



中國建築國際集團有限公司

CHINA STATE CONSTRUCTION INTERNATIONAL HOLDINGS LIMITED

(於開曼群島註冊成立之有限公司)

(Incorporated in the Cayman Islands with limited liability)

Leaping Towards a Sustainable Future

2023 Sustainability Report



Building Happiness and Leading the Trend

Tide, born from the ocean, and
leads the **ocean** forward

With the guidance of China Overseas' Leading Culture, we go together
with "one country, two systems" policy and resonate with the "reform
and opening-up" of China

Hong Kong-rooted, China-based, Global-oriented,
Keep going beyond, Lead the trend, Stand at the forefront

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About the Group

Business Overview

Founded in 1979 and headquartered in Hong Kong, China State Construction International Holdings Limited (“CSCI”) is a member of China State Construction Engineering Corporation and is responsible for the construction and related businesses of China Overseas Holdings Limited (“COHL”). Since its listing on the Main Board of The Stock Exchange of Hong Kong Limited (the “SEHK”) in 2005 (Stock Code: 3311), CSCI together with its subsidiaries (collectively, the “Group”) has consolidated its industry-leading position in the construction industry, infrastructure investment, infrastructure asset operation, curtain wall systems and other construction-related businesses, and has continued to strengthen its internal integration of resources and business synergies in order to establish a business model of “technology + investment + construction + asset operation” to provide professional services for urban construction. While pursuing business growth, the Group has made continuous efforts in recent years to integrate the concepts of low carbon, talent development, good governance and social contribution into its business and operations, which have yielded fruitful results and received support and recognition from various parties.

Over the years, the Group has carried out significant projects in Hong Kong and Macau, invested in and managed infrastructures in Chinese Mainland, and grown its curtain wall business through another listed company, China State Construction Development Holdings Limited (“CSC Development”). Now, the Group operates in over 80 cities across 22 provinces, effectively forming a national network. It has completed more than 1,500 projects in Hong Kong, Macau, Chinese Mainland, and abroad. The Group operates and manages its activities through six platform companies.

The Group operates in

22 provinces over 80 cities

Constructed

Over 1,500 projects

About the Group

 **中建國際投資集團有限公司**
CHINA STATE CONSTRUCTION INTERNATIONAL INVESTMENTS LIMITED
("CSCIL")

The flagship enterprise conducts investment business in Chinese Mainland, providing comprehensive services for urbanisation construction in large and medium-sized cities. Its infrastructure investments span 21 provinces and over 80 cities, encompassing more than 300 construction projects with a total investment exceeding 500 billion Hong Kong dollars.

 **中國建築工程(香港)有限公司**
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LIMITED
("CSHK")

A significant player in Hong Kong's construction industry, this company is involved in diverse areas such as housing construction, civil engineering, foundation engineering, site investigation, and electrical and mechanical engineering, and concrete production. It has an impressive portfolio, having constructed 15% of public housing and 25% of hospitals in Hong Kong. Additionally, the water supply pipelines it has installed account for 70% of Hong Kong's fresh water supply.

 **中國建築工程(澳門)有限公司**
CHINA STATE CONSTRUCTION ENGINEERING (MACAU) COMPANY LIMITED
("CCE Macau")

One of Macau's largest urban construction operators, it provides a full industrial chain of services in construction, investment, development and operation. In Macau, there are on average 8 projects constructed by CCE Macau in every 1 square kilometer, and 1 out of every 6 people lives in a building constructed by CCE Macau.

 **中國建築興業集團有限公司**
CHINA STATE CONSTRUCTION DEVELOPMENT HOLDINGS LIMITED
("CSC Development")

Its primary objective is to offer comprehensive curtain wall and building envelope solutions for construction projects. This includes design, manufacturing, production, and assembly services.

 **中連海龍科技有限公司**
CHINA STATE CONSTRUCTION HAILONG TECHNOLOGY COMPANY LIMITED

 **中海建築有限公司**
CHINA OVERSEAS CONSTRUCTION LIMITED
("CSC Hailong") and ("China Overseas Construction")

Specialising in industrialised architecture, this company has ushered in the era of domestic assembly 4.0 with a modular integrated construction system. It has established eight assembly production bases in Shenzhen, Zhuhai, Jiangmen, Hefei, Suzhou, Chongqing, and Jining, accumulating 70 modular prefabricated construction projects.

 **中建國際資產管理有限公司**
CHINA STATE CONSTRUCTION INTERNATIONAL ASSET MANAGEMENT LIMITED
("CSIAM")

It serves as a professional hub for asset revitalisation and trading for the Group, managing assets over RMB 150 billion across various sectors including industrial parks, toll roads, bridges, cultural and sports venues, and municipal infrastructure. CSIAM is always on the lookout for domestic and international resources. In partnership with professional leading institutions, it is innovating asset revitalisation models, boosting asset turnover efficiency, expanding investment opportunities, and shaping a new "fundraising, investment, construction, operation, and retirement" asset life cycle management model. This method not only facilitates financial growth but also broadens the Group's asset management perspective to fuel its primary business development.

About the Group

Business Performance

With its years of experience in Guangdong, Hong Kong and Macau, the Group has continued to expand its business, optimise its business structure and project quality, and maintain steady growth. Meanwhile, the Group focuses on scientific research and innovation to create high-quality projects with first-class technical strength in the industry, and strives to become an international integrated construction and infrastructure investment enterprise with differentiated competitiveness.

Mission

We manage happiness

Philosophy

Quality assurance,
value creation

Corporate Spirit

Integrity, innovation,
transcendence, "win-win"

Business Performance

A total of **121** new contract signings, with a total attributable contract value of **HK\$188.02** billion

Annual turnover reached **HK\$113.73** billion

Gross profit amounted to **HK\$16.34** billion

Value Creation

Direct economic value generated	HK\$113.73 billion
Project cost	HK\$97.40 billion
Salary and welfare expenses	HK\$6.73 billion
Payment to the government	HK\$2.33 billion
Payment to shareholders	HK\$2.59 billion
Charitable donations	HK\$1.158 million

Innovation Leadership

Patent licensing **211** items
 Formulation of industry standards
 Over **10** instances
 Conduct of technology-related
 training Over **15** sessions

Green Construction

Electricity **171,690** MWh
 Water consumption **12,290,232** m³
 Clean technology research
 and development¹ **HK\$350** million



Joint Forces

Total number of suppliers **5,944** units

Quality Project

The “National Quality Project Award” was bestowed upon the Construction Project of Cross Harbor Tunnel Railway (North South Corridor) of Shatin to Central Link

The North Lantau Hospital Hong Kong Infection Control Centre (Hong Kong Temporary Hospital) was honored with the “2022 Quality Building Award (QBA)”

15 technology promotion and demonstration projects have been successfully launched or recognised

Employee Development

Employee total **16,373**
 Employee training **12,681**

For information about the Group's business strategy and financial performance, please refer to the Group's 2023 Annual Report.

¹ Related technologies include industrial automation, reuse and recycling of waste, waste treatment, desalination and information technology optimisation.

Message from the Chairman



In 2023, the global economy is grappling with a myriad of challenges such as inflation, monetary policy shifts, geopolitical risks, and escalating weather extremities. These pose a significant threat to the sustainability of worldwide economic and social progress. However, the Chinese economy has shown a wave-like recovery and overall improvement, becoming a key driver for global economic growth. As a leader in the construction industry, the Group is acutely aware of its role and mission, actively tackling these challenges and relentlessly pursuing high-quality development. To sustain the leadership in the industry, the Group is constantly improving the environmental, social, and governance performance, with the aim to drive the corporate sustainable development and lead the industry towards a green, low-carbon future.

Mr. Zhang Haipeng

Chairman and Executive Director
Sustainability Committee Member



Message from the Chairman

The Group is pleased to present the 2023 Sustainability Report to all stakeholders to demonstrate the environmental, social and governance performance for the year. The Group is committed to promoting sustainable development. Adhering to the sustainability mission of “leading the trend with innovation, building a life of happiness” and the sustainability vision of “developing into a world-class and sustainable corporation concentrating on international construction and infrastructure investment”, the Group incorporates the concepts of green and low carbon, talent development, good governance and giving back to the community into the business and operations. To this end, the Group has formulated a more forward-looking sustainability roadmap with an eye on future development trends. The roadmap includes key goals such as further reducing carbon emissions, improving resource efficiency and promoting a circular economy. In order to achieve these goals, the Group will increase the investment in research and development, innovation and technology upgrading, and actively seek cooperation with research institutes, universities and other partners. In addition, the Group actively promotes the disclosure of climate-related financial information. By conducting a comprehensive assessment of the economic, environmental and social impacts and publicly disclosing the results, the Group has demonstrated to investors and the community the efforts and achievements in sustainable development. This transparency not only enhances the corporate image, but also provides strong support for sustainable financing in the future.

This year, the Group’s sustainability performance was again recognised by authoritative institutions. The Group was included in the FTSE Social Responsibility Index for the seventh year in a row. In addition, for the first time, the Group was featured in the world’s inaugural Standard & Poor’s Global Sustainability Yearbook 2023 (China Edition) and received the “Industry’s Most Improved Enterprise” title, which encourages the Group to maintain the pursuit of excellence. Moreover, the United Nations Industrial Development Organisation invited the Group to the Blue Zones Summit Forum. There, the Group shared the sustainable technology solutions to combat climate change at the United Nations World Climate Action Summit (COP28), showing the Group’s consistent efforts and achievements in sustainable development.

Moving forward, the Group will fully support the achievement of carbon peaking and carbon neutrality (“Dual Carbon Goals”), also cooperate fully with the transition to a low-carbon economy. By continuously promoting green buildings and low-carbon construction, and encouraging the research and application of innovative technologies, the Group aims to stay ahead of sustainable development trends, leading the construction industry and all stakeholders in the value chain towards a sustainable future.

Sustainability Roadmap

Background

Sustainable development stands as a critical challenge in today's world, influencing everything from everyday choices to the legacy people leave for the next generations. It is a concern that stretches from the political arena to business boardrooms. Concurrently, the global community has reached a consensus on the importance of green, low-carbon initiatives. Carbon neutrality has emerged as a key objective for economic and social development. An array of catalysts is pushing for a deeper integration of sustainable development and a dual carbon economy.

- Nationally, policy guidance and support are key to promoting sustainable development. For example, the Chinese Government has issued a series of policy documents and action plans on Dual Carbon Goals, clearly stating the need for energy transition and emphasising the strengthening of the development and utilisation of renewable energy. In addition, the construction of smart cities has been steadily advancing. Intelligent management and optimisation of transportation, energy and the environment have been achieved through the deep integration of information technology and urban infrastructure. At the same time, the development of a green economy has been strongly promoted by policies, and the development of clean technologies and green industries has become an important direction for future development.

- In the context of industry transformation, technological innovation is propelling the digital transformation of numerous sectors. The development of cutting-edge technologies such as artificial intelligence, big data, cloud computing, the Internet of Things, and blockchain is not only accelerating industry digitisation but also injecting new vitality into areas like energy conservation, environmental protection, clean energy, and green infrastructure.
- Investors are increasingly focusing on sustainability issues. In financial markets, they have elevated expectations for companies' sustainability performance. Rating agencies stress the significance of corporate governance, particularly structures centered on independent, effective, and diverse boards of directors. With respect to climate change risk assessment and carbon reduction target setting, these agencies have increased scoring weight. They also enhance assessment standards in areas like business ethics, health and safety, and clean technology.

CSCI has always understood the significance and immediacy of sustainable development. Starting from 2019, it has been crafting high-level strategies and initiating a sustainability roadmap, pinpointing its growth focus. Today, sustainable development firmly holds a position in the Group's strategic agenda.

Sustainability Roadmap

In the year, due to the external reasons mentioned above, the Group is aware of the new requirements for corporate sustainability actions and disclosure on a number of fronts, including policy, regulation and investors. And in the annual review of the fulfillment of the sustainability targets, some of the Group's targets, such as the short-term carbon reduction target (25% reduction in carbon intensity by 2025 as compared to 2018) and a series of policy refinements, were accomplished beyond expectations. As a pioneer in the construction industry, the Group is committed to maintaining its leading position in the field of sustainability and has therefore decided to enter the optimisation phase of its sustainability roadmap, with a view to further improving the Group's sustainability performance.

2019

Commencement of Sustainability Roadmap Study and Design

2020

Publishing a sustainability roadmap framework, identifying areas of focus such as "Safeguarding the Environment".

2023

Optimising the Sustainability Roadmap in response to development trends and internal strategic requirements

2021

Launch of a complete Sustainability Roadmap with 30 detailed targets and a number of actions

Sustainability Roadmap

Optimisation Process

The updated sustainability roadmap will establish more ambitious and comprehensive sustainability targets. The Group has spent approximately six months developing this, considering both internal and external factors, and undertaking extensive work.

- From October to November 2023, the Group, with the help of consultants, conducted desktop research to understand the latest industry trends, rating agency requirements, and sustainability strategies of peers. They compared these findings with the Group's set goals, preliminary determining the direction for amending the roadmap and proposing additional targets.
- Following this, the Group coordinated over 20 interviews with six platform companies and crucial departments like Financial Business, Technology, Information Management, Human Resources, Finance and Capital, Safety Production Supervision, Legal Affairs, Planning and Investment, Marketing, and Audit. The viability of additional targets, challenges in roadmap execution, and other overlooked actions were discussed to refine the initial plan.

- The roadmap revision also incorporated the formulation of a long-term carbon strategy. The Group invited an international consulting agency to conduct a detailed combing of carbon data of past years, and made reference to carbon reduction paths such as the widely recognised Science Based Target Initiative (SBTi), and established a data model in conjunction with the Group's business planning to scientifically formulate carbon reduction targets.
- The results of the roadmap optimisation were presented to the Sustainability Committee and the Board for discussion and approval.

The Group aims for the optimised sustainability roadmap to comprehensively address the three pillars of E, S, and G. It intends to drive the strategy to tackle sustainability issues with quantifiable targets as much as possible.

Sustainability Roadmap



Governance



Environment



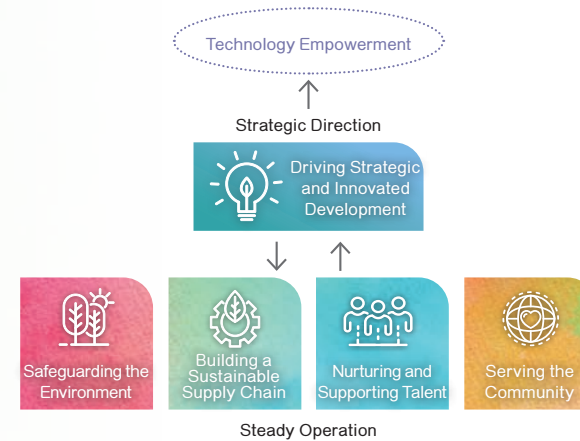
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Sustainability Roadmap

Optimised Content

Highlight 1

The Group has restructured the initial parallel model of "Safeguarding the Environment", "Building a Sustainable Supply Chain", "Driving Strategic and Innovated Development", "Nurturing and Supporting Talent", and "Serving the Community". Now, it is led by "Driving Strategic and Innovated Development", which is backed by the other four categories. This new "Driving Strategic and Innovated Development" better encapsulates the Group's strategic direction of "Technology Empowerment", thereby elevating related tasks to the enterprise's core strategy.



Highlight 2

The Group has re-categorised "Transition to Carbon Neutrality" from "Safeguarding the Environment" to "Driving Strategic and Innovated Development", aligning with its established carbon strategy of "Carbon Emissions Management", "Low Carbon Technology", and "Carbon Finance". This repositioning affirms the central strategic importance of "Transition to Carbon Neutrality" within the Group.

The Group also expanded the role of the sustainability roadmap in guiding the Group's governance by adding the targets of "Best Governance Practices" in the area of "Driving Strategic and Innovated Development".

Highlight 3

In line with sustainable development and new industry trends, the Group has introduced several new targets and action proposals in key areas. These considerations include the requirements of rating agencies, industry best practices, and commendable practices of regional companies.

Driving Strategic and Innovative Development

Technological Innovation

Target

- Technology investment — reach HK\$600 million by 2025, with clean technology constituting of least*
- R&D and application projects for innovative technologies — 20 projects per year from 2022 onwards
- Number of published patents, methods, and papers grows annually
- 100% of technology-related employees trained with innovative concepts or tools by 2025¹
- Apply the Modular Integrated Construction (MiC) in 10 projects each year *

▶ Action

- Effectively leverage external R&D funds to foster the development of cutting-edge technology
- Foster collaborations with academic institutions for joint development of novel products and services
- Engage in strategic investments to bolster start-ups
- Expand the use of BIM in new contract undertakings
- Harness technology like MiC, BIM, DfMA to trim on-site working hours, thereby making engineering safer and more efficient
- Integrate and utilise a range of technologies, such as AI, IoT and big data, VR and AR more extensively.
- Initiate R&D projects focused on industrial automation, including smart factories *
- Kickstart R&D initiatives related to sustainable water resources and wastewater management*

¹ Training in innovative concepts or tools includes, but is not limited to: (1) Training related to innovative construction techniques, such as MiC, BIM, DfMA, BIPV; (2) Business-related innovative tools training, including C-Smart, C-SYS+, information management systems; (3) Training related to innovative technologies, such as carbon capture.

Sustainability Roadmap

Driving Strategic and Innovative Development

Transition to Carbon Neutrality

Target

- Near-term carbon reduction target
 1. reduce carbon intensity by 59% (7.63 tonne/million HKD, Scope 1 and Scope 2) in 2025 compared to 2018;
 2. Peak carbon intensity in 2030, reducing carbon intensity by not less than 40% (5.48 tonne/million HKD, Scope 1 and Scope 2) compared to 2022*
- Long-term carbon reduction target — Achieve carbon neutrality in 2050*
- Provide low carbon training to all relevant staff annually
- Provide low carbon training to all relevant new staff
- The utilisation of low carbon and environmentally friendly generators at construction sites in Hong Kong — 100% by 2026

▶ Action

Reinforcement of top-level design*

- By 2024, develop and publish a dual-carbon strategic framework
- Formulate and publish dual-carbon targets by 2024
- By 2025, enhance basic data statistics and incorporate all 3311 businesses into the Carbon Neutral Cloud Platform
- Track and evaluate data from carbon reduction projects, and pilot the application of international standards such as SBTi and ISSB
- By 2024, complete carbon neutral construction pilot projects and promote related carbon reduction technologies

Promotion of dual carbon awareness*

- Establish incentives for dual carbon before 2025
- Organise annual promotional activities for dual carbon

Advancement of carbon reduction technology*

- Maintain a steady push for green technology research and development, boosting funding for essential carbon reduction technologies like MiC, BIPV, CCUS.
- Bolster the commercial application of green technology, fostering the use of MiC, BIPV, CCUS in projects.
- Elevate the international green building certification standing, providing assistance and incentives for owners to adopt green building certification.

Strengthening of internal management*

- Promote carbon reduction in the construction sites, fully electrify all vehicles in Hong Kong and Macau by 2035, and explore the application of hydrogen energy
- Promote carbon reduction in the offices by adopting energy-efficient electrical appliances and lighting, reducing electricity consumption in office buildings, encouraging paperless office and reducing office paper consumption.

Driving Strategic and Innovative Development

Best Governance Practices*

Target

- Diversity on Boards — 30% of Board members to be women by 2030
- Link executive compensation to ESG performance by 2025
- 1 ESG demonstration project per year
- Complete a Code of Business Ethics by 2024. Ensure 100% of employees (including part-time) and contractors receive anti-corruption and business ethics training²
- Ensure 100% of employees (including part-time) and contractors receive data security training³
- 0 significant data security incidents each year

▶ Action

- Implement a mechanism to verify anti-corruption compliance among suppliers
- Join the United Nations Global Compact
- Develop a data security policy under the supervision of the board of directors
- Perform an audit of anti-corruption policies and ethical standards every three years
- Establish a comprehensive executive compensation and incentive system tied to ESG performance



Safeguarding the Environment

Green Operation

Target

- Reduce the hazardous waste intensity (generation/turnover)
- Increase the recycling rate of non-hazardous waste
- Reduce water consumption intensity (water consumption/turnover)
- Reduce energy intensity (energy consumption/turnover)
- Reduce the landfill and incineration waste intensity (disposal/turnover)
- Conduct a biodiversity risk assessment for all sites in 2024*

▶ Action

- Reduce diesel use on construction sites
- Utilise electricity from power companies in projects as early as possible
- Increase recycling, reuse and improve on-site practices
- Reduce and recycle construction waste on site, especially in civil engineering works where excavated material can be recycled as backfill or used for environmental restoration of sites
- Develop specific energy and water resource plans*
- Develop TNFD disclosure plans*
- Develop specific waste recycling program*

² Training includes: face-to-face sessions, written materials, and video instruction.

³ The definition of training is the same as above.

Sustainability Roadmap

Building a Sustainable Supply Chain

Supply Chain Management

Target

- Each business division organises 2 training sessions for relevant staff per year
- Each business division organises an annual training or seminar for suppliers and subcontractors to communicate the Group's sustainability requirements

Action

- Establish a group-level policy for forest protection
- Establish material wastage rate targets for subcontractors
- Provide incentives for suppliers and subcontractors to meet the Group's safety and environmental requirements in order to continuously improve their social responsibility performance
- Support the Hong Kong Construction Industry Council's "Registered Specialist Trade Contractors Scheme" and prefer engaging registered contractors (RSTCs)
- Link the supply chain to UN Sustainable Development Goals (SDGs)
- Provide sustainable supply chain training to relevant staff
- Provide sustainable supply chain training to suppliers and sub-contractors

Sustainable Materials

Target

- All timber purchased by CSHK should be with FSC/ PEFC certification by 2025
- Enhance the use of green and low-carbon building materials and equipment*

Action

- Establish a database of low carbon materials and products to facilitate related procurement

Nurturing and Supporting Talent

Talent Acquisition and Retention

Target

- Percentage of personal performance review⁴ for monthly paid employees — 100% by 2025*
- Employee turnover rate — below 25% by 2025
- Conduct an anonymous employee satisfaction survey annually*
- Conduct an anonymous employee engagement survey annually*

▶ Action

- Establish a performance-based compensation system for monthly paid staff
- Include learning and development plans in the performance review of senior and middle management
- Improve internal job mobility
- Expand recruitment programs, including the Sons of the Sea and Sea's Recruits programs at the group level, and the programs of business divisions

Staff Training

Target

- Training percentage of monthly paid employees — 95% by 2022; 100% by 2023
- Average training hours of monthly paid employees — 15 hours by 2025

▶ Action

- Provide a variety of training for staff and help them acquire future-oriented skills
- Enhance training related to sustainable development, such as training on diversity policies and low-carbon initiatives*

⁴ The personal performance review includes entry-to-job assessment, and annual personal performance evaluation.

Sustainability Roadmap

Nurturing and Supporting Talent

Occupational Safety

Target

- Occupational injury rate — below 6.0 per 1,000 persons by 2025
- Annual safety and health training covers 100% of employees (including part-time employees) and Tier 1 contractors by 2025*
- Maintain 100% of companies' ISO45001 certification*
- Lost Time Injury Rate (LTIR) — less than 1.2% per 200,000 hours*

Action

- Establish a mechanism for subcontractor workers to report safety hazards

Serving the Community

Community Investment

Target

- Community projects organised/co-organised/participated — at least 80 projects per year by 2025
- Employee volunteer hours — increase by 15% in 2025 compared to 2020
- Employee volunteer attendance — increase by 15% in 2025 compared to 2020
- Community investment amount — increase by 15% in 2025 compared to 2020

Action

- Link community investment policy to the UN Sustainable Development Goals (SDGs)
- Arrange project staff to communicate with and understand the needs of local communities in the vicinity of project sites

Employment Opportunities for Disadvantaged Groups and Young People

Target

- Number/amount of apprenticeship — 30 places per year for young apprentices with low-income background from 2022 onwards

Action

- Provide study grants to encourage apprentices from low-income background

* Modifications or additions

Case Study of Operational Performance



Kickstart R&D initiatives related to sustainable water resources and wastewater management

Tseung Kwan O Desalination Plant — Providing Hong Kong with a Strategic Water Resource Unaffected by Climate Change

On December 22, 2023, the first phase of the Tseung Kwan O Desalination Plant began supplying water. This marked Hong Kong's entry into a new era of “active water production”. The plant is the first in Hong Kong to utilise advanced reverse osmosis desalination technology. Once fully operational, it can produce 135,000 tonnes of fresh water daily. Together with the Pak Kong Water Treatment Works and the Tseung Kwan O Fresh Water Primary Service Reservoir, it supplies drinking water to Sai Kung, East Kowloon, and parts of Hong Kong Island, meeting about 5% of Hong Kong's fresh water needs.

Hong Kong, a city surrounded by sea on three sides and lacking in natural water sources, has always grappled with the challenge of self-sufficiency in water supply. The solution to domestic water usage is a conundrum that the government has been striving to solve. In 2008, the Hong Kong Water Supplies Department introduced the “Comprehensive Water Resources Management Strategy” to ensure a steady water supply and to accommodate the city's growth. The strategy operates on a simple principle — “Conserve first and then augment”. This involves prioritising water conservation, increasing the use of seawater for flushing toilets, water recycling, and most importantly, exploring new water sources. In 2019, the department re-emphasised their plan to introduce new water sources, including seawater desalination and water recycling. The primary objective of using seawater desalination technology is to bolster the city's capacity to provide drinking water, particularly in the face of lower annual rainfall forecasts due to climate change.



It is in this context that the Group has partnered with Acciona (Spain) and JEC (Hong Kong) to commence the design and construction of the first phase of the Tseung Kwan O Desalination plant in late 2019. This is the first phase of desalination projects to be constructed in Hong Kong, covering an area of 80,000 square meters and comprising 11 buildings and marine works, including an administration building, a chemical raw materials building, a reprocessing building, a reverse osmosis purification building and an on-site chlorine production building. The entire treatment process is carefully designed and scientifically regulated, from the water intake system to the final introduction of the water into the service reservoir for municipal water supply. The use of the world's most advanced green and low-energy reverse osmosis desalination technology to develop fresh water not only technically realises the goal of efficient seawater treatment, but also takes into account environmental protection and sustainable development.

Sustainability Roadmap

Water Intake

The seawater is introduced into the integrated vertical well through the pipeline, and the suspended matter is roughly screened and separated through the grate.

Pre-treatment

Suspended solids and microorganisms are removed under the action of the integrated equipment ActiDAFF, which includes coagulation, flocculation, dissolved air flotation, and filtration.

Reverse Osmosis

Two-stage reverse osmosis membrane is used, which can efficiently remove dissolved salts and impurities in seawater and convert them into fresh water. At the same time, the system is equipped with an energy recovery device, with an energy recovery rate of up to 98%.

Post-treatment

The desalinated seawater is treated for mineralisation, disinfection, and pH adjustment to ensure that the quality of the fresh water fully complies with the "Hong Kong Drinking Water Standard". Finally, after comprehensive treatment, the clean fresh water is introduced into the water distribution reservoir to meet the daily water needs of the citizens.

The project not only addresses the current water demand but also has potential for future expansion. As technology advances and demand grows, the daily fresh water production capacity is expected to increase to 270,000 cubic meters. This increase will further alleviate Hong Kong's fresh water resource shortage, providing robust support for the city's sustainable development.

The Tseung Kwan O Desalination Plant project follows the design, build, and operate model, with the Group maintaining operational responsibility for up to 15 years. As a pioneer in environmental protection technology, the Group is committed to ensuring the project's sustainable clean water supply. This commitment also establishes a solid foundation for the Group's future exploration of the international water treatment market.





Target

Apply the Modular Integrated Construction (MiC) in 10 projects each year

The Second High-rise Concrete MiC projects in Chinese Mainland Was Initiated in Zhejiang

Having successfully completed the inaugural high-rise concrete MiC project on Zhangkeng Road, Longhua District, Shenzhen, in August, the Group has secured another significant project. It has won the bid for Zhejiang Province's first high-rise concrete modular construction — the Neighborhood Center project located in the Baibu Economic Development Zone in Jiaxing City. This project marks the second high-rise concrete MiC undertaking in Chinese Mainland, and the country's first prefabricated shear wall structure concrete MiC building.

It plans to construct 6 blocks of 16–18-story residential buildings, 1 block of 15-story service apartments and 1 block of commercial neighborhood center, with a total number of 854 households and a total construction area of about 86,700 square meters. The service apartment adopts MiC construction technology, which is a key project of Jiaxing City's new building industrialisation and the first assembly project in Zhejiang Province to obtain AAA



Action

Bolster the commercial application of green technology, fostering the use of MiC, BIPV, CCUS in projects

certification for prefabricated building at the design stage. The service apartment will serve as a staff dormitory for Zhejiang Guanyu Battery Company Limited, providing 378 dormitories, which is an important support for its annual production capacity of 10GWh power batteries. The application of MiC saves more than 70% of on-site labour through factory production, transfers about 80% of the processes to be completed in the factory, and greatly shortens the construction period to achieve rapid delivery in 180 days. The quick solution of the staff accommodation problem accelerates the production process of the battery project, which helps Baibu government to optimise the business environment for the project construction, provide fast and efficient service for the project promotion and construction, and help the regional economic development.



Sustainability Governance



Sustainability Governance

Enhancing Corporate Governance

The Board of Directors for the Group plays a pivotal role in formulating overall strategy, overseeing business development, financial performance, and governance effectiveness. They are dedicated to improving governance standards, recognising the link between good corporate governance and ESG performance. The Group acknowledges the importance of the Board's effective functioning to the business and conducts regular reviews to ensure efficiency. Besides the Group's Audit and Supervision Department, which routinely assesses business operations and compliance, the Group has set up various committees to conduct internal assessments and enhance governance practices. This strengthens the corporate governance system and the Board's operational mechanisms, ensuring effective governance implementation at every level.

The Group acknowledges the significance of board member diversity in enhancing governance standards, preventing "groupthink", and promoting a balanced perspective. Diversity considerations extend beyond gender, age, education, and professional background to include knowledge, culture, and tenure. The current board members have extensive experience

in the construction industry across Chinese Mainland, Hong Kong SAR, and Macau SAR. Each member contributes their unique expertise in fields such as engineering, real estate, banking, finance, accounting, investment management, and public administration. The Group is also aware that the pursuit of diversity is an ongoing process. As part of this commitment, the Group plans to increase the number of independent directors over the next two years. These new members will come from varied fields, bringing diverse backgrounds and professional knowledge, enabling the board to consider issues from multiple perspectives and make well-rounded, accurate decisions. In the selection of new independent directors, the Group will adhere to the highest corporate governance standards, both locally and internationally, with a focus on gender balance and diversity.

To boost the governance standards, the Group is amplifying the development and training plan for board members. It is supplying tailored training and resources to bolster directors' expertise in corporate governance, enabling them to better carry out their roles and offer more efficient supervision and guidance. Certain directors, as members

of professional bodies, also have ongoing professional development obligations to meet. Furthermore, the Group is examining the effect of innovative technology and green, low-carbon initiatives on business development, and integrating this into the director training plan. Hot topics like artificial intelligence, big data analysis, blockchain, and carbon trading are included. Through expert-led talks, case studies and hands-on activities, the board members can deeply understand the practical applications of these concepts and the opportunities and challenges they bring to business strategy and operations. The Group also promotes the active participation of the board members in external professional training and seminars, in addition to the internal programs.

The Group continues to review the composition of the Board to meet the requirements of the regulators and the concerns of various stakeholders, including investors. For more information on the Board and its committees, please refer to the Corporate Governance Report in the Group's 2023 Annual Report.



Sustainability Governance

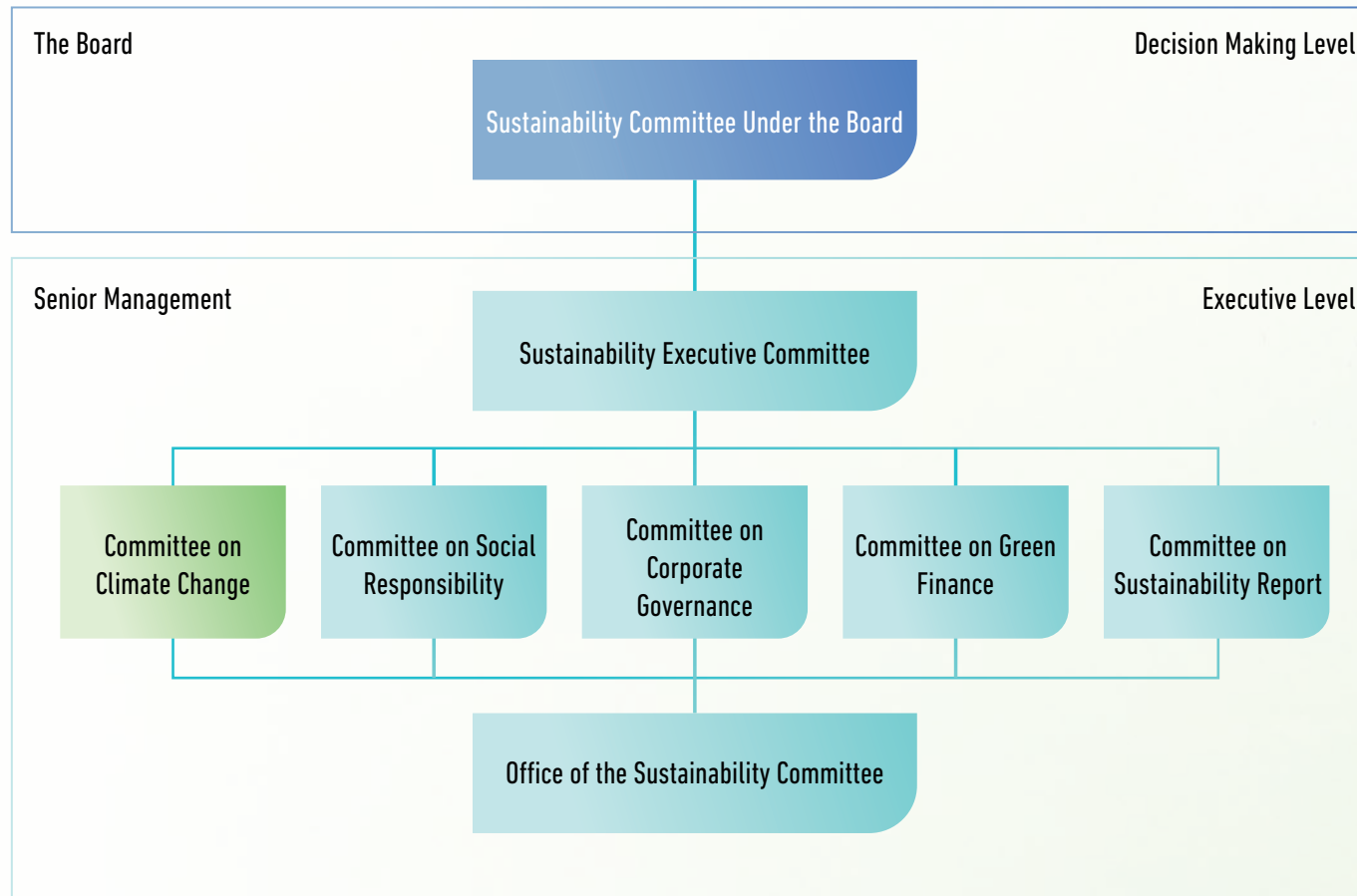
Sustainability Governance Structure

A Sustainability Committee, which is chaired by the Group's Chief Executive Officer and includes the Chairman of the Board, and the Independent Non-Executive Directors, has been established under the Board. This committee is the key decision-maker on the Group's sustainability matters. During the year, a new governance structure for sustainability at the executive level was established to align with the implementation of the new roadmap. The Sustainability Executive Committee (SEC) was formed, with members from senior management of relevant Group departments. These include the Chief Financial Officer and the Heads of platform companies, who have been responsible for ESG reporting and related tasks for a long time, as well as the Head of Financial Business, the main department responsible for ESG reporting and related tasks. There are five Sub-committees within the SEC, each responsible for a specific issue or project, like tackling climate change and promoting green finance. They create plans and measures that align with the Group's strategic objectives and oversee their execution.

Furthermore, the original Sustainability Working Group's duties have been reassigned to the Office of the Sustainability Committee. This Office, under the Group's Financial Business Department, focuses on resolving specific issues and facilitating the progress of related projects. A strong collaborative relationship exists between the Sub-committees and the Office. The Sub-committees are in charge of establishing overall strategies and objectives and offers guidance and support to the Office. Meanwhile, the Office of the Sustainability Committee takes care of executing specific tasks. Progress reports are made to the Subcommittees, and finally to the Sustainability Committee and the board of directors. This process ensures the smooth implementation of the sustainability strategy.



















Sustainability Governance



Sustainability Governance

Sustainability Approach and Policy

Sustainable development has become a pivotal aspect of corporate management recently. A sustainability strategy provides a roadmap for businesses to navigate the evolving global landscape, integrating sustainability into everyday operations. In 2018, the Group introduced seven guidelines for sustainable development. These serve as the foundation for the Group's sustainability actions and were used to create the sustainability policies. These guidelines align with the United Nations Sustainable Development Goals (SDGs), demonstrating the Group's commitment to supporting global sustainability.

Strategy	Strategy	SDGs
Compliance	Maintain good corporate governance, establish a sound anti-corruption system, continuously strengthen legal risk prevention and control, comply with various laws, regulations, and policies in the company's business location, and ensure sustainability of the Group.	
Green Development	Coexist with green development, develop in harmony with ecology, save and use resources, reduce the negative impact of construction on the environment, and reduce carbon emissions from construction through scientific management and improved building technology.	   
People-oriented	Employee development is the top priority, fully integrate employees' personal pursuits into the Group's long-term development, focus on personnel selection, training, and employment, and provide employees with good development space, a complete training system, competitive compensation and benefits, and incentive systems, create a safe, healthy, and sunny work environment for employees.	   
Safety First	Maintain good management practices, adhere to the construction policy of safety first and prevention-oriented, improve the safety management system, prevent accidents, and eliminate serious accidents and violations.	
Quality First	The Group abides by the contract and ensures quality, continuously reviews and improves its quality management system, and strives to "alright for one time, alright for all times" to provide customers with excellent services and quality products.	
Supply Chain Management	Adhere to the idea of "comparing goods from three sources, green procurement", prioritise the purchase of nearby and environmentally friendly materials, expect business partners to comply with the Group's sustainability policy and include it in the business partner code of conduct as a guide.	  
Community Care	Make efforts to give back to the community where the business is located, participate in improving related livelihood construction, provide emergency assistance services, accurately help the poor, encourage employees to actively participate in social welfare activities, and achieve good neighborly relations in the community.	 

Sustainability Governance

This reporting period has been characterised by increasing legal and compliance requirements from governments and regulators around the world, as well as growing concerns among investors and other stakeholders about corporate sustainability strategies and performance. These concerns are reflected in a number of areas including corporate governance, climate change, environmental resources, health and safety and supply chain management. In response to these trends, the Group, after strengthening its Anti-Corruption Policy and Whistleblowing Policy in 2022, and releasing policy documents such as the Water Resource Management Policy and the Sustainable Procurement Policy, has carried out a large number of policy reviews and formulations during the current year. It released a series of documents such as the Human Rights Policy, the Climate Change Policy, the Health and Safety Policy and the Supplier Code of Conduct, with a view to providing the Group with relevant management guidance on policy level.



Human Rights Policy

Promoting and protecting the inherent rights and dignity of all people, reflects the Group's commitment to uphold and respect human rights standards, providing a framework for guiding actions and decisions to avoid any possible human rights violations.



Climate Change Policy

A comprehensive strategy adopted to address urgent and complex issues related to global warming and environmental changes, such as reducing greenhouse gas emissions, promoting sustainable practices, using renewable energy, and conducting climate impact research.



Health and Safety Policy

Detailed elaboration of the Group's regulatory measures and preventive measures to ensure all workers have a safe, healthy, and conducive working environment.



Supplier Code of Conduct

Covers a series of ethical, environmental, and social standards that the Group expects all its suppliers to abide by, to ensure fair business practices and promote healthy working relationships between the Group and the supply chain.



Business Ethics Code

Provides clear guidelines for the ethical and behavioral norms of the Group's business conduct, emphasising basic values of honesty, fairness, and respect, while also emphasising the norms that all employees should follow regarding compliance, protection of company assets, supervision and maintenance of cooperative relationships, environmental protection, protection of employee rights, etc.



Sustainability Governance

Sustainability Risks and Opportunities

The Group incorporates risk and compliance management throughout all business operations. It conducts annual risk identification and assessments, investigates various types of risks and hazards, and enhances the comprehensive risk management system. The Audit Department regularly reviews the Group's risk management and internal control system, ensuring its effectiveness. It also attends the Audit Committee meetings annually to report on its work. Furthermore, the Audit Department annually reports to the Board of Directors on the Group's internal audit work and suggests improvements to address identified deficiencies and shortcomings.

The Sustainability Committee advises the Board of Directors on sustainability risks. It reviews risk management reports and related strategies submitted by management annually. The Group consistently evaluates significant ESG risks, including climate change, occupational health and safety, labour, supply chain management, technological innovation, and cyber security, ensuring sufficient measures are in place to minimise the likelihood and impact of these risks. Particularly concerning climate change, the Group enacts the recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD"). It identifies physical risks and transition risks, clearly assessing and strategising for climate change mitigation and response to enhance climate resilience. This year, the related work extended to operations in Macau and mainland from Hong Kong.

The table below provides a concise overview of the Group's work in the four fundamental elements of TCFD: governance, strategy, risk management, metrics and targets.



The Board

The Board has overall responsibility for the Group's ESG matters, including overseeing strategies and measures relating to climate risks and opportunities, to ensure that the Group's ESG performance is aligned with its objectives and commitments. The Sustainability Committee, comprising members of the Board and reporting to the Board, chaired by the CEO, is responsible for managing the Group's sustainability agenda, strategy, policies and performance as well as overseeing the implementation of sustainability related issues including climate change, safety, quality management and environmental protection etc.. The Committee meets at least twice a year to consider climate-related issues within the Group.

Management

The Board has overall responsibility for the Group's ESG matters, including overseeing strategies and measures relating to climate risks and opportunities, to ensure that the Group's ESG performance is aligned with its objectives and commitments. The Sustainability Committee, comprising members of the Board and reporting to the Board, is responsible for managing the Group's sustainability agenda, strategy, policies and performance. The Committee meets at least twice a year to consider climate-related issues within the Group.

The Group has established the SEC and the Committee on Climate Change under the Board to enhance its management of climate-related issues and promptly respond to policy changes and market trends. These committees are responsible for planning and implementing climate-related initiatives, as well as monitoring the group's progress in areas like carbon neutrality, low carbon buildings, and the circular economy.

The Committee on Climate Change is led by experienced leaders in climate change response. It comprises members responsible for engineering, operation management, and financial affairs of platform companies. The committee's primary responsibilities include promoting policies and measures related to climate change, and implementing initiatives proposed by SEC. The committee's tasks include:

1. Reviewing plans, programs, and plans related to carbon neutrality, carbon asset trading, and climate change risks, opportunities, and indicators;
2. Supervising the progress of the Group's short-term and long-term climate-related targets;
3. Updating the targets in line with the actual operational situation of the Group.

The committee convenes quarterly meetings to deliberate on climate-related issues, and provides an annual report to the Board.

Internal Policy

The Group has a Climate Change Policy which applies to all directors, senior management and other employees, which is reviewed annually and amended as necessary.

Staff Training

The Group highly values the impact of climate change on its business. Therefore, it is committed to improving the knowledge and agility of its Board of Directors and senior management regarding climate change through an extensive training program. The Group's training initiatives focus on the latest global, national, and regional climate issues. This is to ensure that the leadership receives critical information promptly and can effectively steer the Group's growth and innovation amidst climate change challenges. Moreover, the Group has initiated employee risk awareness training to bolster risk management and internal control systems, ensuring the Group's competitiveness and sustainability in a dynamic environment.

Compensation Incentives

The Group is actively working on integrating climate-related performance indicators into its compensation policy. The goal is to use the compensation system to guide and encourage the Group's overall performance in addressing climate issues.

Sustainability Governance



The Group conducts a climate change scenario analysis that aligns with the IFRS S2 disclosure standards and TCFD recommendations. It also considers the Stock Exchange's "Climate Information Disclosure Guidelines". It has adopted four climate scenarios: SSP1-2.6 (Sustainability), SSP2-4.5 (Middle of the road), SSP4-6.0 (Inequality), and SSP5-8.5 (High emission)¹. These scenarios help the Group identify potential physical and transition risks that could significantly impact its financial standing in the short term (2023-2030), medium term (2031-2040), and long term (2041-2050).

SSP1-2.4

SSP1-2.4 Sustainability (low emissions scenario under strong policy intervention for low-carbon transition): Global greenhouse gas emissions are significantly reduced, and socio-economic development presents sustainable and inclusive growth. Climate change is effectively controlled, and the global warming range is within the target of less than 2° C.

SSP2-4.5

SSP2-4.5 Middle of the road (medium emissions scenario under moderate policy intervention for low-carbon transition): Global socio-economic development is relatively balanced, and climate change control is moderate. The global warming range is closer to 3° C.

SSP4-6.0

SSP4-6.0 Inequality (moderately high emissions scenario under minor policy intervention for low-carbon): Global economic development is extremely unbalanced, leading to social and economic instability. Climate change control is weak, and the global warming range may exceed 3° C.

SSP5-8.5

SSP5-8.5 High emission (high emissions scenario with no policy intervention for low-carbon transition): The global economy is highly dependent on fossil fuels, climate change control is limited, and the global warming range may be the highest, possibly exceeding 4° C.

¹ The analysis uses a combination of the Shared Socioeconomic Pathways (SSP) and Representative Concentration Pathway (RCP) climate scenarios, as published by the IPCC, giving a thorough and scientific insight into possible future socio-economic development and GHG emission pathways. It allows for improved planning and handling of the effects of climate change on the Group's business and assets.

Physical Risks

Through a comprehensive analysis of historical data on natural disasters and the financial position of the Group and subsidiaries, a total of eight physical risks were identified during the year, including seven acute risks and one chronic risk.

Analyses revealed significant geographical differences in losses from various types of risks, with the majority of losses occurring in coastal provinces/regions. For instance, under the 2050 SSP5 scenario, Macau, Guangdong, Jiangsu, and Zhejiang rank highest in severity to the Group's operations, contributing to 5.43%, 3.50%, 2.58%, and 2.07% of the Group's

EVIC respectively. Of all the physical risks, tropical storms, floods, and sea-level rise had the most significant impact on the Group's operations, accounting for 6.33%, 2.80%, and 3.24% of the Group's EVIC.

However, since the financial impact of subsidiary risks is relatively minor compared to the Group's overall operations, the physical risks across all regions contribute less to the Group's total operational risk¹. This indicates that the Group is more adaptable to physical risks.

Level of Physical Risks to the Group's Overall Operations

	2030 SSP1		2030 SSP5		2050 SSP1		2050 SSP5	
	Sustainability		High emission		Sustainability		High emission	
Extreme heat	●	●	●	●	●	●	●	●
Drought	●	●	●	●	●	●	●	●
Tropical storm	●	●	●	●	●	●	●	●
Flood	●	●	●	●	●	●	●	●
Sea level rise	●	●	●	●	●	●	●	●
Landslide	●	●	●	●	●	●	●	●
Wildfire	●	●	●	●	●	●	●	●
Extreme cold	●	●	●	●	●	●	●	●

● Low impact ● Medium impact ● Moderately high impact ● High impact ● Extremely high impact

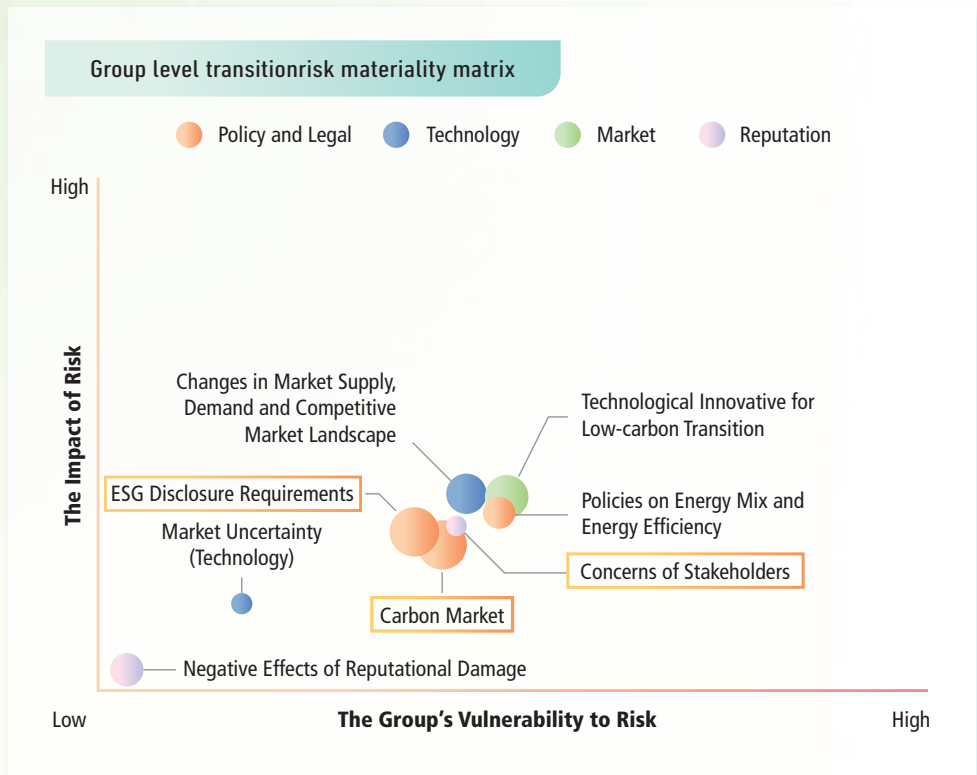
Sustainability Governance

Transition Risks

The Group has carried out detailed evaluations of the transition risks present in various business sectors, including investment construction, EPC, project construction, prefabricated construction, glass curtain wall, and power generation. By examining the nature of the Group's business and policy, as well as market development trends, eight transition risks and one transition opportunity were identified.

Type of Risk/Opportunity	
Policy and Law	ESG information disclosure compliance requirements Energy structure and energy efficiency related policies Carbon market
Technology	Innovation in low-carbon transition technology
Market	Changes in market supply, demand, and competitive landscape Market uncertainty (technology)
Reputation	Stakeholder's attention Negative impact of damaged reputation
Opportunity	Low-carbon construction, waste management policy

The materiality of the transition risks assessed according to the dimensions "The Impact of Risk" and "The Group's Vulnerability to Risk" shows that the "Policy and Legal" category of transition risks has a relatively high impact on the Group and is expected to occur in the short term. A quantitative analysis of this category of transition risk has therefore been undertaken in the current year. The quantitative results indicate that the financial impact of this category of transition risk on the Group is in the lower category under all four climate scenarios.



Financial Impact of "Policy and Legal" Transition Risks

Policy and Legal	SSP1	SSP2	SSP4	SSPS
	Sustainability	Middle of the road	Inequality	High emission
2030	●	●	●	●
2050	●	●	●	●

● Low impact ● Medium impact ● Moderately high impact ● High impact ● Extremely high impact

Response Strategies

The Group has implemented comprehensive prevention and response strategies for extreme weather events that may affect infrastructure and business stability. These strategies involve building disaster-resistant cities into the development plans to ensure the continuity of assets, operations, and the safety of employees.

Group Level: a budget plan for climate risk items has been established to reduce the impact of physical risks on business and asset operations. The Group continually encourages interdepartmental cooperation to ensure a swift and coordinated response to sudden physical risks. Moreover, the Group has implemented intelligent monitoring and forecasting systems through technological innovation, allowing for the early identification of potential extreme weather events.

Subsidiary Level: the Group actively endorses physical risk management plans across diverse business regions, guaranteeing that every business unit adopts suitable measures corresponding to its geographical location and specific risk circumstances. These measures encompass local infrastructure enhancements, emergency training, and ensuring supply chain diversification and sustainability to mitigate business interruption risk. All subsidiaries have, and will continue to reinforce their resilience against physical risks, including routine updates to physical risk strategies, ensuring they are well-equipped to effectively manage various physical risks in the mid to long-term.

With the transition risk, the Group has continued to pay attention to domestic and international industry development trends and integrated green thinking and industrialisation of construction with the Group's development strategy. By strengthening carbon management capabilities in operations and promoting innovative building technologies such as green buildings, prefabricated construction and glass curtain walls, the Group will further reduce the impact of buildings on climate change, create higher value for the environment and enhance its competitiveness in sustainable development.

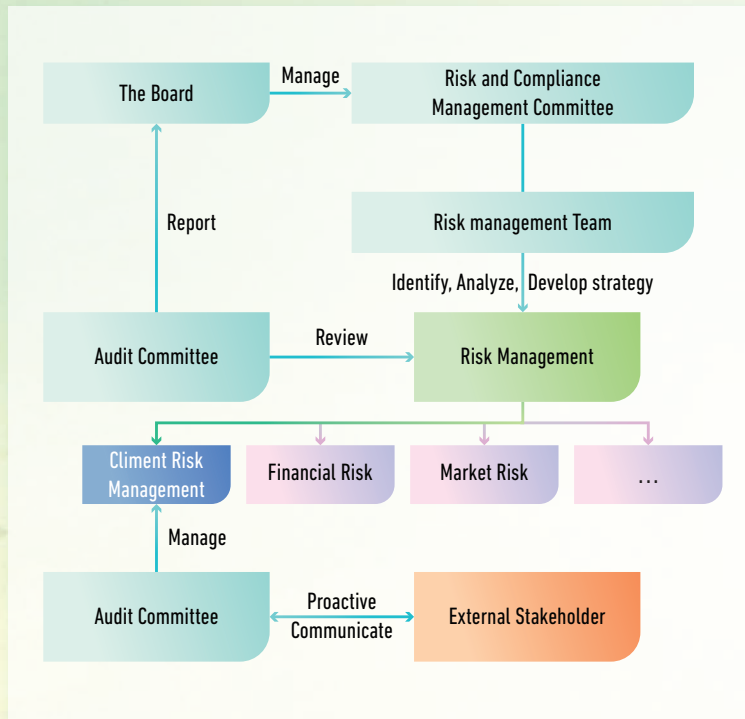
Sustainability Governance

Risk Management

The Group has established a detailed climate risk assessment process and management mechanism, including systematic handling of a climate risk database, identification and evaluation of climate risks and opportunities, analysis of climate risk impact scenarios, and improving strategic resilience to climate risk. These measures extend to the Group's core businesses. This process and mechanism have enabled the Group to deeply understand potential climate risks and develop strategies to confront them. It ensures that the Group can adapt flexibly and effectively to uncertainties like climate change. Furthermore, it provides investors and other stakeholders with more comprehensive and transparent information.

Metrics and Targets

This year, the Group has optimised its carbon-related targets, pushing the long-term target of carbon neutrality to 2050 and setting more ambitious targets for 2025 and 2030. Moreover, the Group is examining energy, water, and waste data and measures, planning to set quantitative reduction targets by 2025 to manage costs and environmental impacts.



Investment and Achievements in Sustainability

The Group's success in sustainable development is clear, as shown by numerous awards and recognitions.

- **United Nations Industrial Development Organisation** — United Nations Industrial Development Organisation Global Call for Proposals 2022 Global Champion Award (CSCI) (O·PARK2)
- **Hong Kong Green Building Council** — Green Building Award 2023 Merit Award — New Buildings Category (O·PARK2)
- **Construction Industry Council (CIC)** — CIC Sustainable Building Award 2023 — Contractor Gold Award (New Buildings) (O·PARK2)
- **Institutional Investor** — No. 1 in “Best Environmental, Social and Governance” in Asia's Industrial Sector (CSCI)
- Listed as a constituent of the FTSE Social Responsibility Index for the seventh consecutive year (CSCI)
- Named to **Fortune** China ESG Impact List
- Selected as a “Best Progressive Company” in the first edition of S&P Global Sustainability Yearbook (China edition)

Moreover, the Group has secured various green financings due to its outstanding sustainability performance, including a sustainability-linked loan under the “Sustainable Finance Certification Scheme” of the Hong Kong CIC and a green working capital loan from the Industrial and Commercial Bank of China (ICBC). Throughout the year, the Group increased its new credit facilities by HK\$3,669 million, with loan drawdowns totaling HK\$2,889 million.

Stakeholder Engagement

Sustainable development covers a broad array of issues and topics. Various industries have distinct focal points and priorities, stemming from their business nature and operational status. Since corporate operations and development significantly impact all stakeholders, companies depend on their contributions while companies' business activities influence stakeholders and their decisions. As a result, the Group places significant emphasis on stakeholder opinions when identifying crucial sustainability issues.

Following the guidelines of the internationally recognised AA1000SES standard (for in-depth details, please check out the Group's 2022 Sustainability Report), the Group has identified six critical stakeholder categories. They include employees, investors, customers, business partners, government and regulatory bodies, and community groups. The Group has set up several channels for stakeholder communication and is actively gathering feedback from all areas of its day-to-day operations.

Sustainability Governance

Main Stakeholders	Value Creation	Concerning Issues	Communication Channels
Employees	Focus on development, talent cultivation, and workplace health and safety.	<ul style="list-style-type: none"> • Employment management system • Safe and healthy working environment • Training and development • Labor relations • Anti-corruption 	<ul style="list-style-type: none"> • Email notifications • Internal meetings • Training courses • Group communications • Complaint channels
Investors	Create profits through transparent information and responsible commitments.	<ul style="list-style-type: none"> • Safe and healthy working environment • Employment management system • Anti-corruption • Training and development • Labor relations 	<ul style="list-style-type: none"> • Shareholder meetings • Annual reports, interim reports, and other announcements • Performance roadshows and reverse roadshows • Investor conferences • Indexes and ratings
Customers	Cultivate long-term relationships and provide high-level technology and services.	<ul style="list-style-type: none"> • Energy • Materials • Innovative technology and applications • Intellectual property • Preventing anti-competitive behavior 	<ul style="list-style-type: none"> • Bid meetings • Project briefings • Gatherings and industry group activities
Suppliers or subcontractors	Jointly build corporates that focuses on excellent operation, ecological benefits, environmental protection, and technological innovation.	<ul style="list-style-type: none"> • Customer privacy • Anti-corruption • Safe and healthy working environment • Preventing anti-competitive behavior • Innovation technology and application 	<ul style="list-style-type: none"> • Procurement procedures • Audit and evaluation • Performance monitoring • Supplier/subcontractor meetings
Government and regulatory bodies	Respond to policy requirements, tailor-made construction solutions and products, and pay attention to leading industry progress.	<ul style="list-style-type: none"> • Economic performance • Market performance • Employment management system • Labor relations • Preventing child or forced labor 	<ul style="list-style-type: none"> • Public consultation • Working meetings • Reflecting opinions through industry associations
Community groups (e.g. professional organizations, media, and NGOs)	Seek shared value for the community based on dialogue, participation, and inclusion.	<ul style="list-style-type: none"> • Materials • Procurement behavior • Waste • Water resources and wastewater • Biodiversity 	<ul style="list-style-type: none"> • Seminars and workshops • Media conferences and press releases • Community surveys • Cooperative hosting and participation in public welfare activities

Identification of Material Issues

With the feedback from the stakeholders, the Group has identified the material issues in this report so that the disclosures in the report are relevant to the concerns of the stakeholders, and at the same time allow the Group to understand the status of implementation of sustainable development as a reference for revising and updating the relevant strategies and measures.

The Group employed the subsequent four steps to pinpoint the material issues presented in this report:



1 Preparation Identify relevant sustainability issues

Sustainability consultants refer to international and local reporting standards, as well as the results of past communication activities, update the list of sustainability issues, and identify 37 issues most closely related to the Group's business in the "Economy", "Environment" and "Society" categories.



2 Identification Collect stakeholders' feedback

Invite internal and external stakeholders to participate in interviews and surveys to collect their opinions on each issue.

In addition, to revise the sustainability roadmap, the consultant conducted more than twenty in-depth interviews with various platform companies and managers of major departments. The interview information is also included in the considerations of the materiality assessment.



3 Evaluation Identify material issues

In line with the international trend of linking sustainability performance with financial performance to reflect the overall management level of the enterprise, the Group revised the dimensions of materiality assessment this year, from the financial impact of the issue on the Group's business, the impact of the Group's business on the environment, society and the economy, and the potential for the Group to make a positive contribution to sustainable development, to establish a materiality matrix.

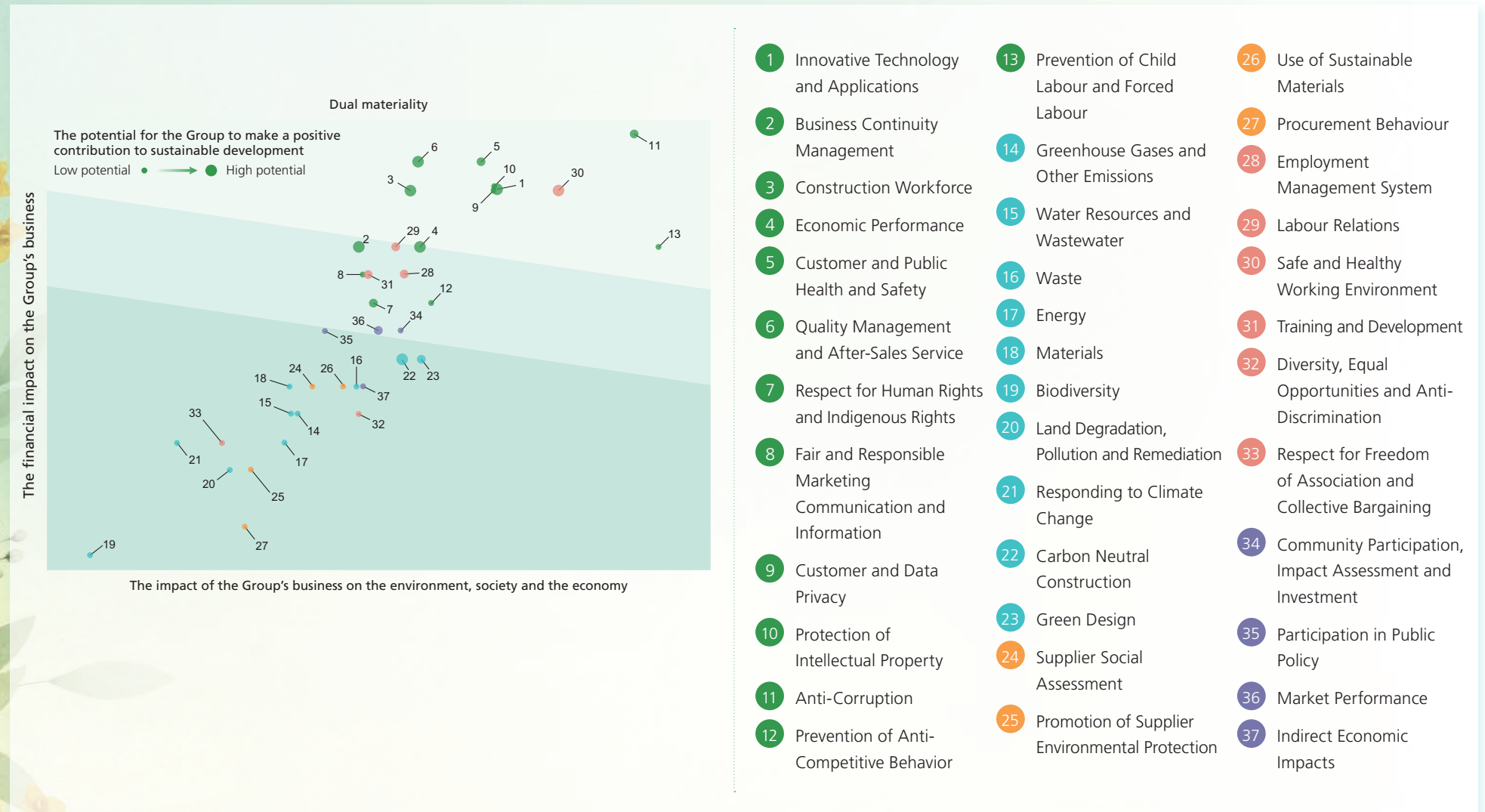


4 Verification Confirm assessment results

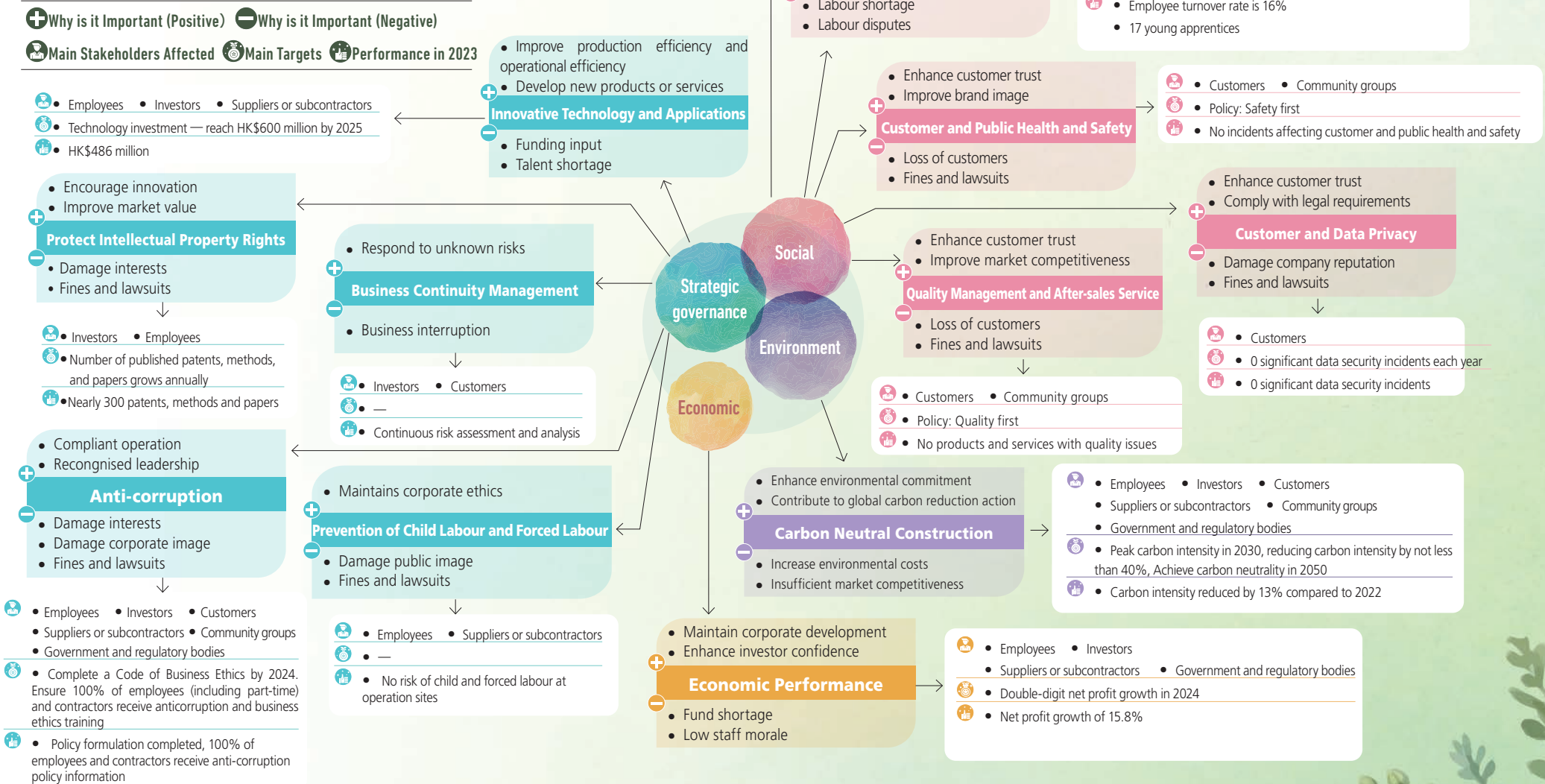
The consultant submits an analysis report to the Sustainability Committee and the Board of Directors, including the issues arranged by materiality, and summarises the suggestions of stakeholders; the Group confirms 12 material issues as the basis for writing the sustainability report.

Sustainability Governance

The material issues of this report are illustrated using a matrix.



The materiality assessment has pinpointed 12 material issues that are vital to the Group's sustainability. These issues fall into three categories: environmental, social, and strategic governance, which add to the economic aspect of the Group's sustainability. The diagram below illustrates how these issues tie into the Group's key stakeholders and targets.



Driving Strategic and Innovated Development

Following the rapid development of science and technology, the Group adheres to the development concept of “Innovation, Coordination, Green, Openness and Sharing”, and actively researches, develops and applies various types of technology, so as to allow technological advancement to provide the basis for the Group's business expansion and project quality.



Driving Strategic and Innovated Development

Target and Action

Aspect/Target

Technological Innovation

Technology investment —
**reach HK\$600 million by 2025, with
 clean technology constituting at least**

75%

R&D and application projects for innovative
 technologies —
per year from 2022 onwards

20 projects

Number of published patents, methods, and
 papers grows annually

100% of technology-related employees trained
 with innovative concepts or tools by 2025

Apply the Modular Integrated Construction (MiC)
 in 10 projects each year

2023 Performance

The technology investment was HK\$486 million,
 with clean technology representing **71.4%** of it.

89 projects

7 national and provincial engineering methods, **211** patent authorisation, and **77** paper

90%

20 projects

Driving Strategic and Innovated Development

Aspect/Target

2023 Performance

Transition to Carbon Neutrality

Near-term carbon reduction target

1. reduce carbon intensity by

59%
(7.63 tonne/million HKD, Scope 1 and Scope 2) in 2025 compared to 2018

8.10 tonne/million HKD¹ down **56%** from 2018 and **13%** from 2022

2. Peak carbon intensity in 2030, reducing carbon intensity by not less than

40%
(5.48 tonne/million HKD, Scope 1 and Scope 2) compared to 2022

Long-term carbon reduction target

Achieve carbon neutrality in 2050

53%

Provide low carbon training to all relevant staff annually

92% of relevant staff received low-carbon training

Provide low carbon training to all relevant new staff

100% of relevant new staff received low-carbon training

The utilisation of low carbon and environmentally friendly generators at construction sites in Hong Kong

100% **>70%**

by 2026

¹ verified by BSI.

Driving Strategic and Innovated Development

Aspect/Target

Best Governance Practices

Diversity on Boards

Board members to be women by 2030

30%

Link executive compensation to ESG performance by 2025

1 ESG demonstration project per year

Complete a Code of Business Ethics by 2024. Ensure 100% of employees (including part-time) and contractors receive anti-corruption and business ethics training

Ensure 100% of employees (including part-time) and contractors receive data security training

0 significant data security incidents each year

2023 Performance

14%

Relevant programs are under development

Hong Kong O·PARK2, the first project that achieved carbon neutrality during construction, was completed this year. Experience from this project has been shared of the COP28.

Relevant policies and standards have been established and training has been given to all employees and contractors.

100% employees have received the relevant training

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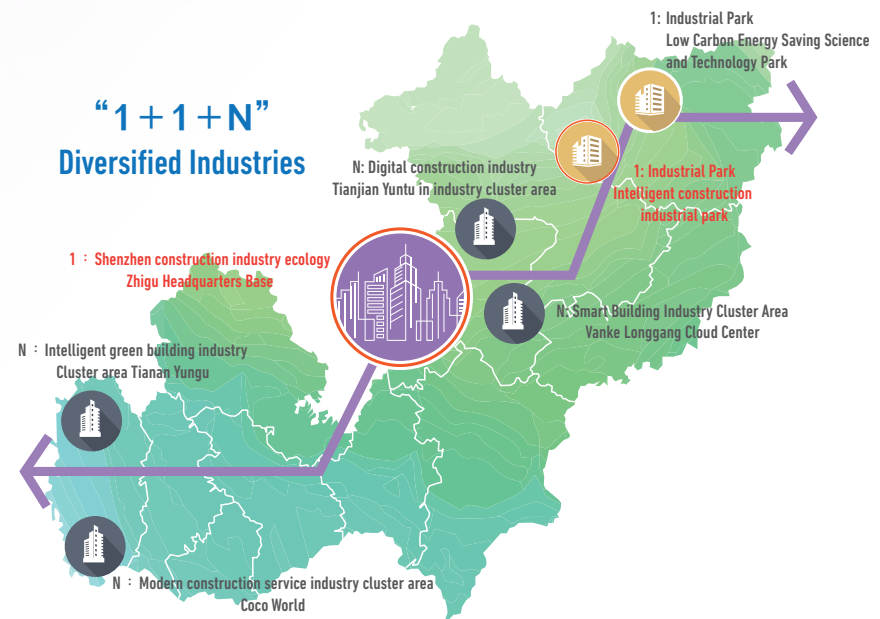
Driving Strategic and Innovated Development

Case Study

Building the MiC Smart Manufacturing Lighthouse Factory to promote low-carbon green development in Shenzhen and Hong Kong

Promoting green and low-carbon development is not only a trend but also the key to achieving high-quality growth in the modern society. Longgang District in Shenzhen, with its growing economy, industry, and population, has recently been focusing on enhancing the city's strategic shift towards low-carbon. This includes improving the green, low-carbon and circular economic system, accelerating the construction of a green and low-carbon industrial chain, with the aim to effectively convert ecological benefits into tangible social and economic advantages.

The Longgang District Intelligent Construction Industry Park plays a crucial role in the spatial layout strategy of “1 headquarters base + 1 industrial park + N industrial agglomeration areas” in Longgang District. Recognised as a major project in Shenzhen for 2023 and 2024, the park aims to become an international first-class MiC new building technology innovation production base. It is dedicated to promoting green low-carbon intelligent construction, implementing the “dual carbon strategy”, enhancing Shenzhen-Hong Kong integration, deeply integrating into the Guangdong-Hong Kong-Macau Greater Bay Area, and serving as a model of future building technology that merges production, learning, and research, all to aid China's high-quality development in new building industrialisation. Situated in the Pingxi area, the industrial park has a planned total land use of 102 acres and a floor area of 228,000 m². It includes high-tech factories, an R&D complex, a 4S exhibition center, a Shenzhen-Hong Kong cooperation training center, and a product exhibition park. The project's design stage fully considers carbon reduction potential. BAVP photovoltaic roof and BIPV photovoltaic integrated curtain wall technologies are used to demonstrate “Photovoltaic — Energy storage — Direct Current — Flexibility”. Also, intelligent management, scheduling, and monitoring of equipment power loads are conducted. This enables the management of material lifecycle carbon emissions and the establishment of low-carbon design and data management. The park will operate using a “source-measurement-flexibility-management” low-carbon management mode, thus achieving comprehensive energy saving and carbon reduction.



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Upon project completion, it will establish three advanced manufacturing systems: Concrete MiC, Steel Structure MiC, and MiMEP. Utilising state-of-the-art technology such as the MOM manufacturing production system and the expert craft library, it will introduce automated assembly lines that incorporate intelligent composite robots, AGV, comprehensive quality inspection robots, and a shuttle system. This will create the world's first smart industrial park dedicated to prefabricated construction products.

Moreover, the industry park will partner with Hong Kong CIC to establish a specialised training hub for Steel MiC and Concrete MiC. The curriculum will cover a range of topics including MiC structure production, interior decoration tasks, and hoisting and connecting operations, with the aim to nurture talent in the MiC industry and further synergise Shenzhen and Hong Kong's integrated efforts.

Low carbon energy source

Distributed photovoltaic power generation

Smart street light

Smart charging pile

Carbon emissions monitoring

Transportation energy consumption monitoring

Production energy consumption monitoring

Waste emission monitoring

Energy consumption and emissions monitoring

Flexible optimization adjustment

Energy consumption analysis

Smart lighting and energy saving

Flexible air conditioning energy saving

Energy optimization strategy

Carbon management

Carbon data management

Carbon emissions management

Carbon Footprint

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Case Study

Sharing Carbon Reduction Practices with the World at COP28

In December 2023, delegates from around the world gathered for the 28th Conference of the Parties (COP28) to the United Nations Framework Convention on Climate Change (UNFCCC), which opened at the Dubai Convention Center in Dubai, United Arab Emirates (UAE). With the slogan “Unite, Act, Achieve”, the Conference aims to unite the world's efforts and call on all participants to take bold and innovative actions to accelerate the closing of gaps in the global energy transition and carbon reduction targets. At the invitation of the United Nations Industrial Development Organisation (UNIDO), the Group participated in the Blue Zones Summit and shared with representatives of the parties and accredited observers the sustainable technological solutions it has developed to combat climate change.

CSHK attended the first day of the World Climate Summit, hosted by the United Nations Climate Change Global Innovation Hub (UGIH), to discuss innovative climate resilience solutions and climate action practices in Asia and Europe. It presented a case study on the carbon-neutral construction of the Hong Kong Organic Waste Recycling Centre Phase II (O-PARK2).

This project is the first in Hong Kong to meet the international voluntary emission reduction requirements. When completed in 2024, it will be the largest food waste recycling center in the city, and the first green project in China that is carbon-neutral during construction. The project has been pre-certified to the BEAM Plus v1.2 Platinum standard. It is designed and built using the Integrated Design Process (IDP), and promotes the use of green building materials and renewable energy. The project has also introduced several intelligent low-carbon construction technologies to Hong Kong for the first time, including BIM 7D (Building Information Modeling), MiC (Modular Integrated Construction), DfMA (Design for Manufacturing and Assembly), BIPV (Building Integrated Photovoltaic), and CCUS (Carbon Capture, Utilisation, and Sequestration). Additionally, the project has used the independently-developed C-SMART intelligent site management platform and the “Carbon Neutral Cloud Platform” to improve the accuracy and efficiency of carbon accounting. The project facilitated the first carbon offset transaction since the establishment of Core Climate, the international carbon market of the Hong Kong Exchanges and Clearing Limited (HKEx). It also explored an innovative operating-phase negative carbon economy model by combining food waste-to-energy technology, thus promoting the development of the international carbon market in Hong Kong.

By participating in the United Nations Climate Change Conference and sharing sustainable technology solutions on this global platform, CSCI is dedicated to collaborating with political, business, and academic leaders worldwide to collectively enhance the global response to climate change.



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Innovative Technologies

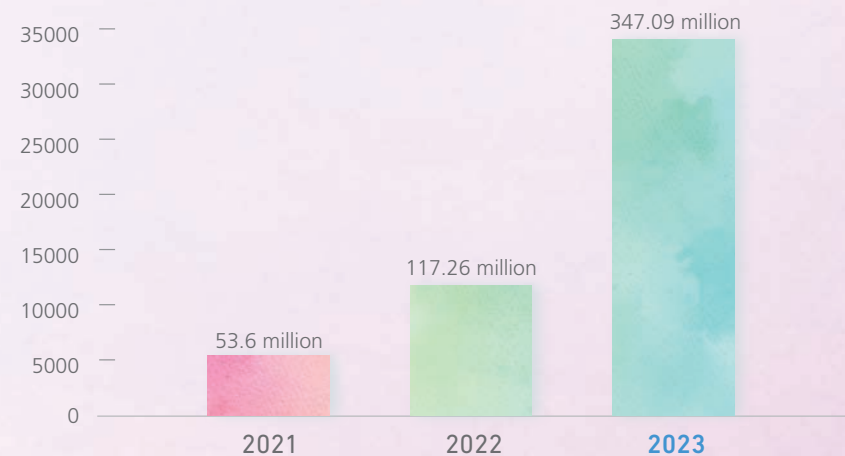
Fostering independent innovation is a key focus for the Group's growth. By continually enhancing the drive for innovation, the Group can reach its goal of superior development. In this fast-paced era of digital, networked, and smart advancements, the Group is always on the lookout for fresh business models and use cases, aiming to be an industry frontrunner.

With regard to the management system, the Group has implemented the "Science and Technology Management System" and formulated a detailed science and technology development plan and work plan, as well as an assessment and reward mechanism. Firstly, in terms of science and technology development planning, the senior management of the Group has set up a leading group for science and technology innovation. They pay close attention to market demand and industry development trends, and conduct long-term planning based on the company's strategic objectives. The Technology Management Committee is responsible for the implementation of the development plan, while the Technology Management Department is responsible for the daily projects. Every year, the Group formulates an annual innovation project plan and prepares a budget for this purpose, allowing subsidiaries to put forward technological needs and topics and initiate research after approval. Each project has a clear objective, timetable and resource allocation plan. Through effective communication and coordination and cross-departmental cooperation, the Group is able to advance its work efficiently and respond to issues and challenges arising from the projects in a timely manner. In terms of assessment and incentives, the Group has established a fair and impartial evaluation system. The work of R&D personnel is comprehensively evaluated through quantitative indicators and comprehensive assessment. The Group rewards outstanding projects and selects outstanding projects to participate in external technology awards in order to stimulate employees' motivation and creativity.

The Group places emphasis on protecting intellectual property rights and promoting technology transfer. By establishing a comprehensive intellectual property management system and strengthening cooperation with patent organisations and legal advisors, the Group can effectively protect the rights and interests of its own R&D outcomes. Concurrently, the Group actively encourages technology transfer and application, converting R&D results into tangible productivity and enhancing the value of the enterprise.

To enhance independent innovation capabilities, the Group has bolstered its investment in scientific and technological research and development. It has also improved the professional skills and innovative thinking of technical staff. This year, the Group allocated HK\$486 million for R&D, employing 1,164 technical professionals, which constitutes 7.1% of the total employee count. The Group was awarded 211 patents this year, including 36 invention patents. The Group's investment has been increasing year on year, particularly in the development of key clean technologies, including prefabricated construction, waste reuse and recycling, waste treatment, and seawater desalination.

Clean Technology R&D Investment



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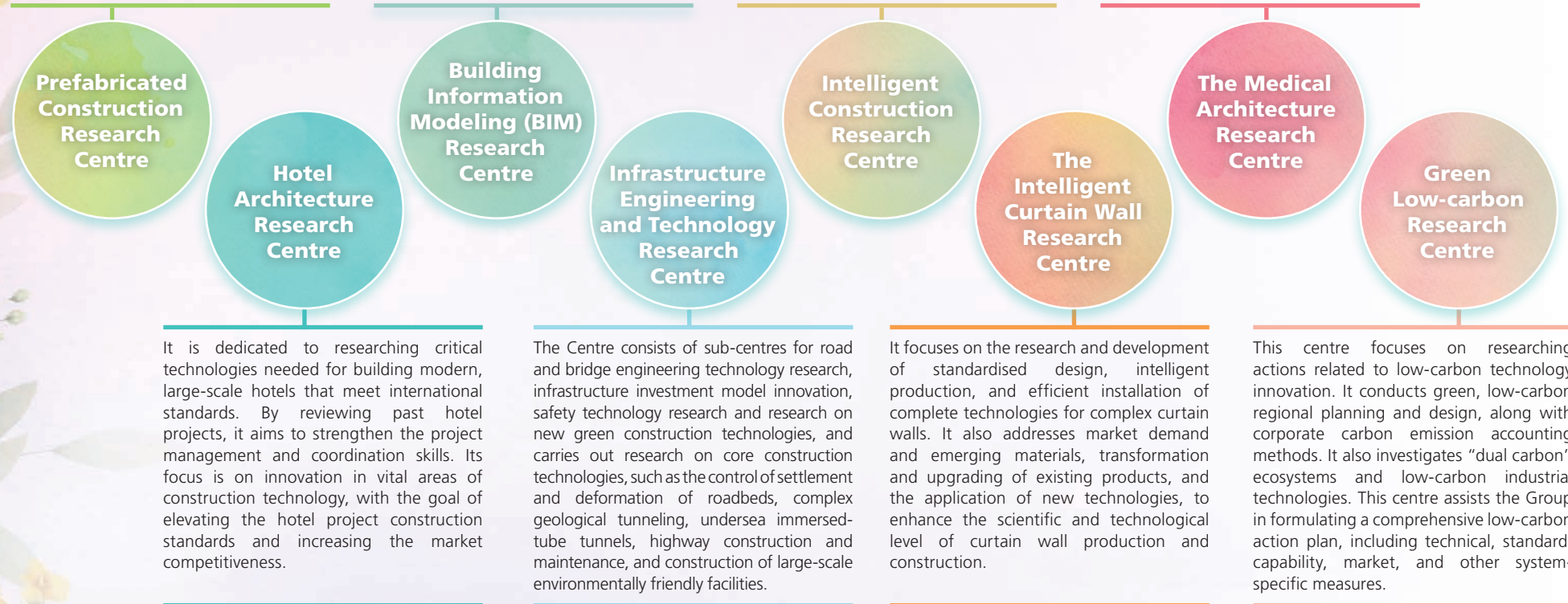
Moreover, the Group has expedited the development of the technology innovation platform, taking a leading role in the platform and encouraging the industrial application of innovative technology. By the end of this year, the Group has founded eight research centres:

The professional team spans the entire industry chain, covering design, manufacturing, construction, materials, and more. It focus on research areas like concrete and steel MiC systems, prefabricated construction, and innovative construction materials, to master key technologies throughout the prefabricated construction process.

Research on the whole-process integrated application of BIM technology, continuously expanding BIM+ application scenarios, devoting itself to technical training, standardisation, and construction of component libraries of BIM, and integrating information on construction materials, installation progress, and cost management into the practical application of BIM technology through the development of plug-ins, the use of calculation software, and the combination of AR and scanning technology.

It integrates technologies such as 5G, VR, AI, the Internet of Things, robotics, and blockchain. It independently develops the C-Smart intelligent construction site series of products, builds a digital construction integrated management platform with independent intellectual property rights, and offers comprehensive real-time project management.

It has a professional team specialising in medical planning, design, construction, and operation. The centre is dedicated to researching comprehensive construction technology for internationally standardised modern hospitals and developing core construction techniques for modular hospitals, supporting medical construction projects and contributing to the advancement of medical construction science and technology.



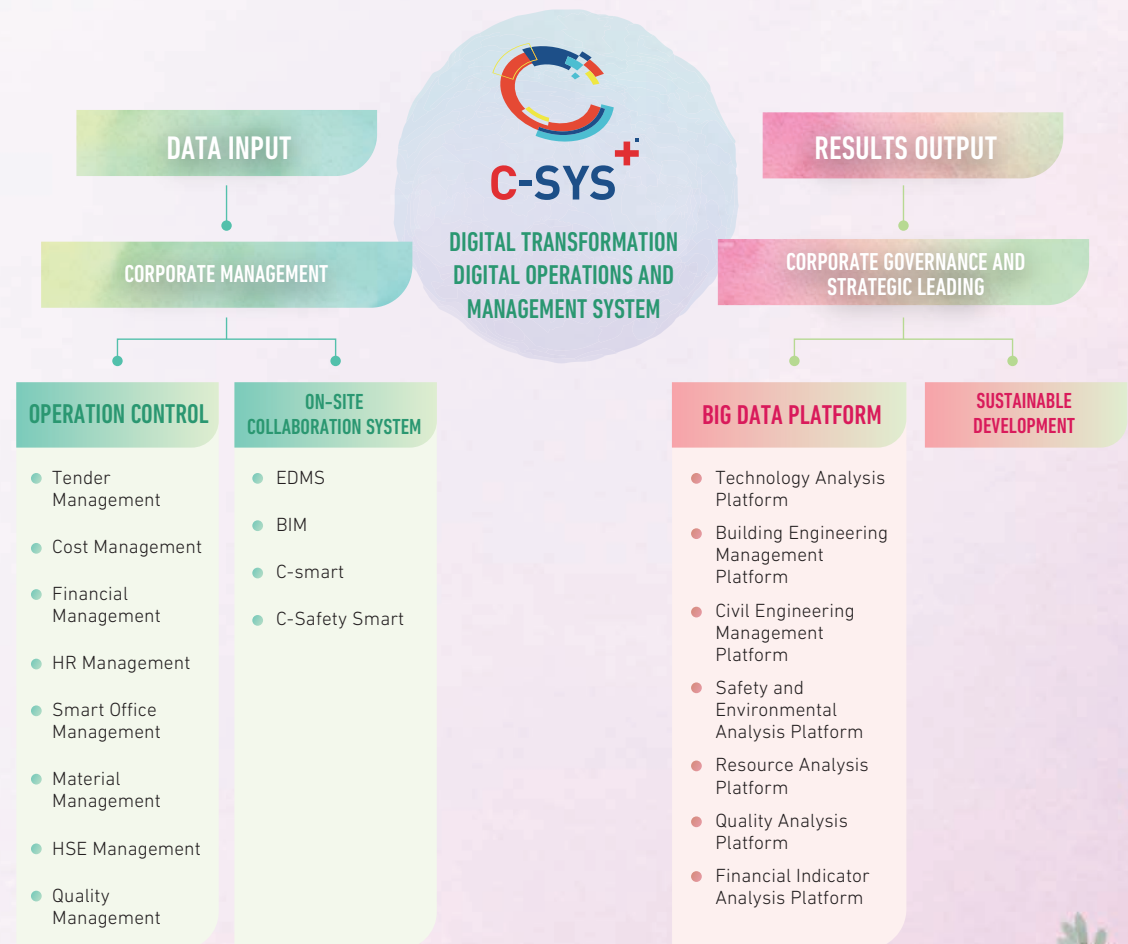
Driving Strategic and Innovated Development

Technology Empowerment

In this digital era, the Group is dedicated to pioneering the industrial internet in the construction sector. It is leveraging IoT, big data, and cloud computing technologies to boost the information capabilities and speed up the company's digital transformation. Through the in-house development of C-SYS+, C-Smart, and the Carbon Neutral Cloud Platform, the Group is achieving more efficient workflows and sharper data analysis.

C-SYS+

CSHK has independently developed the C-SYS+ system to create a digital enterprise management platform that extends and integrates the digital ecosystem into all aspects of corporate operations. By introducing advanced technologies such as data collection, analysis, artificial intelligence comparison, forecasting, and robot development, and integrating systems and platforms from various departments and business areas, the system is able to automatically collect and organise internal and external data, and build an intelligent decision-making model in real-time and accurately. The model not only covers cost, schedule, quality and other dimensions, but also breaks down information silos between departments, laying a solid foundation for corporate governance and strategic guidance. For example, in project management, C-SYS+ can track and record key indicators such as cost control, schedule, and quality assessment results from project inception to completion. At the same time, C-SYS+ can compare these metrics with historical data and conduct predictive analysis using artificial intelligence technology. In this way, managers can keep abreast of project progress, make accurate decisions, and make adjustments when necessary to ensure the project runs smoothly. In terms of supply chain management, it can automatically collect supplier information and optimise supply chain processes based on demand forecasts. In addition, C-SYS+ can share data and information with owners, suppliers and subcontractors, thus realising highly transparent and intelligent supply chain management. This approach not only improves project execution efficiency, but also effectively reduces costs and risks.



Driving Strategic and Innovated Development



C-Smart

Smart Site is an extension of the smart city concept in the construction industry. The Group has developed the C-Smart platform, emphasising quality, safety, progress, and cost. By deeply integrating new technologies like mobile internet, the Internet of Things, artificial intelligence, and big data, the Group can thoroughly enhance and optimise all aspects of a construction site.

Mobile internet allows construction workers to access project information, monitor construction progress, and communicate with their team in real time, from anywhere and at any time. They can efficiently complete tasks whether they are in the office or on-site. The implementation of Internet of Things technology makes smart construction sites even more advanced. Sensors and monitoring equipment are widespread on construction sites, collecting and transmitting real-time data. This data assists in monitoring equipment operation, detecting faults promptly for repair, and analysing various construction process

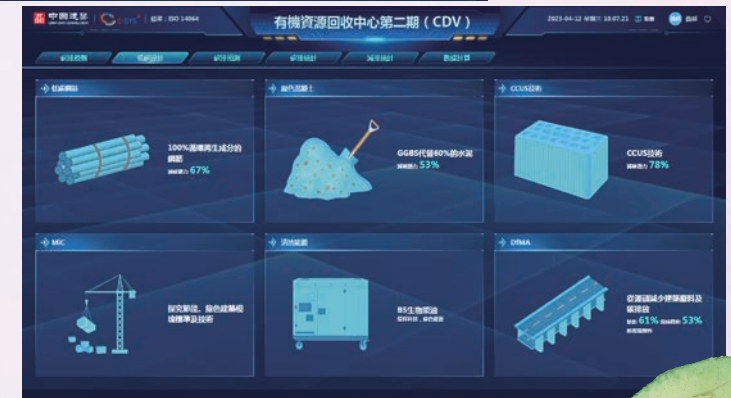
indicators. This information serves as a basis for decision-making and optimisation solutions. Additionally, facial recognition technology ensures only authorised personnel can enter the construction site, automatically recording their access. This measure effectively prevents unauthorised entry, minimising safety risks.

AI technology is enhancing the functionality of smart construction sites with its unique intelligent capabilities. By deploying machine learning and deep learning algorithms, the system can automatically spot safety hazards on-site and promptly issue alerts to ensure the well-being of construction personnel. Furthermore, AI has the capacity to sift through and analyse large data sets, offering precise predictions and decision-making support. The incorporation of big data empowers smart construction sites with robust information processing and management. By gathering, organising, and scrutinising construction site data, it is possible to monitor and optimise resource utilization, cost control, quality management, among other sectors.

Carbon Neutral Cloud Platform

In addition to the internal sustainability data cloud platform, the Group has independently developed a carbon neutral cloud platform for collecting and displaying the carbon emission level of projects and realising the e-verification process of carbon emission. The cloud platform enables more efficient collaboration and resource sharing by centralising the storage and management of data, applications and computing resources. Meanwhile, due to the flexible scalability of cloud computing, the Group can also flexibly adjust the computing resources according to project requirements and provide safe and reliable data storage and backup services.

The platform incorporates blockchain and Internet of Things technologies to ensure data security and trustworthiness. Blockchain technology, known for its decentralisation and non-tampering features, effectively prevents data forgery and manipulation. By recording a project's carbon emission data on the blockchain and linking it with other pertinent information, the Group can create a traceable and transparent carbon verification system. The cloud platform also includes an intelligent data analysis module. This module facilitates in-depth mining and analysis of each project's carbon emission data, allowing the Group to accurately assess each project's environmental impact and propose improvements. In terms of practical application, the cloud platform gathers years of emission reduction cases from the construction industry. It analyses factors such as scenario practicality and input-output ratio to provide optimal emission reduction solutions for different scenarios, aiding companies in planning emission reduction scenarios. Moreover, it develops emission reduction models with the application of new technologies to explore the effects of applying emerging emission reduction technologies, leading the industry in emission reduction. Currently, the Carbon Neutral Cloud Platform is being promoted and utilised in Hong Kong, Macau, and Chinese Mainland, including projects like O-PARK2, Macau Senior Apartment Housing, and China Overseas Shenzhen Houhai Headquarters Base.



Driving Strategic and Innovated Development

Cutting-edge Craft

The Group actively pursues the three major areas of green construction, smart construction, and construction industrialisation, making significant progress. These technological innovations meet engineering needs, encourage a greener and more efficient construction industry, and lay a solid foundation for the Group's expansion into new business areas and industrial transformation.

MiC

Prefabricated construction paves the way for construction industrialisation. It demands precise technical skills and craftsmanship, enhancing construction quality, efficiency, and safety compared to traditional methods. It is swiftly evolving in the global construction market. CSC Hailong, with its self-developed MiC construction system, has initiated China's prefabricated 4.0 era. The MiC system applies a “modular integrated” approach. In the design phase, buildings are divided into modules based on function zones. These modules are mass-produced with high standards, quality, and efficiency, then transported to the construction site for assembly, representing today's peak standard of prefabricated construction worldwide.

By using MiC, 90% of the traditional construction processes can be successfully transferred to the smart factory. This innovative approach not only greatly reduces on-site construction processes, but also effectively solves the problems of weather conditions, labour resources and site constraints during the construction process. In the smart factory, the project's BIM model data is imported into the production management system, and each module is produced one by one on a standardised production line, ensuring the quality and precision of each module. Whether it is steel processing, concrete pouring or wall decoration, the intelligent production line can achieve fast, precise and standardised construction. In the on-site construction stage, the prefabricated modules are simply assembled and put together, and the module information can be tracked throughout the whole process, further improving the overall project management efficiency. Compared with traditional construction methods, the “modular integrated” construction method reduces on-site labour, lowers labour costs, and reduces the impact of noise and dust on the surrounding environment. In addition,



producing building modules in an intelligent factory effectively reduces resource wastage. Through careful planning and optimisation, the use of materials is maximised, while the generation of waste and residual materials is greatly reduced. This is not only good for the environment, but also in line with the concept of sustainable development.

In the year, CSC Hailong showcased its recent technological advancements and latest “modular” construction product matrix at the China International Residential Industry and Construction Industrialisation Products and Equipment Expo, including a physical sample of a modular building, intelligent construction production equipment, a digital delivery system, and a physical sample room from the Zhangkeng Road project in Longhua District, Shenzhen. The aim was to foster industry exchanges and highlight the pivotal role intelligent factories will play in the construction industry. Looking forward, the Group plans to continue investing in intelligent construction and use industrialised and intelligent solutions to elevate the entire construction industry.

Driving Strategic and Innovated Development

BIM

BIM has become a prevalent technology in today's architectural design industry, gaining wide recognition. The Group has consistently prioritised BIM promotion, applying it extensively in architecture, engineering, and manufacturing. In O-PARK2, the Group employs the innovative BIM7D technology platform for design, construction, operation, and maintenance. The 3D model guides collision checks, identifying and resolving potential issues before construction to prevent time and cost losses from later repairs. The 4D model guides the construction

process, simulating it to increase accuracy and efficiency, allowing for reasonable resource and personnel allocation, anticipating potential problems, and adjusting plans timely. It ensures project completion on time while minimising delays and waste. The 6D model greatly eases the actual operation stage. By comprehensively managing facilities, including maintenance plans and equipment updates, the Group can better control the project's entire lifecycle and maximise efficiency during use and maintenance. The project also explores BIM's 7D use, linking the model with the CIC's carbon assessment tool to streamline the carbon assessment process.

Advantages of BIM Technology



Project Management

Architects, engineers, and other relevant personnel can collaborate and communicate on a unified platform, achieving information sharing and integration. This greatly improves the communication efficiency among the project team and can resolve issues and adjust the design plan in a timely manner. At the same time, BIM technology can also manage the project progress visually, accurately grasping the progress of each stage, thus better arranging resources and time.



Quality Control

A comprehensive and accurate check and evaluation of the design plan can be carried out. For example, potential problems can be discovered and resolved in time by simulating the design plan with virtual reality technology before construction. In addition, BIM technology can also achieve precise control of key elements such as materials and components, effectively avoiding the occurrence of quality issues during the construction process.



Maintenance Phase

Digital recording and management of all parts of the building, including structure, equipment, pipelines, etc., can be done. This way, during the usage phase of the building, relevant information can be conveniently found and updated, improving the efficiency and accuracy of maintenance. At the same time, BIM technology can also achieve intelligent maintenance management, real-time monitoring of the building's operation status through sensors and data analysis, and provide corresponding early warnings and maintenance plans.

Driving Strategic and Innovated Development

BIPV

Achieving zero energy consumption in buildings is a significant global goal. The BIPV system is a key method for achieving this. The BIPV system's advantage is its seamless integration with the building. By incorporating photovoltaic panels into the building's facade, it not only generates solar power but also preserves the building's original aesthetics and design. Beyond technical advancements, the BIPV system is versatile in its function. For instance, through thoughtful design and layout, the energy output of photovoltaic panels can be modified to fit specific geographical and climate conditions. Also, in scenarios like evenings or cloudy days, the BIPV system can work with energy storage devices to ensure the building's normal operation.

CSC Development has been continuously and actively developing BIPV technology and launching various types of BIPV products. Throughout the year, the company focused on the development of new products — Light A and Mega Light-A, and completed the construction of its inaugural photovoltaic curtain wall production line. The Light-A series, a lightweight imitation aluminum solar module, can generate 12,000 kWh per 100 square metres of solar power, which is estimated to reduce carbon dioxide emissions by 10 tonnes annually. Beyond retrofitting its own factories, the company has collaborated with owners to implement the low-carbon solution in projects. This year, it has installed BIPV in the projects of Heya Poverty Alleviation Industrial Park in Yunxi County and the Zhongjian Smart Valley West District Distributed Photovoltaic Power Generation and Energy Saving.



Driving Strategic and Innovated Development

Cooperation and Exchange

The Group actively collaborates with universities and research institutes, establishing a robust mechanism for industry, academia, and research cooperation to jointly address core technological issues. This partnership promotes knowledge exchange, resource sharing, and accelerates the application of innovative achievements. Universities and research institutes contribute by conducting cutting-edge basic research, fostering scientific and technological innovations; while the Group rapidly transforms these innovations into actual products and solutions for practical production. For instance, the Group and the Harbin Institute of Technology (Shenzhen) have jointly established the “Harbin Institute of Technology — 3311 MiC Cooperative R&D Centre”. This collaboration advances the research of MiC core technology and further propels the Group's development in the field of construction industrialisation.

Beyond architecture, the Group also actively explores partnerships with universities and research institutions. For instance, it collaborates with iFlytek in areas such as AI intelligent hospitals and AI intelligent education, investigating the use of AI technology for managing

international hospitals and modular schools, which brings new energy to the Group's business expansion. Huanggu Thermal Power Plant has also improved its heating efficiency and achieved energy savings and emission reductions through the development of a central control system and secondary network balance in partnership with Harbin Institute of Technology. The heating and power industry's technical parameters provided to the school help the R&D team refine the system. The current R&D results have been adopted and utilised by several local heating companies.

Not only does the Group devote energy to its own initiatives, but it also takes an active role in shaping industry standards. By taking a proactive stance in this process, the Group gains a clearer understanding of the industry's trajectory, ultimately contributing to its healthy and well-structured growth.

Besides, the Group has also strengthened its cooperation and exchanges with other enterprises and organisations, with a view to achieving win-win cooperation on the basis of resource sharing and mutual benefits. The list of the Group's participating organisations is set out below:

Driving Strategic and Innovated Development

Participating Organisations

Hong Kong	Macau	Chinese Mainland
The Hong Kong Chinese Enterprises Association — Construction Industry Committee	The Macau Chinese Enterprises Association	Sichuan Association for Construction Quality and Safety Supervision
The Hong Kong Construction Association	Associação Geral do Sector Imobiliário de Macau	Chengdu Construction Quality Association
Construction Industry Council	School of Business Advisory Board, Macau University of Science and Technology	Yunnan Construction Industry Association
Occupational Safety and Health Council	Macau Construction Industry Association	Foshan Shunde District Village Industrial Park Upgrading and Reconstruction Association
Vocational Training Council	Macau Association of Building Contractors and Developers	Hubei Province Department of Housing and Urban-Rural Development Engineering Projects Approval System Reform Committee
Labour Advisory Board	Macau Construction Association	Shenzhen Municipal Housing and Construction Bureau Prefabricated Building Specialists
Hong Kong Institute of Environmentalists	Macau Wo Kuong Advancement Association	Guizhou Youth Federation
The Employees' Compensation Insurance Residual Scheme Bureau Limited	Association of Study of Environmental Science and Technology of Macau	Shanxi Youth Federation
Employees Compensation Insurer Insolvency Bureau	Macau Construction Safety Association	
Development Bureau Joint Sub-committee on Streamlining of Development Control	The Women's General Association of Macau	
Registered Contractors' Disciplinary Board Panel		

Driving Strategic and Innovated Development

Best Governance Practices

Good governance plays a crucial role in building a good brand reputation and ensuring stable development of an enterprise. This encompasses the creation of ethical policies and systems, the development of effective internal control mechanisms and oversight systems, as well as instilling appropriate values and ethical standards in employees and partners. A company can achieve sustainable development and gain stakeholders' trust only by adhering to principles of integrity, fairness, and responsibility.

Integrity and Anti-Corruption

The Group is dedicated to upholding the highest standards of governance and ethics, staunchly opposing all forms of corruption, including bribery, extortion, fraud, and money laundering, to foster a fair, transparent, and reliable business environment. To ensure all business activities adhere to laws, regulations, and ethical standards, the Group bolsters its internal control system. The "Employee Handbook" and "Anti-Corruption Policy" explicitly outline rules that prevent employees from abusing their positions for personal gain. Senior management in the Group are required to sign the "Integrity Construction Responsibility Letter" and are held accountable for any corruption found under their watch. Besides internal governance, the Group also insists on conducting business with external partners based on integrity. The "Supplier Code of Conduct" explicitly stipulates the prohibition of bribery and other improper behaviors.

The Group has created the "Guidelines on Overseas Integrity and Compliance Supervision System Construction" to enhance its overseas integrity and compliance supervision system, aiding high-quality corporate development. This year, the Group bolstered frontline integrity and compliance management using Hong Kong as a test site. It identified 66 common risk points in various areas such as material management, quality management, contract management, and personnel management, and devised 146 preventive and control measures to mitigate these risks. This led to the creation of the "Hong Kong Site Integrity and Compliance Supervision Handbook", which serves as a guide for the daily supervision by project site management staff, and also sets guidelines for construction site workers' behaviour.

The Group has established a "Whistleblowing Policy" and "Measures for Managing Complaints and Petitions". Upon receipt of any whistleblowing information, it is the responsibility of the Compliance Supervision Department to review and process it following the workflow outlined in the "Measures for Managing Complaints and Petitions". The investigation process includes liaising with the whistleblower, gathering evidence, and gaining a thorough understanding of the incident while ensuring the whistleblower's privacy. If the report holds true, the Group will take appropriate disciplinary action based on the nature of the case, with dismissal being a possible outcome for severe cases. Any potential legal violations will be forwarded to local law enforcement for further investigation.

During the year, the Group conducted 14 inspections. These focused on each unit's responsibilities, higher-level work deployment and system implementation, and compliance with the eight provisions of the Central Authorities and their implementation details. In the process, the Group identified 56 areas of concern, provided constructive feedback, and proposed 96 areas for enhancement. Over the year, the Group addressed a total of 19 cases and took formal action against one person. The person in question was disciplined by the Group and transferred to the local supervisory committee and public security authorities.

To ensure all employees understand the Group's integrity management requirements and can appropriately respond to potential risks, the Group has established roles for a Compliance Officer and a Compliance Supervisor. An anti-corruption coordination team has been formed for integrity building purposes, and employees are regularly shown anti-corruption video cases. By discussing real-life scenarios, the Group further enhances the employees' understanding of and vigilance against corrupt practices. The Group also collaborates with Hong Kong's Independent Commission Against Corruption (ICAC) to host targeted seminars. These sessions introduce new employees to potential corruption risks in the construction industry and provide practical preventive measures and countermeasures. The seminars cover a broad spectrum, from fostering professional ethics to promoting awareness of laws and regulations. The goal is to guide employees in developing a proper sense of professional ethics.

Driving Strategic and Innovated Development

On April 24, 2024, the Group kicked off a comprehensive training on anti-corruption and business ethics. It was mandatory for everyone in the Group, including part-time employees, as well as suppliers and contractors. The training was delivered in an engaging online video format, led by expert consultants, and achieved 100% participation. The Group's goal with this initiative is to boost everyone's understanding of business ethics. Equipped with this knowledge, employees and partners can better meet their responsibilities, prevent potentially harmful errors in judgement that could affect company assets, data, reputation, and culture, and help the Group continue to fulfill its commitment to social responsibility and sustainable growth.



Abide by Business Ethics

The Group promotes the spirit of contract adherence and business compliance. It seeks profits in a transparent and ethical manner, provides high-quality services for customers, and safeguards customers' rights and interests.

Fair competition

When conducting business transactions, the Group expects employees to uphold the values of honesty and fairness, steering clear of any anti-competitive behaviors such as collusion or other infringements. To safeguard fair competition, the Group has set up a specific supervisory body and an internal audit department. Regular inspections and evaluations are carried out across all departments, with any breaches identified and rectified swiftly. Moreover, the Group organises routine trainings to enhance employees' understanding of both competition laws and ethical guidelines.

Customer privacy

The rapid development of information technology and its application in corporate operations have correspondingly increased the risk of information leakage. In order to safeguard data security, the Group has formulated an information security management system in accordance with the ISO27001 standard, which stipulates prudent methods of information collection, processing, storage and use to minimise the risk of information leakage. In addition, the Group attaches great importance to the information security education and awareness cultivation of its employees. Through regular training courses, provision of relevant information and formulation of clear information security policies, the Group helps its employees better understand the possible risks of information leakage and learn to properly handle and protect sensitive data, including customers' privacy.

Facing the threat of cyber-attacks and hacking, the Group prioritises the enhancement of cyber-security protection by adopting multi-level security measures to safeguard critical data and systems. The Group also continuously tests and updates its information system infrastructure and security measures and conducts simulated cyber-attacks to test the security of its information system, thereby ensuring the privacy of its customers, business partners, and employees.

Protection of intellectual property

The Group highly values the protection of its own and third-party intellectual property rights. It promptly applies for patents for its innovative results and explicitly states in the employee handbook that unauthorised use of others' ideas and products is prohibited. Furthermore, the Group bolsters employee awareness of intellectual property rights protection through regular training and internal communication, urging them to adhere to relevant regulations.

Compliant advertising and promotion

The Group prioritises consumer rights and market order by ensuring rigorous advertising compliance. To ensure stakeholders have access to ample and accurate information, the Group has set up a dedicated department to oversee brand positioning, media management, brand activities, and market information disclosure.

As part of its efforts to improve the Group's business ethics audit and supervision system, the Group conducts special audits and investigations in key areas every year, including internal control testing about spot checks on projects and employees' implementation of the Group's policies and requirements. If problems are found, the Group will implement a system of accountability and urge the relevant departments, responsible persons and project leaders to complete rectification as required.

Driving Strategic and Innovated Development

Respect for Human Rights

In its Sustainability Policy, the Group commits to following the United Nations Guiding Principles on Business and Human Rights. It explicitly prohibits child labour and protects its employees from any form of forced labour. During recruitment, the Human Resources Department adheres to established procedures. They verify candidate identity documents and require them to sign the job application form, confirming their personal information. For site personnel, dedicated labour officers are stationed at each site. They manage and oversee the legal compliance of various contractors and subcontractors' hiring activities. Regular checks of worker registration information are conducted to prevent child labour or forced labour issues.

As a construction enterprise, the Group values community participation in its projects and develops a community participation plan before starting. Before construction, each project involves extensive communication with local governments and community representatives to understand residents' needs and concerns, making adjustments as needed. Secondly, a detailed construction plan is formulated and shared with nearby residents. This plan includes the construction timeline, location, and potential impact factors like noise and dust, helping residents prepare and adjust accordingly. During construction, the project strictly adheres to environmental protection regulations, with professionals monitoring and managing on-site.

If any standard is exceeded or adverse effects are detected, immediate rectification measures are taken, and residents are promptly informed and compensated. Residents can also voice their concerns to the Group through contact information posted at the construction site. All complaints are taken seriously, with prompt responses and resolutions to ensure residents' rights and interests are upheld.

Driving Strategic and Innovated Development

Quality Assurance

With a commitment to public health, safety, and quality construction, the Group adheres to the principle of “quality assurance, value creation”. It regularly conducts internal audits and monitor quality performance, continually enhancing the management process to uphold the policy of “alright for one time, alright for all times”. Additionally, the Group ensures its new team members are up-to-speed with its quality management system and related processes, with Human Resources Department providing quality management training for new hires. Furthermore, many of the Group's subsidiaries—including CSHK, CCE Macau, and several prefabricated construction companies—have achieved ISO9001:2015 quality management system certification.

By strictly complying with laws and regulations such as the Construction Law of the People's Republic of China, the Buildings Ordinance of Hong Kong and the General Conditions of Urban Construction of Macau, the Group is committed to carrying out construction works in accordance with the relevant regulations and incorporating them into its quality control procedures to ensure that the safety and health requirements of clients and building users are incorporated into the relevant laws and contractual terms and conditions. The Group works closely with its clients and collects their feedback to manage building quality. To ensure safety compliance, clients inspect buildings against their standards and procedures. In addition, the Group's construction projects generally provide a maintenance period after project handover to provide aftercare services to further enhance public health safety and building quality management.

CSHK has established a Quality Management Team for effective construction quality management. This team's responsibilities include recommending quality management policies to senior management, preparing and reviewing the annual quality audit plan, and continuously improving the management system and quality performance. CSHK has also

developed a “Quality Management Manual” and “Standard Work Procedures”. “Standard Work Procedures” detail quality-related areas such as tender management, contract management, project planning, and incident reporting. In addition, CSHK has formulated “Quality Control Procedures for Critical Construction Processes”, specifying construction requirements and inspection content for each critical process in housing, civil, foundation, and E&M works. It implements triple checking and auditing to strengthen quality control and enhance the quality level at construction sites.

CCE Macau's quality management system comprises the “Quality Manual”, “Procedure Document”, and “Operation Guide”. CCE Macau conducts internal audits and management reviews annually to verify the system's adequacy. Furthermore, a third-party certification centre is engaged to conduct external audits of the system. This ensures compliance with laws and regulations and contract requirements, helps achieve stated goals, and identifies areas for potential improvement. CCE Macau promptly identifies and analyses problems, and takes corrective and preventive measures. Strict supervision is enforced to ensure the management system's continuous effective operation and ongoing improvement.

To ensure superior quality of construction, exhaustive management reviews are implemented at construction sites in CSHK and CCE Macau. They utilise a red and yellow card system as a warning and motivation tool for sites and personnel who are not meeting standards, while also acknowledging those that excel. CSHK has a “Project Management System” in place. This system establishes a management structure, outlines the responsibilities of each department and position, and provides clear work requirements and procedures. It covers various aspects including contractors, contracts and costs, project progress, quality and technology, safety, and environmental protection.

Safeguarding the Environment

Under the trend of low-carbon transformation, the Group actively pursues a carbon-neutral transformation and practices green operations to avoid polluting the surrounding environment during construction and operation. The Group is also committed to building resource-saving, environmentally friendly and disaster-resistant communities. As such, the Group continuously improves its environmental management system and promotes green initiatives and actions to foster a business model that harmonises corporate activities with environmental protection.



Safeguarding the Environment

Target and Action

Aspect/Target	2023 Performance
Green Operation	
Reduce the hazardous waste intensity (generation/turnover)	0.1 tonnes/HK\$ million
Increase the recycling rate of non-hazardous waste	48.53 %
Reduce the landfill and incineration waste intensity (disposal/turnover)	4.31 tonnes/HK\$ million
Reduce water consumption intensity (water consumption/turnover)	108.06 cubic metres/HK\$ million
Reduce energy intensity (energy consumption/ turnover)	7.17 MWh/HK\$ million
Conduct a biodiversity risk assessment for all sites in 2024	Relevant programs are under development

Safeguarding the Environment

Case Study

Qingdao Zero-carbon Industrial Park

Qingdao City, being the first in the country to pilot green city construction and development, is actively exploring a high-quality development path for green cities. It has planned and constructed pilot areas such as an International Cruise Ship Green Port, the Sino-German Ecological Zero-carbon Park, and the Olympic Sailing Center Zero-carbon Community. Leveraging the radiating effect of these key zones, Qingdao is dedicated to increasing the number of green and low-carbon buildings in both urban and rural areas.

Located in Qingdao's West Coast New District, the Sino-Japanese (Qingdao) Local Development Cooperation Demonstration Zone has prioritised energy conservation and environmental protection from its planning stages, with the mission to care for mankind's common home. The zone primarily focuses on the development of four key industries: material science, energy technology, bioengineering, and information communication, and drives the growth of modern service industries, contributing to a modern park characterised by a strong Japanese style, low-carbon environmental protection, and industrial-city integration. Leveraging the policy background that promotes green and low-carbon initiatives and the Group's extensive construction experience, the goal is to transform this project into a high-quality, high-end industrial park of benchmark significance, establishing it as a leading zero-carbon park, a green energy-saving ecological park, and a technology-focused, advanced intelligent park in the country.





Case Study

Zero-carbon Park

Starting with the park layout, the team came up with a “double C” design, a nod to dual carbon (C+C). This is in sync with the park's planning ethos, promoting green and eco-friendly practices. In consideration of Qingdao's climate, the park largely follows a north-south orientation, with main entrances positioned southward, thereby shielding against winter's northern winds and allowing natural ventilation in summer. The architecture is also devoid of excessive nooks and crannies, minimising heat loss in colder regions.

The Group worked with the Southwest Architectural Design Institute during the design stage to conduct a detailed study on the practicality of various passive energy-saving measures, and considered the adoption of photovoltaic, geothermal and other energy collection and utilisation technologies, including BIPV, to achieve the coordinated development of multiple energy sources in the park. Green plants are planted on the roofs of the buildings to absorb carbon emissions inside the buildings and to provide shading at the same time. Other trees and plants planted in the park also have the function of carbon sequestration.

Ecological Park

Situated adjacent to the river on the project's east side, the design integrates the river to create a water-friendly garden space. The Group utilises local drought-resistant plants and outdoor activity venues to create resilient ecological landscapes, including sunken green spaces, permeable paving, bio-retention ponds, rain gardens, and rainwater collection ponds. These features facilitate the rational use of rainwater, reduce the load on the city's drainage system, and increase the city's flood-resistance capacity. By applying these design and technical methods, the Group has created a green, low-carbon, safe, resilient, ecological, and water-saving sponge city showcase, which not only provides a space for relaxation and recreation but also contributes to ecological protection and carbon emission reduction.

Intelligent Park

The park intends to establish a unified platform that ensures comprehensive connectivity, deep integration, and widespread smart office use of the park's IoT devices. It will implement 3D visualisation technology for park display and management. The project also aims to construct an energy carbon management platform based on the BIM model. Through a data centre formed by the installation of environmental sensors that measure temperature, humidity, air quality, particulate matter concentration, indoor illumination, and building energy consumption for monitoring and intelligent control, The dynamic display system based on the BIM model will provide real-time comprehensive analysis of the indoor environment, renewable energy of buildings, and data related to low-carbon emission reduction effects, aiding in quick decision-making for operations.

Once the project is finished, the goal is to attain a 100% green building three-star level. Moreover, the six multi-storey office buildings within the park are aimed to become zero carbon, zero energy consumption structures, achieving LEED Gold and WELL Gold standards.

Safeguarding the Environment

Case Study

Green construction of Leirong Expressway

On November 3, 2023, Guizhou Leirong Expressway was officially opened to traffic and operation. Leirong Expressway starts from the east of Leishan County, ends at Zhongcheng Junction Interchange in the north of Rongjiang County, and connects with Jianrong Expressway, with a total length of 72.453 kilometers, which is an important part of Guizhou Province's expressway network, and an important channel connecting Guizhou to Guangdong, Hong Kong and Macau Greater Bay Area. Leirong Expressway runs through more than 100 villages in the hinterland of Leigong Mountain, and it takes only about 40 minutes from Leishan to Rongjiang, realising the shortest connection between Hukun Expressway and Xiarong Expressway. Convenient transportation will further promote the development of diversified industries such as transportation tourism, agro-tourism and cultural tourism, which is of great significance in promoting the development of cultural tourism industry of Miao and Dong mountain treasures and helping rural revitalisation.

Ecological Environment Protection

The Leirong Expressway is being constructed as a two-way, four-lane highway, with a roadbed width of 24.5m. It is designed for a speed of 80km/h. The mainline bridges span 26121.7m across 80 locations, and there are 18 tunnels totaling 29885.5m. The bridge-to-tunnel ratio is 77.31%. The expressway includes five interchanges, two service areas, and one parking area. The estimated total investment for the project is RMB12.297 billion, with a construction period of three years and an operation period of 30 years. The route passes through major rivers and their tributaries such as the Danjiang River, Wujiu River, Pingjiang River, Pingyong River, and Zhaihao River. It also crosses the Leigongshan National Nature Reserve and Leishan Scenic Spot, and is approximately 180 meters from the nearest boundary of the Leigongshan National Forest Park. With this in mind, it is crucial to address the project's engineering challenges while also prioritising the protection of the ecological environment.

77%
bridge-to-tunnel ratio

Leirong Expressway has its bridge-to-tunnel ratio of 77%

48 tunnel faces
high number of bridge and tunnel

18 tunnels and 48 tunnel faces along the entire line

116m
filling area

individual project work site has filling area reaching 116m

269 plans
numerous risky projects

269 special plans

6000 workers
mass construction team

over 6,000 people at peak

3.5 times
difficult transportation condition

average construction access road is 3.5 times that of the main line



The project company, alongside all participating units, has established safety and environmental protection departments and clearly defined the responsibilities of the department. It implements the construction principle of “minimum damage, maximum restoration”, throughout the highway construction process, strived to minimise harm to the natural environment through scientific and reasonable planning. For instance, by optimising route selection, ecologically sensitive areas were avoided, and the impact on wildlife habitats was reduced. The project's longest tunnel, Leigongshan Tunnel, is situated within a national nature reserve. The project company adopted a non-disturbance approach, limiting side slope excavation and preventing extensive damage to vegetation, effectively shortening the construction period while protecting the environment. Moreover, temporary cross tunnels were repurposed as permanent power distribution rooms, integrating temporary and permanent structures.

Throughout the Leirong Highway construction, the Group incorporated a variety of eco-friendly materials and technologies. Take, for instance, the low-noise pavement materials which have lessened the traffic noise impact on the surrounding environment. The ecological slope protection technology was also used to ensure roadbed stability while safeguarding soil and water sources. Moreover, the Group strictly regulated dust and wastewater discharge during construction, effectively warding off environmental pollution.

- Atmospheric protection: Dedicated car washing devices are set up to ensure that vehicles do not bring mud onto the road. Dust removal devices are installed on the top of the mixing tank, and water sprinkling vehicles are equipped to sprinkle water and reduce dust on the construction road. The construction site is equipped with a fog cannon machine to minimise construction dust.

- Water treatment: Sedimentation tanks are set up at the site, and wastewater is collected by the sedimentation tank. After simple treatment such as sedimentation and slag removal, it is reused for sprinkling water to reduce dust or local irrigation, effectively controlling wastewater exceeding the standard and causing water pollution along the line.
- Sound environment protection: During the construction of the site, places that are prone to noise, such as rebar fields and prefabricated beam fields, are kept away from the construction of villages and encampments, and full closure measures are taken to effectively avoid noise pollution.
- Solid waste treatment: Garbage bins are set up in the living camp, hazardous waste temporary storage rooms are set up in all kinds of sites, the ground is treated for seepage prevention and hardening, rain shelters are set up, and relevant signs of hazardous waste are set up.
- Soil and water conservation: Full coverage measures are taken for exposed slopes and soil piles on the site, and greening measures are taken for high slopes, abandoned soil yards, etc., effectively preventing soil erosion.
- Coal-to-gas technology: The asphalt mixing station uses Marini 5000 type + coal-to-gas technology to increase the combustion rate by more than 90%; reduce fuel consumption by about 10%~20%/tonne; reduce CO₂ emission by about 27%, and reduce SO₂ emission by more than 80%.
- Topsoil stripping: In the early stage of construction, land is saved, over-occupation of farmland is strictly prevented, topsoil is stripped and collected with vegetation bags and centrally stacked to avoid damaging ecological resources and actively practice the concept of green environmental protection engineering.

As these measures were taken to minimise the damage to the environment and create a green ecological Leirong, the project was awarded the title of “Green Demonstration Project in Guizhou Province” by the Guizhou Provincial Construction Industry Association.

Safeguarding the Environment



Transforming Phosphogypsum Waste into Treasure

Guizhou has the third largest phosphate reserves in the country, making it a primary area for phosphate production and a vital base for the national phosphorus chemical industry. However, phosphogypsum, a solid waste product from this industry, not only takes up land but also pollutes the air, water, and soil. To address this, the project company collaborated with a university to develop a technology that improves phosphogypsum, actively exploring phosphogypsum's potential applications and enabling the recycling and reuse of this solid waste. After special treatment, phosphogypsum is used as a filler material for road base construction, thereby enhancing the stability and load-bearing capacity of the road base. In greening projects, the improved phosphogypsum serves as a soil conditioner, improving the soil's water retention and air permeability and creating optimal conditions for plant growth. Additionally, the use of phosphogypsum in non-major concrete structures reduces construction costs and eases environmental pressure.

Comprehensive research and testing have been carried out to ensure the security, stability, and quality of the application. For example, for the extension of the Datang Interchange AK0+938-AK0+980, the project company opted for a phosphogypsum + lime filling scheme. This extension has a roadbed fill length of 42m, a width of 30m, an average fill height of 1.2m, and an earthwork volume of 1500m³. Before construction began, tests were conducted on phosphogypsum (washed) + lime (2%) and phosphogypsum (unwashed) + lime (3%), including CBR tests, sieving tests, and soil and water tests. These determined the use of 2% lime powder. During construction, the project company monitored compaction and bending. They also conducted real-time monitoring of roadbed settlement to ensure the design requirements were met. Water sampling tests in the downstream side ditches of the test sections met the indicators for drinking water and concrete. This confirmed that there was no seepage or overflow, and it would not result in environmental or resource pollution.

Case Study

The project company also prioritises promoting and popularising the use of phosphogypsum application technology. By engaging in technical exchanges and research reports, they share their experience in using phosphogypsum with other construction entities. This inventive resource recycling model not only elevates the environmental standards in construction, but also contributes positively to local economic growth and environmental conservation.



CBB test



Screening test

Safeguarding the Environment

Green Operation

Environmental Management System

A member of the construction industry, the Group attaches great importance to environmental protection and its sustainability policy stipulates the management of important environmental issues, including emission treatment, resource utilisation, natural resource conservation and climate change. In its business operations, the Group strictly complies with environmental laws and regulations, contracts and other relevant requirements to minimise construction waste and natural resources consumption and prevent environmental pollution. In addition, the Group has established an environmental management system and related standard operating procedures to systematically manage environment-related matters in its business operations. In order to better establish an environmental management system that is in line with the location, the Group requires all subsidiaries to understand the environmental characteristics and needs of the region in which they are located, so as to implement specific management strategies that meet the requirements. The Group continuously consolidates and improves its management system and mechanisms to implement environmental protection measures in its daily operations. The Group's environmental management system is based on ISO14001:2015, and all major subsidiaries of the Group have successfully passed annual internal or/and external audits to safeguard the effectiveness of the environmental management system.

The Group's Production Safety Supervision and Management Department handles environmental management. It develops the Group's annual and long-term environmental plans, reviews and maintains the environmental management plans for various projects, and oversees the enforcement of environmental protection measures during construction. It also promotes new environmental protection technologies. To minimise environmental impact, the Group implements a construction planning and review system, holding pre-construction review meetings to ensure that the construction plans include appropriate and effective environmental protection measures.

The Group is committed to architectural compliance and adheres to a robust management practice focused on green development concepts, including improving the digitalisation, precision, and intelligence of construction site management, as well as enhancing the efficiency of natural resource utilisation to minimise construction waste and bolster environmental management performance. To reduce carbon emissions, the Group has adopted green procurement policies that limit the environmental impact of the supply chain and promote green operations. Furthermore, the Group will continue to monitor global environmental protection trends, particularly in the construction industry, and adjust its environmental management strategies as needed.

Air Emissions

The Group is dedicated to enhancing air pollution prevention and control measures to reduce air emissions. It achieves this by improving the effectiveness of the desulfurisation and denitrification equipment in thermal power plants, and utilising automatic sprinkler heads during construction processes to mitigate dust and control air pollutant emissions at the source. In 2023, the majority of the Group's air pollutants were primarily nitrogen oxides, making up 85.73% of total emissions and primarily originating from the combustion of coal in thermal power plant, fossil fuels at construction sites and for engineering equipment. The emission of various type of air pollutions increased due to the higher volume of work conducted throughout the year.

Safeguarding the Environment

Greenhouse Gases and Energy

To evaluate and disclose GHG emissions, the Group has been recording and monitoring data from its business activities. In quantifying GHG and energy, the Group has made reference to the National Standards and Guidelines of the People's Republic of China¹, the guidelines compiled by the Environmental Protection Department and the Electrical and Mechanical Services Department of Hong Kong², the guidelines compiled by the University of Hong Kong and the City University of Hong Kong³, as well as the international standards ISO14064-1 and the Greenhouse Gas Inventory Protocol. The data disclosed by the Group is categorised by region to provide stakeholders with a comprehensive carbon footprint and a review of the Group's performance.

The Group continues to engage the British Standards Institution (BSI) to verify greenhouse gas data. This is conducted in accordance with ISO 14064-3 Greenhouse Gases — Part 3: Guidance on the Specification for the Validation and Certification of Claims Relating to Greenhouse Gases, with the aim to ensure the reliability and accuracy of the greenhouse gas data for this year. The Group has verified data for 10 projects in Hong Kong, Macau, and Chinese Mainland during the reporting period. It is considering expanding the data verification scope to other projects in the future.

According to the greenhouse gas emissions data, in scope 1 and scope 2, 86.3% of the Group's emissions are from burning fossil fuels; 10.5% of emissions come from purchased energy sources of Scope 2. With a commitment towards energy conservation and emission reduction, the Group utilised 9,202.21 MWh of renewable energy, primarily harnessed from solar power at the construction sites and BIPV technology at the façade production plants. This represents a nearly 200-fold increase from 2022.

The Group's total energy consumption for the year was 815,158 MWh. CSHK was the largest consumer accounting for 42.2%, owing to a significant rise in its construction volume. The main energy source was purchased electricity, which comprised 21.1% of the total energy consumption.

The greenhouse gas emissions and energy usage data will continue to be assessed, documented and disclosed on an ongoing basis and the Group will continue to review the effectiveness of current measures to assist in the further development of its energy efficiency and conservation objectives in the future.

GHG	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction and CSC Hailong	CSIAM	Total	Unit
Scope 1: Direct GHG emissions	93,805.5	1,218.8	12,285.1	711,739.2	5,439.4	661.5	825,149.4	Tonnes of CO ₂ -e
Carbon dioxide (CO ₂)	87,762.4	1,208.7	2,637.1	709,060.4	2,433.4	661.5	803,763.6	Tonnes of CO ₂ -e
Methane (CH ₄)	24.3	0.5	0	0.3	0	0	25.1	Tonnes of CO ₂ -e
Nitrous oxide (N ₂ O)	199.7	9.6	0	11.7	0	0	221.1	Tonnes of CO ₂ -e
Hydrofluorocarbons (HFCs)	5,819.0	0	9,648.0	2,666.7	3,006.0	0	21,139.7	Tonnes of CO ₂ -e
Perfluorocarbons (PFCs)	0	0	0	0	0	0	0	Tonnes of CO ₂ -e
Sulphur hexafluoride (SF ₆)	0	0	0	0	0	0	0	Tonnes of CO ₂ -e
Bromotrifluoromethane (BTM)	0	0	0	0	0	0	0	Tonnes of CO ₂ -e

¹ "Guidelines for Accounting and Reporting Greenhouse Gas Emissions China Public Building Operation Units (Enterprises) (Trial)" and "Guidelines for Accounting and Reporting Greenhouse Gas Emissions Other Industrial Enterprises (Trial)".

² "Guidelines for Accounting and Reporting of Greenhouse Gas Emissions and Removals from Buildings (Commercial, Residential or Public Purposes) in Hong Kong" prepared by the Environmental Protection Department (EPD) and the Electrical and Mechanical Services Department (EMSD) of Hong Kong

³ Carbon Audit Toolkit for Small and Medium-sized Enterprises in Hong Kong

Safeguarding the Environment

Water Resources

The Group is committed to conserving and reusing water resources in its operations, recognising the value of this vital earthly resource. The Group's water supply primarily comes from municipal sources or other public or private entities, with no issues regarding water availability. According to the World Resources Institute's Aqueduct Water Risk Atlas, 76.1% of the Group's water sources in its operating regions are not under stress, and 95.6% of the water discharged from its projects is fresh water.

To enhance water resource efficiency, the Group will harvest rainwater for operational use. Additionally, sedimentation tanks and sewage treatment facilities are installed at construction sites to maximise wastewater recycling. The Group's projects have repurposed nearly 386,738 cubic meters of wastewater, primarily for dust reduction on construction sites. Given the nature of the construction industry, the Group unavoidably produces domestic, construction, and industrial wastewater. All wastewater is treated and discharged in compliance with local laws and regulations, and suitable wastewater treatment equipment is installed at each project site.

Category	Amount of water consumed	Unit
Source of water withdrawal		
Surface water	244,575	Cubic meters
Groundwater	1,464,148	Cubic meters
Sea water	0	Cubic meters
Municipal water supply or third party water	10,581,508	Cubic meters
Total water consumption	12,290,232	Cubic meters
Water consumption density (by turnover)	108.1	Cubic meters/million HKD
Effluent destination		
Surface water (discharged to natural water bodies (rivers or lakes, etc.) after being treated by sewage treatment facilities)	87,136	Cubic meters
Groundwater (discharged into groundwater after being treated by sewage treatment facilities)	34,782	Cubic meters
Seawater (discharged into the sea after being treated by sewage treatment facilities)	9,318	Cubic meters
Communal stormwater drains (discharged after being connected to the municipal pipe network)	1,404,543	Cubic meters
Communal sewers (discharged after being connected to the municipal pipe network)	356,553	Cubic meters
Total water discharge	1,892,332	Cubic meters
Water discharge intensity (by turnover)	16.6	Cubic meters/million HKD

Safeguarding the Environment

Waste

In its ongoing efforts to lessen waste and enhance resource efficiency, the Group constantly refining its design, craftsmanship, and material management strategies. It is committed to strictly abiding by local regulations when managing hazardous and non-hazardous waste from construction, production, and office processes. Non-hazardous waste, such as rubble and factory scrap concrete components, are stored in dedicated areas on site or in the factory. The Group prioritise waste classification before thoroughly cleaning and transporting in accordance with regulations, with a strong focus on recycling and reusing soil and demolition materials whenever possible. The Group entrusts the disposal of hazardous waste, including chemical waste, secondary marine sediments, and metal-containing sludge from sewage treatment facilities, as well as fluorescent lights, to certified units.

Category	Amount of waste generated	Unit
Hazardous waste		
Construction site-excavated materials exceeding heavy metal standards	7,182.3	Tonnes
Construction site-excavated materials contaminated by petroleum product	0.0	Tonnes
Level-3 polluted marine sediment	0.0	Tonnes
Other hazardous waste	40.6	Tonnes
Total hazardous waste	7,222.9	Tonnes
Hazardous waste intensity (by turnover)	0.1	Tonnes/million HKD
Non-hazardous waste		
Inert construction and demolition materials	7,683,392.4	Tonnes
Non-inert construction and demolition materials	269,103.3	Tonnes
Other non-hazardous waste	236,760.0	Tonnes
Total non-hazardous waste	8,189,255.7	Tonnes
Non-hazardous waste intensity (by turnover)	72.0	Tonnes/million HKD

Safeguarding the Environment

Disposal Method	Amount of hazardous waste generated	Amount of non-hazardous waste generated	Unit
Reuse	0	0	Tonnes
Recycling	0	42,775	Tonnes
Upcycling	0	29,742	Tonnes
Combustion (being sent to incinerators)	0	968	Tonnes
In-situ storage	0	0	Tonnes
Landfill	0	432,378	Tonnes
Being sent to sorting facilities of the government	0	57,258	Tonnes
Being sent to public fill reception facilities of the government	7,182	3,724,036	Tonnes
Reuse as filler	0	2,119,859	Tonnes
Reuse as concrete aggregate	0	1,782,239	Tonnes
Processed by qualified contractors	41	0	Tonnes
Marine dumping	0	0	Tonnes
Total waste	7,223	8,189,256	Tonnes
Waste intensity (by turnover)	0.1	72.0	Tonnes/million HKD

Building a Sustainable Supply Chain

The Group is working hard to build a high-quality, sustainable supply chain that balances economic, environmental and social benefits and promotes sustainable upstream and downstream of the Group's value chain, while providing its customers with excellent service and quality products.



Building a Sustainable Supply Chain

Target and Action

Aspect/Target

2023 Performance

Each business division organises two trainings for employees

Each business division has organised & training sessions for staff.

Each business division has organised & training sessions for staff.

Each business division organises an annual training or seminar for suppliers and subcontractors to communicate the Group's sustainability requirements

Two-thirds of platform companies have accomplished the task

Sustainable Materials

All timber purchased by CSHK should be with FSC certification by 2025

99.8%

Enhance the use of green and low-carbon building materials and equipment

Each business division has increased the use of green and low-carbon building materials and equipment

Case Study

CSHK Promotes the Use of Low Carbon Materials

With rising global awareness of environmental protection, low-carbon and green development has become a shared goal worldwide. As a socially responsible enterprise, CSHK consistently adheres to environmental protection and energy conservation principles, actively promoting the use of low-carbon materials and products, achieving significant progress.



BYD E6



BYD Atto3

Building a Sustainable Supply Chain



Electric Vehicle Application: In the year, the company has added a variety of electric vehicles, including 5 and 7-passenger models to its fleet. As a result, electric vehicles now meet 58% of the company's vehicle needs. Compared to traditional fuel cars, these changes have reduced carbon emissions by about 90%. To further support companies in switching to electric vehicles, the government's fiscal budget for 2024–25 will extend the tax exemption period for electric vehicles by two years.



electric loader



electric forklift

Electric machinery: Electric elevators are a common sight on the construction sites. For elevators under 45 feet, electrification has been fully realised, and those over 45 feet are not far behind with a 60% electrification rate. The introduction of electric forklifts and electric cat equipment has also significantly contributed to a decrease in carbon emissions by up to 90%. Looking forward, CSHK aims to continue this upward trend, striving to make electric machinery account for more than 50% of the overall equipment ratio.



CCUS carbon capture and storage technology CCUS brick

CSHK unveiled electric excavators and cranes for the first time on November 7, and held a ceremony in its project of Relocation of Sha Tin Sewage Treatment Works to Caverns. These electric machines, in comparison to their traditional counterparts, can decrease carbon dioxide equivalent emissions by around 7 tonnes and 21 tonnes per year for the excavator and crane, respectively. With their low noise output and zero onsite emissions, they can effectively lessen the environmental impact on the community and offer a cleaner, safer workspace for workers.



CCUS Concrete Blocks: CCUS concrete blocks use carbon capture and sequestration technology to reduce carbon emissions by up to 80% compared to traditional concrete blocks, with each tonne of CCUS concrete block sequestering approximately 50 kilograms of carbon dioxide. Approximately 80% of the raw materials are recycled from local construction and industrial solid waste, allowing for the reuse of resources.

B5 Diesel: A diesel fuel that contains 5% biodiesel. It has the advantage of reducing greenhouse gas emissions and air pollutants. Compared to conventional diesel, it reduces carbon emissions by up to 4.25%.

GGBS (slag) concrete: Has the potential to replace up to 80% of the cement content in concrete, thereby reducing carbon emissions.



B5 diesel



GGBS (slag) concrete



Battery energy storage system (BESS)



Environmentally friendly wood certification (PEFC, FSC)



Green Steel CIC green product certification

Battery Energy Storage System (BESS): This system, compared to traditional generators, has the potential to slash the carbon footprint by up to 85%. Additionally, it can decrease noise by a factor of 32, eliminate the emission of diesel smoke, and remove the risks associated with handling and using diesel.

Green Santalum: The company has fully adopted environmentally certified (PEFC, FSC) plywood and wood square.

Green Steel: The company will introduce energy-saving steel, which have a CO₂-equivalent of less than 1.5235 tCO₂e per tonne of steel.

These measures have allowed CSHK to successfully decrease its energy consumption and pollution emissions. Furthermore, it has taken a leading role in advancing the entire industry's development. An increasing number of companies are beginning to focus on and advocate for low-carbon materials and products, thus encouraging the industry's transformation towards green and low-carbon development.

Building a Sustainable Supply Chain

CSC Hailong Builds Low Carbon Material and Product Database

In alignment with the Group's "Sustainable Procurement Policy", CSC Hailong is in the process of developing a "Low Carbon Material and Product Database". It has already set up the basic structure and has begun to populate the database with certain materials and products, including the following aspects:

1

Database Access Evaluation System

Organise the relevant policies and regulations on green materials and products in each region, and refine the product certification catalog to each key province and city. At the national level, it is mainly based on the Notice on the Issuance of the Implementation Plan for Green Building Material Product Certification (Municipal Supervision and Development [2019] No. 61) and the Notice on Accelerating the Certification and Production and Application of Green Building Material Products (Municipal Supervision and Development [2020] No. 89). At the regional level, in Guangdong Province, for example, certification is implemented according to the Implementation Guidelines for Grading Certification of Green Building Material Products (CNCA-CGP-13), and the certification results are divided into one-star, two-star, and three-star from low to high. It also summarise at the provincial, municipal, and association levels, respectively, such as Implementation Plan for Certification and Promotion of the Application of Green Building Material Products in Guangdong Province (Guangdong Municipal Supervision [2020] No. 106), Catalog for Promotion of Applicable Technologies and Products for Green Buildings in Shenzhen, etc.

2

Materials and Products Catalog Determination

The catalog is established in line with the company's business development. It is based on the first and second batches of the "Green Building Materials Products Classification and Certification Catalog". The evaluation of products and suppliers evolves gradually, taking into account the demand for material usage and other factors.

Moving forward, in addition to completing the inventory of materials and products, CSC Hailong will strengthen cooperation and communication with suppliers, collect more information on low-carbon materials and products and incorporate them into the database, so as to provide more choices for the enterprise and encourage suppliers to produce more environmentally friendly and sustainable products. In addition, CSC Hailong will strengthen employee training and improve their understanding of green procurement policies and related knowledge by conducting training courses on sustainable supply chain.

3

Green Procurement

Prioritise the selection of environmentally friendly materials that are produced nearby. For example, a portion of the cement purchased long-term for the CSC Hailong base is made from fly ash, a by-product of coal combustion. This reduces carbon emissions from cement production.

4

Carbon Data Management

Inquire with suppliers about the availability of verified carbon emission data for their products, ideally through Environmental Product Declarations (EPD) or similar reports. This data should be registered and digitised upon product arrival at warehouses, allowing the company to accurately track carbon emissions throughout the transportation process.

Building a Sustainable Supply Chain

Supply Chain Management

Managing the supply chain is critical for corporate sustainability. Choosing suppliers that adhere to sustainability standards not only enhances product quality and reliability, but also mitigates environmental and social risks within the supply chain. To create a sustainable supply chain, the Group has established a “Sustainable Procurement Policy”. This policy communicates the Group's procurement standards and expectations to all significant business partners, with the aim to collaborate with them to minimise negative environmental and societal impacts, contributing to the overall sustainable development of the construction industry. Furthermore, the Group has introduced the “Supplier Code of Conduct” this year. It mandates suppliers to comply with business ethics and promotes environmental consciousness and social responsibility, fostering joint efforts towards sustainable development.

To manage supply chain risks, CSHK has established the “Procurement Policy” and “Supplier Behavior Code”. The company prioritises suppliers with strong business ethics and commitment to corporate social responsibility, prefers to buy local, environmentally-friendly materials and makes orders as per demand in order to minimise resource waste and carbon emissions. The “Materials Procurement Work Procedure” mandates consideration of safety, health, and environmental factors when choosing suppliers. Suppliers' performance is routinely evaluated and reviewed, which aids in updating the supplier roster. For effectively managing supply chain risks, the company enforces disciplinary actions for poor-performing suppliers based on feedback from the construction sites and related departments. These actions may include written warnings, bid suspension, or even removal from the approved roster. Suspended suppliers must outline their improvements, guarantees, and monitoring methods after the punishment period ends for the company to consider reinstating their qualifications.

Supplier Roster Management



Supplier Admission Evaluation

Evaluating potential material suppliers related to engineering quality, safety, health and environmental protection based on the supplier's capabilities, reputation, and past service performance



Regular Supplier Assessment

Sites and Materials Department fill in the supplier evaluation form and summarise every year. The electromechanical engineering suppliers are included in the Electromechanical Department's scoring, considering quality, punctuality, service, safety and environmental protection, and dividing the suppliers into four grades based on the scores



Supplier Roster Update

The Materials Department comprehensively evaluates, reviews and updates the supplier roster based on the performance of the past year, signed by the general manager of the Materials Department for implementation

The Group will consistently assess its supply chain's sustainability performance, ensuring adherence to standards and fostering ongoing enhancement in procurement processes. The Group aims to engage suppliers and subcontractors in developing risk management plans, with the goal of effectively managing supply chain risk. It also provides training on sustainable supply chains to employees, suppliers, and subcontractors. This training boosts their proficiency in sustainable development and eco-friendly procurement. In turn, this enhances their commitment to creating a sustainable supply chain and propels them to apply sustainability practices throughout the supply chain.

Building a Sustainable Supply Chain

Procurement of Sustainable Materials

As part of its efforts to promote a sustainable supply chain, the Group has established a database of low carbon materials and products. All procurement of green and low-carbon products is centrally managed through the CDMS system, including procedures such as contract signing, inventory records and payment processing, to ensure the accuracy and completeness of information. In terms of the use of project materials and equipment, CSHK has released a "Clean Energy Program" this year, aiming to follow best sustainability practices in every aspect of projects:



Site vehicles and small machines to be electrified:

- 1 Prioritise the use of electric vehicles for new vehicle purchases, aiming for 70% by 2024.
- 2 Decommission petrol vehicles that are over 10 years old or have driven more than 300,000 kilometers.
- 3 Prioritise the rental or purchase of electric small machines, such as cat carriers and forklifts.
- 4 Introduce the rental of electric cat carriers at specified locations. Annually increase the proportion of other electrically powered machinery/equipment (e.g., energy storage cabinets, forklifts) to reduce diesel consumption and increase energy use efficiency.



Generator and Machinery Rental:

- The diesel generators, boasting an NRMM approval certificate, will constitute 80% of services from 2024, with an annual increase of 10% until they represent our full offer in 2026.
- As for crane truck rental, all crane trucks comply with the Euro V standard, and are no more than 10 years old.



Copies

The company uses environmentally certified paper and recycled paper and encourages the use of recycled paper at construction sites.



Plywood and green wood squares

The company utilises environmentally-friendly certified plywood and wood squares.



Innovative environmentally-friendly building materials:

- 1 The sites prioritise the use of prefabricated components made of CCUS carbon-capture concrete (such as sand bricks, concrete bricks, and stone arrows). These products are created using patented carbon dioxide capture, utilisation, and storage technology, contributing to the establishment of a future "net zero emissions" industrial economic system.
- 2 Additional supplies of locally-mined stone materials can reduce carbon emissions during transportation. Therefore, these should be used preferentially.



Temporary Lighting

All temporary site lighting utilises LED lights.



Old steels

Reuse.



Office Furniture

All office furniture is constructed with E1 panels.

Nurturing and Supporting Talent

Attracting and nurturing talent is crucial to the Group's prosperity and growth. In recognition of employees' contributions, the Group has established a comprehensive employment system, safe working conditions, and extensive training and development programs. This way, it can share the rewards of the Group's development with employees.



Nurturing and Supporting Talent

Target and Action

Aspect/Target 2023 Performance

Talent Acquisition and Retention

Percentage of personal performance review for monthly paid employees by 2025 **100%** **100%**

Employee turnover rate by 2025 **below 25%** **16%**

Conduct an anonymous employee satisfaction survey annually Two-thirds of platform companies have accomplished the task, with a half of these completing it multiple times

Conduct an anonymous employee engagement survey annually Pilot program were initiated and a third of platform companies accomplished the task

Aspect/Target 2023 Performance

Staff Training

Training percentage of monthly paid employees **95%** by 2022 **100%** by 2023 **88%**

Average training hours of monthly paid employees **15** hours by 2025 **20.8** hours

Occupational Safety

Occupational injury rate **below 6.0** per 1,000 persons by 2025 **3.8**

Annual safety and health training covers **100%** of employees (including part-time employees) and Tier 1 contractors by 2025 **55%**

Maintain 100% of companies' ISO45001 certification Two-thirds of platform companies have obtained the relevant certification

Lost Time Injury Rate (LTIR) — less than **1.2** per 200,000 hours **0.4**



Case Study

Intelligent Safety Management

According to statistics, about one-tenth of workers worldwide suffer injuries on construction sites each year, a significant ratio. Looking at Hong Kong specifically, the construction industry has seen numerous fatal and serious work accidents this year. To heighten contractors' focus on site safety, the Hong Kong government has increased disciplinary sanctions. Contractors involved in serious accidents are required to suspend their bidding qualifications for related engineering projects for at least three months and must undergo independent safety audits. Furthermore, in the bidding evaluation process, if a contractor is implicated in a serious accident, even outside of public works sites, the relevant safety score will be deducted. These measures pose new challenges to the construction industry while also providing avenues for improvement.

CSHK is deeply committed to ensuring the safety and health of its employees and subcontractors, continuously allocating resources to foster its safety culture and enhance safety management. It is proud to have a dedicated team of over 200 safety management professionals, positioning it among the top companies in Hong Kong in terms of safety management expertise. As the construction industry enters a new epoch of intelligent and safety management, its key focus is leveraging high-tech solutions to transform construction sites into safe, efficient, and smart work environments.

Throughout the years, CSHK has vigorously implemented intelligent safety systems at new construction sites. Through advanced technologies such as the IoT and AI, CSHK has realised refined management of construction sites, enhanced monitoring and early warning, and greatly reduced construction



risks and accident risks at construction sites. The system divides a construction site into different zones and monitors the activities of people in the zones through smart helmets worn by workers. If managers find workers entering restricted or dangerous areas, they can use high-definition cameras for real-time monitoring and timely intervention. At the same time, safety inspectors at construction sites conduct regular inspections. When workers are found to have violated the rules, such as climbing at non-safety entrances and exits or leaving tools at the construction site, the commissioner can take photos, record them and upload them to the platform via cell phone, and then immediately provide guidance to the workers. If the phenomenon recorded on the platform occurs repeatedly, the management will retrain the workers to minimise the occurrence of accidents.

Nurturing and Supporting Talent



The personnel management system categorises and locates workers using data such as age, gender, joining time, and contractor status, enabling the “Care for Specific Groups” feature. The command center pays particular attention to workers over 60 years old and new recruits. Elderly workers can wear smart watches connected to the platform. The command center can then monitor their physical data when needed and provide timely assistance through zonal positioning if abnormalities are detected. The Safety Officer also closely tracks the movements of new employees, who may be unfamiliar with the site, to enhance their work safety.

CSHK has developed the “Happy Worker Mobile App”, incorporating information technology into daily labour tasks. The app includes features like electronic work permits, safety training databases, and personal safety record management. These electronic applications streamline work processes, enhance safety awareness among workers, and decrease the likelihood of workplace accidents.

CSHK participated in the “Construction Safety Week 2023” this year, a collaborative effort by the Development Bureau and the Construction Industry Council. It was honored to share its knowledge at the “Opening Ceremony and Seminar”, where it discussed smart safety site construction and introduced the

“C-SMART Engineering Management Digital Platform” and “Happy Worker Mobile App”. These tools illustrate how smart construction sites can operate in Hong Kong. Its “Smart Track Personnel Intelligent Management System” received a Gold award in the Public Group at the first-ever “Occupational Safety and Health Innovation Award”. This recognition, sponsored by the Occupational Safety and Health Council and the Labour Department, underscores the importance that both the government and industry leaders place on improving safety and health standards in the construction sector through technology. CSHK remains committed to working alongside government bodies, research institutions, and industry colleagues to devise even more innovative safety management solutions, with the aim of fostering a safer and smarter construction environment.



Case Study

CCE Macau Provides Extensive Training Programs to Help Employees Improve Their Capabilities

As the rapid development of social economy, enterprises have higher and higher requirements for the comprehensive quality of employees. Only by continuously improving the professional skills and comprehensive quality of employees can companies adapt to the changes and challenges of market competition. In response to this demand, CCE Macau actively implements measures such as career development planning, education and training, and is committed to helping employees improve their working ability and building a broad development platform for them. In terms of career development planning, CCE Macau has formulated a series of training programs for employees in different positions and at different levels. By clarifying career development paths, job responsibilities and requirements, CCE Macau points out the direction for employees to move forward and provides corresponding support and guidance. Meanwhile, in terms of education and training, CCE Macau focuses on comprehensively improving employees' professional skills and knowledge. The company has organised various training courses on project management, technology research and development, communication and coordination. These courses not only focus on theoretical learning, but also strengthen the emphasis on practical operation and case analysis to help employees learn and apply what they have learned in actual work.

In 2023, it organised a training series called “How to Become an Engineer in Five Steps” and “How to Become a Project Manager in Four Steps”. Guided by experienced seniors in the company, employees gained insights into the job duties, vocational skills, and common queries related to these roles. For instance, to become an “engineer”, one needs robust professional knowledge

and technical skills. They should be capable of independently completing project design and construction tasks, while also considering safety and environmental factors. On the other hand, becoming a “project manager” requires strong leadership and team management skills, with the ability to coordinate resources effectively to drive project progress.

CCE Macau has organised special topic courses to share insights on key projects and new technologies. These include prefabricated construction technology and safety management from the Senior Apartment Housing project, as well as precautions for curtain wall construction management introduced by the Galaxy Phase IV project. By participating in these trainings, employees can stay updated with the latest industry knowledge and technology, increase their competitiveness, and potentially earn promotions within the company.



Nurturing and Supporting Talent

Work Safety and Health

Given the nature of the construction industry, the Group places a high value on the health and safety of its employees and partners. The Group's commitment to safety and health is always top of mind, and it strives to maintain a work environment that meets high safety and health standards. The Group utilises a variety of measures and cutting-edge technologies to minimise safety risks, with the aim of safeguarding the wellbeing of its employees, business partners, customers, and the public.

The occupational safety and health management systems of the Group are in compliance with internationally recognised standards, and the subsidiaries have obtained ISO45001 certification. The General Managers of CSHK and CCE Macau review, update and publicise their safety and health policies annually, including safety and health commitments and safety management objectives for the year.

The Safety Committee, headed by the Chief Executive Officer and other key personnel, including the Vice Presidents, Chief Financial Officers, Chief Safety Officers, and Assistant Chief Human Resources Officers of the subsidiaries, uses a "Safety First, Prevention First, Comprehensive Management" approach for the Group's overall safety management system. Committee members implement decisions based on their areas of responsibility. The Chief Safety Officer and the Production Safety Supervision and Management Department ("PSM Department") oversee the implementation of decisions and regularly report to the Board of Directors and the Safety Committee.

To ensure safe production, the Group has established the "Safe Production Supervision Management System" and "Safe Production Responsibility List". These clearly outline the responsibilities of all departments and personnel within the group. The "Safe Production Supervision Management System" provides specific safety management methods for various types of subsidiaries and projects. It sets requirements for safe production planning, training, technology, cost, hazard identification, risk assessment, equipment safety, safety inspections, hidden danger investigations, and emergency management. It also includes management of subcontractors and occupational health in construction, professional technology, infrastructure investment, and operational businesses. Furthermore, it details management tasks such as safety accidents, safety assessments, and continuous improvement.

The Group is committed to enhancing safety awareness among its employees and partners. To do this, it provides safety education and training and establish effective communication channels with its workforce to reduce accidents. Regular assessments will be performed to identify hazards and safety risks in construction engineering. Through safety climate surveys, the Group aims to improve workers' safety practices and is dedicated to improving safety and health performance through practical measures and innovative methods. The Group values workers' feedback. If workers notice any potential safety management issues, the Group encourages them to report issues via various channels. The Group promises to keep reports confidential to protect the relevant persons' rights and interests. If an investigation proves the validity of the report, the Group will reward whistleblowers for vigilance.

Other than continuously strengthening the management of work safety and prevention of occupational diseases, the Group also pays attention to the physical and mental health of its employees by providing them with medical and health benefits such as life insurance, accident insurance, medical insurance and dental insurance, as well as organising and subsidising medical check-ups for its employees. The Group encourages its employees to develop good living habits, relieve work pressure and balance work and life. In addition, simple check-ups such as blood pressure measurement will be conducted for a sample of senior employees to remind them to pay attention to their health.

In the year, a total of 171 employees and workers suffered injuries at work, with no accidental deaths reported. The primary causes of these injuries were slips, trips and impacts from objects. The Group compensated and provided relief to the affected individuals based on safety management procedures and the laws of the operating locations. Comprehensive procedures for handling accidents and work-related injuries are in place. These include investigating severe accidents, documenting the accident process, taking photographs of the scene, obtaining relevant drawings and witness testimonies, and making recommendations for improvements to prevent similar accidents from recurring.

Nurturing and Supporting Talent

Employment and Treatment

The Group follows the talent philosophy of China Overseas, which is “Gathering and inspiring those who strive, motivating those who are capable”. In line with this philosophy, it has established human resource management policies and systems, overseen by the Human Resources Department. The Group offers competitive pay and benefits, routinely reviews its remuneration system, builds a talent pipeline, enforces performance incentives, and cultivates a skilled team. As of December 31, 2023, the Group had a total of 16,373 employees, with 16,313 full-time and 60 part-time. Below is the statistical distribution of employees:

			Male	Female
Total number of employees				
By employment contract	Unlimited term/ permanent	Hong Kong	5,315	1,429
		Macau	504	113
		Chinese Mainland	705	216
		CSC Development	1,920	328
	Fixed term/ temporary	Hong Kong	275	128
		Macau	394	131
		Chinese Mainland	2,119	551
		CSC Development	1,881	364

	Male	Female	Hong Kong	Macau	Chinese Mainland	Other Regions
Total number of employees (monthly paid)	11,825	2,618	5,495	708	8,079	161
Rate of employee turnover (monthly paid)	16%	16%	19%	15%	13%	34%

Nurturing and Supporting Talent

Employment System and Welfare

The Group is committed to protecting the rights of employees, ensuring its employment contracts comply with local laws. This includes abiding by the “Labour Law of the People's Republic of China”, the “Labour Contract Law of the People's Republic of China”, Hong Kong's “Employment Ordinance”, and Macau's “Labour Relations Law”. The Group has clear procedures in its recruitment process, including checking identification documents and verifying the willingness of applicants to work, preventing child labour and eliminate forced labour.

The Group's “Employee Handbook” sets out the rights and obligations of employees and stipulates their wages, working hours, vacations and benefits. In addition to basic salary and statutory benefits, the Group provides employees with various types of leave, such as paid annual leave, marriage leave, bereavement leave, examination leave and birthday leave, as well as benefits such as job allowance, transportation subsidy, relocation subsidy, wedding vouchers and long service awards. The Group pays Insurance and Housing Fund for employees in Chinese Mainland. In addition, vocational qualification subsidy, staff canteen or meal subsidy and corporate pension are also provided. In addition, if employees have any questions or disputes about employment issues, they can lodge complaints with their leaders through their immediate supervisors, department heads or the Human Resources Department. Employees can also join organisations such as the Hong Kong Construction Industry Employees General Union to promote fair and reasonable employment conditions in the industry.

Performance Evaluation and Promotion System

The Group focuses on talent development, endorsing young leaders, and training potential successors. It strives to offer equal career progression opportunities for employees and conduct fair and scientifically-based performance evaluations. To cater to the rapid growth of the Group and the career aspirations of employees, the Group has implemented the “MAPS” (Management, Administration, Professionals, Sales) grade system. This system, inspired by the management practices of top global and Chinese enterprises, considers both management and professional technical aspects. It offers diverse career paths for employees, allowing them to evolve within the Group based on their interests, skills, and objectives. Moreover, “MAPS” equips the Group with a talent pool rich in professional knowledge and managerial abilities, helping it navigate the ever-changing market and competitive landscape, and providing robust talent support for the Group's rapid expansion.

Every year, the Group conducts a talent inventory based on the current status and future planning of different businesses. This involves an inventory of key positions and competency requirements, as well as assessments of professional skills, management capability, and personal career development for employees in key positions, allowing the Group to fully understand the talent suitability for the its core positions. In line with the identified talent gap, the Group strives to build a reserve talent pool and implement a successor plan. During this process, the Group prioritise reserving key position talents via various internal cultivation mechanisms such as internal promotion, rotation, leadership training, and overseas dispatch, maximising the use of existing talent resources.

Subcontractor Employment Management System

In the construction industry, which involves numerous subcontractors, the Group is dedicated to safeguarding the rights and interests of all related workers. The Group has labour officers on-site at construction sites who conduct monthly labour-management relations review meetings with all subcontractors. These officers address labour relations issues, such as handling workers' complaints, maintaining workers' attendance in the registration system, following up on subcontractors' wages, and ensuring subcontractors respect labour rights. Besides, labour officers manage and monitor the legality and compliance of contractors and subcontractors in all employment activities. They regularly verify worker registration information to avoid issues such as child labour or forced labour.

The Group encourages workers at construction sites to take the initiative to report any unfair treatment, and through regular questionnaires, the Group takes the initiative to ask workers whether they have encountered any situations that jeopardise their interests, such as non-payment of wages. In addition, the Group also posts statements at prominent locations on construction sites listing complaint channels to ensure that workers are aware of their rights and avenues for recourse.

Employee Communication Channels

The Group highly values the opinions of its employees and actively communicates with them through various channels to foster mutual trust. It organises team-building and employee care activities to strengthen employees' sense of belonging. Additionally, the Group publishes internal newsletters to keep employees updated on the Group's latest developments and to enhance team unity, aiming to cultivate an efficient and cohesive team.

Diversified and Equal Working Environment

The Group fosters a diverse and inclusive culture, valuing everyone's unique qualities and backgrounds. This approach attracts a wide array of exceptional talents, enhancing the Group's ability to understand and tackle various challenges comprehensively, thus establishing a competitive edge for the enterprise. In accordance with the Group's "Prevention of Discrimination and Harassment Policy", recruitment, salary, promotion, transfer, training, dismissal, and layoff decisions are based on "uniform selection criteria", which considers the true job needs considering the employee's experience, education, skills, and other legal factors. To protect excellent talents with diverse characteristics and backgrounds, the policy clearly defines harassment and provides examples as well as methods for employees to file complaints and handle harassment or discrimination.

Training and Development

The Group's policy documents such as the "Employees Manual", the "Training Manual", the "Human Resources Management System", and the "Training Working Procedures" explain the purpose and function of training, and specify the requirements for internal and external trainings. To strengthen employees' professional knowledge, tap into their potential and work enthusiasm, the Human Resources Department formulates annual training plans based on the Group's development needs, employee assessments, questionnaire surveys, and senior management discussions, and is responsible for conducting internal standard courses.

Furthermore, the Group provides external course subsidies for employees and has established educational subsidies for employees seeking diplomas or degrees related to their jobs. Using internal and external approaches, the Group continuously cultivates excellent and comprehensive talent.

Serving the Community

Business growth and development are rooted in society, and the prosperity of a business is intimately tied to societal prosperity. The group maintains a philosophy of drawing from and contributing back to society. It is committed to active participation in public welfare, fostering beneficial relationships with neighbors, and working together to create a harmonious and flourishing society.



Serving the Community

Target and Action

Aspect/Target

2023 Performance

Community Investment

Community projects organised/co-organised/participated

at least **80**
projects per year by 2025

>200

Employee volunteer hours

increase by **15%**
in 2025 compared to 2020

22,929 hours, an increase of **15%** over 2020.

Employee volunteer attendance

increase by **15%**
in 2025 compared to 2020

6,832 attendances, an increase of **59%** over 2020.

Community investment amount

increase by **15%**
in 2025 compared to 2020¹

HKD **5,827** thousand², an increase of **45%** over 2020.

Employment Opportunities for Disadvantaged Groups and Young People

Number/amount of apprenticeship

30 places per year for young apprentices with low-income background from 2022 onwards

17³

¹ Converting volunteer hours to money, the 2020 standard has been re-estimated as follows: Volunteer hours in 2020 are worth approximately HKD2,875 thousand, and the community investment amount reported in 2020 is approximately HKD1,157 thousand, for a total of approximately HKD4,032 thousand.

² Including about HKD 3,520 thousand equivalent salary of volunteer hours.

³ The Group was allocated 17 apprentices from the "Apprenticeship Training Scheme" of the Hong Kong Construction Industry Council. The Group is willing to sponsor more apprentices to join the construction industry.

Case Study

Urban Renewal Action to Enable the Public to Enjoy a Healthy and Livable Life

According to the CPC Central Committee and the State Council, it is necessary to adhere to the people-centered approach, improve the level of urban planning, construction and governance, accelerate the transformation of the development mode of mega-cities, implement urban renewal actions, strengthen urban infrastructure construction, and create livable, resilient and smart cities. The Standing Committee of the Beijing Municipal People's Congress has also issued the "Beijing Municipal Urban Renewal Regulations", aiming to optimise urban functions and spatial layout, improve the living environment, strengthen historical and cultural preservation and inheritance, stimulate urban vitality, and promote the high-quality development of cities. In this context, the transformation of old neighborhoods has become one of the core contents of urban renewal actions, which is directly related to the people's sense of gain, happiness and security.

As a pioneer in China's prefabricated construction business, CSC Hailong has introduced C-MiC modularised integrated concrete buildings to enable fast and efficient renovation of old districts. They divide each building into several modules based on functional zoning and perform high-standard industrialised prefabrication. These modules are then transported to the construction site for assembly, facilitating rapid renewal. This innovative green construction method significantly reduces the construction period and difficulty, embodying the concept of "building a house like a car".

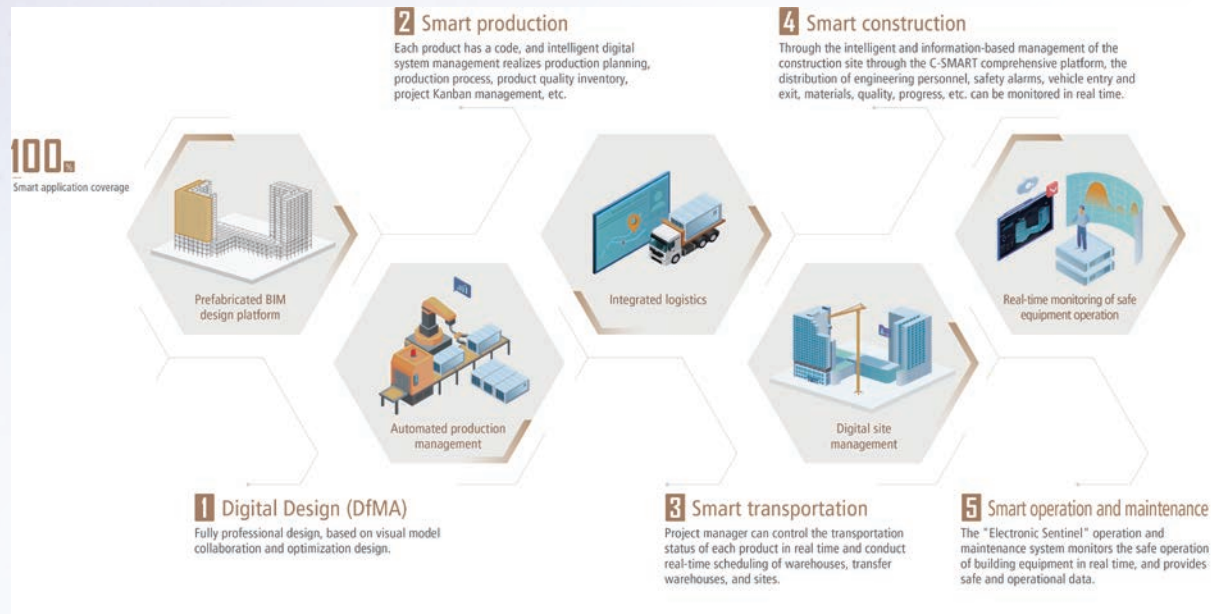


The C-MiC concrete modularisation project of Building No. 8, Huapi Factory, located in Xijiekou Street, Xicheng District, Beijing, serves as an excellent example of renovation and reconstruction. This project, one of the first in Beijing to adopt the “demolish and rebuild at the original location” approach, spans an area of 374m² with a built-up area of 1194m². It houses a 5-story single-family residential building accommodating 20 households. Originally constructed in the 1970s, the building's old structure system and aging equipment pipeline have long been neglected. Inadequate basic facilities pose consumer safety hazards, while the degraded insulation effects and complex surrounding environment further complicate matters. The planned transformation will replace the brick-bearing wall with a steel-concrete wall body to save space and increase the interior area. Enhancements such as setbacks, external shifting of wells, and the addition of elevators will improve usage efficiency and the living experience. Furthermore, the interior layout design will be optimised to separate movement from quiet areas and extend shared public spaces, catering to the needs of different generations.

The successful roll-out of the C-MiC modular integrated building project showcases its substantial benefits. It not only tackles the hurdles faced during the renovation of old communities, but also offers a swift, effective, and trustworthy solution for urban renewal initiatives. Its speed and efficiency are among its top strengths. With the factory production and on-site construction happening in parallel, the construction time can be reduced by 60%. This not only cuts down on-site labour and demolition costs, but also enables residents to move into their new homes faster. Furthermore, the C-MiC modular integrated building puts a premium on safety and reliability. Its design, comparable to the cast-in-place structural system, gives the building excellent seismic performance, thereby securing the safety of residents and their belongings. Smart integration is another notable feature. It leverages digital tools and smart technology to enable digital management of the entire process from design to operation, tailoring an intelligent construction plan for the whole life-cycle.

Serving the Community

Case Study



The project has also focused on being green and low-carbon. Through the application of new technologies such as integrated construction techniques, green building and green building materials, the project has reduced material waste by 25%, reduced solid waste emissions by 75%, and achieved an 80% re-interest rate and recycling rate compared with traditional construction modes. During the construction process, the project also focuses on minimising the impact on the surrounding residents. More than 90% of the project's processes are completed within the plant, reducing on-site construction. Meanwhile, through reasonable traffic planning, noise reduction and dust suppression measures, the project reduces the disturbance to neighboring residents during the construction process.



Relieving pressure on traffic obstruction

The site is located on Beijing's second ring road. The west side of the road, which is the main thoroughfare, experiences heavy traffic. Material transportation vehicles arrive early in the morning, unload during the day, and leave at night. During the decoration stage, the occupied area will be strictly controlled to the sidewalk to minimise traffic congestion.



Reducing construction site occupancy

Given the small size of the construction site, traditional methods may not be sufficient. Modular integrated construction technology offers a solution to this issue. Most of the construction processes are completed in a factory setting, leaving only assembly and building for the actual site. This reduces construction complexity and offers innovative approaches for refurbishing older projects.



Reducing noise and dust pollution

Given the dense residential area around the project, it is mindful of possible disturbances caused by construction. That's why the project is committed to using green construction methods and implementing environmental safeguards. By controlling dust, noise, light pollution, and waste emissions throughout the entire process, it aims to have a minimal environmental impact, thereby not only reducing the carbon footprint but also lessening disruption to the neighbours.

Looking ahead, the Group believes that concrete C-MiC modular integrated buildings will continue to drive the development of urban renewal initiatives. Through continuous innovation in new building technologies, materials and equipment, the Group will further improve the efficiency and quality of buildings and continue to promote the development of smart cities, making them more livable, resilient and intelligent, and providing the public with a better living environment and quality of life.

Serving the Community

Case Study

Delivering Care through Action

Consumer assistance is a critical measure for consolidating and expanding the effective convergence of poverty alleviation and rural revitalisation results. It plays a significant role in enhancing the quality of life for the general public, rejuvenating villages, and promoting rural prosperity. The year 2023 is pivotal for reinforcing and expanding these results. In line with the national “14th Five-Year Plan” decision-making and development, the Group has actively promoted consumer assistance and encouraged employee participation. This initiative has successfully increased farmers' incomes in assisted areas, stimulating local economic and societal development. For instance, the CSCILL head office launched the Spring Festival Consumption Support Campaign, actively purchasing agricultural and sideline products from Kangle County and Zhuoni County in Gansu Province, key counties for village revitalisation. The total purchase amounted to more than RMB20,000 in the New Year campaign.

Besides providing aid by consumption, the Group's helping spirit extends to community involvement. On the 60th “Learn from Lei Feng Memorial Day”, the various party branches of Anhui Company under CSCILL actively conducted a series of volunteer activities inspired by “Learn from Lei Feng”. The first party branch, in collaboration with the local community, delivered door-to-door care services for the community's elderly. They provided them with daily necessities like rice, oil, and milk, engaged in conversations about their daily lives, inquired about their comfort, cleaned their homes, and tidied their beds, thereby offering care and warmth to the lonely elderly. The fourth party branch, in partnership with the Hefei Civilisation Office, Yaohai District Civilisation Office, and other units, formed a “Learn from Lei Feng” volunteer team to assist with order at the event site. They guided residents through the volunteer service alliance photo exhibition and used their professional skills to give community residents safety tips for maintaining old houses.





The Huainan project team, composed of party members and volunteers, headed to Shungeng Mountain Wetland Park in Huainan City for a clean-up. They diligently picked up garbage and floating objects along the way, reflecting its commitment to green development and embodying the spirit of community service inspired by Lei Feng.

Moving forward, CSCIL will continue to uphold this spirit of helping people, exploring and practicing more public welfare activities for the benefit of the society and the people, and contributing to the realisation of the goals of rural revitalisation and common prosperity.



Serving the Community

Community Care

The Group recognises the significant impact of the construction industry on local communities. Infrastructure investment improves local livelihoods, economies, and provides long-term development opportunities. However, construction can disrupt daily life in nearby communities. The Group is committed to minimising these disruptions. It maintains close communication with local residents and consider their needs. Before starting projects, the Group sets construction hours to minimise disruption to residents' daily routines and develop community involvement plans. For certain projects, the Group employs public relations staff to establish good relations with residents, local councilors, and government departments. It also provides community inquiry hotlines and post contact information at construction sites for easy communication and feedback collection, ensuring potential issues are reported and resolved promptly.

Promoting Public Good

To systematically manage community construction efforts, the Group established the CSCI "Caring for the Community" Volunteer Branch. This branch is led by the Group and the management of CSHK, with a long-term goal of becoming an influential public welfare organisation in Hong Kong. The Volunteer Branch is dedicated to professionally serving society and coordinating volunteer activities, enabling employees to engage with the community, contribute to society, and build the Group's brand. To motivate employee participation in volunteer activities, the Group offers up to four days of volunteer leave. Employees who participate in volunteer services can apply for this leave.

To advance the volunteer service, the Group implements these strategies:

Win-Win Cooperation

Cooperate with non-governmental organisations to provide training and service opportunities, making good use of the manpower resources of the volunteer branch.

Record Hours

Establish a volunteer hour record system to apply for external recognition for actively serving volunteers.

Professional Training

Arrange for key members to participate in professional training, employees participate in corporate volunteer training courses, and for large-scale volunteer projects, grasp the corresponding management knowledge and skills.

Anchoring Direction

Establish a "4+x" service mainline, encouraging employees to try various volunteer experiences, and to actively identify service needs.

Serving the Community

"4+x" means "Care for the Elderly", "Contribute Your Skills", "Care for Teenagers", "Care for Your Home" and "Innovative Space". It capitalised on the strengths of the core businesses to understand the needs of the community in areas such as housing maintenance, urban development and environmental protection, focusing on serving the elderly, youth and the needy in the community. During the year, the Group participated in volunteer activities in Hong Kong for more than 4,700 person-times and more than 17,200 hours of service. The Group will continue to participate internally and externally in the economic and livelihood development of Hong Kong, and will continue to encourage more employees and their families, customers and community organisations to fulfill their social responsibilities and bring positive energy to the community.

Following the unprecedented events of Typhoon Signal No. 10 "Sula" and a severe rainstorm, the Group immediately assembled an emergency response team. This team worked in collaboration with government departments to handle the unexpected natural phenomenon. The Group dispatched volunteers throughout Wong Tai Sin, Eastern District, Southern District, Wan Chai, Yuen Long, and other regions. In the span of two support operations, the Group deployed over 650 volunteers and mobilised more than 140 vehicles and pieces of equipment. People of Hong Kong, as well as numerous community sectors including the Development Bureau, expressed their gratitude for the Group's efforts through letters of appreciation.




Throughout the year, the Group diligently promoted the "1,000 Households Home Repair" project. Its skilled engineering staff volunteered as a "Home Repair" team, offering repair services to low-income families in sub-divided units and elderly individuals living alone in Hong Kong. Since the project began, the Group has completed over 620 home repairs. In addition, the Group inspires its project teams to respond to community needs, regularly arranging various community volunteer activities, like nursing home visits, environmental cleanups, and fundraising events. These initiatives have been greatly appreciated by the community. This year, the Group has received the "Hong Kong Volunteer Award 2023 - Corporate Award (Volunteer Hours) Gold Award (10,000 hours or above)" from the Home and Youth Affairs Bureau and the Agency for Volunteer Service. Furthermore, 80 employees were recognised with the Hong Kong Chinese Enterprises Association's 2023 "Outstanding Volunteer Leader, Outstanding Volunteer, and Outstanding Young Volunteer Awards". These accolades are a testament to the Group's employees' unwavering commitment to service.



Regional Sustainability Performance Highlights

Hong Kong

Key Performance¹

 <p>Economic performance</p>	Revenue	HKD30,821,983 thousand
 <p>Social performance</p>	Total number of employees	7,147
	Monthly paid employees turnover rate	18%
	Work-related injuries	5.9/1,000 workers
	Average training hours of monthly paid employees	9.3 hours/person
 <p>Environmental performance</p>	Greenhouse gas emissions intensity	50.4 tonnes CO₂-e/million HKD²
	Non-hazardous waste intensity	107.5 tonnes/million HKD
	Electricity intensity	0.9 MWh/million HKD
	Water intensity	186.3 m³/million HKD

¹ Including the data of CSHK.

² Expanded data collection of Scope 3 emission sources for the year.



Kai Tak New Acute Hospital

The lack of healthcare resources in Hong Kong is a long-standing issue. Particularly during the fifth wave of the epidemic in 2022, public hospital emergency departments and medical wards faced immense pressure, underscoring the extreme shortage of healthcare resources. With Hong Kong's rapidly ageing population and the continuous rise in public demand for healthcare services, this unresolved issue may conflict with the aspirations of Hong Kong's residents for a better life.

Since 2016, the Hong Kong Special Administrative Region Government has proposed two ten-year hospital development plans, including building a large-scale emergency general hospital in the Kai Tak Development Area to meet growing emergency needs with more staff, advanced equipment, and technology. They also plan to rebuild or expand 11 existing public hospitals to enhance treatment efficiency and quality by increasing bed numbers, improving facilities, and raising technical standards. Additionally, the construction of 3 community health centres will enable citizens to conveniently receive basic health checks, regular treatments, and health guidance services. Furthermore, they plan to establish 1 support service centre. These hospital development plans are crucial steps the Hong Kong government is taking to address the scarcity of medical resources. The aim is to increase rescue capacity, improve treatment conditions, and enhance service quality, in hopes of effectively addressing current challenges and meeting the public's demand for high-quality medical services.

Regional Sustainability Performance Highlights

Hong Kong

As part of the government's decade-long hospital development plan, the new emergency hospital is to be built to accommodate the rising need for medical services in the Kowloon district. This need is driven by population growth and an aging demographic. The hospital, situated on two land plots, will comprise five units: an emergency building, administrative building, teaching building, oncology building, and a specialist outpatient clinic building. Upon completion, it will rank among Hong Kong's largest acute hospitals, offering 2400 inpatient and day beds, equipped with supporting medical facilities, 37 operating theatres, a neuroscience centre, oncology centre, specialist outpatient clinics, a community health centre, and departments for oral and maxillofacial surgery and dentistry. As a designated trauma centre, the hospital will operate a 24-hour emergency room, adequately staffed and equipped to handle diverse emergencies and significant incidents. Going forward, this acute hospital will assume a pivotal leadership role, coordinating medical services across the Kowloon region and collaborating with the nearby children's hospital to cater to the long-term healthcare needs of local residents.



offering

2,400

inpatient and day beds



operate a

24-hour

emergency room

Overcoming Difficulties

Kei Tak New Acute Hospital is the largest hospital project in the history of Hong Kong in terms of construction volume and contract value. The scale and volume of the project also brought many difficulties to the construction, but the Group overcame them all and set a number of records in the industry in Hong Kong.

During the basement stage, it is estimated that over 25,000 tonnes of temporary platforms and ELS supporting I-beams will need to be dismantled. This amount of steel is equivalent to the consumption of 3.5 Eiffel Towers. The dismantling process is challenging due to the large number of supporting I-beams, their complex arrangement, and limited working space.

The project's main structure involves a significant amount of materials, including templated areas, steel, and concrete. The total steel used is equivalent to that in the external structure of three Bird's Nest National Stadiums. The total volume of concrete used is nearly 400,000 cubic metres, which is equivalent to the volume used in 3.5 Hong Kong International Finance Centre.

Electromechanical equipment encompasses a diverse range, with a complex system that includes 7 primary systems and 86 subordinate subsystems. The volume of consumables is substantial. For instance, the air conditioning project utilises over 5,000 tonnes of galvanised iron. In the realm of electrical engineering, over 7,600 tonnes of copper are used, with an estimated wire length nearing 60 million metres — enough to encircle the earth 1.5 times.

A total area of more than 200,000 square metres was covered by the glass curtain wall system of this project. The curtain wall has a wide variety of types and needs to be constructed in conjunction with exterior aluminum panels, stone and other materials, making the installation of some of the components more difficult.

Debugging and testing the project's E&M system necessitated the interconnection of diverse equipment and systems, increasing the complexity of the testing process and making the acceptance requirements stringent. Specifically, Site A features 40 operating rooms of 17 different types, and 65 negative pressure rooms of 24 types. In the future, 12 standardised tests will be carried out in both the operating rooms and the negative pressure rooms.

The project features many unique structures. For instance, the steel structure of the helipad located on the roof of Block A's emergency building weighs over 600 tonnes. With an installation height exceeding 100m, it includes numerous cantilever structures, demanding high node welding technology and presenting substantial installation challenges.

Regional Sustainability Performance Highlights

Hong Kong

This project incorporates a range of pre-made products, including MiC, MiMEP, and prefabricated concrete components, to achieve a high level of industrialisation in hospital construction, representing a significant step in the field of construction industrialisation by CSHK. Moreover, it is one of the most comprehensive applications of MiC room types in a Hong Kong hospital project. The Group has implemented all seven different MiC room types outlined in the MiC design guidelines for medical buildings by the Hong Kong Development Bureau. These room types add up to 1,023, making the total number of MiCs 2,373, and the total construction area of these MiC rooms is an impressive 36,240 square metres. The MiMEP technology encompasses five key electromechanical systems, which include the air conditioning, electrical, fire protection, water supply and drainage, and medical and non-medical gas systems. Among the 14 types of modules, three are independently innovative modules from the Group, including hazardous storage modules, medical gas system equipment rooms, and regional valve maintenance devices. Thanks to MiMEP technology, the Group can industrialise the production and quick installation of electromechanical systems, thereby enhancing the overall efficiency and quality of the project. Furthermore, the project's prefabricated concrete components are projected to weigh more than 16,000 tonnes, with about 40% of the stairs being prefabricated. These technologies have significantly improved the construction efficiency, quality, and safety level of the project.



Besides, facing such a large-scale project, the team not only needed to solve technical difficulties, but also had to deal with various issues such as staff coordination and resource management. For example, the project is surrounded by a number of complex municipal projects under construction and a completed children's hospital, as well as a number of external connecting facilities, and has long shared some of the traffic roads with neighboring parcels, which posed great challenges to the project's layout, transportation, and construction coordination. To meet these challenges, the project team held regular monthly meetings with representatives from each project to exchange project progress and coordinate construction. Secondly, in terms of personnel management, as the project requires a large number of management personnel and workers, in order to solve the problems of scarcity of local management personnel and insufficient supply of labour, the Group innovated its operation and management model, actively promoted digital transformation, and ensured the smooth progress of the project through a number of measures such as the establishment of a 50-strong project team of the Mainland Support Centre, the introduction of 26 professionals, and application for importation of labour by joining the Construction Labour Importation Program. Encl. 2 These measures have ensured that the project can proceed smoothly.



Protecting Quality, Safety and Environment

Project volume, staff, and other characteristics require careful attention, as do site quality, safety, and environmental management. The project has established a comprehensive safety and environmental management system with the goal of building a benchmark and standardising site safety matters. This ensures that on-site safety work objectives are accurate, requirements are clear, classifications are detailed, and examples are standardised, thereby enhancing the level of environmental protection and safety management. Firstly, the project has bolstered training and education by regularly organising various safety and environmental activities. These include site safety lectures, healthy living talks, fire drills, and training on the use of anti-dumping tables. These activities aim to raise staff safety awareness and enhance their skills and knowledge. Secondly, a district safety performance leaderboard is set up on site. The safety performance scores are updated weekly, and evaluation results are promptly announced, encouraging competition among staff and motivates them towards better safety management performance. Lastly, the project implements a regional responsibility system, dividing the site into 8 districts under a "Theater Race" system. The person in charge of each zone is responsible for its quality, safety, and environmental performance. Performance exceeding company standards will be rewarded, while underperformance will be penalised, ensuring that frontline integrated management responsibility is appropriately allocated.

In quality management, the project has implemented a zoning responsibility system as well. This system assigns quality management duties for different areas to specific personnel, ensuring effective supervision and management of each area. Promoted by the quality self-inspection and dual-track systems, staff are required to complete daily tasks, routinely check and assess their work, and supervise and share experiences during collaborations. This system allows for early identification and timely resolution of quality risks. To ensure comprehensive support for all frontline staff, the project continues to advance and popularise the CIMS system and the Happy Workers App. These platforms offer convenient information exchange channels and resource sharing, enabling staff to access necessary guidance, materials, and feedback at any time to promptly address issues. Additionally, the project holds regular meetings to enhance quality. During these meetings, managers at all levels discuss the latest experiences in quality management, technical advancements, and successful cases. This approach strengthens management's awareness of quality control, improves their understanding of its importance, and stimulates their enthusiasm for actively participating in and promoting quality work. These measures ensure superior project quality and effectively address potential quality issues.



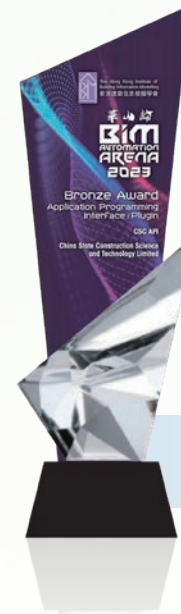
Regional Sustainability Performance Highlights

Hong Kong

Project Honours

Throughout the build, the team has maintained a commitment to high standards and quality, giving due attention to the finer details. This meticulous approach extends to material selection, equipment installation, and progress control. To ensure the hospital meets international standards, the Group carried out numerous checks and tests. Since construction started, the project has scooped 16 safety and health awards and three technology innovation awards, including the “24th Construction Industry Safety Award: Best Safety Culture Site” from the Occupational Safety and Health Bureau and the Labour Department, the “International Safety Award 2023” Excellence Award from the British Safety Council, and the “BIM Automation Arena 2023” Winner Award from the Hong Kong Building Information Modeling Association. Far from just being a nod to the project team's hard work, these accolades acknowledge the industry's appreciation for the project's exceptional quality and innovative prowess.

On top of the new acute hospital project in Kai Tak, CSCI has also participated in key projects under the hospital's two 10-year development plan, such as the Kwong Wah Hospital redevelopment project, the Prince of Wales Hospital redevelopment project and the redevelopment of Our Lady of Maryknoll Hospital. In the future, the Group will continue to capitalise on its strengths in advanced construction technologies and further strengthen its communication and collaboration with various partners to create more eye-catching landmark projects, contributing the strengths of a centralised enterprise to satisfy Hong Kong people's urgent demand for quality healthcare services.



“BIM Automation Arena 2023” Winner Award from the Hong Kong Building Information Modeling Association.

Digital Robots Enhance Construction Efficiency

Technological advances are transforming various sectors, including the construction industry. In Hong Kong, innovative technology use is a growing trend in the field. The industry is grappling with a manpower shortage. CIC reports that of the roughly 600,000 registered construction workers in Hong Kong, the average age is 47, indicating a clear aging trend. Construction work is physically demanding and often conducted under challenging conditions, such as exposure to sun and rain. It also has inherent safety risks. These factors often discourage young people from entering the field. To address these issues and to improve construction standards, the HKSAR Government established the Construction Industry Innovation and Technology Fund, focusing on introducing construction robotics to alleviate the manpower shortage.

The public housing development project on Tsing Yi Tsing Hong Road North, constructed by CSHK in its first and second phases, introduced digital robots for the first time. These robots were successfully used in a range of tasks including indoor paint spraying, wall plastering, exterior wall painting, and material transportation.

Spray Painting Robot: This innovative device was co-developed by CSHK and SquareDog Robotics. It is designed to perform indoor spray painting tasks on walls and ceilings with exceptional precision, even in low light conditions. It uses advanced technologies including Building Information Modeling (BIM) and automatic path planning. In contrast to traditional methods, which would require several workers to invest significant time and effort, this robot can complete the same task in a mere 15 to 20 minutes for a 2 to 3 person living area. It enhances construction efficiency and is a significant reduction in physical strain for workers.



Plastering Robot: Through autonomous sensing and obstacle avoidance technology, it plays an important role in coarse sand sanding of concrete walls, automatic plastering and scraping, fine sanding of scraped surfaces, and paint spraying. As the robot is equipped with automatic vacuuming technology, it can ensure a cleaner environment during the construction process. With 5G transmission technology, the person in charge can also monitor the construction situation and real-time data from a distance.

Regional Sustainability Performance Highlights

Hong Kong



Curtain Spraying Robot: This robot can finish spraying a facade that is 3.5m wide and 36 stories high in 2.5 to 3 hours. It can calculate the spraying area in real-time, replacing workers who spray paint at high altitudes, thereby reducing the risk of falling. The gondola platform uses wind stabilisation control as an algorithm to maintain equipment stability, enhancing safety and ensuring consistent construction quality.

Material Handling Robot: Equipped with human recognition and automatic obstacle avoidance technology, this robot can follow a user's path. It has a load capacity of up to 250 kilograms per trip. Due to its compact size, it is also ideal for transporting materials through standard building corridors. The use of this robot not only minimises the risk of worker injuries from heavy lifting but also enhances the efficiency of material transportation.

Welding Robot: This device is crucial in the H-beam pile joining process at the foundation. All that is needed is for workers to program the task on a tablet. They can then manage several welding robots performing multi-layer welding simultaneously. This approach not only enhances efficiency but also safeguards the workers.

Widespread application of intelligent robots in the construction industry will not only solve the problem of manpower shortage and aging in Hong Kong's construction industry, but also provide a safer, more efficient and attractive working environment for young people. With the further development of technology, the Group believes that intelligent robots will play an increasingly important role in the construction process in the future, injecting new vitality and innovation into the Hong Kong construction industry.

Regional Sustainability Performance Highlights

Annual Environmental Protection Target

According to the “Guidelines for Calculation of Environmental Indicators” and “Working Procedures for Material Loss Control”, the Safety and Environmental Protection Department of CSHK developed environmental indicators and targets. It also set resource-saving goals for the Hong Kong Head Office. These were reviewed and endorsed by the Group's Integrated Management Committee. Here are the Environmental and Energy Management Goals for Construction Sites and Offices of CSHK for 2023:

Environment and energy management target	Environmental Management Indicators in 2023	Environmental Management Indicators in 2024
Environmental management metrics		
Reduce wood use on site	Less than 120 cubic meters/100 million HKD turnover	Less than 110 cubic meters/100 million HKD turnover
Reduce paper use on site	Less than 340 packs of equivalent A4 paper/100 million HKD turnover	Less than 320 packs of equivalent A4 paper/100 million HKD turnover
Water saving on site	Less than 55 thousand/100 million HKD turnover in general construction site	Less than 52 thousand/100 million HKD turnover in general construction site
	Less than 600 thousand/100 million HKD turnover in pile grinding site	Less than 570 thousand/100 million HKD turnover in pile grinding site
Electricity saving on site	Less than 200 thousand/100 million HKD turnover	Less than 190 thousand/100 million HKD turnover
Reduce concrete loss	Less than 1.5% in general construction site	Less than 1.5% in general construction site
	Less than 5.5% in pile grinding site	Less than 5.5% in pile grinding site
Reduce rebar loss	Building sites below 3.8%	Building sites below 3.8%
	Civil work sites below 2.3%	Civil work sites below 2.3%
	Base site is below 3.3%	Base site is below 3.3%
Save electricity in the office	Annual electricity consumption per square meter decreased by 1.0% (i.e.<112kWh/m ²) compared to 2022	Annual electricity consumption per square meter decreased by 1.0% (i.e.<111kWh/m ²) compared to 2023

Regional Sustainability Performance Highlights




Hong Kong

Environment and energy management target	Environmental Management Indicators in 2023	Environmental Management Indicators in 2024
Environmental management metrics		
Save paper in the office	3% less than the average total paper used in 2020–2022	3% less than the average total paper used in 2021–2023
Recycle the computer and its equipment	Recycle all computers	Recycle all computers
	Recycle all monitors	Recycle all monitors
	Recycle all hard drives and other accessories	Recycle all hard drives and other accessories
	Recycle all printer cartridges	Recycle all printer cartridges
Waste paper recycling	Recycle all used paper	Recycle all used paper
Energy management metrics		
Total office saves power	Annual electricity consumption per square meter is 1.0% less than 2022 (i.e. <112kWh/m ²)	Annual electricity consumption per square meter is 1% less than 2023 (i.e. <111kWh/m ²)
Continuous improvement of the energy performance indicator (EnPI) for construction work	2.0% improvement in EnPI	2.0% improvement in EnPI
Get the latest information on energy-efficient products	Visit the annual International Environmental Expo	Visit the annual International Environmental Expo
Share the latest energy-saving product information	Share the latest energy-saving product information	Share the latest energy-saving product information
Use energy-saving lighting products	Use T5 or LED light pipes in newly built site offices	Use T5 or LED light pipes in newly built site offices

Regional Sustainability Performance Highlights

Macau

Key Performance¹

 <p>Economic performance</p>	<p>Revenue HKD10,769,724 thousand</p>
 <p>Social performance</p>	<p>Total number of employees 1,142</p> <p>Monthly paid employees turnover rate 15%</p> <p>Work-related injuries 0.5/1,000 workers</p> <p>Average training hours of monthly paid employees 2.7 hours/person</p>
 <p>Environmental performance</p>	<p>Greenhouse gas emissions intensity 55.1 tonnes CO₂-e/million HKD²</p> <p>Non-hazardous waste intensity 21.4 tonnes/million HKD</p> <p>Electricity intensity 1.8 MWh/million HKD</p> <p>Water intensity 76.9 m³/million HKD</p>

¹ Including the data of CCE Macau.

² Expanded data collection of Scope 3 emission sources for the year.

Regional Sustainability Performance Highlights

Macau



Leading the Development of Building Technology by Innovation

CCE Macau, a company dedicated to scientific research management and technological innovation, is always exploring advanced technology and applying it to practical projects. It also actively encourages team members to participate in related work, fostering deeper thinking and experience sharing. This year, CCE Macau successfully launched two high-level research topics: “Application Research of Tool-Type Single-Side Formwork in Basement Retaining Wall Construction” for the Maiden Street construction site and “Development of Intelligent Operation System for No.8 Project” for the No.8 project site. Additionally, the research of first phase of the Hotel Technology Centre project passed both the project completion acceptance and financial audit, leading to a thesis, patents, internal standards, and monographs on key technologies for constructing high-end modern hotels.

CCE Macau’s patent management work has been notably successful, showing a substantial rise in the number of authorised invention patents and utility model patents. Of particular note is CCE Macau’s first invention patent — “A mobile control device, system and application method for VR equipment”. This innovation offers a portable VR safety vocational training system for project transfer, which is not only convenient to use but also effectively reduces costs. Through the team’s concerted efforts, CCE Macau has turned intellectual achievements into cost-saving solutions. On top of this, CCE Macau has also authorised 15 utility model patents and accepted 7 utility model patents. These patents span various areas, including a pile planting device to maintain the verticality of hydrostatic piles, an assembly-type wall column rebar binding operation platform, and a construction site microwave alarm device, among others. These innovative

Regional Sustainability Performance Highlights

technologies and devices are set to further enhance construction efficiency and bring added convenience and safety to the construction industry. The fruits of patent management work fully illustrate CCE Macau's proficiency and efficiency in scientific research management.

Regarding the difficulties encountered in engineering construction, the project promotes technical innovation through more understanding, learning, thinking and summarising, and further improves the quality of thesis compilation and the level of thesis publication. This year, CCE Macau has successfully published one international SCI paper and six papers in domestic core journals such as "Construction Technology" and "Construction Safety". By encouraging the management of workmanship through planning beforehand, adjusting and analysing during the process, and summarising afterward, CCE Macau has been awarded 2 China Overseas group-level workmanships, and plans to declare China Overseas group-level workmanships and participate in the evaluation of 8 provincial and ministerial-level workmanships. The Quality and Technology Department conducted a comprehensive evaluation of the 8 work methods to help improve the quality of the project. The release of these achievements will win more reputation and recognition for CCE Macau and further consolidate CCE Macau's leading position in the construction industry.

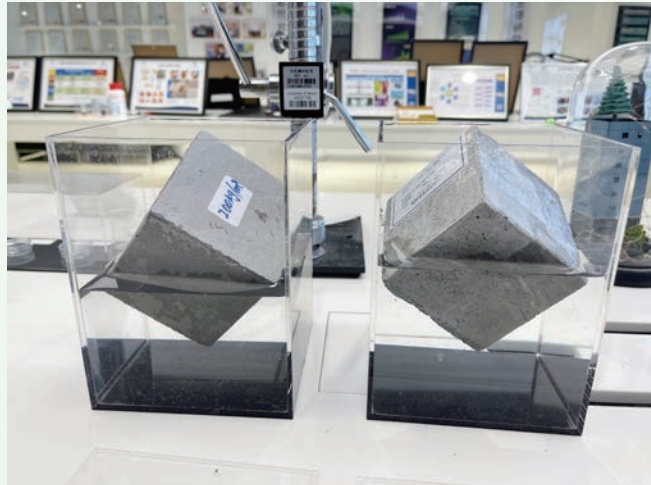
Nano Foam Concrete in the Construction

CCE Macau utilised the latest Nano Foam Concrete (NFC) technology in the construction of Lot P — Lot A Replacement House in the Hac Sa Wan New Reclamation Area. This innovative technology was developed by Professor Sun Guoxing's team at the University of Macau. The high energy efficiency and cost-saving features of NFC technology enhance the quality of the project. Additionally, it offers significant environmental and social benefits.

- **Engineering Quality:** NFC uses nanoparticles to stabilise foam, providing superior stability in cement slurry. When compared to other foam concrete types, it has smaller pores at the same density and the strength is also 2–5 times greater, enhancing structural stability and load-bearing capacity, thereby improving overall engineering quality. NFC also excels in thermal insulation, with its performance improved by 25% compared to ordinary foam concrete. Additionally, NFC features all-around self-compaction, no dead corners, and a low volume water absorption rate, lending it a certain waterproof effect and reducing the risk of leakage.
- **Eco-friendly Materials:** NFC, compared to its ordinary counterpart, can decrease cement usage by 40%. This results in energy conservation and emission reduction. Since NFC does not require a waterproof protection layer, this saves on material costs, making construction project more cost-effective and budget-friendly.
- **Social Benefits:** The research and development of NFC originated from the research team of the University of Macau, which promotes the development of Macau's industry, academia and research. It also helps the country to promote the development of green building materials industry and the diversification of Macau's economy.

Regional Sustainability Performance Highlights

Macau



The construction project for Lot P — Lot A Replacement House in the Hac Sa Wan New Reclamation Area also collaborated with Prof. Sun Guoxing's team to conduct verification tests on NFC. The results confirmed its advantages and demonstrated that, when maintaining the same quality, the foam concrete bedding layer offers 30%-40% more economic benefits than the typical mortar leveling layer.

Macau No.8 (M8) Project

The M8 project, a nine-storey commercial building, is located in the heart of Macau's Historic City, a UNESCO World Heritage Site, approximately 50 metres from the main entrance of the Ruins of St. Paul. As the Group's first urban renewal project in Macau, M8 project employs design techniques that incorporate elements of Chinese and Western cultures, old and new aesthetics, movement and stillness, and fresh interpretations of old objects. It deeply integrates with the surrounding city, community, streets, and old buildings, aiming to create a landmark that represents Macau's cultural business and serves as a model for urban renewal. The project received the use permit at the end of February 2024 and is now in the decoration phase. It is expected to open later in the second half of 2024.

Reducing Construction Impacts and Enhancing Community Communication

Given M8 project's unique location, the Group worked diligently to reduce the impact on the local community and environment during construction. CCE Macau has sped up the build, aiming to complete the project in just two years. It also implemented various strategies to ensure things like sound insulation, dust reduction, monitoring, drainage, traffic control, cleanliness, and pest prevention. To manage noise levels, the company introduced staggered construction hours, low-noise equipment, and optimised procedures. As a result, the noise level for the foundational work hovers around 80dB(A), aligning with environmental protection regulations. The company is also mindful of dust control, avoiding construction near sensitive areas and using temporary structures like site offices and containers to act as dust barriers, as well as paving the construction area as much as possible



to further reduce dust. Its efforts have kept PM10 control around $116\mu\text{g}/\text{m}^3$, satisfying the 2020 air quality impact assessment guidelines set by the environmental protection bureau.

In view of the project's proximity to a school, the project team reinforced the school façade and constructed a section of the façade facing the school using prefabricated parts. It made use of the after-school hours, summer vacations and holidays for construction to minimise the impact on the school. The project team also communicated with the school and parents through parent-teacher conferences to introduce the project plan, minimise parents' concerns about noise and air pollution, and coordinate the construction schedule. At various stages of the project, the project team kept parents updated on the progress of the project and answered their questions to better understand the needs of the community.

Regional Sustainability Performance Highlights

Macau



World Record in Innovative Craftsmanship

Curved hot-melt composite stone glass was used as the façade material for M8 project. This material is created by sandwiching natural stone flakes between tempered curved glass under high heat and pressure, combining the texture of natural stone with the transparency of glass. After about 1,000 days of design and development, CCE Macau, in collaboration with Wuxi Cheng Yi and Far East Façade, produced the world's largest curved hot-melt composite stone glass. This glass, with a monolithic area of 20.45 square meters, set the Guinness World Record for the "Largest Curved Hot-Melt Composite Stone Glass". The material is ultra-thin and curved, and the entire surface of the stone glass is a single, unspliced piece. The Guinness World Records officially recognised and commended this achievement as a challenge to the limits of technology and manufacturing, demonstrating the Group's commitment to technological innovation.

Winning Prizes and Honours

The M8 project has gained significant recognition. At the PropertyGuru Asia Real Estate Awards Finals in Bangkok, in December 2023, it represented the Greater China region and won the "Asia's Best Retail Project Gold Award". Among the winners of the Asian Gold Award, only three were Chinese projects, making up about 6% of the total gold awards. The PropertyGuru Asia Real Estate Awards is a prestigious event that covers 12 major real estate markets in the Asia-Pacific region. It has been held annually for 18 consecutive years. The award process is fair, just, and transparent. An independent jury of industry elites in the region assesses the projects. It is known as the "gold standard of the real estate industry" and holds high esteem worldwide. Earlier, in the Hong Kong and Macau regional competition, the M8 project had also won the "Best Landmark Project Gold Award in Hong Kong and Macau" and the "Best Retail Project Gold Award in Hong Kong and Macao".



Volunteer Team Advocates Environmental Protection and Cares for the Disadvantaged Groups

This year, the CCE Macau Volunteer Team has once again demonstrated their commitment to helping others and giving back to the community. They have rolled out nearly 10 initiatives aimed at assisting those in need and fostering community development. These activities range from repairing homes for the elderly who live alone, to cleaning up after typhoons, visiting service centres for those with intellectual disabilities, and spending quality time with the elderly.

Repairing homes for the elderly living alone



The Volunteer Team provides a variety of simple home maintenance services to the elderly living alone, such as changing light bulbs, cleaning up rust, checking the safety of doors and windows, and dealing with cracks in walls. At the same time, they also provide counseling services about maintenance to units in need of help to improve the living environment of the elderly living alone.

Cleaning up after typhoons



During Typhoon Sura, a category 10 storm that struck Macau, a large tree fell at the Exhibition Centre prompting the involved organisations to seek help. In response, the CCE Macau Volunteer Team sent dozens of volunteers, managing to clear the aftermath of the typhoon in a single day.

Regional Sustainability Performance Highlights

Macau

Visiting intellectual disability service centre



The Volunteer Team has made several visits to the intellectual disability service center to foster community integration and harmony. For instance, on August 17, they interacted with the students at the Kai Hong Centre, sponsored by the Hong Chi Association. On September 21, they hosted a “Community Visit: event at the Kai Hong Centre under the Macau Hong Chi Service Association. During this event, over a dozen volunteers and students from the Kai Hong Centre collaborated to package blessed rice.

Spending time with the elderly



The “Golden Autumn Sends Warmth — Caring for the Community and Respecting the Elderly” event took place on November 7th at the Women's Federation Yikang Association. The Volunteer Team contributed everyday essentials to the Yikang Center and arranged “Blessed Rice” packages, assembled by both volunteers and students at the Kai Hong Centre, symbolising the mutual affection and well-wishes amongst various Macau social groups. Simultaneously, hundreds of seniors engaged in hand fitness activities and entertaining games at the venue, promoting their physical and mental well-being.

Regional Sustainability Performance Highlights

Macau






Concerned about the green lifestyle as well, CCE Macau Volunteer Team carried out the “World Earth Day — Green Walk” environmental protection themed volunteer activity at Hac Sa Beach in Macau on April 22nd. More than 30 volunteers took part in the “Green Walk” activity to publicise the environmental protection knowledge through cleaning the beach, fun games, etc., and appealed to the attention to the green lifestyle with practical actions.

Meanwhile, the CCE Macau Volunteer Team plans to conduct further community service and public welfare education activities. Through their dedication and efforts, they aim to make significant contributions to the advancement and development of Macau society.

Regional Sustainability Performance Highlights

Chinese Mainland

Key Performance¹

 Economic performance	Revenue	HKD66,185,389 thousand
	<hr/>	
 Social performance	Total number of employees	3,591
	Monthly paid employees turnover rate	8%
	Work-related injuries	2.4/1,000 workers
	Average training hours of monthly paid employees	24.7 hours/person
 Environmental performance	Greenhouse gas emissions intensity	133.9 tonnes CO₂-e/million HKD²
	Non-hazardous waste intensity	67.1 tonnes/million HKD
	Electricity intensity	1.3 MWh/million HKD
	Water intensity	50.7 m³/million HKD

¹ Including data of CSCIL, China Overseas Construction, CSC Hailong and CSIAM.

² Expanded data collection of Scope 3 emission sources for the year.

Technology Innovation Research Institute of China Academy of Metrology, Shenzhen

Technology Innovation Research Institute of China Academy of Metrology, Shenzhen, is being established to create a national science centre and offer comprehensive scientific infrastructure for the Greater Bay Area's development. This institute is a major element of Shenzhen's 14th Five-Year development plan, focusing on scientific and technological innovation projects. Adhering to Shenzhen's innovation-driven development strategy, the project executes the Party Central Committee and the State Council's directives to construct a national modern advanced measurement system. It accelerates the development of a quantum measurement support system and creates an integrated, open international platform for quantum measurement and advanced measurement technology research. By innovating and developing advanced measurement technology, the project aids in constructing Shenzhen's full-process innovation ecosystem and building a significant high-tech strategic highland in China.

The project's construction site is nestled on the southeast side of Liantang Reservoir, at the crossroads of Gongming Street and Xinhua Street in Guangming District. The site spans a total area of 36,194 square metres and will feature a laboratory cluster that includes four key platforms: the Metrology Standard Technology Research Institute, the Quantum Metrology and Sensing Research Institute, the Precision Instrument Integration Research Institute, and the Technology Diffusion Center. It will also house auxiliary rooms for scientific research offices, academic activities, dormitories, and canteens. The total construction area for the project is 68,384 square metres. Given this project's significant value to the Greater Bay Area and the nation, the project team has set a series of ambitious targets in terms of quality, safety, and green low-carbon construction, with the aim of establishing it as a benchmark in these areas.

Quality Excellence Target

Win the
"Guangdong Province Construction Quality Award"

Strive for the
"Zhantianyou Award of China Civil Engineering"

Safety and Civilisation Target

Win the
"Guangdong Province Housing and Municipal Engineering Safety Production Civilisation Construction Demonstration Site"

Strive for the
"National Safety Production Civilisation Construction Demonstration Site"

Green and Low Carbon Target

Build the
"Shenzhen Near Zero Carbon Building Demonstration Project"

Build the
"First National Zero Carbon Light Storage — Direct Flex Project Department"

Ranking Comparison Target

City Engineering Bureau All Projects Quarterly, Annual Inspection Ranking "Ensure the Top Ten and Strive for the Top Three"

Regional Sustainability Performance Highlights

Chinese Mainland

The project also faced some difficulties while the high target brought high requirements. First of all, the project is highly specialised, involving laboratory engineering, electromechanical equipment pipelines and intelligent engineering, etc. It is necessary to ensure that the construction process and post-construction use comply with the relevant regulations and standards. The project team carried out the design and construction in strict accordance with the relevant regulations and conducted several quality checks to ensure that every aspect of the project complied with the standards. Secondly, the project faced the challenges of the rainy season, typhoon season and hot season. In order to avoid the rainy and typhoon seasons as much as possible, the project team rationalises the construction schedule and develops corresponding protective measures. Especially in the construction of key parts such as laboratories and research structures, the team has special requirements for materials such as earthquake-resistant concrete to ensure the stability and safety of the structure. In addition, due to the shortage of land, the construction team also needs to carefully plan the site layout and traffic organisation. Within the red line, the construction team strictly controls the layout of temporary facilities, office and living areas to maximise the use of limited land resources. As the general contractor, the team will face the challenge of coordinating multiple specialised subcontractors. Whether it is finishing, laboratory specialties, fire doors and waterproofing, or elevators, the team will proactively coordinate with all parties to ensure that all work runs smoothly. In terms of resident project management, the team has established a three-tiered structure from corporate to project decision-making, management and execution. This allows the team to be effectively organised to ensure proper project management.

The Group's latest achievements in prefabricated construction and smart construction were showcased. The team adopted the concrete MiC implementation program to increase assembly application depth. For Dormitory Building #1, they used the "Box Mold — Cast-in-Place Frame Structure System" to improve assembly efficiency. In the foundation, precast high-performance concrete shells were used to simplify construction steps and boost efficiency through precast bearing shells and on-site post-cast concrete. DfMA (Design for Manufacturing and Assembly) technology was utilised to optimise the manufacturing and assembly process. In the basement plant room construction, DfMA E&M modules were used to enhance efficiency through factory prefabrication and on-site installation. Intelligent construction was applied through the C-SMART intelligent construction site system, enabling the intelligent command centre, one-code pass for personnel, three diagrams, and two curves. By using BIM technology and digital delivery, the project will achieve digital management of the physical equipment and operation data, and a three-dimensional visualisation of the digital life system.



Regional Sustainability Performance Highlights

The project team has implemented a range of green and low-carbon strategies to make this project a near-zero carbon building. These strategies cover the full project lifecycle, from design to operation.

Production Stage

- Use of green building materials: including 100% recycled rebar, concrete using blast furnace slag powder to replace 60% of cement.
- Adopting CCUS (Carbon Capture, Utilization and Storage) technology to produce low-carbon concrete blocks.

Transportation Stage

- Choose local suppliers to reduce carbon emissions from transportation.

Construction Stage

Energy saving: reasonable layout of temporary power grid; extensive use of energy-saving equipment and appliances, motion sensor automatic power-off sensors, smart metres, air source heat pumps and solar water heaters.

Water saving: set up rain and sewage treatment system, recycle and reuse; use frequency conversion pumps water-saving appliances, smart water metres; advanced water-saving construction technology used during construction.

Resource saving: use of old templates, permanent combination, digital paperless office.

Land saving: BIM simulated site layout, dynamic management.

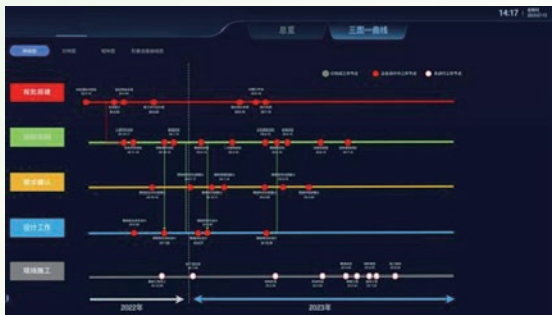
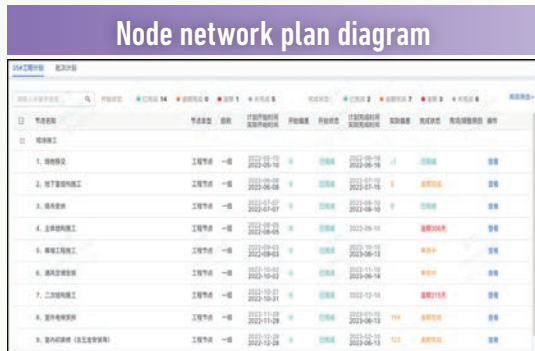
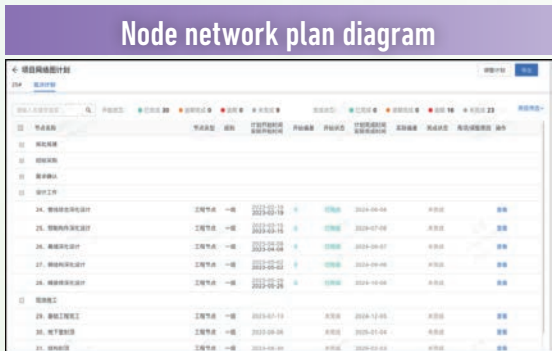
Environmental protection: control environmental protection goals from 7 aspects, including construction waste, noise control, water pollution control, dust control, light source control, personnel health, and pipeline protection. Especially in the management of construction waste, implement the resource utilisation of construction waste, and fully carry out classification, reuse and recycling treatment.

Operation Stage

- Apply BIPV technology, install BIPV photovoltaic curtain wall materials on the building facade, and use roof integrated photovoltaic panels to generate electricity. It is estimated that the annual power generation of these installations is 752,000 kilowatt-hours.
- Installation of solar street lights, solar tables and chairs, etc., integrating renewable energy.
- Water saving through techniques such as air conditioning condensate water reuse and rainwater recycling.
- Adopt passive building design, such as the exterior of the building is painted with reflective thermal insulation paint to reduce heat absorption, and natural ventilation in the transition season increases heat dissipation.
- Preference for local plants in Shenzhen for landscape design, reducing transportation energy consumption, improving plant survival rate, tall carbon sequestration plants such as trees can also increase the amount of carbon sequestration per unit area.

Regional Sustainability Performance Highlights

Chinese Mainland



The First Unmanned Toll Station in Shanxi Province

On October 18, Shanxi Province proudly launched its first unmanned toll station. This innovative station harnesses the power of big data and artificial intelligence to facilitate unmanned toll collection, handle unique situations, and provide driving guidance. This step forward significantly enhances both the efficiency and safety for drivers and passengers.

This unmanned toll station is Niangziguan Toll Station, which is operated by CSCIL (Shanxi) Co. of CSCI. Over the years, the company has been adhering to the concept of “technology-enabled operation” and has made significant breakthroughs in digital invoicing and payment. After the promotion of mobile payment and electronic invoicing, how to ensure automatic and accurate identification of car models has become a bottleneck in the construction of unmanned toll stations. Accurate model and license plate recognition is the prerequisite for accurate billing system, and also the primary problem that needs to be solved to realise unmanned toll collection system. At present, the mainstream model recognition equipment adopts video recognition or laser recognition technology. However, in the outdoor environment, there are light, fog and other factors of interference, resulting in a lower recognition rate of car models, and thus can not realise the whole car type unmanned payment. In response to this problem, the company continues to deepen innovation this year, and has established a huge database of license plates and car models. The front-end sensing equipment quickly recognises vehicle information, and compares the license plate and car model data obtained by the recognition equipment with the database. When the comparison result is consistent, the driver pays the fee through cell phone scanning code and enters the charging session; when the comparison result is inconsistent, the monitoring and processing can be

introduced by video way to confirm the model and license plate information. At the same time, the manually judged model and license plate information will be automatically stored in the database, and the next time the vehicle passes by can immediately extract the accurate model results. Through the assistance of video recogniser, big data artificial intelligence comparison verification and cloud seat, accurate model and license plate determination can be realised. Currently, more than 93% of vehicles can retrieve accurate model information through the database, thus ensuring the accuracy of toll collection. The database is also expanding as time goes by. The results have been awarded invention patents and software copyrights.

The Niangziguan Toll Station, the first unmanned toll station in Shanxi Province, plays a significant role in advancing intelligent transportation and boosting the efficiency of highway operations. Economically, the creation of this unmanned toll station has optimised the staffing needs from 26 personnel to just 6 for normal operations. Based on an annual cost of RMB73,000 per person, this change results in direct labour cost savings of RMB1.46 million per year, equivalent to at least a 75% reduction. If the project's findings are implemented at all toll stations along the road, the estimated savings could reach at least RMB2.774 million per year in labour costs. In terms of societal benefits, the unmanned toll station uses intelligent technology to ensure safe vehicle passage, remote handling and security control, and equipment status monitoring, ensuring the toll station operates safely, smoothly, and efficiently. This not only offers drivers and passengers a more convenient, rapid, and secure travel experience but also enhances the company's social image.

Regional Sustainability Performance Highlights

Chinese Mainland

Inorganic non-metal processing



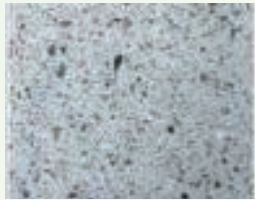
Used for roadbed cushion



Muck backfill



Recycled aggregate



Inorganic artificial stone



No-burning bricks



Recycled prefabricated components

Metal processing



Centralized recycling



Professional company smelting

Wood processing



On-site recycling



Specialized in recycling as raw material for paper making and artificial wood

Plastic type



Centralized recycling



Professional utilization and preparation of renewable fuels

Summary of Key Performance Indicators

Operating Performance

Pathway to Reducing Carbon Emissions

Category	The Group	Unit
Carbon neutral target year	2050	Year
Carbon reduction target (Base year: 2018; Target year: 2025)	-59	%
Carbon reduction target (Base year: 2022; Target year: 2030)	-40	%

Technology and Innovation

Category	The Group	Unit
Invention authorisation	36	Invention
Invention patent application	440	Invention
New patent	172	Patent

Summary of Key Performance Indicators

Management Certification Coverage¹

Category	The Group	Unit
ISO9001 Quality Management System	100	%
ISO14001 Environmental Management System	80	%
ISO50001 Energy Management System	20	%
ISO45001 Occupational Safety and Health Management System	80	%
ISO27001 Information Security Management System	100	%
ISO14064 Greenhouse Gas Emissions Verification	10	project/year

¹ Platform Company level statistics, ISO9001, ISO14001, ISO50001 and ISO45001 are not applicable to CSIAM due to business nature.

Summary of Key Performance Indicators

Environmental Performance

Air Emissions

Category	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Nitrogen oxides	2,143,996.4	28,027.7	41,830.4	297,267.7	16,122.0	2,397.2	2,529,641.4	kg
Sulphur oxides	140,768.3	1,825.6	2,525.4	108,862.6	806.5	82.5	254,870.9	kg
Respirable suspended particulates	150,714.3	1,979.3	1,858.0	10,635.9	995.3	40.1	166,222.9	kg

Summary of Key Performance Indicators

Greenhouse Gas Emissions²

Scope	Emission source	CSHK	CCE Macau	CSCIIIL	Development	CSC	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Scope 1: Direct emissions	Combustion of fossil fuels-stationary source and non-road mobile source	80,074.0	1,058.6	1,749.8	706,525.9		2,115.5	366.5	791,890.3	tonne of CO ₂ -e
	Combustion of fossil fuels-mobile source	1,948.8	158.8	887.3	340.9		234.9	295.0	3,865.8	
	Fugitive emissions ³	5,819.0	0	9,648.0	2,666.7		3,006.0	0	21,139.7	
	Industrial production processes — welding	5,963.7	1.4	0	19.9		82.9	0	6,068.0	
	Carbonate	0	0	0	2,185.7		0	0	2,185.7	
Scope 2: Energy indirect emissions	Purchased electricity	11,214.2	11,406.8	34,098.3	22,133.9		6,715.3	8,128.4	93,696.8	tonne of CO ₂ -e
	Purchased heat	0	0	1,106.0	0		1,842.4	0	2,948.3	
Total GHG emissions (Scope 1 & Scope 2)					921,794.6					tonne of CO ₂ -e
GHG intensity (Scope 1 & Scope 2, by revenue)					8.1					tonne of CO ₂ -e/ HKD million

² GHG emissions quantification process and emission factors refer to the national standards and guidelines of the People's Republic of China (Guidelines for Accounting and Reporting Greenhouse Gas Emissions China Public Building Operation Units (Enterprises) (Trial) and Guidelines for Accounting and Reporting Greenhouse Gas Emissions Other Industrial Enterprises (Trial)), Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong prepared by the Environmental Protection Department and the Electrical and Mechanical Services Department of Hong Kong, SME Carbon Audit Toolkit compiled by the University of Hong Kong and the City University of Hong Kong, and the international standards ISO 14,064-1 and the Greenhouse Gas Protocol.

³ Including emissions from fire suppression systems and refrigerant emissions within the reporting scope. While fugitive GHG emissions from BTM (bromotrifluoromethane) used in fire suppression systems are not included in the six Kyoto Protocol GHG categories, they are included in this carbon assessment to provide a true and fair picture of GHG-related information. BTM is one of the controlled substances listed in Annex A of the Montreal Protocol, with a conversion factor of approximately 1.0 metric ton of CFC-11 (trichlorofluoromethane) equivalent.

Summary of Key Performance Indicators

Greenhouse Gas Emissions ²										
Scope	Emission source	CSHK	CCE Macau	CSCIIL	Development	CSC	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Scope 3: Other indirect emissions	Business travel ⁴	39.1	182.9	232.3	224.0		232.3	21.4	932.0	tonne of CO ₂ -e
	Building materials	1,331,230.7	575,651.6	8,471,698.9	248,189.1		293,420.1	13.3	10,920,203.7	
	Subcontractor energy use	102,237.7	4,451.0	11,844.7	259.6		2,084.7	0	120,877.6	
	Water resource use	2,496.0	141.9	395.9	399.3		98.3	17.3	3,548.8	
	Wastewater treatment	9.2	5.0	275.0	66.2		50.7	20.9	426.9	
	Waste disposal	13,915.3	407.2	4,652.7	331.7		3,183.6	663.3	23,153.8	
Total GHG emissions (Scope 1, Scope 2 & Scope 3)					11,990,937.4					tonne of CO ₂ -e
GHG intensity (Scope 1, Scope 2 & Scope 3, by revenue)					105.4					tonne of CO ₂ -e/ HKD million

⁴ Including airplanes and trains.

Summary of Key Performance Indicators

Hazardous Waste

Category	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Total hazardous waste	7,183.0	0	0.03	0.8	39.1	0	7,222.9	tonne
Hazardous waste intensity (by revenue)				0.1				tonne/ HKD million

Non-hazardous Waste

Category	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit	
Non-hazardous waste generated	Inert C&D materials	3,200,792.0	95,546.5	4,084,258.9	2,558.1	300,236.8	0	7,683,392.4	tonne
	Non-inert construction waste	89,769.2	133,233.4	40,156.7	2,572.8	3,371.2	0	269,103.3	
	Other non-hazardous waste	23,583.8	1,165.9	3,056.9	202,428.5	5,442.2	1,082.7	236,760.0	
Total non-hazardous waste				8,189,255.7				tonne	
Non-hazardous waste intensity (by revenue)				72.0				tonne/ HKD million	

Summary of Key Performance Indicators

Energy								
Category	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Gasoline	3,713	600	4,310	1,291	927	992	11,833	MWh
Diesel	243,767	4,060	5,305	2,395	5,830	428	261,785	
Liquefied petroleum gas	0	58	301	102	1,732	252	2,445	
Liquefied natural gas	0	0	19	0	104	0	123	
Pipeline gas	0	0	0	0	0	225	225	
Acetylene	24,396	6	16	82	173	0	24,672	
Natural gas	0	0	63	528	791	766	2,147	
Lignite	0	0	0	1,891,246	0	0	1,891,246	
Methanol	0	0	83	0	0	247	331	
Towngas	0	0	0	0	0	0	0	
B5 biodiesel	45,724	0	24	0	51	0	45,799	
Propane	0	0	61	0	40	0	101	
Kerosene	0	0	8	0	0	0	8	
Coke oven gas	0	0	0.2	0	0	0	0.2	

Summary of Key Performance Indicators

Energy								
Category	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Fuel oil	0	0	69	0	0	0	69	MWh
Purchased electricity	26,775	19,164	59,790	39,933	11,775	14,253	171,690	
Purchased heating	0	0	2,793	0	0	0	2,793	
Sold electricity	0	0	0	(74,356)	0	0	(74,356)	
Sold heating	0	0	0	(1,525,753)	0	0	(1,525,753)	
Total energy consumption				815,158				
Energy intensity (by revenue)				7.2				MWh/ HKD million
Renewable energy	49	0	7,060	1,162	931	0	9,202	MWh

Summary of Key Performance Indicators

Water								
Category	CSHK	CCE Macau	CSCIIL	Development	CSC Construction & CSC Hailong	CSIAM	Total	Unit
Total water consumption ⁵	5,742,016	828,401	2,596,985	2,361,090	658,617	103,123	12,290,232	cubic metre
Water consumption intensity (by revenue)				108.1				cubic metre/ HKD million
Total wastewater discharge	772,085	148,754	586,292	91,456	265,500	28,245	1,892,291	cubic metre
Wastewater discharge intensity (by revenue)				16.6				cubic metre/ HKD million
Total water reused ⁶	2,443	0	14,641	359,121	10,533	0	386,738	cubic metre
Reused water intensity (by revenue)				3.4				cubic metre/ HKD million

Packaging Materials								
Category	CSHK	CCE Macau	CSCIIL	Development	CSC Construction & CSC Hailong	CSIAM	Total	Unit
Total consumption of packaging materials	0	53.8	823.1	643.3	0	0	1,520.2	tonne
Packaging Material Intensity (by revenue)				0.01				tonne/ HKD million

⁵ Including freshwater supplied to contractors at construction sites by the Group.

⁶ Reused in construction sites of the Groups, not used by other organisations.

Summary of Key Performance Indicators

Use of Raw Materials

Category	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Concrete	1,057,945.9	623,792.5	4,545,494.8	0	311,225.3	0	6,538,458.4	cubic metre
Cement mortar	5,909.1	3,278.5	13,934,391.9	0	4,640.0	0	13,948,219.5	cubic metre
Reinforced steel bar	267,614.2	142,389.9	1,006,603.3	0	37,995.2	0	1,454,602.6	tonne
Steel beams	42,155.2	8,153.9	190,076.9	0	0	0	240,386.1	tonne
Iron sheet pile	3,530.7	373.1	1,577.4	0	0	0	5,481.2	tonne
Wooden sheet pile	0	0	3,223.1	0	0	0	3,223.1	tonne
Cement	36,581.6	9,172.4	75,626.7	0	93,577.9	17.5	214,976.0	tonne
River sand	208,442.6	16,891.0	52,169.4	0	94,002.8	30.1	371,535.9	tonne
Stones	128,368.7	101.0	150,225.4	0	309,770.0	0	588,465.1	tonne
Bricks	0	51,039.4	6,259,294.1	0	5,923.0	2.4	6,316,258.8	tonne
Concrete floor materials	0	0	400.0	0	0	0	400.0	tonne
Aluminium products	0	80.0	6,944.1	24,529.0	0.3	0	31,553.4	tonne
Steel products	0	10.7	479.9	10,773.8	0	0	11,264.4	tonne
Silica gel	0	425.0	26.4	995.2	0	0	1,446.6	tonne
Glass	0	142.4	16,057.0	19,644.3	0	0	35,843.6	tonne

Summary of Key Performance Indicators

Use of Raw Materials

Category	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Timber for packaging	0	53.8	823.1	289.3	0	0	1,166.2	tonne
Other timber	12.8	177.7	34,593.3	0	128.0	0	34,734.0	cubic metre
Other Steels	32,022.8	548.4	5,617.3	0	3,232.8	0	41,421.3	tonne
Steel tubes	27,228.6	2,814.6	173,875.5	0	49.8	0	203,968.5	tonne
Paper	158.9	21.3	5,650.7	56.3	13.3	2.3	5,902.7	tonne
Insulation material	0	403.1	60,962.9	0	438.5	0	61,804.5	tonne
Cable	0	2,113,633.0	6,451,330.1	0	219,104.0	0	8,784,067.1	metre
Prefabricated board	0	865.8	51,968.0	0	6,981.0	0	59,814.7	cubic metre
Prefabricated column	0	0	5,498.8	0	466.4	0	5,965.2	cubic metre
Prefabricated beam	0	0	5,234.7	0	1,186.3	0	6,420.9	cubic metre
Prefabricated stairs	0	1,176.7	81,293.8	0	350.8	0	82,821.2	cubic metre
Asphalt	0	0.5	22,484.2	0	664.6	0	23,149.3	tonne
Industrial oxygen	93.3	8.3	34,840.0	0	76.35	0	35,018.0	tonne
Block	0	2,989.9	1436,668.9	0	5,923.0	0	1,445,581.8	cubic metre

Summary of Key Performance Indicators

Use of Raw Materials

Category	CSHK	CCE Macau	CSCIIL	CSC Development	China Overseas Construction & CSC Hailong	CSIAM	Total	Unit
Renewable materials	Bamboo flooring	0	0	0	0	0	0	tonne
	Cork flooring	0	0	0	0	0	0	tonne
	Straw bale insulation	0	0	0	0	0	0	tonne
	Cotton insulation material	0	0	0	0	0	0	tonne
	Straw board	0	0	0	0	0	0	tonne
	Sunflower seed board	0	0	0	0	0	0	tonne
	Soy foam insulation	0	0	0	0	0	0	tonne

Summary of Key Performance Indicators

Social Performance

Employment

Statistics		CSHK	CCE Macau	CSCIIL	Development CSC	China Overseas Construction & CSC Hailong	CSIAM	Total	
Current employees ⁷	Gender	Male	5,590	898	1,845	3,801	790	189	13,113
		Female	1,557	244	494	692	146	127	3,260
	Age group	30 or below	1,915	338	645	1,374	410	22	4,704
		31–40	2,100	397	1,330	1,535	336	222	5,920
		41–50	1,344	176	277	1,060	122	58	3,037
		51 or above	1,788	231	87	524	68	14	2,712
	Employment rank	Senior	15	5	8	11	5	0	44
		Middle	81	46	233	29	52	20	461
		Executive	982	209	1,139	346	320	38	3,034
		General employees	6,069	882	959	4,107	559	258	12,834
	16,373								

⁷ Total number of employees as of 31 Dec 2023.

Summary of Key Performance Indicators

Employment		China Overseas Construction & CSC Hailong							Total
Statistics		CSHK	CCE Macau	CSCIIL	Development	CSC	CSIAM		
Current employees ⁷	Region								
		Hong Kong	6,760	0	0	460	0	14	7,234
		Macau	18	831	0	41	0	0	890
		Chinese Mainland	367	303	2,339	3,832	936	302	8,079
		USA	0	0	0	10	0	0	10
		Canada	0	0	0	144	0	0	144
	Others ⁸	2	8	0	6	0	0	16	
Other workers ⁹	Gender								
		Male	14,759	8,336	592	58	4,738	38	29,277
	Female		151	156		430	19	29,277	

⁸ Including UK, Portugal and Dubai.

⁹ Including contractors, subcontractors, interns, and other workers whose workplace or work content is controlled by the Group.

Summary of Key Performance Indicators

Statistics		CSHK	CCE Macau	CSCIIL	Development	China Overseas		Total	
						CSC Construction & CSC Hailong	CSIAM		
Monthly paid employees ¹⁰	Gender	Male	4,412	796	1,845	3,793	790	189	11,825
		Female	995	164	494	692	146	127	2,618
	Age group	30 or below	1,755	311	645	1,374	410	22	4,517
		31–40	1,841	383	1,330	1,530	347	222	5,653
		41–50	905	143	277	1,057	122	58	2,562
		51 or above	906	123	87	524	57	14	1,711
	Employment rank	Senior	15	5	8	11	5	0	44
		Middle	81	46	233	29	52	20	461
		Executive	979	209	1,139	346	320	38	3,031
		General employees	4,332	700	959	4,099	559	258	10,927
	Region	Hong Kong	5,021	0	0	460	0	14	5,495
		Macau	18	649	0	41	0	0	708
		Chinese Mainland	367	303	2,339	3,832	936	302	8,079
		USA	0	0	0	2	0	0	2
		Canada	0	0	0	144	0	0	144
		Others ¹¹	1	8	0	6	0	0	15
									14,443

¹⁰ Total number of monthly-paid employees as of 31 Dec 2023. In order to align with the Group's roadmap for setting target statistics, data related to new hires, lost employees, and training is only applicable to monthly-paid employees.

¹¹ Including UK, Portugal and Dubai.

Summary of Key Performance Indicators

Statistics		CSHK	CCE Macau	CSCIIL	Development	China Overseas		CSIAM	Total	
						CSC	Construction & CSC Hailong			
New hires	Gender	Male	1,324	167	82	495	111	6	2,185	2,751
		Female	357	61	30	96	20	2	566	
	Age group	30 or below	804	83	86	319	94	3	1,389	
		31-40	597	65	23	173	36	4	898	
		41-50	172	28	3	75	1	1	280	
		51 or above	108	52	0	24	0	0	184	
Rate of new hires ¹²	Gender	Male	30%	21%	4%	13%	14%	3%	17%	19%
		Female	36%	37%	6%	14%	14%	2%	17%	
	Age group	30 or below	46%	27%	13%	23%	23%	14%	30%	
		31-40	32%	17%	2%	11%	10%	2%	15%	
		41-50	19%	20%	1%	7%	1%	2%	9%	
		51 or above	12%	42%	0%	5%	0%	0%	7%	

¹² Rate of new hires = (Number of new hires in 2023/Number of monthly paid employees as of 31 Dec 2023) x 100%

Summary of Key Performance Indicators

Employment									
Statistics			CSHK	CCE Macau	CSCIIL	Development CSC	China Overseas Construction & CSC Hailong	CSIAM	Total
Gender	Male		768	112	110	774	98	13	1,875
	Female		188	28	31	131	20	11	409
Age group	30 or below		316	50	50	405	68	3	892
	31-40		367	51	63	267	43	17	808
	41-50		157	20	18	120	3	3	321
	51 or above		116	19	10	113	4	1	263
Number of employee turnover	Hong Kong		910	0	0	127	0	1	1,038
	Macau		9	98	0	0	0	0	107
Region	Chinese Mainland		37	42	141	724	118	23	1,085
	USA		0	0	0	13	0	0	13
	Canada		0	0	0	41	0	0	41
	Others ¹³		0	0	0	0	0	0	0

¹³ Including UK, Portugal and Dubai.

Summary of Key Performance Indicators

Employment										
Statistics		CSHK	CCE Macau	CSCIIL	Development CSC	China Overseas Construction & CSC Hailong	CSIAM	Total		
Rate of employee turnover ¹⁴	Gender	Male	17%	14%	6%	20%	12%	7%	16%	16%
		Female	19%	17%	6%	19%	14%	9%	16%	
	Age group	30 or below	18%	16%	8%	29%	17%	14%	20%	
		31–40	20%	13%	5%	17%	12%	8%	14%	
		41–50	17%	14%	6%	11%	2%	5%	13%	
		51 or above	13%	15%	11%	22%	7%	7%	15%	
	Region	Hong Kong	18%	0	0	28%	0	7%	19%	
		Macau	50%	15%	0	0%	0	0	15%	
		Chinese Mainland	10%	14%	6%	19%	13%	8%	13%	
		USA	0	0	0	650%	0	0	650%	
		Canada	0	0	0	28%	0	0	28%	
		Others ¹⁵	0	0	0	0	0	0	0	

¹⁴ Rate of employee turnover = (Number of employee turnover in 2,023/Number of monthly paid employees as of 31 Dec 2,023) x 100%.

¹⁵ Including UK, Portugal and Dubai.

Summary of Key Performance Indicators

Health and Safety¹⁶

Statistics	CSHK	CCE Macau	CSCIIL	Development	CSC Construction & CSC Hailong	CSIAM	Total
Number of recordable work-related injuries	0	0	0	12	19	0	31
Work-related injury rate ¹⁷	0.00	0.00	0.00	0.27	2.24	0.00	0.19
Number of high-consequence work-related injuries ¹⁸	0	0	0	1	0	0	1
High-consequence work-related injury rate ¹⁹	0.00	0.00	0.00	0.02	0.00	0.00	0.01
Number of work-related fatalities	0	0	0	0	0	0	0
Work-related fatality rate ²⁰	0	0	0	0	0	0	0
Lost days due to work-related injuries	0	0	0	571.5	652	0	1,223.5
Number of hours worked ²¹	14,067,188	2,268,716	4,665,000	8,965,152	1,697,772	620,204	32,284,032
Rate of injury per thousand people	0.00	0.00	0.00	2.67	20.30	0.00	1.89

¹⁶ The Group did not have any employees or other workers who suffered from occupational diseases during the year.

¹⁷ Work-related injury rate = (Number of recordable injuries/Number of hours worked) × 200,000.

¹⁸ An injury that cannot or is not expected to recover fully to pre-injury health status within 6 months.

¹⁹ High-consequence work-related injury rate = (Number of high-consequence injuries/Number of hours worked) × 200,000.

²⁰ Work related fatality rate = (Number of work-related fatalities/Number of hours worked) × 200,000.

²¹ The estimate is based on each employee working 8 hours per day, excluding hours lost due to sick leave and similar absences.

Summary of Key Performance Indicators

Health and Safety¹⁶

Statistics	CSHK	CCE Macau	CSCIIL	Development	CSC Construction & CSC Hailong	CSIAM	Total	
Number of recordable work-related injuries	129	5	0	2	4	0	140	
Work-related injury rate ²³	0.87	0.06	0.00	99.60	0.50	0.00	0.56	
Number of high-consequence work-related injuries ²⁴	0	0	0	0	0	0	0	
High-consequence work-related injury rate ²⁵	0	0	0	0	0	0	0	
Number of work-related fatalities	0	0	0	0	0	0	0	
Work-related fatality rate ²⁶	0	0	0	0	0	0	0	
Lost days due to work-related injuries	0 ²⁷	569	0	0.5	296	0	865.5	
Number of hours worked ²⁸	29,518,000	16,968,592	1,496,000	4,016	1,602,224	107,520	49,696,352	
Rate of injury per thousand people	8.74	0.59	0.00	34.48	0.77	0.00	4.78	
Total Workforce	Lost time injury rate (LTIR) ²⁹	0.59	0.05	0.00	0.31	1.39	0.00	0.42

²² Including contractors/sub-contractors, interns, and other workers whose work or venue of work are controlled by the Group.

²³ Work-related injury rate = (Number of recordable injuries / Number of hours worked) × 200,000.

²⁴ An injury that cannot or is not expected to recover fully to pre-injury health status within 6 months.

²⁵ High-consequence work-related injury rate = (Number of high-consequence injuries/Number of hours worked) × 200,000.

²⁶ Work related fatality rate = (Number of work-related fatalities/Number of hours worked) × 200,000.

²⁷ Some other workers are paid on a daily basis and are covered by insurance in case of injury. Replacements will be arranged by their employers, so there is no loss of working days.

²⁸ Estimated by number of hours worked per workers per working day, 7 to 8 hours per day depending on the workers' location.

²⁹ LTIR = (Number of recordable injuries of total workforce/Number of hours worked of total workforce) × 200,000.

Summary of Key Performance Indicators

Training and Development ³⁰									
Statistics			CSHK	CCE Macau	CSCIIL	Development CSC	China Overseas Construction & CSC Hailong	CSIAM	Total
Training percentage	Gender	Male	69%	64%	100%	94%	100%	99%	88%
		Female	54%	49%	100%	100%	100%	93%	86%
	Employment rank	Senior	100%	100%	100%	100%	100%	N/A	100%
		Middle	80%	100%	100%	100%	81%	60%	95%
		Executive	55%	89%	100%	100%	100%	82%	90%
		General employees	69%	49%	100%	94%	100%	100%	86%
Average training hours	Gender	Male	9.8	3.1	30.7	37.4	10.3	13.3	21.5
		Female	7.1	0.5	38.1	23.9	8.4	10.4	17.2
	Employment rank	Senior	1.3	2.5	112.2	9.4	119.0	N/A	37.0
		Middle	6.0	5.7	41.4	20.6	11.0	17.1	25.8
		Executive	7.6	0.5	30.2	34.2	9.1	28.5	19.1
		General employees	9.8	3.1	31.8	35.5	9.5	9.4	20.9

³⁰ Including data of employee turnover who has received training in the Reporting Period.

Summary of Key Performance Indicators

Supply Chain Management³¹

Statistics		CSHK	CCE Macau	CSCIIL	Development	CSC China Overseas Construction & CSC Hailong	CSIAM	Total
Number of suppliers	Hong Kong	503	12	0	123	1	0	639
	Macau	1	96	0	1	0	0	98
	Chinese Mainland	6	8	1,362	1,102	2,485	89	5,052
	Others ³²	1	0	0	154	0	0	155
								5,944

Anti-corruption³³

Statistics		CSHK	CCE Macau	CSCIIL	Development	CSC China Overseas Construction & CSC Hailong	CSIAM	Total
Number of people receiving information on anti-corruption policies and procedures	Governance body							7
	Senior	15	5	8	11	5	N/A	44
	Middle	81	46	233	29	52	20	461
	Executive	982	209	1,139	346	320	38	3,034
	General employees	6,069	882	959	4,107	559	258	12,834
								16,373

³¹ The Group consistently applies supplier recruitment, management and monitoring practices to all suppliers of the same category to ensure fairness of the system.

³² Including USA, Canada and Europe.

³³ Including data of employee turnover who has received information or training in the Reporting Period.

Summary of Key Performance Indicators

Anti-corruption³³

Statistics		CSHK	CCE Macau	CSCIIL	Development	CSC Construction & CSC Hailong	CSIAM	Total
Percentage of people receiving information on anti-corruption policies and procedures	Governance body							100%
	Senior	100%	100%	100%	100%	100%	N/A	100%
	Middle	100%	100%	100%	100%	100%	100%	100%
	Executive	100%	100%	100%	100%	100%	100%	100%
	General employees	100%	100%	100%	100%	100%	100%	100%
Number of people receiving anti-corruption training	Governance body							7
	Senior	7	6	8	11	79	N/A	111
	Middle	23	8	167	36	58	11	303
	Executive	90	110	915	369	410	25	1,919
	General employees	986	549	765	3,537	549	241	6,627a

Summary of Key Performance Indicators

Anti-corruption ³³		China Overseas Construction & CSC Hailong							Total
Statistics		CSHK	CCE Macau	CSCIIL	Development	CSC	CSIAM		
Percentage of people receiving anti-corruption training	Governance body							100%	
	Senior	47%	100%	100%	100%	100%	N/A	100%	
	Middle	28%	17%	72%	100%	100%	55%	66%	
	Executive	9%	53%	80%	100%	100%	66%	63%	
	General employees	16%	62%	80%	86%	98%	93%	52%	
Average anticorruption training hours	Governance body							3.0	
	Senior	0.5	9.6	2.6	3.0	49.0	N/A	8.1	
	Middle	0.3	1.0	5.2	3.1	3.6	1.4	3.5	
	Executive	0.1	2.1	5.3	2.0	3.1	1.3	2.7	
	General employees	0.2	2.5	4.7	2.1	3.2	1.4	1.5	

Summary of Key Performance Indicators

Community Investment

Statistics	CSHK	CCE Macau	CSCIIL	Development	CSC Construction & CSC Hailong	CSIAM	Total	Unit
Total amount of investment	2,122,214.0	120,492.7	0.0	300.0	51,160.0	12,488.0	2,306,654.7	thousands HKD
Number of participating volunteers	4,782.0	698.0	954.0	122.0	170.0	106.0	6,832.0	number of people
Number of volunteer participation hours	17,210.5	3,388.0	1,908.0	200.0	172.0	50.0	22,928.5	hours

About this Report

CSCI is dedicated to incorporating the concept of sustainable development into its daily operations. It integrates green and low-carbon initiatives, talent development, good governance, and social contribution into the Group's culture. The Group actively engages with stakeholders from various sectors and releases an annual "Sustainability Report". This report discloses the progress and related performance of the Group's work, aiming to showcase the policies, measures, and performance in economic, environmental, and social aspects in a comprehensive and diverse manner, allowing stakeholders to better understand the Group's development strategy and commitment to sustainable development. The "2023 Sustainability Report" outlines the Group's investments and accomplishments in environmental, social, and governance aspects. It helps stakeholders understand the Group's development and operation policies, and also provides an opportunity for the Group to understand their views and needs. This, in turn, allows the Group to develop policies that respond to and meet their expectations.

Reporting Period and Scope

This report covers the period from January 1, 2023, to December 31, 2023, coinciding with the Group's annual reporting cycle. It includes performance data from the Group's operations in Chinese Mainland, Hong Kong, and Macau, as well as CSC Development. For further details on CSC Development (Stock Code: 00830) ESG policies and initiatives, please refer to its standalone "Environmental, Social, and Governance Report". Note that this report does not incorporate data from joint ventures or associates not under the Group's control¹.

¹ The Group holds less than 50% interest.

Reporting Standards and Principles

This report complies with the requirements of the Environmental, Social and Governance Reporting Guide ("ESG Reporting Guide") issued by the Stock Exchange and follows the Sustainability Reporting Standards issued by the Global Reporting Initiative ("GRI Standards"). The G4 version of the Construction and Real Estate Disclosure ("GRI CRE") has also been prepared with reference to the GRI Sustainability Reporting Guidelines. A full index of the ESG Guide and the GRI Standards is included at the end of this report for stakeholder reference.

While preparing the Sustainability Report, the Group has followed internationally recognised reporting principles. It has implemented certain responses to ensure accurate decision-making regarding the report's content and to maintain the quality of the disclosed information.

About this Report

Stakeholder Inclusiveness	The Group identifies key stakeholders by referencing the AA1000 Stakeholder Participation Standard. Through various communication methods such as meetings, workshops, and surveys, the Group understands the opinions and expectations of stakeholders and responds in the report content.
Sustainability Context	The Group refers to international trends, industry practices, and long-term risk and opportunity discussions on sustainability issues. The report content also specifically demonstrates the Group's response to global trends, as well as the performance of various business divisions and regional companies.
Materiality	The Group identifies material sustainability issues related to core business and a wide range of stakeholders through stakeholder communication. These issues have been highlighted in the report.
Completeness	The report covers all material sustainability issues, avoiding any omissions of details important to stakeholders.
Verifiability	The Group has established internal monitoring and review procedures, and has adopted the ESG cloud platform for raw data collection, to ensure that all data is accurate and reliable. External verification has been obtained for this report.
Balance	The Group describes achievements and challenges in a balanced manner with an objective attitude.
Clarity	The way the report is presented is sufficient for all stakeholders with a certain understanding of the Group and its activities.
Comparability and Consistency	The Group uses consistent disclosure statistical methods, allowing stakeholders to compare the Group's sustainability performance year by year.
Accuracy	The information contained in the report has been accurately presented, including the basis for data measurements and calculations without any intention to mislead or deceive.
Timeliness	The Group regularly reports on its sustainability performance. Each report clearly shows the period described.
Quantitative	The Group strives to present its performance quantitatively, and provides comparative data in appropriate circumstances.

About this Report

Content Management

The Group has set up a Sustainability Report Editorial Committee to coordinate report work. Additionally, the Group continually updates its ESG cloud platform and provides training to pertinent employees to address their queries. An independent sustainability consultant, Hong Kong Sustainability Strategic Advisory Limited, has been appointed to aid in stakeholder engagement, materiality assessment, data collection and quantification, roadmap formulation and content compilation. This is part of the Group's commitment to presenting accurate, reliable, and comprehensive information in the report.

As an independent third-party organisation, Deloitte Touche Tohmatsu provides its assurance on this report. The Sustainability Committee has gone through the report and it was approved for publication from the Board of Directors in April 2024.

Publication

The electronic version of this report is published in both English and Chinese. In the event of any discrepancy between the English version and the Chinese version, the Chinese version shall prevail. Stakeholders can download this report from the sustainability page of CSCI's website and the HKExnews website of Hong Kong Exchanges and Clearing Limited. The Group has also published a summary of this report on its WeChat official account. Through these channels, stakeholders can keep abreast of the Group's sustainability initiatives.

Feedback

The Group is confident that stakeholders' feedback will guide it towards a sustainable future. This report is designed to facilitate communication among stakeholders, and the Group invites you to share your valuable comments. If you have any questions or comments regarding this report or the Group's sustainability efforts and performance, please email the Group at csci_esg@cohl.com.

Assurance Statement



Inspiring trust for a more resilient world.

Verification Credential

This is to verify that BSI Hong Kong has conducted a KPIs verification for:

China State Construction International Holdings Limited

Verified KPIs Summary (1-Jan-2023 to 31-Dec-2023) as following:

- 1) KPI1 - Green House Gas (GHG) Emission Intensity (Scope 1+2)
Total GHG emission divided by Revenue
= 8.10 tCO₂-e/million HKD
- 2) KPI2 - FSC or PEFC certified wood purchase percentage
FSC or PEFC certified wood purchased divided by total wood purchased (x100)
= 99.8%
- 3) KPI3 - Work-related injury rate per 1,000 workers
Number of work-related injuries divided by monthly cumulative average number of employees and subcontracted workers (x1,000)
= 3.7 per 1,000 workers

Signed on behalf of BSI:

Mr. Stephen Yu
Market Leader – Hong Kong
Principal Assessor – China Core Delivery Operations

Last Assessment Date: 2024-04-26

Note:

This verification credential is for the exclusive use of the verification credential holder and is provided pursuant to the agreement between BSI and its client. BSI responsibility and liability are limited to the terms and conditions of the agreement. BSI assumes no liability to any party, other than to the client in accordance with the agreement for any loss, expense or damage occasioned by the use of this verification credential. Only the client is authorized to copy or display this verification. Any use of the BSI name or one of its marks for the sale or advertisement of the tested material, product or services must first be approved in writing by BSI. The issuing of this verification credential does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any related product.

Information and Contact: BSI Pacific Limited, 23rd Floor, Cambridge House, Taikoo Place, 979 King's Road, Island East, Hong Kong



Inspiring trust for a more resilient world.

2024-04-23

China State Construction International Holdings Limited
28/F, China Overseas Building
139 Hennessy Road
Wan Chai
Hong Kong

Greenhouse Gas Emission Verification

British Standards Institution (hereinafter referred to as BSI) was engaged to complete GHG verification to the 10 projects managed by China State Construction International Holdings Limited (hereinafter referred to as CSCI) and completed on 16th April 2024. The aim of this verification was to provide a reasonable assurance on the completeness and accuracy of the data consolidated in the GHG Emissions Inventory by CSCI.

Verification Scope

The independent verification activity covers the greenhouse gas emission data for the period from 1 January 2023 to 31 December 2023 of CSCI. The organizational boundary was established following the operational control approach, which only limited to 10 construction sites from engineering business:

- 1) Foundation and Site Formation for Public Housing Development at Ka Wai Man Road Phase 1
- 2) Main Works for New Acute Hospital at Kai Tak Development (Site B)
- 3) Construction of Public Housing Development at Lei Yu Mun Phase 4
- 4) Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant
- 5) Design and Construction of Apartments for the Elderly on Avenida do Nordeste
- 6) Construction of the Upper Cover of Galaxy Macau Phase 4
- 7) Construction Project of Complex Tower for Internal Medicine of Shekou Hospital, Shenzhen, Guangdong Province, China
- 8) Industrial Community Neighborhood Center Project of Jiaxing Baibu Economic Development Zone, Jiaxing, Zhejiang Province, China
- 9) 9-year Consistent School Project in the 10th unit of Qianwan, Shenzhen City, Guangdong Province, China
- 10) Beijing Xicheng District Birch Bark Factory Project, China

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Verification Methodology

Within the verification scope, BSI reviewed the activity data and supporting evidence of the selected samples out of the 10 construction sites. BSI obtained supporting evidence to assess greenhouse gas inventory by conducting interviews and data collection with the relevant personnel of CSCI. The verification was conducted in accordance with ISO 14064-3:2019 "Greenhouse gases Part 3: Specification with guidance for the verification and validation of greenhouse gas statements". Materiality threshold of ±5% was adopted for this verification. BSI verification team did not take part in the GHG data preparation process.

The following opinion was recommended by the verification team.

- No material error or omission was identified in the GHG Emission Inventory. There is no misstatement for GHG calculation. The direct and indirect greenhouse gas emission from 10 construction sites of CSCI for the period from 1 January 2023 to 31 December 2023 are as below,

Greenhouse Gas Emission	Tonnes of CO ₂ equivalent
Direct Greenhouse Gas Emissions (Scope 1)	11845.70
Indirect Greenhouse Gas Emissions (Scope 2)	5725.01
Indirect Greenhouse Gas Emissions (Scope 3)	177541.77
Biogenic Greenhouse Gas Emissions	336.07
Total Greenhouse Gas Emissions	195448.55

- Data quality was considered acceptable in meeting the principles as set out in ISO 14064-1:2018.

Signed on behalf of BSI:

Stephen Yu
Market Leader – Hong Kong

SEHK ESG Reporting Guide Content Index

Main Areas, Aspects, General Disclosures and KPIs	Chapter of Disclosure (Page)	Remark
A. Environmental		
Aspect A1: Emissions		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	Sustainability Governance (28); Safeguarding the Environment (72) Important laws and regulations applicable to the Group include the Environmental Protection Law of the People’s Republic of China, the Law of the People’s Republic of China on the Prevention and Control of Atmospheric Pollution, the Law of the People’s Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, the Air Pollution Control Ordinance, the Water Pollution Control Ordinance, the Waste Disposal Ordinance, the Noise Control Ordinance, the Environmental Impact Assessment Ordinance, the Dumping at Sea Ordinance of Hong Kong, and the Environmental Law of Macau, the Construction Waste Management System. These laws and regulations stipulate standards relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. Any non-compliance may result in fine penalty, mandate to suspend operation and/or legal action imposed by regulators on the Group. During the year, CSHK’s three cases in 2021 and one in 2022 that violated the Noise Control Ordinance have been convicted. Additionally, one case in 2022 violated the Water Pollution Control Ordinance has been convicted. The Group was fined a total of HK\$56,000 for these violations. To ensure compliance with environmental protection laws and regulations, the Group has enhanced its management practices.

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Main Areas, Aspects, General Disclosures and KPIs	Chapter of Disclosure (Page)	Remark
A1.1	The types of emissions and respective emissions data.	Summary of Key Performance Indicators (133)
A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity	Summary of Key Performance Indicators (134)
A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Summary of Key Performance Indicators (136)
A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Summary of Key Performance Indicators (136)
A1.5	Description of emission target (s) set and steps taken to achieve them.	Safeguarding the Environment (65-73)
A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Safeguarding the Environment (65-76)

SEHK ESG Reporting Guide Content Index

Main Areas, Aspects, General Disclosures and KPIs		Chapter of Disclosure (Page)	Remark
A2 Use of Resources			
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	Sustainability Governance (28-29); Safeguarding the Environment (72)	
A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	Summary of Key Performance Indicators (137-138)	
A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Summary of Key Performance Indicators (139)	
A2.3	Description of energy use efficiency targets and steps taken to achieve them.	Safeguarding the Environment (65-73); Sustainability Regional Sustainability Performance Highlights (113-114)	
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target (s) set and steps taken to achieve them.	Safeguarding the Environment (65-74); Sustainability Regional Sustainability Performance Highlights (113-114)	During the year, the Group did not have any problem in obtaining suitable water sources.
A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Summary of Key Performance Indicators (139)	

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Main Areas, Aspects, General Disclosures and KPIs	Chapter of Disclosure (Page)	Remark
A3 The Environment and Natural Resources		
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	Sustainability Governance (28-29); Safeguarding the Environment (65-76)
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Safeguarding the Environment (65-76)
Aspect A4: Climate Change		
General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Sustainability Roadmap (14); Sustainability Governance (29-31)
A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Sustainability Roadmap (14); Sustainability Governance (32-36)

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Main Areas, Aspects, General Disclosures and KPIs	Chapter of Disclosure (Page)	Remark
B. Social		
Aspect B1: Employment		
<p>General Disclosure</p> <p>Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. 	<p>Sustainability Governance (28); Nurturing and Supporting Talent (92-93)</p>	<p>Important laws and regulations which are applicable to the Group include Labour Law of the People’s Republic of China, The Labour Contract Law of the People’s Republic of China, the Employment Ordinance in Hong Kong and the Labour Relations Law in Macau. These laws and regulations stipulate the requirements for compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare, clearly stating employers’ legal obligations and responsibilities.</p> <p>During the year, there were 2 incidents of non-compliance with the Employees’ Compensation Ordinance involving failure to provide compensation to employees on time, resulting in a total penalty of HK\$6,000. The Group has strengthened its management to ensure that similar incidents will not occur again in the future.</p>
B1.1	Total workforce by gender, employment type, age group and geographical region.	Summary of Key Performance Indicators (143-144)
B1.2	Employee turnover rate by gender, age group and geographical region.	Summary of Key Performance Indicators (148)

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Main Areas, Aspects, General Disclosures and KPIs	Chapter of Disclosure (Page)	Remark
B2 Health and Safety		
<p>General Disclosure</p>	<p>Information on:</p> <p>(a) the policies; and</p> <p>(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.</p>	<p>Sustainability Governance (28-29); Nurturing and Supporting Talent (90)</p> <p>Important laws and regulations which are applicable to the Group include the Production Safety Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases, Regulation on Work-Related Injury Insurances of the People's Republic of China, the Occupational Safety and Health Ordinance in Hong Kong and Amendment to the Employees' Compensation Insurance Ordinance in Macau. These laws and regulations stipulate the requirements for production business units and employers in providing a safe working environment and protecting employees from occupational hazards.</p> <p>The Group complies with relevant laws and regulations. During the year, the Group did not identify any cases of non-compliance in relation to health and safety.</p>
<p>Indicator B2.1</p>	<p>Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.</p>	<p>Summary of Key Performance Indicators (149-150)</p> <p>In 2022, there was one work-related death with a rate of 0.006. Similarly, in 2021, there was one work-related death with a rate of 0.007. No work-related deaths have occurred in the current year.</p>
<p>B2.2</p>	<p>Lost days due to work injury.</p>	<p>Summary of Key Performance Indicators (149-150)</p>
<p>B2.3</p>	<p>Description of occupational health and safety measures adopted, how they are implemented and monitored.</p>	<p>Nurturing and Supporting Talent (87-90)</p>

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Main Areas, Aspects, General Disclosures and KPIs	Chapter of Disclosure (Page)	Remark	
B3 Development and Training			
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Nurturing and Supporting Talent (89-93)	
Indicator B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Summary of Key Performance Indicators (151)	
Indicator B3.2	The average training hours completed per employee by gender and employee category.	Summary of Key Performance Indicators (151)	
B4 Labour Standards			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	Driving Strategic and Innovative Development (62)	Important laws and regulations which are applicable to the Group include the Labour Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Minors, the Employment Ordinance in Hong Kong and the Labour Relations Law in Macau. These laws stipulate the prohibition of using child labour or forced labour and clearly outline employers' legal responsibilities. The Group complies with relevant laws and regulations. There were no cases of non-compliance relating to labour standards within the Group during the year.
B4.1	Description of measures to review employment practises to avoid child and forced labour.	Driving Strategic and Innovative Development (62)	
B4.2	Description of steps taken to eliminate such practises when discovered.	Not Applicable	There were no such cases of non-compliance discovered in our operations during the year.

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Main Areas, Aspects, General Disclosures and KPIs		Chapter of Disclosure (Page)	Remark
B5 Supply Chain Management			
General Disclosure	Policies on managing environmental and social risks of the supply chain.	Sustainability Governance (28-29); Building a Sustainable Supply Chain (83)	
B5.1	Number of suppliers by geographical region.	Summary of Key Performance Indicators (152)	
B5.2	Description of practises relating to engaging suppliers, number of suppliers where the practises are being implemented, and how they are implemented and monitored.	Building a Sustainable Supply Chain (83); Summary of Key Performance Indicators (152)	
B5.3	Description of practises used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Building a Sustainable Supply Chain (83)	
B5.4	Description of practises used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Building a Sustainable Supply Chain (79-84)	

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Main Areas, Aspects, General Disclosures and KPIs		Chapter of Disclosure (Page)	Remark
B6 Product Responsibility			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Sustainability Governance (28-29); Driving Strategic and Innovative Development (61, 63)	Important laws and regulations which are applicable to the Group include the Company Law of the People's Republic of China, the Patent Law of the People's Republic of China, Buildings Ordinance in Hong Kong and the Personal Data (Privacy) Ordinance. These laws and regulations stipulate the requirements for the health and safety, as well as privacy matters of products and services. The Group complies with relevant laws and regulations. There were no cases of non-compliance relating to product responsibility within the Group during the year.
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Not Applicable	There were no recalls concerning the provision and use of products and services for safety and health reasons within the Group during the year.
B6.2	Number of products and service related complaints received and how they are dealt with.	Not Applicable	There were no substantiated complaints received relating to the provision and use of products and services that have a significant impact on our operations during the year.
B6.3	Description of practises relating to observing and protecting intellectual property rights.	Driving Strategic and Innovative Development (61)	
B6.4	Description of quality assurance process and recall procedures.	Driving Strategic and Innovative Development (61)	
B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Driving Strategic and Innovative Development (61)	

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Main Areas, Aspects, General Disclosures and KPIs		Chapter of Disclosure (Page)	Remark
Aspect B7: Anti-corruption			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Sustainability Governance (28-29); Driving Strategic and Innovative Development (59-60)	Important laws and regulations which are applicable to the Group include the Anti-Unfair Competition Law of the People's Republic of China, Anti-Money Laundering Law of the People's Republic of China, Criminal Law of the People's Republic of China, Prevention of Bribery Ordinance in Hong Kong and the Criminal Code in Macau. These laws and regulations stipulate the prevention of bribery, extortion, fraud and money laundering, outlining the legal responsibility of maintaining a clean and fair society and curbing unfair competition.
B7.1	Number of concluded legal cases regarding corrupt practises brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Not Applicable	This year, an employee was convicted of corruption and bribery. The individual received a sentence of three years and three months' imprisonment, along with a fine of RMB200,000. In response, the Group has enhanced employee education and continued to advance internal inspection and management to prevent any future instances of corruption.
B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Driving Strategic and Innovative Development (59)	
B7.3	Description of anti-corruption training provided to directors and staff.	Summary of Key Performance Indicators (59-60)	

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Main Areas, Aspects, General Disclosures and KPIs	Chapter of Disclosure (Page)	Remark
B8 Community Investment		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Serving the Community (102-103)
B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Serving the Community (96-103); Regional Sustainability Performance Highlights (121-123)
B8.2	Resources contributed to the focus area (e.g. money or time).	Summary of Key Performance Indicators (155)

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
GRI 1: Foundation 2021 (excluding any disclosures)			
General Disclosure			
GRI 2: General Disclosures 2021			
The Organisation and its reporting practices			
2-1	Organisational details	About the Group (2-3)	Detailed information is set out on pages 29 — 50 of the 2023 Annual Report of CSCI.
2-2	Entities included in the organisation's sustainability reporting	About the Group (2-3)	
2-3	Reporting period, frequency and contact point	About this Report (156-158)	
2-4	Restatements of information	Not Applicable	This report did not include restatements of information from previous reports.
2-5	External assurance	About this Report (158); Assurance Statement (159)	Deloitte Touche Tohmatsu's Assurance Statement can be found at (https://www.csci.com.hk/pdf/2023_SR_Assurance.pdf)
Activities and workers			
2-6	Activities, value chain and other business relationships	About the Group (2-3)	There were no significant changes in the Group's industry, value chain and business relationships during the year.
2-7	Employees	Nurturing and Supporting Talent (91)	
2-8	Workers who are not employees	Summary of Key Performance Indicators (144)	

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
Governance			
2-9	Governance structure and composition	Sustainability Governance (24-25)	Please refer to pages 64 — 81 of the 2023 Annual Report of CSCI for details.
2-10	Nomination and selection of the highest governance body	Sustainability Governance (24-25)	Please refer to pages 71 — 85 of the 2023 Annual Report of CSCI for details.
2-11	Chair of the highest governance body	Not Applicable	Please refer to pages 71 — 85 of the 2023 Annual Report of CSCI for details.
2-12	Role of the highest governance body in overseeing the management of impacts	Sustainability Governance (24-26)	Please refer to pages 71 — 85 of the 2023 Annual Report of CSCI for details.
2-13	Delegation of responsibility for managing impacts	Sustainability Governance (26-27)	
2-14	Role of the highest governance body in sustainability reporting	Sustainability Governance (26-27); About the Group (158)	
2-15	Conflicts of interest	Not Applicable	Please refer to pages 71 — 85 of the 2023 Annual Report of CSCI for details.
2-16	Communication of critical concerns	Sustainability Governance (26-27, 30-31)	

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
2-17	Collective knowledge of the highest governance body	Sustainability Governance (24-25)	
2-18	Evaluation of the performance of the highest governance body	Sustainability Governance (24-25)	
2-19	Remuneration policies	Sustainability Roadmap (15)	Please refer to pages 71 — 85 of the 2023 Annual Report of CSCI for details.
2-20	Process to determine remuneration	Not Applicable	Please refer to pages 71 — 85 of the 2023 Annual Report of CSCI for details.
2-21	Annual total compensation ratio	Incomplete data	The Group will collect and organise relevant data in the future, and plan to disclose them in the next report.
Strategies, policies and practises			
2-22	Statement on sustainable development strategy	Message from the Chairman (6-7)	
2-23	Policy commitments	Sustainability Governance (28-29)	
2-24	Embedding policy commitments	Sustainability Governance (28-29); Driving Strategic and Innovative Development (43-63)	
2-25	Processes for remediate negative impacts	Sustainability Governance (35-36)	
2-26	Mechanisms for seeking advice and raising concerns	Sustainability Governance (38)	
2-27	Compliance with laws and regulations	SEHK ESG Reporting Guide Content Index (160-169)	
2-28	Membership associations	Driving Strategic and Innovative Development (58)	

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
Stakeholder Engagement			
2-29	Approach to stakeholder engagement	Sustainability Governance (38-39)	
2-30	Collective bargaining agreements	Not Applicable	The Group's employees were not covered by collective bargaining agreements.
Material Topics			
GRI 3: Material Topics 2021			
3-1	Process of determine material topics	Sustainability Governance (39-40)	
3-2	List of material topics	Sustainability Governance (41)	
Economic Performance			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (41)	

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
GRI 201: Economic Performance 2016			
201-1	Direct economic value generated and distributed	About the Group (4)	
201-2	Financial implications and other risks and opportunities due to climate change	Sustainability Governance (32-35)	
201-3	Defined benefit plan obligations and other retirement plans	Not Applicable	Low relevance to the Group's material issues.
201-4	Financial subsidies from the government	Not Applicable	Low relevance to the Group's material issues.
Anti-corruption			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (41); Driving Strategic and Innovative Development (59)	
GRI 205: Anti-corruption 2016			
205-1	Operations assessed for risks related to corruption	Driving Strategic and Innovative Development (59)	
205-2	Communication and training of anti-corruption policies and procedures	Driving Strategic and Innovative Development (59-60); Summary of Key Performance Indicators (152-154)	
205-3	Confirmed incidents of corruption and actions taken	Driving Strategic and Innovative Development (59); SEHK ESG Reporting Guide Content Index (169)	

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
Safe and healthy working environment			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (41); Nurturing and Supporting Talent (90)	
GRI 403: Occupational Health and Safety 2018			
403-1	Occupational health and safety management system	Nurturing and Supporting Talent (86, 90)	
403-2	Hazard identification, risk assessment, and incident investigation	Nurturing and Supporting Talent (90)	
403-3	Occupational health services	Nurturing and Supporting Talent (87-90)	
403-4	Worker participation, consultation, and communication on occupational health and safety	Nurturing and Supporting Talent (90)	
403-5	Worker training on occupational health and safety	Nurturing and Supporting Talent (90)	
403-6	Promoting worker health	Nurturing and Supporting Talent (90)	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Nurturing and Supporting Talent (87-90)	
403-8	Workers covered by the occupational health and safety management system	Summary of Key Performance Indicators (132)	All workers of the Group are protected by the occupational health and safety management system.

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
403-9	Work-related injuries	Nurturing and Supporting Talent (90); Summary of Key Performance Indicators (149-150)	
403-10	Work-related ill health	Summary of Key Performance Indicators (149)	
Prevention of Child and Forced labour			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (41); Driving Strategic and Innovative Development (62)	
GRI 408: Child Labour 2016			
408-1	Operations and suppliers at significant risk for incidents of child labour	Not Applicable	During the year, the Group did not identify any operations and suppliers that are at significant risk for incidents of forced or compulsory labour.
GRI 409: Forced or Compulsory Labour 2016			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	Not Applicable	During the year, the Group did not identify any operations and suppliers that are at significant risk for incidents of forced or compulsory labour.

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
Customer and Public Health and Safety			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (41); Driving Strategic and Innovative Development (63)	
GRI 416: Customer Health and Safety 2016			
416-1	Assessment of the health and safety impacts of product and service categories	Not Applicable	The Group does not have significant products and services that need to improve health and safety impacts.
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Not Applicable	The Group has no non-compliance incidents involving health and safety impacts of products and services.
Customer and Data Privacy			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (41); Driving Strategic and Innovative Development (61)	
GRI 418: Customer Privacy 2016			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Not Applicable	During the year, the Group had no substantiated complaints concerning breaches of customer privacy or losses of customer data.

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
Issues Not Covered by GRI Standards			
Business Continuity Management			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Roadmap (11-12); Sustainability Governance (41)	
Carbon-neutral Construction			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Roadmap (14); Sustainability Governance (41)	
Construction Workforce			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability roadmap (17-18); Nurturing and Supporting Talent (90, 93); Sustainability Regional Sustainability Performance Highlights (111-112)	

GRI Standards Content Index

GRI Standards	Content	Chapter (Page)	Remarks
Quality Management and After-sales Services			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (41); Driving Strategic and Innovative Development (63)	
Innovative Technology and Application			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (41); Driving Strategic and Innovative Development (49-57)	
Protection of Intellectual Property Rights			
GRI 3: Material Topics 2021			
3-3	Management of material topics	Sustainability Governance (4); Driving Strategic and Innovative Development (61)	



中國建築國際集團有限公司

CHINA STATE CONSTRUCTION INTERNATIONAL HOLDINGS LIMITED

(於開曼群島註冊成立之有限公司)

(Incorporated in the Cayman Islands with limited liability)