustainability and data management.

The Testing and Commissioning (T&C) Intelligent Robot leverages IoT sensors, AI-driven deep learning and video analytic technology to generate measurement and verification reports, perform inspections and verify installations for smart construction sites.

The "Weaving Love" iconic installation at the wedding garden of Tseung Kwan O Immigration Headquarters is Hong Kong's first large-scale pilot utilising 3D metal printing technology.



Launched a self-developed BIM tool, "ArchSD BIMate" aimed at seamlessly integrating resources and utilizing AI technology to develop application tools and plugins. This development provides clear strategies, standardizes the modelling methodologies and promotes automated checking to ensure a smooth project delivery process.

HIGHLIGHTS OF THE YEAR

2024 Performance Highlights

People-centric Design

Advanced low-carbon, sustainable and inclusive building designs to enhance liveability and well-being in Hong Kong, supported by proactive multiple platform stakeholder engagement to understand needs and share knowledge.

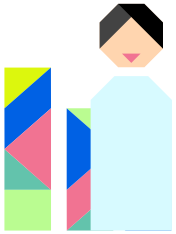
CARBON NEUTRALITY

Launched the Carbon Neutrality Strategic Framework and developed "3A Strategy" to facilitate low-carbon transformation in Hong Kong's built environment. Conducted internal training and arranged presentations at the Eco Expo Asia 2024 for stakeholder engagement.

Promoted adoption of the comprehensive ArchSD Elderly-friendly Design Guidelines, which includes practical examples, across new works projects and facilities upkeep.

HIGHLIGHTS OF THE YEAR

2024 Performance Highlights



Sense of Purpose

Empowered and groomed talent to uphold professional standards, and drove continuous improvements. Through knowledge management portals and public engagement events, we fostered a resilient, can-do team spirit dedicated to serving the community.

ArchSD was the Top Winner of the 2024 Hong Kong Most Innovative Knowledge Enterprise (MIKE) Award and Winner of the Global MIKE Award 2024, commending ArchSD's outstanding performance in knowledge management and innovation.

Showcased ArchSD's leading role in innovative construction technologies and its commitment to inclusive, environmentally friendly building designs in the "Public Architecture in Hong Kong II" Special Stamps.

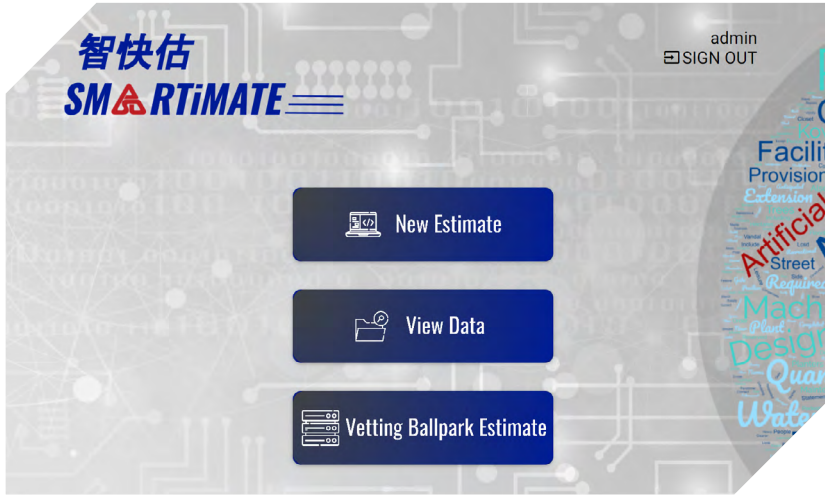
Held the "Our Community - Built From the Heart" photo and short video competition to celebrate the 75th Anniversary of the founding of the People's Republic of China and promote appreciation for public architecture.

HIGHLIGHTS OF THE YEAR

2024 Performance Highlights

Slim and Trim

Streamlined cumbersome procedures and obsolete practices, and leveraged smart technologies and digitalisation to foster a work-smart culture and drive greater efficiency.



Fostered a work-smart culture through strategic digitalisation in facilities development and upkeep, monitoring and advisory services to streamline processing time and reduce paper-based workflows.

Won Gold Award in the CIC Construction Digitalisation Award 2024 for outstanding performance in enhancing project efficiency, promoting a wider adoption of BIM, AI, robotics and IoT, and engaging stakeholders in digital transformation.

HIGHLIGHTS OF THE YEAR

Awards and Recognition

We strive for excellence in facilities development and upkeep, industry and community contributions. Awards are a strong testament to our innovative solutions for the benefit of the living environment and thriving communities.

In 2024, we won over 80 prestigious awards recognising our contributions in green buildings, creative urban design, construction and research innovation, heritage conservation and project management. Below is a selection of some key awards from local and global institutions.

Architectural Services Department

CIC Construction Digitialisation Award 2024

Organisation – Client (Public) Category – Gold Award

Architectural Services Department

Hong Kong Most Innovative Knowledge Enterprise (MIKE) Award 2024 – Top Winner

Global MIKE Award 2024 – Winner

Cheung Sha Wan Catholic Primary School

International Architecture Awards 2024

School and Universities Category – Winner

Hong Kong Post Headquarters

DFA Design for Asia Awards 2024

Spatial Design – Workspace Category – Bronze Award

HIGHLIGHTS OF THE YEAR

Awards and Recognition

Integrated Building Services Modules

The 49th International Exhibition of Inventions of Geneva

Architecture/Civil/Construction/Materials/ Woodworks Category – Silver Medal

Kai Tak Station Square

HKIA Annual Award 2024

HKIA Medal of the Year of Hong Kong (Urban Design & Master Planning)

Lung Tsun Stone Bridge Preservation Corridor

HKIUD Urban Design Awards 2023

Planned Project Category – Grand Award

Volunteer Service

Civil Service Volunteer Commendation Scheme 2024

Outstanding Volunteer Leader Award & Excellent Volunteer Award

Ms MO Yin-ling, Carman

HIGHLIGHTS OF THE YEAR

Awards and Recognition

OTHER KEY AWARDS

Projects	*Award*
Advancing Code Compliance Checking: Research and Development of Automated OpenBIM Checking for General Building Plans Submissions	**Hong Kong OpenBIM / OpenGIS Awards 2024** Professional Research Category - Grand Award
Advancing Net Zero – Refurbishment of Toilet Blocks at Pet Garden of Central and Western District Promenade	**Green Good Design 2025** Green Landscape Architecture/ Urban Planning - 2025 Green GOOD DESIGN Award
	HKIPM PM Achievement Awards 2024 Sustainable Projects - Winner
AI Drone Building External Wall Spalling / Water Seepage Detection System for Deteriorated Buildings in Hong Kong	**"Innovative Application with AI" Competition (OGCIO)** Merit Award
	"Innovative Application with AI (Artificial Intelligence)" competition Merit Award
D&C of a Community Health Centre cum Social Welfare Facilities at Pak Wo Road, North District	**HKIPM PM Achievement Awards 2024** Construction/ Engineering - Winner
Estimating Team of QSB, ArchSD Application of artificial intelligence in cost estimation.	**RICS HK Awards 2024** Research Team of the Year - Winner
Expansion of the Legislative Council Complex	**Autodesk HK BIM Awards 2024** Award Winner
Expansion of Wo Hop Shek Crematorium	**The International Architecture Award 2024** Religious Buildings - Winner
Heritage Building Information Modelling for Cultural Heritage Conservation at Tai Fu Tai Mansion	**HKICON Conservation Awards 2024** Interpretation Category - Special Mention Award

HIGHLIGHTS OF THE YEAR

Awards and Recognition

OTHER KEY AWARDS

Projects	*Award*
Hong Kong Pavilion International Horticultural Exposition 2024, Chengdu	**HKILA Landscape Awards 2024** Excellence in Public Development - Merit Award
	HKIA Annual Award 2024 Architectural Installation, Curation & Exhibition Design - Finalist
	Bronze Award Gardens of Chinese Cities
Hoi Bun Road Park	**HKIUD Urban Design Awards 2023** Completed Project - Merit
Hoi Ha Visitor Centre	**HKIA Cross-Strait Architectural Design Awards 2024** Community, Culture & Recreational Projects - Nominated
Hong Kong Flower Show 2024	**Hong Kong Flower Show 2024 - Gold Award for Design Excellence (Landscape Display)** Displays Section (Local)
Hong Kong Flower Show 2025	**Hong Kong Flower Show 2025 - Grand Award for Design Excellence (Landscape Display)** Displays Section (Local)
Hong Kong Post Headquarters	**International Design Awards 2024** Bronze Award for Architecture - Commercial Architecture (Public/ Government Buildings)
Immigration Headquarters	**ASHRAE Hong Kong Chapter Technology Award 2025** Institutional Buildings (Other Institutional) - Winner
	Autodesk HK BIM Awards 2024 Honorable Mention

HIGHLIGHTS OF THE YEAR

Awards and Recognition

OTHER KEY AWARDS

Projects	*Award*
Inland Revenue Tower in Kai Tak Development	**ASHRAE Region XIII Technology Award 2024** Regional Merit under category of Institutional Buildings – New
	HKIS Awards 2024 Construction (Building) Category - Merit
	Quality Building Award 2024 CAT 3. Hong Kong Non-residential (New Building - government, Institution or Community) - Merit
Integrating OpenBIM in the Museum Project at Kowloon Park: A Shift in Design, Collaboration, and Tender Preparation	**Hong Kong openBIM/openGIS Awards 2024** Design for Buildings Category - Merit Award
Kai Tak Station Square	**DFA Design for Asia Awards 2024** Spatial Design -Cultural & Public Spaces Category (Silver)
	International Design Awards 2024 Bronze Award for Architecture - Landscape Architecture (Community Spaces/ Parks)
	HKIA Cross-Strait Architectural Design Awards 2024 Community, Culture & Recreational Projects-Nominated
	The International Architecture Award 2024 Urban Planning/ Landscape Architecture - Winner
Kwu Tung North Multi-welfare Services Complex	**Quality Building Award 2024** CAT 3. Hong Kong Non-residential (New Building - government, Institution or Community) - Merit
	HKIE Structural Excellence Award 2024 Non Residential Category: Commendation Merit

HIGHLIGHTS OF THE YEAR

Awards and Recognition

OTHER KEY AWARDS

Projects	*Award*
Lai Chi Wo Eco-smart Public Toilet	**HKIA Annual Award 2024** President's Special Prize
	HKIA Annual Award 2024 Sustainable Architecture Category - HKIA Special Award
Lam Wah Street Playground	**HKIA Annual Award 2024** Public Space/ Civic/ Communal Building - HKIA Award of/ outside Hong Kong
	DFA Design for Asia Awards 2024 Spatial Design - Cultural & Public Spaces (Bronze)
Lung Mei Beach House	**The International Architecture Award 2024** Sports & Recreation - Winner
Maintenance Strategy on ArchSD maintained man-made slope	**HKIS Awards 2024** Post-occupation Category - Grand Award
Mass Deployment on Renewable Energy Projects in Existing Government Venues	**HKIPM PM Achievement Awards 2024** Sustainable Projects - Winner
Modernisation of Lai Wan Market	**HKIPM PM Achievement Awards 2024** Construction/ Engineering - Winner
Moreton Terrace Activity Centre	**HKIUD Urban Design Awards 2023** Completed Project - Merit
Oil Street Art Space	**The International Architecture Award 2024** Public Space - Honorable Mentions

HIGHLIGHTS OF THE YEAR

Awards and Recognition

OTHER KEY AWARDS

Projects	*Award*
Pound Lane Public Toilet and Bathroom	**HKIUD Urban Design Awards 2023** Completed Project - Merit
Public Open Space at East Coast Park Precinct	**HKIUD Urban Design Awards 2023** Planned Project - Merit Award
Public Toilet at Pak Shek Kok Promenade, Tai Po District	**HKIA Annual Award 2024** President's Special Prize
Quantity Surveying Branch of ArchSD	**RICS Hong Kong Awards 2024** Quantity Surveying Team of the Year - Winner
Design and Construction of Light Public Housing	**HKIS QS Awards 2024** QS Awards on projects (Innovation) - Merit
Reprovisioning of a Public Toilet at Pak Shek Kok Promenade, Tai Po District	**HKIPM PM Achievement Awards 2024** Construction/ Engineering - Winner
Reprovisioning of Transport Department's Vehicle Examination Centres at Tsing Yi	**HKIA Cross-Strait Architectural Design Awards 2024** Transportation & Infrastructure Facilities-Nominated
Sham Shui Po Park	**Universal Design Award Scheme 2024/25** Gold Award
Wan Chai Promenade	**The International Architecture Award 2024** Urban Planning/ Landscape Architecture - Honorable Mentions
Weaving Love	**HKIA Annual Award 2024** HKIA Special Award - Technology or Innovation Architecture Category

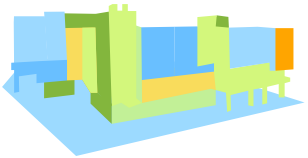
HIGHLIGHTS OF THE YEAR

Project Showcase

As an integral part of the community, we adopt an empathetic and long-term approach to advancing sustainable development in public architecture. By blending innovative construction technologies with sustainable and people-centric design, ArchSD's projects exemplify our commitment to shaping a smarter, greener, and more liveable city. Through close collaboration with industry partners, user departments, and the wider community, we create vibrant, nature-integrated and accessible spaces that enhance resilience, urban well-being and cultural heritage for generations to come.

CASE STUDY

PO LEUNG KUK SIU HON SUM PRIMARY SCHOOL



The Pioneer of Fair-faced Load-bearing Reinforced Concrete MiC Primary School

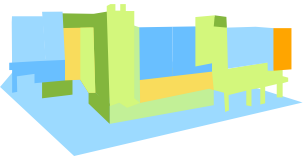
The primary school in Fo Tan pioneers an innovative fair-faced load-bearing reinforced concrete (RC) MiC design, setting a new benchmark for future MiC schools built in the same way. By combining advanced grout tube and tie bar connections, this novel structural approach significantly reduces wet trades onsite while enhancing overall construction efficiency.

Departing from traditional layouts, the school adopts a low-density spatial scheme, integrating learning facilities within a compact yet flexible footprint. Its unique design features 3 teaching cluster blocks encircling the sports podium deck on the 2nd floor, linked by semi-open corridors to foster connectivity. Each cluster includes 4 classrooms with DfMA-enabled aluminium folding partitions, offering adaptable spaces for diverse teaching methods. The use of fair-faced concrete finishes for both exterior facades and interior walls lowers embodied carbon while showcasing the material's natural aesthetic and MiC's superior concrete quality control.

To ensure seamless offsite manufacturing and onsite assembly, BIM played a pivotal role in facilitating architectural, mechanical, electrical and plumbing (MEP) coordination through BIM CAVE, precision rebar setting, and 4D simulation for MiC module installation. DfMA principles were also applied to M&E equipment, including air-handing units, pump sets and electrical distribution boards, minimising waste and optimising energy efficiency.

CASE STUDY

PO LEUNG KUK SIU HON SUM PRIMARY SCHOOL

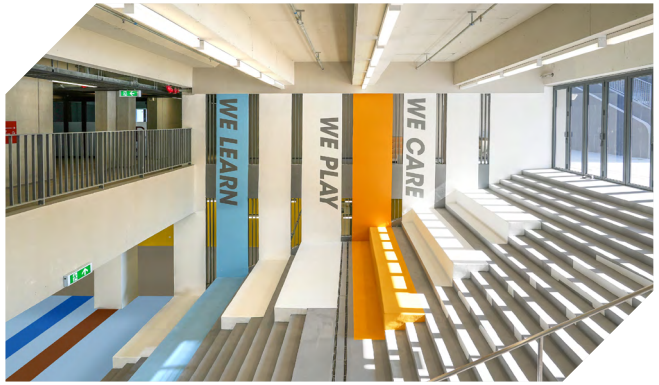


KEY FEATURES

The low-density spatial design integrates learning facilities, fostering a cohesive environment for study and activities while minimising visual and ventilation impacts on neighbouring buildings.

The school's innovative MiC structural system integrates beam-column moment-resisting structural frame with non-structural wall or façade. This approach minimises onsite concreting works, reduces construction waste and dust emissions, thereby improving construction efficiency.

MEP installations including mechanical ventilation, fire services, plumbing and drainage, and electrical system, except the connection between MiC units, were manufactured in factory, significantly accelerating onsite construction progress. BIM was implemented across all project stages to ensure highest standards for the final building.

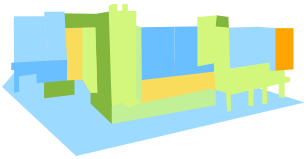


Fair-faced concrete finishes on the exterior façade and classroom interiors enhances sustainability performance while exemplifying the material's natural aesthetics and MiC's concrete quality control.

Energy-efficient features and renewable energy technologies, including photovoltaic panels, DC-powered fans and solar tubes, contribute to energy reduction and sustainable operations.

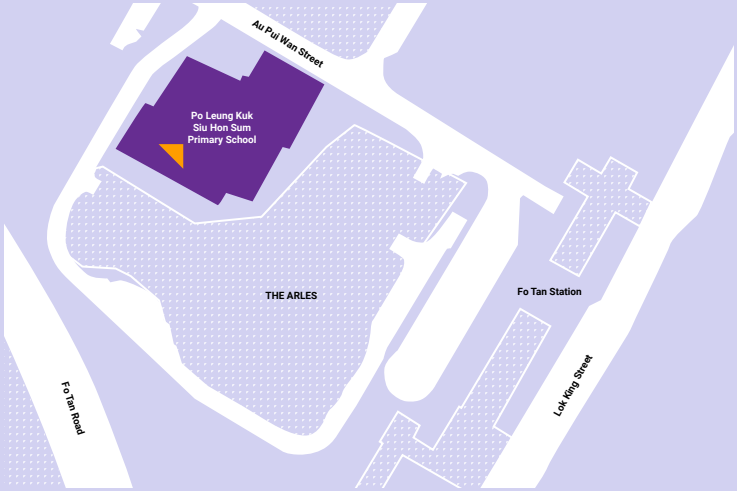
CASE STUDY

PO LEUNG KUK SIU HON SUM PRIMARY SCHOOL



LOCATION

3 Au Pui Wan Street, Fo Tan, Sha Tin



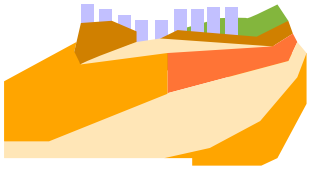
LEARN MORE

Recognised for its groundbreaking innovation and engineering excellence, the project won the HKIE Structural Excellence Award 2025 – Commendation Merit and obtained Green Building Award 2025 - Finalist.

The primary school consists of 24 classrooms, 4 small group teaching rooms, 6 special rooms (including a music room, a visual arts room, a general studies room, a multi-purpose room, a computer assisted learning room and a language room), a library, a guidance activity room, 2 interview rooms, a staff room, a staff common room, a conference room, an assembly hall, a multi-purpose area, a student activity centre and other ancillary facilities.

CASE STUDY

PO PIN CHAU VIEWING PLATFORM



Sustainable Viewing Facilities for Natural Landscape Conservation

Growing foot traffic along the trail to Po Pin Chau Viewing Platform had degraded vegetation and accelerated erosion, particularly at certain cliffside areas. To protect the pristine coastal landscape of the trail to Po Pin Chau Viewing Platform while enhancing hiking safety and visitor experience, a new viewing platform overlooking Po Pin Chau was built with associated facilities, i.e. the two viewpoints and trail entrance feature.

The terraced viewing platform and natural stone-paved ground—with grass infill—blend seamlessly with the natural surroundings. Strategically placed stumps and warning signages improve safety, while scenic viewpoints at East Dam and Kim Chu Wan highlight coastal vistas reduce disturbances to the environment.

To promote sustainability and integration with the surrounding environment, the design incorporates various measures. These include native plants to reduce erosion; along with low-impact materials (e.g. river sand and peat moss).

CASE STUDY

PO PIN CHAU VIEWING PLATFORM

KEY FEATURES

Terraced viewing platform and scenic viewpoints at East Dam and Kim Chu Wan offer breathtaking views.

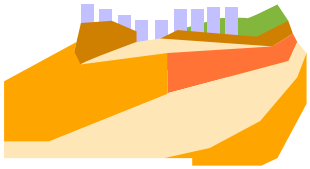
Native planting blend with existing vegetation to reduce erosion and protect ecosystem biodiversity.

Natural stone paving and low-maintenance planting mediums to minimise environmental impact.

Signage and strategically placed stumps guide hikers to appreciate the scenic views within the specific points.

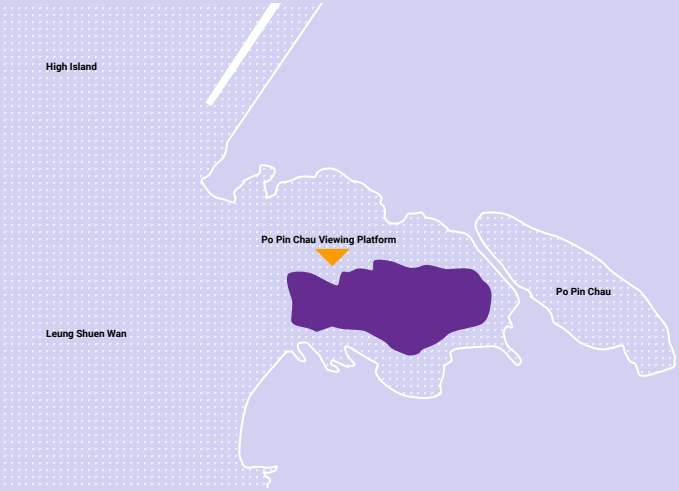
CASE STUDY

PO PIN CHAU VIEWING PLATFORM



LOCATION

Viewing Platform Overlooking Po Pin Chau



LEARN MORE

Po Pin Chau, located within the Hong Kong UNESCO Global Geopark, is a striking sea stack renowned for its towering hexagonal volcanic columns. Originally connected to Fa Shan (visible from the East Dam), it was shaped by relentless wave erosion that first formed a sea cave, then an arch, before gravity caused its collapse into the isolated landmark we see today.

The Po Pin Chau Viewing Platform adapts the winning design from the Hexagonal Adventure – Design Competition. It seamlessly integrates with the landscape while preserving the existing trigonometrical station and cross-shaped cement structure - offering visitors unparalleled views of this geological wonder.

CASE STUDY

FACILITIES TO SUPPORT OPENING PLAN OF SHA TAU KOK

Revitalising Border Tourism

The Sha Tau Kok Opening-up Plan facilitates the gradual opening of this historic border area for recreation and tourism as part of the Northern Metropolis Development Strategy. The project delivers thoughtfully designed facilities that enhance visitor experience while ensuring security and honouring local heritage.

The reprovisioned Chung Ying Street Checkpoint in Sha Tau Kok replaces temporary marquees structures with a permanent facility inspired by Sha Tau Kok's railway legacy. Its design blends nostalgic elements with designated scenic photo spots, creating a cultural landmark for Chung Ying Street and implementing "e-Corridor" border-crossing measures for residents' convenience. A reinforced boundary fence at Tsoi Yuen Kok further strengthens border security.

Adjacent to the Sha Tau Kok Pier, a once-vacant waterfront has been revitalised into a vibrant tourist zone. The area now offers essential amenities such as tour bus parking, restrooms, and seating, alongside open-air market stalls promoting local products. The design harmonises with the coastal landscape, creating inviting spaces for leisure (including boat excursions) and photography.

Sustainable features include steel structures and facades to minimise dust and carbon emissions, a high-ceilinged clearance hall to optimise natural ventilation, and glass walls facing a courtyard to maximise natural lighting and user comfort.

CASE STUDY

FACILITIES TO SUPPORT OPENING PLAN OF SHA TAU KOK

KEY FEATURES

A revitalised waterfront zone enhancing visitor experience with amenities such as parking, lavatories, and seating, along local open-air market stalls against Sha Tau Kok's coastal backdrop.

A splash of sea, sky and forest hues creates the perfect picturesque photo spot for memorable moments of Sha Tau Kok.

A boundary fence was installed in the Tsoi Yuen Kok area to enhance border security.

High ceilings boost natural airflow, while glass walls and smart lighting sensors maximise daylight—cutting energy use and enhancing comfort.

The Chung Ying Street Checkpoint now stands about where Sha Tau Kok's historic railway terminus once thrived. Its design pays homage to the old Hung Leng Station, blending traditional elements—Chinese blue brick walls, white stone skirting, white columns, and wooden benches—with modern functionality. The exterior wall is decorated with copper plate featuring a vintage train, while the checkpoint seamlessly accommodates both operational needs and visitors capturing photos of this transportation heritage landmark.

CASE STUDY

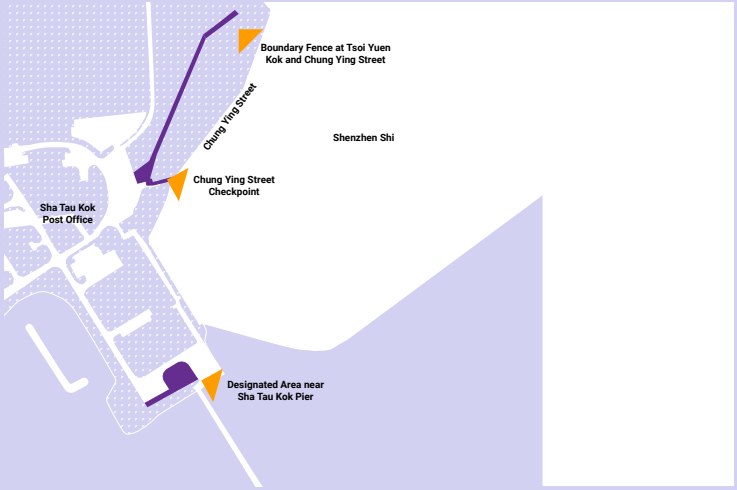
FACILITIES TO SUPPORT OPENING PLAN OF SHA TAU KOK

LOCATION

Designated Area near Sha Tau Kok Pier

Chung Ying Street Checkpoint
Chung Ying Street, Sha Tau Kok, New Territories

Boundary Fence at Tsoi Yuen Kok
Tsoi Yuen Kok, Sha Tau Kok, New Territories



LEARN MORE

The first and second phases of the Sha Tau Kok Frontier Closed Area Opening-up Plan were implemented in June 2022 and January 2024 respectively, allowing individual and group tourists to apply for Closed Area Permit and enter Sha Tau Kok (except Chung Ying Street).

CASE STUDY

LIGHT PUBLIC HOUSING

Building Smart for Better Living: Modular Solution to Housing Shortage

To bridge the short-term gap in public housing supply, the Light Public Housing (LPH) project, announced in the 2022 Policy Address, aims to provide affordable housing to improve the living conditions and quality of life for the underprivileged communities residing in inadequate housing as soon as possible.

The LPH initiative will provide approximately 30 000 simple and standardised apartment units with community-centric ancillary facilities in 2 batches within a 5-year period before 2027-28. These units will be delivered using the Modular Integrated Construction (MiC) approach, enabling faster and more flexible completion compared to traditional methods. The Housing Bureau leads policy implementation while the ArchSD oversees design and construction, ensuring quality through large-scale standardised development. By combining speed, cost-effectiveness, safety, and smart technologies through modular construction, the LPH initiative showcases a creative model to tackle the housing shortage for vulnerable populations.

CASE STUDY

LIGHT PUBLIC HOUSING

KEY FEATURES AND BENEFITS

Productivity

- Factory-built modular components are transported for rapid onsite assembly, achieving 30% faster project completion compared to conventional construction methods
- Extensive application of MiC in high-rise housing developments enables faster project delivery
- 5 vacant school premises repurposed to accelerate delivery and reduce cost
- Integrated smart technologies (e.g. BIM, IoT, AI, robotics) and innovative construction methods (including MiMEP and DfMA) enhance efficiency

Cost-effectiveness

- Approximately 15% cost reduction achieved through standardised designs, central procurement and streamlined processes
- Lower average unit cost for higher MiC storeys
- Cost-efficient basic amenities (electric water heaters, exhaust fans) prioritised for temporary housing over renewable energy systems or air conditioners which are included for long-term developments

Quality

- High-quality prefabricated modules and durable materials
- Standardised designs ensure consistency in living conditions
- ArchSD-led construction balances production efficiency with rigorous quality control measures

Low-carbon and environmental conscious construction

- Prefabrication and precision manufacturing minimise onsite waste, energy use and carbon emissions
- Demountable MiC modules and DfMA units for future relocation and re-assembly through “Design for Deconstruction” principles – reducing waste and enabling circular construction
- Reduce dust and noise impact on surrounding communities
- High-performance facades reduce solar heat gain in the flats

Community-centric

- Flats with self-contained toilet, shower area, open cooking space and basic fittings
- Shared amenities including retail shops, laundrettes, cooking area, study rooms and multi-purpose community spaces

CASE STUDY

LIGHT PUBLIC HOUSING

Yau Pok Road, Yuen Long

- 2 156 units completed with about 880m² of ancillary facilities, resident intake commenced by phases from 28 March 2025. It was the first completed Light Public Housing project which took only 379 days from design inception to project completion.
- Spanning an 87,000m² site divided into northern and southern zones, the project features 10 three-storey residential blocks and 8 single-storey ancillary buildings, as well as 2 public transport termini. Designed with a courtyard layout, half of the flats overlook central green courtyards with lush landscaping and seating areas, while the rest benefit from serene farmland views. By adopting the MiC method, the project minimised on-site construction activities to significantly reduce noise and air impact, safeguarding the local wetland ecosystems, migratory birds, and neighbouring communities.

Choi Hing Road, Ngau Tau Kok

- 2 290 units completed with about 390m² of ancillary facilities, intake commenced from end June 2025.
- As Hong Kong's first high-rise LPH project, this development comprises 2 residential blocks of 18 and 19 storeys equipped with MiC elevators. Completed in a record-breaking 18 months using the MiC approach, it sets a new benchmark for high-rise construction speed in the city. The project is distinguished by its "Moon-Gate"– an elegant and fair-faced concrete arch connecting the two blocks. This minimalist design serves as both a welcoming entrance and a communal gathering space, enhancing aesthetic appeal while reducing material waste by eliminating the need for additional finishes. The development includes community-focused ancillary facilities such as a convenience store, launderettes, an activity room and a minibus stop.

Tsing Fuk Lane, Tuen Mun

- Approximately 1 850 units, complemented by about 300m² of ancillary facilities, with completion scheduled for Q4 2025.
- Entire residential modules – complete with finishes and fittings – are factory-built for rapid onsite assembly. The project extends MiC prefabrication to building cores, fabricating lift shafts, staircases, refuse rooms and electrical and mechanical plant rooms offsite. This comprehensive prefabrication minimises in-situ construction, significantly reducing both construction time and environmental impact. Located adjacent to the Light Rail Ching Chung Stop and Kin Sang Estate Shopping Centre, the development includes community-focused ancillary facilities such as a convenience store, a launderette and a study/activity room.

CASE STUDY

LIGHT PUBLIC HOUSING

Olympic Avenue, Kai Tak

- Approximately 10 700 units with about 1 720m² of ancillary facilities to be completed in Q4 2025 (Phase 1) and Q3 2026 (Phase 2).
- To ensure efficiency and quality throughout the construction process, lift cores and staircases in each residential block are constructed using precast concrete components, while building services installation along exterior façades, common corridors, and plant rooms is optimised through MiMEP systems and DfMA principles. Located adjacent to the Kai Tak MTR station and the Kowloon City Market, the development includes community-focused ancillary facilities such as a convenience store, catering services, a launderette and a study/activity room.

Sheung On Street, Chai Wan

- Approximately 1 720 units with about 250m² of ancillary facilities to be completed in Q2 2026.
- The project's identity is anchored in the branding concept: "Possibility in Life." This guiding philosophy was co-created with the community through participatory drawing workshops, with residents' creative ideas directly inspiring architectural elements. The integration of these community-inspired designs aims to cultivate learning opportunities for the younger generation and foster synergy within the Chai Wan neighbourhood. A central highlight is the "Stories Under the Tree" courtyard. This thoughtfully designed communal space is built around the preservation of an ancient tree, seamlessly weaving natural heritage into modern social infrastructure.

Yan Po Road, Tuen Mun

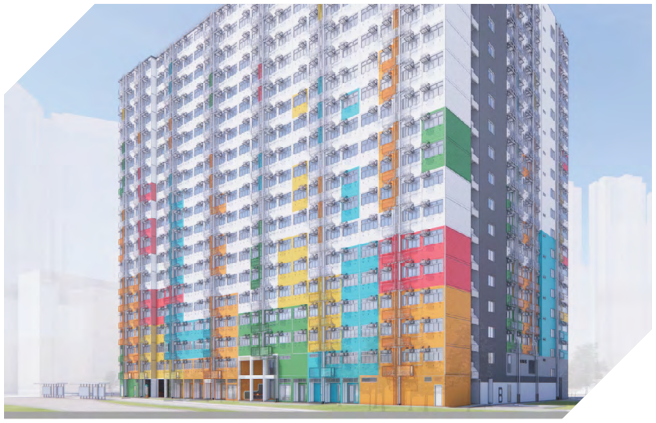
- Approximately 5 620 units with about 2 140m² of ancillary facilities to be completed in Q3 2026 (Phase 1) and Q4 2026 (Phase 2).
- Inspired by the "Life Changing" brand concept, this development serves as an integrated community hub for Tuen Mun, designed to nurture family life and foster community harmony. It blends a "Mountain Step" landscape with a curated mix of essential amenities—including a public transport interchange, premises for after-school care and social community services, a supermarket, a bakery cafe, frozen and general food stores, a laundry, and a hair salon—to create a supportive, natural environment. The design prioritises open spaces, seamlessly linking green areas within each residential block to the surrounding neighbourhood.

CASE STUDY

LIGHT PUBLIC HOUSING

Lok On Pai, Siu Lam

- Approximately 4 200 units complemented by 2 000m^2 of purpose-built ancillary facilities to be completed in Q3 2026.
- Anchored by its "Hope for the Needy" foundation, this project embodies a compassionate vision shaped by direct community input. It is meticulously designed to meet the needs and aspirations of elderly residents and retirees, offering thoughtfully integrated amenities such as a scenic promenade and a supermarket. These facilities provide more than just convenience; they actively build community by encouraging social interaction and enhancing accessibility, ultimately fostering a vibrant and hopeful neighbourhood.



Hang Kwong Street, Ma On Shan

- Approximately 860 units with about 130m^2 of ancillary facilities to be completed in Q4 2026.
- This LPH initiative turns site constraints into opportunities for a well-connected, comfortable community that prioritises resident well-being. Key design innovations include: refuse collection points are positioned for natural ventilation, while a central convenience store is optimised for accessibility; communal facilities are grouped around a courtyard to foster interaction, complemented by increased separation between residential wings to enhance privacy and visual openness; and multiple pedestrian entrances paired with a sky walkway to improve access from public transportation and promote natural ventilation.

CASE STUDY

LIGHT PUBLIC HOUSING

The Mission Covenant Church Holm Glad No. 2 Primary School, Kwun Tong

- Approximately 130 units with about 70m² of ancillary facilities to be completed in Q4 2025.
- The site benefits from its close integration with the existing Shun On Estate community, located near housing blocks and playgrounds. Inspired by "Luminous Ascent," the design features dynamic, floating forms and sweeping lines that convey movement and lightness. Each building is distinguished by a unique colour palette drawn from the glow of fireflies—such as vibrant greens, yellows, and warm oranges, evoking a whimsical yet cohesive aesthetic that enhances its visual connection to its community.

Tung Wah Group of Hospital Ma Kam Chan Memorial Primary School (Choi Yuen Annex), Sheung Shui

- Approximately 110 units with about 120m² of ancillary facilities to be completed in Q4 2025.
- Nestled near major transport routes, this LPH development employs acoustic measures to ensure a tranquil living environment. Community well-being is central to the design, reflected in enhanced lighting and safety measures around the adjacent basketball court, and the preservation of the existing 1/F stage as a communal gathering space. Embracing the "Luminous Ascent" concept, the architecture features dynamic floating forms and sweeping lines that evoke movement and lightness. A unique firefly-inspired palette of vibrant greens, yellows, and oranges creates a distinctive yet harmonious identity, reflecting the playful spirit of the community.

Former St. Joseph's Anglo-Chinese School, Kwun Tong

- Approximately 150 units with about 120m² of ancillary facilities to be completed by Q1 2026.
- Preserving the school's architectural heritage features, including cross motifs, vintage doors, timber-glass altar and mosaic tiles, the transformation creates vibrant leisure and community spaces while integrating sustainable upgrades. The roof's high-performance electricity-free cooling paint reduces heat gain for units below the roof level, and modular bathrooms accelerate affordable unit delivery.

CASE STUDY

LIGHT PUBLIC HOUSING

Carmel Leung Sing Tak School, Kwun Tong

- Approximately 110 units with about 150m^2 of ancillary facilities to be completed in Q1 2027.
- Seamlessly integrated into the Shun On Estate, the Carmel LPH site prioritises inclusivity and convenience. The design features 2 accessible activity rooms—on the ground and 7th floors—ensuring equal access for all tenants. A new barrier-free ramp connects adjoining floor levels, enhancing mobility and convenience within the building. A unique firefly-inspired palette of vibrant greens, yellows, and oranges creates a playful yet harmonious aesthetic that reflects the surrounding community.

Baptist Rainbow Primary School, Wong Tai Sin

- Approximately 100 units with about 220m^2 of ancillary facilities to be completed in Q1 2027.
- Seamlessly integrated with the Wong Tai Sin neighbourhood—including Chuk Yuen Housing Estate, playgrounds, and schools—the design thoughtfully retains and adapts existing features. The former 3rd floor library is repurposed as an activity room, while the 1st floor assembly hall platform is preserved as a fully accessible common area. Inspired by "Luminous Ascent," the architecture features dynamic floating forms and sweeping lines, complemented by a firefly-inspired colour palette of vibrant tones of greens, yellows, and oranges that reflect the community's vibrant identity.

CASE STUDY

LIGHT PUBLIC HOUSING

LOCATION

1. 18 & 22 Yau Pok Road, Yuen Long
2. 20 Olympic Avenue, Kai Tak
3. 23 Choi Hing Road, Ngau Tau Kok
4. 10 Tsing Fuk Lane, Tuen Mun
5. Sheung On Street, Chai Wan
6. Yan Po Road, Tuen Mun
7. Lok On Pai, Siu Lam
8. Hang Kwong Street, Ma On Shan
9. Former St. Joseph's Anglo-Chinese School, Choi Shek Lane, Kwun Tong
10. The Mission Covenant Church Holm Glad No.2 Primary School, Shun On Estate, Kwun Tong
11. TWGHS Ma Kam Chan Memorial Primary School (Choi Yuen Annex), Choi Yuen Estate, Sheung Shiu
12. Carmel Leung Sing Tak School, Shun On Estate, Kwun Tong
13. Baptist Rainbow Primary School, Chuk Yuen (South) Estate, Wong Tai Sin

CASE STUDY

EAST KOWLOON CULTURAL CENTRE

The Art Connector: Infusing Culture into Urban Life

Transforming from a traditional precinct into a new cultural beacon, the East Kowloon Cultural Centre (EKCC) is a hub for all. Its “window of art” radiates creativity to neighbouring districts, while the elevated “Art-Link” pedestrian loop seamlessly connects artists with the daily flow of commuters.

The EKCC houses 5 performance venues of varying sizes accommodating diverse performances and events for art groups.

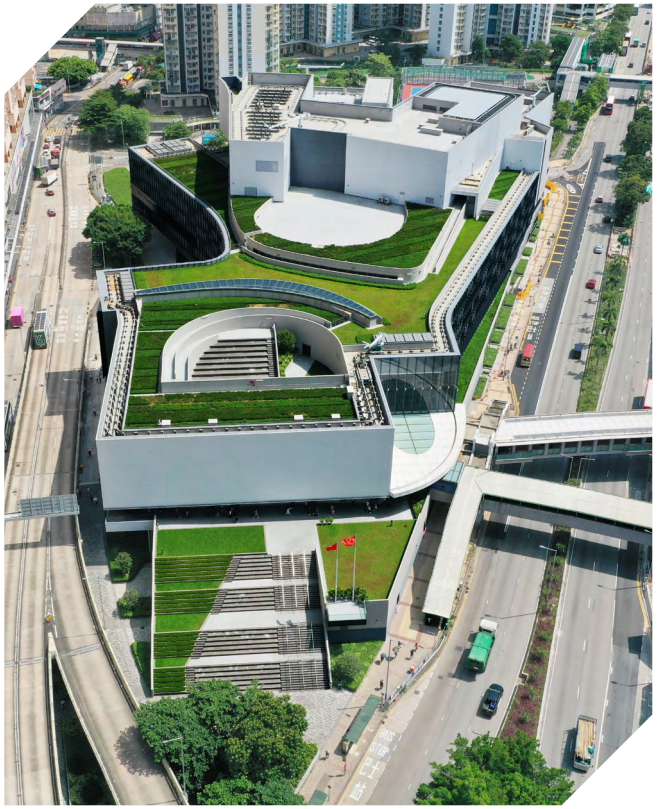
Serving as a chamber for idea collision, EKCC offers a culturally immersive environment where creativity, connectivity and vitality foster spontaneous interactions. The Main Foyer - an iconic crossroads connecting all venues – multi-level open spaces (including a roof garden, open deck and ground level plazas) provide a comfortable environment for the public.

Sustainability shaped every aspect of EKCC’s design, earning a Final Platinum Rating in the BEAM Plus New Buildings assessment. Passive strategies maximise natural lighting while renewable energy technologies (including photovoltaic panels, rainwater recycling and lift regenerative power system) reduce carbon emissions by about 22%. Early stage air ventilation assessments further optimise airflow through strategic adjustments to the building mass.

CASE STUDY

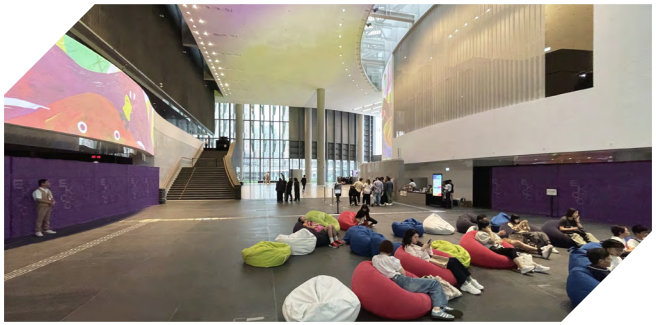
EAST KOWLOON CULTURAL CENTRE

KEY FEATURES



Spanning from roof to street-level plazas, these multi-level green spaces mitigate heat island effects, while delivering biophilic experiences, visual relief for neighbourhoods and opportunities for diverse activities. The Entrance Plaza's preserved trees provide both shade and a living connection to the community's shared memories.

The landscape deck on the 1/F connects the MTR station to street level through a terraced plaza and revitalised garden under the flyover. This creates welcoming new space and refreshing moments of pause for commuters amidst cascading greenery.



The elevated Art-Link Foyer enhances urban connectivity through alternative routes, naturally weaving art and culture into commuters' daily journeys through an immersive public space.

The continuous glass façade and skylights diffuse natural daylight while maintaining visual connectivity. High-performance fritted glass and delicately designed shading fins - featuring perforated pattern inspired by metal folding gates in traditional housing estates - work in tandem to reduce solar heat gain, blending thermal performance with nostalgic local character.

The 1,200-seat Auditorium stands as EKCC's largest multi-purpose performance venue, offering flexible configurations for performances and events.

CASE STUDY

EAST KOWLOON CULTURAL CENTRE

LOCATION

60 Ngau Tau Kok Road, Kowloon

LEARN MORE

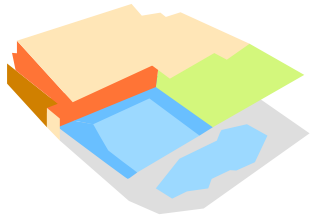
Achieved a Final Platinum Rating under the BEAM Plus New Buildings Version 1.1 assessment.

The sustainable building significantly enhances energy efficiency, conserves resources and improves occupant well-being, cutting annual electricity use more than 23%, reducing water consumption by about 57%, and achieving over 30% of site greenery coverage. Its IAQ Excellent Class certification further ensures healthy indoor air quality.

Rising from the site of the former 1960s Lower Ngau Tau Kok Estate, the EKCC addresses the community's pressing demand for performance spaces. Its strategic location between Ngau Tau Kok Road and Kwun Tong Road transforms a transit zone into a culture hub where artists, students, theatregoers, general public and tourists converge daily.

CASE STUDY

KOWLOON TSAI SWIMMING POOL COMPLEX

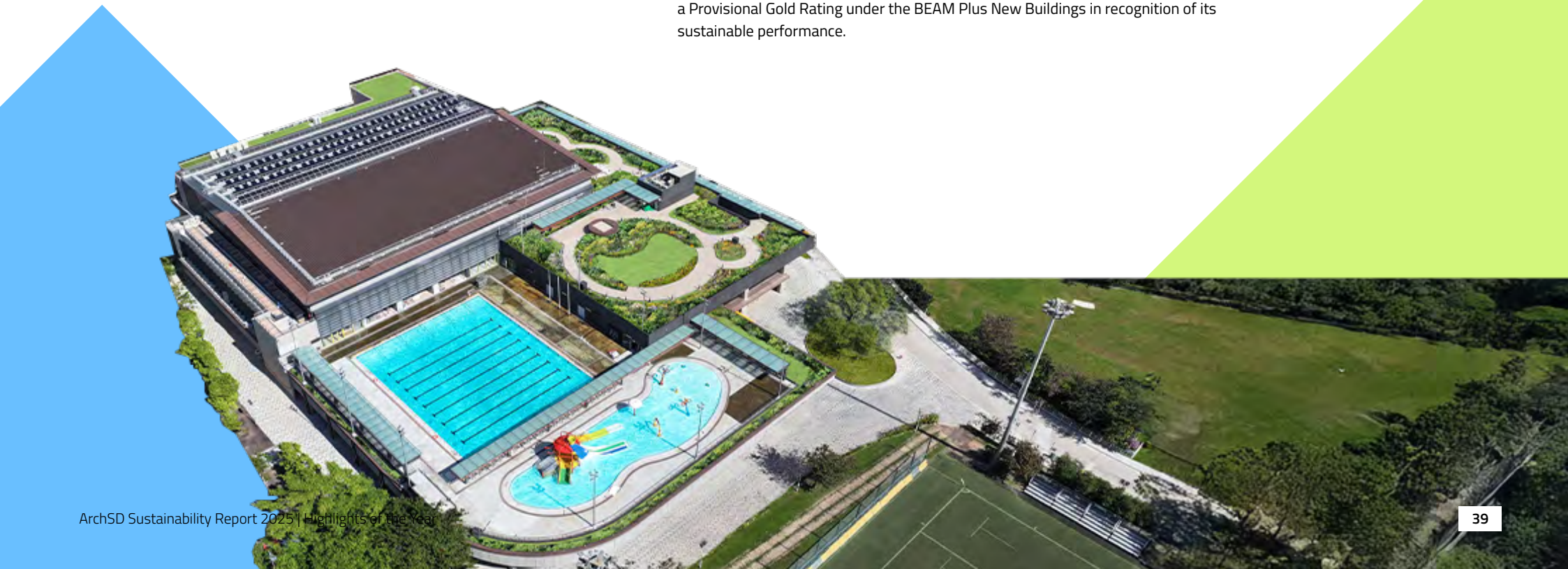


Prioritising Nature-integrated Design and Community Needs

The newly refurbished swimming pool complex at Kowloon Tsai Park revitalises the public facilities by harmonising community needs with ecological preservation. Designed to meet the demand for year-round swimming and competition events, the Complex offers community-centric amenities with tailored landscaping for diverse user groups, enhancing both recreational opportunities and the park's ecological integrity.

Spanning an area of 16 132m^2, the Complex features an indoor heated pool, a 1 200-seat spectator stand, an outdoor training pool, and a leisure pool, complemented by upgraded amenities such as changing facilities, an entrance hall, a filtration plant room and a pool management office. Prioritising inclusive and sustainable design, the project aims to promote healthy living through increased greenery coverage and accessibility features integrated across all spatial and landscaping elements to serve users of all abilities.

By adopting low-impact construction to minimise earthworks and material waste, alongside passive design strategies and energy-efficient systems, the project achieved a Provisional Gold Rating under the BEAM Plus New Buildings in recognition of its sustainable performance.

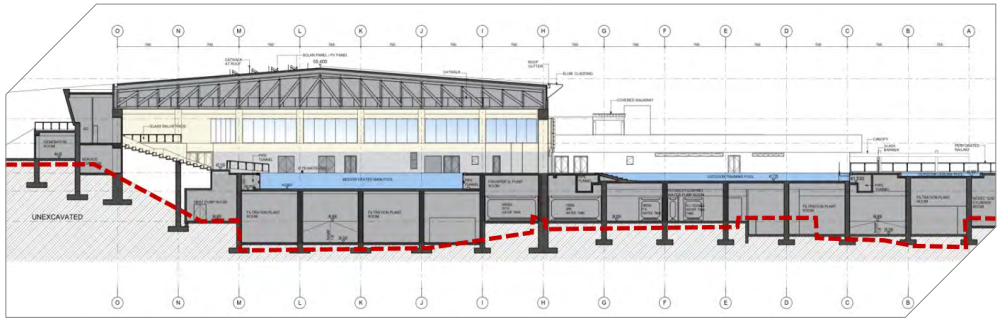


CASE STUDY

KOWLOON TSAI SWIMMING POOL COMPLEX

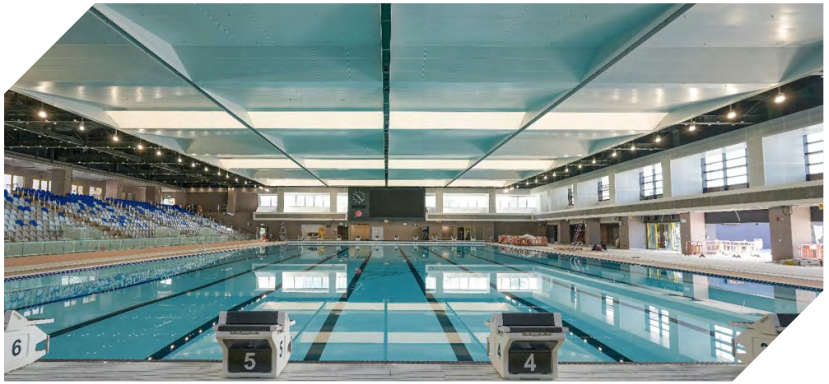
KEY FEATURES

The building height was restricted to 18.5 metres to minimise visual impact, while the rooftop garden offers visitors scenic views of the pool complex against lush greenery.



The new pool facilities were designed to follow the site's natural topography, minimising excavation and backfilling. This balanced cut-and-fill volumes approach reduced material imports and waste disposal.

The landscape design caters to diverse park users, with greenery seamlessly connecting the pool complex to its natural surroundings. Following redevelopment, greenery now covers approximately 20% of the site area.

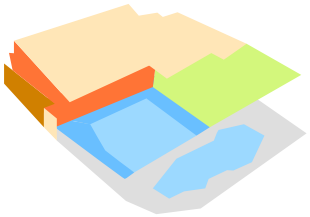


The design created diffused natural lighting through deep recessed windows, shading overhangs and high ceilings. Computer simulations further optimised illumination levels and identified glare issues in advance.

The ArchSD Elderly-friendly Design Guidelines was adopted to integrate accessible features from building layout to landscape detail.

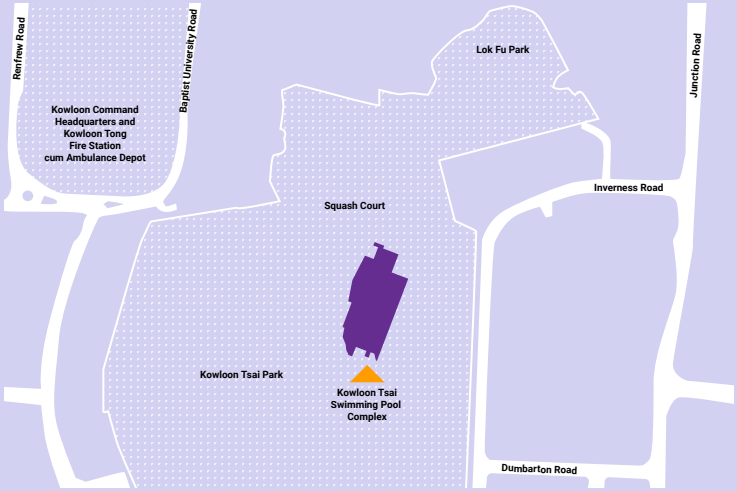
CASE STUDY

KOWLOON TSAI SWIMMING POOL COMPLEX

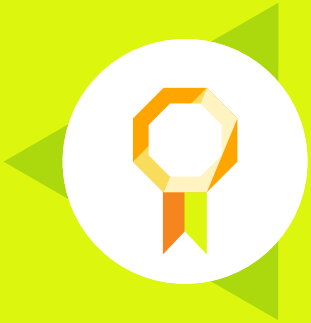


LOCATION

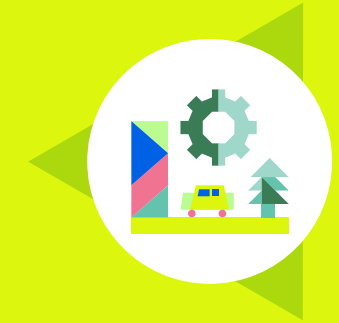
13 Inverness Road, Kowloon City, Kowloon



LEARN MORE



Achieved a Provisional Gold Rating under the BEAM Plus New Buildings Version 1.2 assessment.



The redevelopment project involves demolishing existing outdoor pool facilities; upgrading Inverness Road access to meet the Emergency Vehicle Access standards; enhancing park circulation; and improving the adjacent Bauhinia Garden landscape.

CASE STUDY

TSEUNG KWAN O SOUTH PARK

A Model for Climate-Resilient Blue-Green Drainage Infrastructure

Tseung Kwan O South Park is a large-scale pilot project for climate-adaptive landscape, integrating the Sponge City Concept (SCC) and Water-Sensitive Urban Design into its landscape and drainage systems. Spanning 3.8 hectares, the park is designed to address the city's evolving needs through sustainability, biodiversity enhancement, and community well-being.

The Park features an advanced water management system designed to reduce flood risk and recycle water. Its goal is to capture 70% of rainwater through a network of sustainable elements, including rain gardens, bioswales, a zero irrigation garden, a detention lawn, permeable paving and an underground stormwater storage tank with a capacity of about 142 000 litres. This system is equipped with real-time sensors to collect data for tracking runoff-capture performance. Additionally, the park incorporates renewable energy solutions, such as an air-improvement photovoltaic glazing system and solar lighting, to power the lighting system and improve air quality.

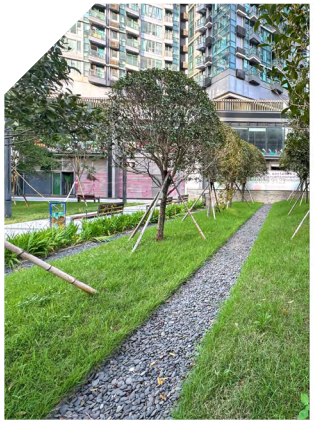
The park's large greenery coverage mitigates urban heat island effects and enhances biodiversity. Over 40 types of trees and 80 types of shrubs and groundcover are planted in the park. Flowering trees such as pink trumpet trees, Guangzhou cherry blossoms promote well-being and sense of identity while nectar plants support pollinator habitats.

The park also features inclusive recreational spaces such as accessible play zones, fitness stations and interactive sand play areas — catering to visitors of all ages and abilities, as well as educational panels aiming to raise public awareness about climate resilience & SCC with intriguing cartoon-illustrations.

CASE STUDY

TSEUNG KWAN O SOUTH PARK

KEY FEATURES



Rain gardens and bioswales store and filter rainwater, while permeable paving reduces runoff. Real-time sensors track performance on rainwater capture, setting a model for flood-resilient, sustainable blue-green infrastructure.

Air-improvement photovoltaic glazing system and solar lighting power the park. Water is collected from planters and cycled back to a storage tank for irrigation reuse. This approach is enhanced by a “zero irrigation” system at the zero irrigation garden, which is designed with integrated storage to hold excess water, making it entirely self-sustaining and eliminating the need for external watering.

Dynamic play zones, wheelchair-accessible seating, and fitness stations promote inclusivity. Educational panels are also provided to raise public awareness of climate resilience and SCC.

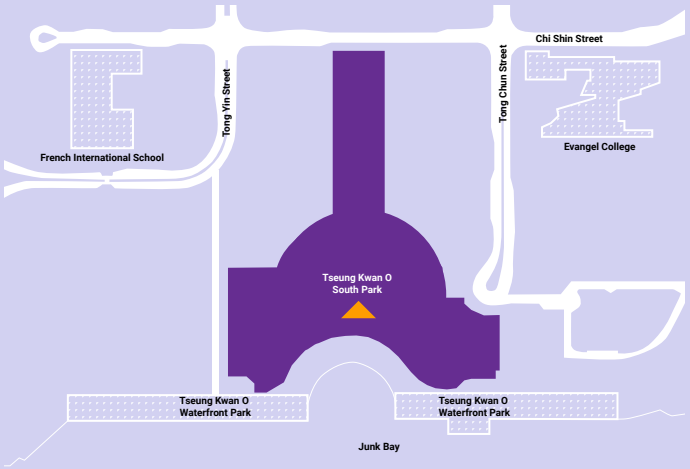
The park’s large greenery coverage mitigates urban heat island effects and enhances biodiversity. including over 700 trees and 110 000 shrubs, cools the urban environment and attracts pollinators — transforming the reclaimed site into a biodiversity hotspot.

CASE STUDY

TSEUNG KWAN O SOUTH PARK

LOCATION

15 Chi Shin Street, Tseung Kwan O, New Territories



LEARN MORE

To combat the imminent threats of climate change, the HKSAR Government introduced the SCC in the Hong Kong's Climate Action Plan 2030+ in 2017 and promulgated the Technical Circular (Works) No.9/2020 Blue-Green Drainage Infrastructure in 2020, setting out the policy for wider adoption of blue-green drainage infrastructure elements in the design of drainage measures for all government projects, with a view to enhancing the adaptive capacity of the drainage system to reduce surface runoff and improve water quality.

This policy brings associated benefits such as place-making, promoting urban biodiversity, improving air quality and mitigating urban heat island effect.

CASE STUDY

NORTH DISTRICT COMMUNITY HEALTH CENTRE BUILDING

Promoting Wellness Through Design

As a cornerstone of Hong Kong's 10-year Hospital Development Plan, the North District Community Health Centre Building is designed to enhance public primary care and community support. Operated jointly by the Hospital Authority, Department of Health and Social Welfare Department, this 10-storey, refurbished integrated facility spans approximately 9 000 m2, offering comprehensive, one-stop primary and community healthcare services for residents in the North District.

From spatial planning to optimised window-to-wall ratios and façade material selection, the building balances sustainable design with user comfort, addressing solar heat gain reduction, daylight optimisation, and neighbourhood views. Its innovative features—including energy-efficient double façades and wellness-promoting staircases—reflect a commitment to environmental stewardship and community well-being, catering to a growing and ageing population. This holistic approach earned the project Platinum certification under the BEAM Plus New Buildings assessment.

CASE STUDY

NORTH DISTRICT COMMUNITY HEALTH CENTRE BUILDING

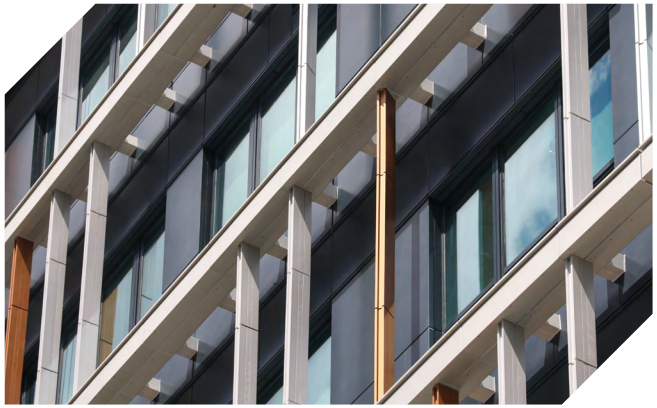
KEY FEATURES

綠葉 年輕，活力	vitality and growth
年輪 代表多年經驗	experience and strength
種子 代表新生命開始	new beginning
大咀鳥 安静、个性温驯、说话能力佳的种类	calm & quiet
鸚鵡 說話學習能力強	Strong learning skills
黑臉琵鷺 香港候鳥群體生活，會互相幫助	Community life, help each other
啄木鳥 專食樹木上害蟲	The "Tree Doctor"
貓頭鷹 夜晚視力強	The "Wise Watcher"
樹木 生命力	growth
木紋 生命&年輪	cycle of life

Modernised facilities and vibrant "Loop of Life" design theme create a hopeful and joyful environment for visitors and the community. Each floor's artistic touches reflect its mission to enhance the social well-being while meeting growing healthcare demands in the North District.

The "Wellness-promoting Staircase" encourages patient and staff to choose stairs over lifts, fostering physical activity while reducing energy consumption.

Photovoltaic panel system and energy-efficient technologies such as sun-shading fins slash annual CO_2 emissions by 15%.



The double façade's theme-coloured accents minimise solar heat gain with abundant natural lighting, ensuring comfort without compromising daylight access for neighbouring buildings.

CASE STUDY

NORTH DISTRICT COMMUNITY HEALTH CENTRE BUILDING

LOCATION

3 Wai Wo St, Sheung Shui, New Territories

LEARN MORE

Achieved Platinum certification under the BEAM Plus New Buildings Version 2.0.

Winner of HKIPM Project Management Achievement Awards 2024 under the Construction/Engineering category.

Commended as an exemplary case study, the project adopted the New Engineering Contract, leveraging the spirit of collaborative partnership address risks, enhance management efficiency a quality control.

The project involved demolition of an existing 2-storey school building followed by design and construction of a 10-storey community health centre and associated social welfare facilities on a constrained site next to Pak Wo Road and Fanling Highway.

CASE STUDY

REFURBISHMENT OF TOILET BLOCKS AT PET GARDEN OF CENTRAL AND WESTERN DISTRICT PROMENADE

Redefining Urban Sustainability

In the heart of Hong Kong's bustling waterfront, a once-ordinary public toilet has been revitalised into a dynamic urban oasis. Combining low-carbon innovation, inclusive design and outdoor amenities, this refurbished facility at the Central and Western District Promenade now serves as a vibrant community hub.

Award-winning and human-centric, the new facility is designed for diverse users. It features a family-friendly toilet, inclusive unisex facilities, water bottle fillers, and resting benches—catering to outdoor lifestyles while providing spaces for relaxation and social interaction. Passive design strategies, including an internal vegetated landscape for cross-ventilation and a semi-open façade for natural daylighting, enhance user comfort while reducing energy demand. The façade with vibrant colour palette incorporated with featured urban skyline, echoes the Promenade's greenery to create an iconic landmark.

Advancing Net zero is central to the design. By retaining the existing structure and systems, employing 3D concrete printing technology and utilising low-carbon materials—such as green concrete, glassfibre-reinforced plastic for facades, recycled palm fibres for cubicle partitions, and recycled glass for walls—the project achieved a remarkable 60% reduction in embodied carbon through a circular economy model. Renewable energy systems—including air-improvement photovoltaics (PV), a solar tree with wind turbines, and walkable PV paving—further slashed operational carbon emissions by 70%.

CASE STUDY

REFURBISHMENT OF TOILET BLOCKS AT PET GARDEN OF CENTRAL AND WESTERN DISTRICT PROMENADE

KEY FEATURES

The Pet Garden Toilet Blocks redefine urban sustainability. Achieving a 60% reduction in embodied carbon and 70% in operational emissions through sustainable design and renewable energy.

Refurbished, not rebuilt—this project maximises low-carbon building materials, renewable energies (solar and wind), proving sustainable retrofits can drastically reduce carbon footprint.

An inclusive oasis featuring a family-friendly toilet, accessible unisex toilet, water refill stations, and resting benches amidst lush greenery.

The semi-open facade and interior greenery promote natural airflow and daylight, reducing energy use while offering a refreshing escape from the city's hustle.

Beyond a restroom—this space fosters sustainable urban living through public education initiatives and a design that embodies Hong Kong's eco-conscious culture.

CASE STUDY

REFURBISHMENT OF TOILET BLOCKS AT PET GARDEN OF CENTRAL AND WESTERN DISTRICT PROMENADE

LOCATION

Central and Western District Promenade (Central Section), Lung Wo Road, Hong Kong

LEARN MORE

This groundbreaking project has earned international acclaim, including the A'Design Award, Architizer Award, Greater Bay Area Urban Design Award, Green Good Design Award and HKIPM Award —demonstrating a transformative approach to sustainable architecture in Asia's urban landscapes.

Strategic collaboration with local universities and research institutes advances adoption of 3D printing technology.

Integration of passive design, use of recycled materials and renewable energy showcases Hong Kong's commitment to promoting a low-carbon city.

CASE STUDY

TAI FU TAI MANSION

HBIM for Cultural Heritage Conservation

The ArchSD has launched a groundbreaking initiative by implementing Heritage Building Information Modelling (HBIM) at Tai Fu Tai Mansion—Hong Kong's first government-owned Chinese-style historic monument to adopt this technology. This pilot project sets a new benchmark for heritage conservation, combining advanced 3D photogrammetry, historical research, and 4D animations to create a comprehensive digital record of the mansion's architectural evolution and historic features (1865–2021), thereby enabling precise maintenance, management, and long-term preservation of this cultural treasure for future generations.

The HBIM platform serves as an interactive conservation tool, allowing users to visualise, share and navigate detailed heritage data, including the building's dimensions, conservation status, and character-defining elements (CDEs)—from intricate Lingnan Guangfu decorative lime plaster moulding to traditional timber pitched roof structure.

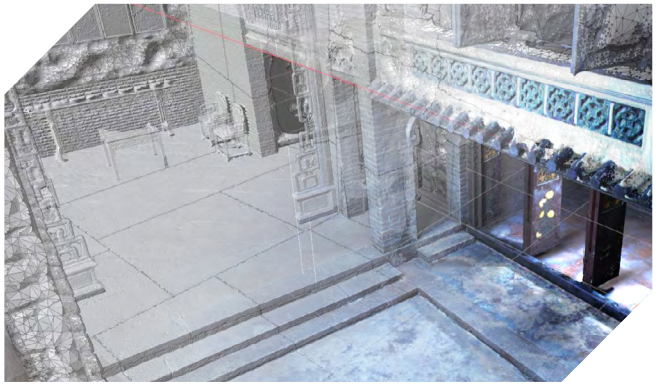
By digitally reconstructing traditional construction sequences and techniques through 4D animations, the ArchSD bridges the gap between artisan skills and cutting-edge technology, preserving invaluable craftmanship knowledge in an enduring digital repository. This innovative approach not only enhances conservation efficiency but also safeguards Hong Kong's cultural legacy through digital archiving and precision restoration.

Visit our website to learn more about implementation of HBIM at Tai Fu Tai Mansion.

CASE STUDY

TAI FU TAI MANSION

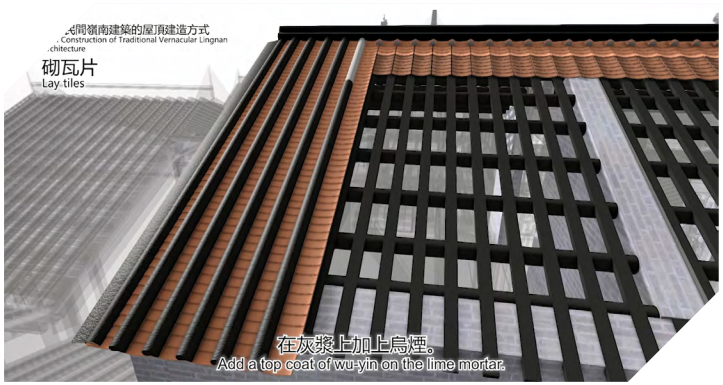
KEY FEATURES



High-resolution photogrammetry and point cloud scans capture every CDE, forming the basis for the conservation management plan and archival records.

Tai Fu Tai Mansion—Hong Kong's first government-owned Chinese monument to utilise BIM for heritage conservation. The detailed 3D model documents the building's dimensions, conservation status and CDEs, providing a benchmark for future restoration and maintenance.

The 3D HBIM model with CDE Schedule enables streamlining maintenance planning and implementation for historic structures.



4D animations visualise traditional construction sequences (e.g. pitched roof assembly), helping artisans and maintenance personnel replicate historical techniques accurately.

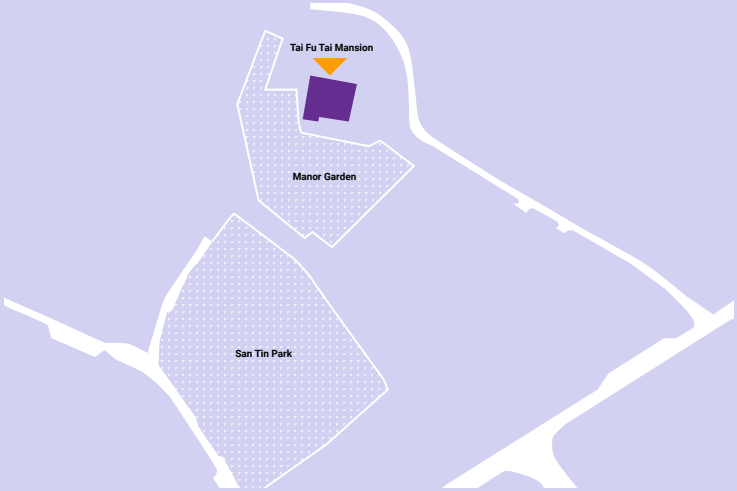
Close-range 3D laser scanning and 3D printing allow precise replication of very fine 3D character-defining elements, ensuring authentic repairs by skilled craftsmen.

CASE STUDY

TAI FU TAI MANSION

LOCATION

Wing Ping Tsuen, San Tin, Yuen Long, New Territories



LEARN MORE

Tai Fu Tai Mansion was declared a historic monument in 1987. The full restoration of Tai Fu Tai Mansion was completed in 1988 under the supervision of the Antiquities and Monuments Office and the ArchSD.

Tai Fu Tai is a fine example of a traditional dwelling of the scholar-gentry class in southern China and one of the most beautifully embellished historic buildings in Hong Kong.

Built in 1865 in the Qing dynasty, the Mansion served as the residence of Man Chung-luen (the Man clan) originated in Sichuan, finally settled in San Tin, Yuen Long in the 15th century.