



CIC SUSTAINABLE
CONSTRUCTION AWARD
建造業議會可持續建築大獎 **2023**

PRESENTATION CEREMONY 頒獎典禮

THE RITZ-CARLTON, HONG KONG
香港麗思卡爾頓酒店
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持續領先
創造未來



TAKE THE LEAD
LET'S CREATE A SUSTAINABLE FUTURE



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About the CIC Sustainable Construction Award

Sustainable construction is one of the world's critical topics concerning the economic, social, and environmental impacts of a built environment. The Construction Industry Council (CIC) has been serving as a leader in the construction sector to promote sustainability in construction among organisations and industry practitioners in the construction industry.

To foster the culture of sustainable construction in Hong Kong, the CIC launched the first Sustainable Construction Award (the Award) in 2018. The Award recognises sustainability best practices among organisations and practitioners, including the young generation of the construction industry. It also promotes continuous enhancements and drives industry synergy in Hong Kong's sustainable construction.

In recent years, innovative digitalisation technologies have been actively applied in prompting environmental protection and life cycle project management. Thus, a "Smart Sustainability Award" is introduced under the "Organisations" category this year to recognise winners with outstanding performance in applying digitalisation with a contribution to sustainable construction.



220+
Applications



80+
Construction
Projects



140+
Industrial
Practitioners



35
Esteemed Professionals
Served in Judging
Panel

Message from the Chairman



Ir Thomas HO
Chairman
Construction Industry Council

The Construction Industry Council is honoured to organise the highly anticipated CIC Sustainable Construction Award. This prestigious award serves as a testament to the exceptional efforts of organisations and industry practitioners while igniting a transformative shift towards sustainability within the construction sector.

The CIC Sustainable Construction Award recognises and celebrates the remarkable commitment demonstrated by organisations and industrial practitioners in upholding and promoting high standards of sustainability throughout the entire construction industry. Through a rigorous selection process, we have witnessed an overwhelming number of submissions, reflecting the unwavering dedication and conscientious implementation of sustainable practices.

This prestigious award not only acknowledges outstanding performance and achievements but also serves as a vital platform for fostering knowledge-sharing, collaboration, and inspiration. By showcasing the industry's capacity to integrate sustainability into every construction process seamlessly, we aim to inspire and drive positive change within our sector.

In line with the evolving landscape of digitalisation, we are pleased to introduce a special accolade - the "Smart Sustainability Award" as part of the CIC Sustainable Construction Award this year. This distinguished recognition pays tribute to organisations that have demonstrated exceptional prowess in leveraging digitalisation technology to advance construction sustainability. These visionary organisations have showcased outstanding performance in developing smart and sustainable solutions, harnessing the power of technology to create positive environmental and social impacts within the construction industry.

I extend my heartfelt congratulations to all winners and thank all those who have contributed to mark this inaugural event as a great success.

Together, let us continue championing sustainable practices, fostering innovation, and collaborating towards a brighter and more sustainable future for the construction industry.

Judges

The Judging Panel is comprised of 35 renowned professionals in the field of sustainable built environment, and the building and construction industry of Hong Kong.

Organisations Category



Mr. Ivan FU
Panel Chairperson



Miss Diane WONG *
Panel Member



Mr. David LAM
Panel Member



Ir WAI Chi-sing
Panel Member



Dr. HUANG Jianxiang
Panel Member

* Mr. WONG Chuen-fai on behalf of Miss Diane WONG

Industry Practitioners Category



Dr. CHEUNG Tin-cheung
Panel Chairperson



Mr. Freeman CHEUNG
Panel Member



Mr. Ian CHUNG
Panel Member



Ir C.S. HO
Panel Member



Sr Eddie LAM
Panel Member



Ir C.F. LEUNG
Panel Member



Mr. Lawrence NG
Panel Member

(Members in alphabetical order of surnames)



Organising Committee

Mr. Ivan FU
Chairperson

Ms. Lotus CHOI

Mr. Clarence LEUNG

Mr. Alex HO

Mr. Joseph LO

Ms. Margaret HO

Mr. Rex WONG

Ar. Nicholas HO

Mr. Franki YEUNG

Technical Committee

Prof. POON Chi-sun
Chairperson

Mr. CHAN Chun-fong

Mr. Bill HO

Mr. CHAN Kai-lam

Ms. Margaret HO

Prof. Jack CHENG

Ar. Nicholas HO

Sr Arthur CHEUNG

Ms. Cynthia KWAN

Ms. Karen CHEUNG

Sr Witty KWOK

Mr. Max CHIN

Mr. Edward LO

Mr. Ivan CHIU

Mr. Joseph LO

^Dr. Crystal FOK

Mr. Barry SIN

^Mr. Edmond LAM
(On behalf of Dr. Crystal FOK)

Mr. WONG Ping



(Members in alphabetical order of surnames)

Winners of the Organisations Category

Gold Award

Project Owner (Public Sector)



Drainage Services Department

Yuen Long Effluent Polishing Plant (YLEPP)

- Successfully achieved energy neutrality through various design features (e.g. utilisation of renewable energy, and optimised hydraulic and building design) and first to adopt the “Aerobic Granular Sludge Technology” in Hong Kong that can achieve up to 20% energy savings against the conventional activated sludge treatment process.
- Thoroughly adopted BIM application for design and construction, particularly for design coordination between different engineering disciplines across different contracts to resolve problem efficiently.
- Open a portion of YLEPP to the public for the enjoyment of natural habitats adjacent to Shan Pui River and provide bird curtains and noise barriers along the construction site to minimise the impacts to the nearby wetland habitats.



Water Supplies Department

Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

- Implemented a series of energy conservation measures to improve energy saving continuously (e.g. effective energy management system, highly efficient water-cooled chiller, renewable energy system).
- Adopted over 40% of Design for Manufacture and Assembly (DfMA), Modular Integrated Construction (MiC) and Multi-trade Integrated Mechanical, Electrical and Plumbing (MiMEP) in Civil and E&M construction works.
- Promoted recycling and sustainable practices (e.g. upcycling) to the young generation and community through school outreach activities and collaboration with shopping malls.

Developer (Private Sector)



Chinachem Group and Urban Renewal Authority

Proposed Composite Development at New Kowloon Inland Lot No. 6627, No. 24-38 Tonkin Street & No. 240-240A Fuk Wing Street

- Improving the working environment and site safety, enhancing high construction quality, and reducing environmental issues (e.g. dust, noise nuisance, C&D waste) generated from the construction works by adopting MiC.
- Used steel formworks for MiC modules.
- Installed Zero Diesel Generator – Using Smart Battery to provide high power with intermittent loads, e.g. cranes, hoists, welders.

Winners of the Organisations Category

Gold Award

Developer (Private Sector)



Swire Properties Limited

Six Pacific Place

- Reduced over 4,200 tCO₂e embodied carbon through green procurement. For instance, 100% of the superstructure concrete is certified by “CIC Green Product Certification”, 67% of rebars are manufactured by the electric arc furnace production, and structural steels or rebars contain at least 60% of recycled steel content by weight.
- Fully adopted BIM in the design, construction and maintenance stage, including 3D scanning, AR technology with a mobile app, DfMA, Immersive 3D CAVE visualisation, and digital twin application.
- Collaborating with tenants through different programmes, such as the Green Performance Pledge and GPP Academy, to promote sustainability.

Contractor in New Works



AJA Joint Venture

O·PARK2 (Contract No.: EP/SP/86/15)

- The first engineering project to introduce Carbon Capture, Utilisation, and Storage (CCUS) technology and adopt CCUS-based carbon dioxide mineralisation curing concrete bricks.
- The first pilot trial using “Dynamo” to extract data from BIM to the CIC Carbon Assessment Tool for carbon emission prediction.
- Developed a Carbon Neutral Cloud Platform with several innovative technologies, such as blockchain, artificial intelligence, and the Internet of Things, for real-time quantification of greenhouse gas emissions.



Daewoo – Chun Wo – Kwan Lee Joint Venture

ND/2019/04 – Fanling North New Development Area,
Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

- The first project and pioneer to adopt ultra-high strength S960 steel to replace reinforced concrete for the bridge deck to minimise corresponding substructures including piers, pile caps and piles as well as reduce timber and steel formwork usage so as to minimise associated waste generated and reduce carbon footprint.
- Modify the bridge profile appearance in response to the local villagers’ comments and concerns, and utilised different visual aids (virtual reality and augmented reality technologies) to facilitate the public understanding of the project.
- Widely adopt digitisation technologies, IoT and smart solutions to mitigate environmental impacts on diverse aspects, such as drone and ArcGIS SiteScan, BIM, Smart Site Safety System, AI camera and real-time monitoring station.

Winners of the Organisations Category

Smart Sustainability Award

Project Owner (Public Sector)



Hong Kong Housing Authority Public Housing Development at Tung Chung Area 99

- 5D BIM Application: enhance effectiveness and efficiency for works coordination, especially for MiC and MiMEP, and thus to achieve enhanced precision in material use.
- Project Dashboard: Digital Twins, Integration of BIM and GIS, and Internet of Things for smart site safety and work monitoring.
- Construction Robotics: reduce exposure to risky trades to enhance work safety.
- Reality Capture Technologies: 3D laser scanning of as-built environment to BIM modelling automation for improved works planning.

Developer (Private Sector)



Wheelock Properties (HK) Ltd & MTR Corporation Ltd Site D of the Remaining Portion of Tseung Kwan O, Town Lot No.70

- Thorough adoption of BIM during the whole project stage for coordination and construction and utilisation of inspection app, handover apps and cloud platform for contractor submissions and inventory monitoring at the handover stage.
- CIC carbon assessment tools: To monitor the carbon emission from the design stage till the end of the project.
- Adoption of several advanced technologies is one of the key award criteria for the main contract.
- Arranged most of the meetings online to reduce carbon footprint.

Contractor in New Works



Gammon Construction Limited Design and Construction of Kwun Tong Composite Development

- Smart Site Control Centre: Management Team used the centralised G-Twin platform to manage a project by consolidating information into multidimensional BIM and GIS layers, ensuring high levels of quality, productivity and safety, which facilitates the supervision and management of site operations.
- iBEAM Unison Application for Embodied Carbon Assessment Tool.

Winners of the Organisations Category

Silver Award

Project Owner (Public Sector)



Drainage Services Department

Outlying Islands Sewerage Stage 2 -
Upgrading of Cheung Chau Sewage Treatment and Disposal Facilities

- The first Drainage Services Department's project to adopt GGBS concrete for all structure construction, reducing carbon emissions by approximately 2,740 tons.
- Adopted MiC method for site office construction, and the site office can be reused or developed after the completion of the construction.
- Utilised Hybrid Hydraulic Tubular Shoring System for excavation and lateral support construction. Easy assembly and disassembly improve construction safety and allow reuse of components to reduce transportation need to enhance sustainability.



Hong Kong Housing Authority

Public Housing Development at Tung Chung Area 99 (TC99)

- Pioneer in MiC adoption: thoroughly implemented carbon reduction strategies and supported low-carbon initiatives with innovations and technologies.
- Emphasising public engagement and stakeholder participation, and serving as a research base for MiC advancement to contribute to the evolution of sustainable construction practices.
- The project dashboard incorporated Digital Twins, integrating BIM, GIS, and IoT for a smart site safety system.

Developer (Private Sector)



Wheelock Properties (HK) Ltd & MTR Corporation Ltd

Site D of the Remaining Portion of Tseung Kwan O, Town Lot No.70

- Applied electrical construction equipment and machinery (e.g. AMPD Evertainer, electrical forklifts and vehicles) to reduce energy consumption and carbon footprint.
- Fully applied BIM from the design to construction stage to better estimate building materials, minimise construction clashes and reduce abortive work and paper usage.
- Incorporated high window-to-wall ratio with insulated low-e coating curtain walls to achieve energy efficiency, and enhancing ventilation and solar access.

Winners of the Organisations Category

Silver Award

Contractor in New Works



Gammon Construction Limited

Design and Construction of Kwun Tong Composite Development

- Incorporated large-scale structural MiC in 60% of the low block and adopted large-scale steel MiC for interior space at high block.
- Promote structural timber in the design of high block elements to provide renewable properties and reduce carbon footprint.

Contractor in RMAA Works



Paul Y. Builders Limited

Renovation Works at Hang Seng Headquarters

- Conducted precise survey with 3D scanning adopted prior to E&M installation.
- Installed automatic lighting control and shading system, which can reduce around 40 % lighting power.
- Carried out an air tightness test to prevent chilled ceiling condensation due to infiltration of humid outdoor air.

Winners of the Organisations Category

Bronze Award

Project Owner (Public Sector)



Highways Department

Lift and Pedestrian Walkway System between Tai Wo Hau Road and Wo Tong Tsui Street, Kwai Chung

- Inclined lift structure which matches sloping ground, reduces wind load, uses economic raft foundation, eliminates the need for elevated walkway, reduces construction cost.
- Full enclosure design enhances system robustness, enabling operation in all-weather conditions, increasing durability, and reducing component replacements.
- System uses mechanical ventilation, reducing electricity consumption and carbon emissions. Lift trough incorporates concrete walls, glazing, and louvre panels for natural light.

Contractor in New Works



Gammon Construction Limited

Main Contract Works for Student Hostel at Whitehead, Ma On Shan for City University of Hong Kong

- MiMEP approach has been adopted for the high level building services along the tower corridor which simplifies workmanship, increases efficiency and reduces wastes and materials.
- CLP was engaged at the foundation stage for early electrification; temporary transformer room reduces carbon emissions and noise during superstructure construction.
- Tower corridor concrete slab was merged with the MiC unit during MiC fabrication, which reduces in-situ work, minimises waste, simplifies workmanship and improves efficiency and quality.



Gammon Construction Limited

Intermodal Transfer Terminal - Bonded Vehicular Bridge and Associated Roads (Contract C19W10)

- The project team designed the first marine-friendly hanging cofferdam for pile cap construction in Hong Kong, providing a sustainable and innovative nature-based solution for marine construction.
- Applied Low-carbon construction method (cast-in-situ method by Form Traveller) for bridge deck to reduce re-bar, concrete, carbon emission and cross-border logistics.
- Achieved Zero Waste to Sea by reusing 1,510 m3 of marine sediment and optimised treatment processes to eliminate cement use and carbon emissions.

Winners of the Organisations Category

Merit Award

Project Owner (Public Sector)

Architectural Services Department	Penny's Bay Community Isolation Facility (Phase 5 & 6), Lantau Island, New Territories and Kai Tak Community Isolation Facility (Phase 1, 2 & 3)
Major Works Project Management Office, Highways Department	Central Kowloon Route

Developer (Private Sector)

Hong Kong Cyberport Management Company Limited	Cyberport Expansion Project
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Contractor in New Works

Build King Civil Engineering Limited	Contract No.: ED/2022/01 Infrastructure Works for Developments at Kwun Tong Action Area
Build King – SK ecoplant Joint Venture	Contract No.: HY/2014/20, Central Kowloon Route – Yau Ma Tei West
Dragages Hong Kong Limited	Contract No.: SS K504 – Design and Construction of District Open Space, Sports Centre cum Public Vehicle Park at Sze Mei Street, San Po Kong
Gammon Construction Limited	L2 Contract for Lyric Theatre Complex and Extended Basement Project for the WKCD A
Gammon Engineering & Construction Company Ltd.	The proposed residential development at NKIL 6579
Hip Hing Construction Co. Ltd.	The Henderson
Hip Hing Engineering Company Limited	Design and Construction of Expansion of the Legislative Council Complex
Yee Fai Construction Company Ltd.	Topside Property Development at West Kowloon Station Express Rail Link - KIL 11262

Contractor in RMAA Works

York Joint Design & Construction Co. Ltd.	Jockey Club SolarCare Programme Phase 2 Batch 1.6 – Design, Construction and Operation of PV Systems
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Winners of Industry Practitioners Category

Excellent Award

Construction Manager

Mr. Brian HO Kwok-chee

Intermodal Transfer Terminal –
Bonded Vehicular Bridge and
Associated Roads (Contract No. C19W10)

- Proposed to EPD and the project owner to use the marine-friendly bridge deck construction method, and thereby reducing usage of re-bar, concrete, carbon emissions and minimising marine ecology impact.
- Initiated discussions to enhance the cofferdam design for marine pile cap construction to enable the first marine-friendly hanging cofferdam in Hong Kong.
- Established a Zero Waste Plan and achieved Zero Waste to Sea by reusing 1,510m³ marine sediment, surpassing EIA requirements and contractual targets.

General Practitioner

Mr. Kingsley CHAN King-wai

Design and Construction of Kwun Tong
Composite Development

- Utilised BIM technologies during the design stage to coordinate, review the design, and detect issues in 3D ahead of construction.
- Established a Smart Site Control Centre for access to project information, enabling accurate and timely decision-making by the management team.
- Assisted in reducing safety risks and environmental impact by implementing advanced construction methods and digitalised assessment.

Mr. CHAN Siu-hei

L2 Contract for Lyric Theatre Complex
and Extended Basement Project for the
WKCD

- Proposed QR code scanning for accessing drawings and installation locations, enhancing efficiency and accuracy.
- Recommended the installation of timers and electricity meters in the site office and subcontractors' break rooms for energy management.
- Promoted the installation of solar lighting systems in various areas of the construction site for sustainable energy usage.

Young Practitioner

Ms. Cori LEUNG Yuet-lam

Design and Construction of Kwun Tong
Composite Development

- Supported the installation of a G-eye AI engine for dump truck detection, outdoor air quality detectors, and tree sensors and monitored data via a central management system, alerting relevant stakeholders.
- Reused different materials on site and recycled various waste before demolition to reduce a large amount of waste to landfills.
- Dedicated efforts to maintaining positive relationships with nearby residential buildings and social welfare organisations, fostering sustainable construction practices.

Winners of Industry Practitioners Category

Outstanding Award

Construction Manager

Mr. LAM Chin-hang	L2 Contract for Lyric Theatre Complex and Extended Basement Project for the WKCDA
Mr. WONG Wing-keung	Design, Build and Operate the First Stage of Tseung Kwan O Desalination Plant
Mr. YAU Ming-hong	In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) – Water Treatment Works and Ancillary Facilities
Mr. Sherman YIP Shing-lam	Construction of Public Housing Development at Tung Chung Area 99

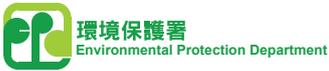
General Practitioner

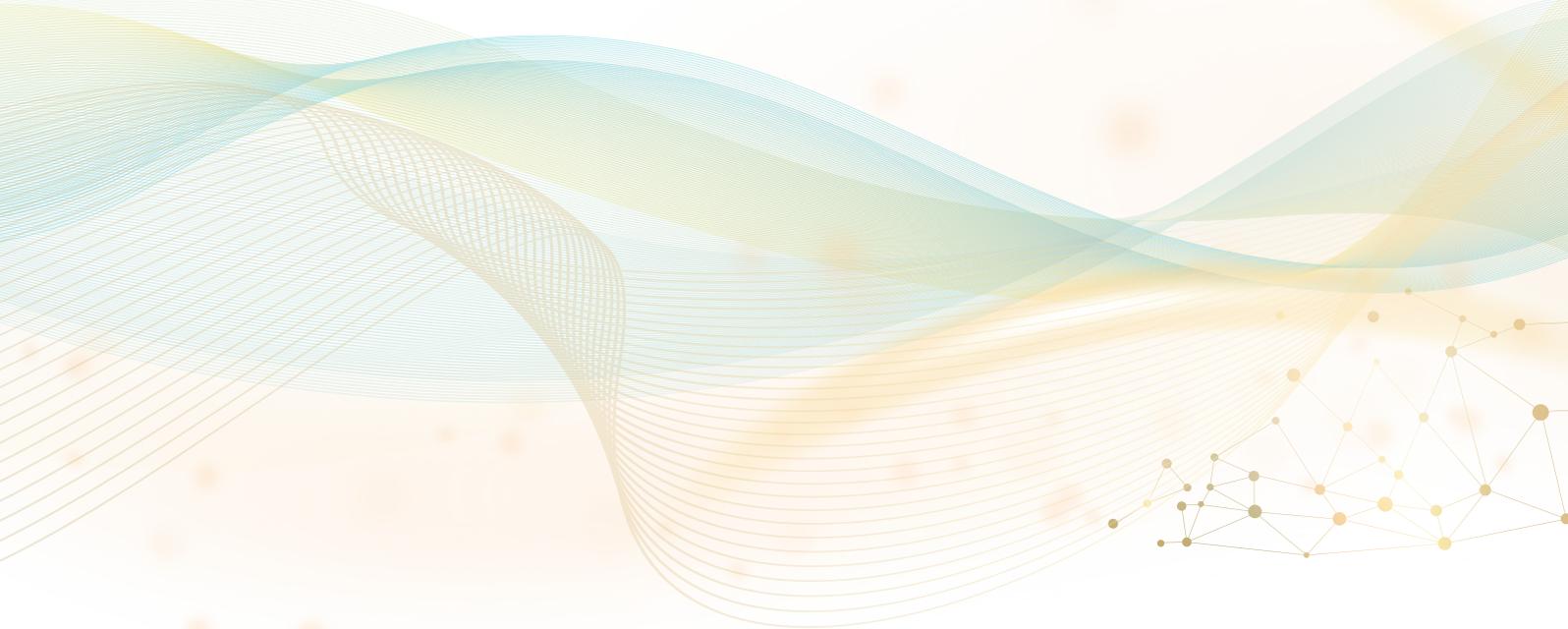
Mr. CHAN Shiu-kei	Ancillary Facilities of Penny's Bay Phase 5 & 6 and Kai Tak Cruise Terminal Quarantine Center
Mr. LAU Siu-hang	6/WSD/21 – In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) – Administration Building
Mr. WONG Sing-yam	Contract No.: SS K504 – Design and Construction of District Open Space, Sports Centre cum Public Vehicle Park at Sze Mei Street, San Po Kong
Mr. YIP Yun-lam	In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) – Water Treatment Works and Ancillary Facilities

Young Practitioner

Mr. CHAN Hiu-fung	L2 Contract for Lyric Theatre Complex and Extended Basement Project for the WKCDA
Mr. Anson CHAN Yuet-chi	Contract No.: SS K504 – Design and Construction of District Open Space, Sports Centre cum Public Vehicle Park at Sze Mei Street, San Po Kong
Mr. Cody HUNG Tak-yin	Main Contract Works for Student Hostel at Whitehead, Ma On Shan for City University of Hong Kong
Ms. Winnie LI Wing-yin	In-situ Reprovisioning of Sha Tin Water Treatment Works (South Works) – Water Treatment Works and Ancillary Facilities
Mr. Frank LIU Ho-kan	Construction of Public Housing Development at Anderson Road Quarry Site R2-8

Supporting Organisations





Construction Industry Council

📍 38/F, COS Centre, 56 Tsun Yip Street, Kwun Tong, Kowloon, Hong Kong

☎ (+852) 2100 9000

✉ scaward@cic.hk

🌐 www.scaward.cic.hk