

Mission Drives Action



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MESSAGE FROM THE DIRECTOR



BUILDING OUR PEOPLE-CENTRIC HOME WITH HEART

Welcome to the Architectural Services Department (ArchSD) Sustainability Report 2022. With the theme "Mission Drives Action", this report marks ArchSD's journey and achievements in moving forward hand-in-hand with Hong Kong citizens in tackling the COVID-19 pandemic and climate change. With our professional expertise and "people-centric" spirit, ArchSD has confronted these challenges to build a sustainable future alongside our fellow citizens.

During the fifth wave of the pandemic, building community isolation facilities became ArchSD's most imperative task. We proactively adopted modular integrated construction (MiC) and made every endeavour to build community isolation and treatment facilities to provide a substantial quantity of beds in no time. In a mere seven days, our team completed expeditiously a new isolation facility with around 3,900 beds. In four months, we completed multiple isolation facilities in phases with an aggregate supply of approximately 40,000 beds satisfying the community's pressing needs at that moment.

Climate change was another issue of global concern. To set a good example for the community, ArchSD has been proactively incorporating green and low-carbon elements into our design. The "Cheung Sha Wan Catholic Primary School" project completed in 2021 has manifested various energy-saving applications in public facilities, expediting the decarbonisation journey in Hong Kong's built environment. ArchSD has also adopted more state-of-the-art renewable energy technologies in existing government buildings, venues and community facilities, such as the "Fanling Health Centre", the "NT Heung Yee Kuk Yuen Long District Secondary School" and "Tuen Mun Government Offices", to lead and encourage the industry in pursuing the development of renewable energy in Hong Kong.

Apart from responding to climate change, ArchSD is also continuously enhancing the quality of public facilities. We actively assimilate social factors into the design of public facilities. For instance, the "Advance Promenade from Central and Western District Promenade" and the "Phase II Development of Oil Street Art Space", both completed in 2021, are designed to enhance their connectivity with nearby recreational spaces for greater social interaction and cohesion.

Despite the challenges and uncertainties during the year, we are grateful that our efforts are recognised by many local and overseas organisations. We attained the Pioneer Award (the Green Building Leadership Category) at the Green Building Award 2021 and the Refurbishment/Revitalisation Team of the Year (Highly Recommended) at the Royal Institution of Chartered Surveyors (RICS) Hong Kong Awards 2021. Our "TechnoLand" staff training and development programme was honoured with the "Silver Award" and "Special Award for the Future Skill Development" at the "HKMA Award for Excellence in Training and Development 2021" by the Hong Kong Management Association (HKMA). These accolades motivate us to uphold our mission and strive for new levels of excellence.

Finally, I would like to express my heartfelt gratitude for the support given from all current and former ArchSD colleagues, our industry partners and stakeholders. Our endeavours and achievements amid all the challenges would not have been possible without your contribution. Looking forward, ArchSD will, as always, enhance speed, quantity, quality and efficiency to create a low-carbon, more vibrant and better Hong Kong for all.

Mr Edward Tse, JP Director of Architectural Services



About this Report

OBJECTIVES

The report – themed "Mission drives Action" - is the 19th annual sustainability report published by Architectural Services Department ('ArchSD' or 'the Department') of the Government of the Hong Kong Special Administrative Region of the People's Republic of China.

This report presents our sustainability initiatives and economic, environmental and social performance in 2021. While demonstrating our achievement in the reporting year, this report also highlights our commitment to better serving our community with continuous efforts and improvements.

SCOPE

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The Sustainability Report 2022 ('the Report') highlights ArchSD's key sustainability initiatives and achievement from 1 January 2021 to 31 December 2021. It covers the sustainability performance and initiatives of our four project management branches, five functional branches and two central management divisions.

The data represents absolute figures as of 31 December 2021 (unless otherwise stated) to the best of our knowledge. Financial data is for the financial year ended 31 March 2022. All monetary values are in Hong Kong Dollars.

ArchSD Sustainability Report 2022 | About this report

PRINCIPLES

This report has been prepared in accordance with the updated GRI Standards 2021. It also refers to the Sustainability Accounting Standard for the Engineering and Construction Industry, as defined by SASB.

The GRI Content Index correlates GRI disclosures with associated sections in this report. External assurance was carried out by an independent third party to ensure the accuracy, consistency, reliability, materiality, and credibility of the report and its adherence to the GRI Universal Standards 2021.



NOTES TO READERS

This report is published online as a web-based interactive html version and as a PDF. It is available in English, Traditional Chinese and Simplified Chinese.

The interface has been prepared in accordance with Level AA Conformance to W3C Web Content Accessibility Guidelines 2.1 and HTML5.

The report can also be viewed via tablet. Key features are:



On-screen font sizes

Picture enlargement



Search function



Dark mode display option



'My report' function – Allows readers to store selected sections and consolidate into one and printing



'Data summary' section – Provides a quick review of our performance in key areas



Glossary section – Provides definitions of technical terms using in or relevant to the Report

ARCHSD AT A GLANCE

OUR ORGANISATION AND ROLES

ArchSD's Role in the Government of HKSAR





OUR ORGANISATION AND ROLES

ArchSD's Structure



Core Functions

ArchSD performs three core functions for Government-owned and Government-funded facilities:



Monitoring & advisory service

Providing effective professional and technical advice to the Government and quasi-government organisations and to oversee subvented, and entrusted projects



Facilities upkeep

Providing efficient and costeffective professional and project management services for the maintenance and refurbishment of buildings and facilities.



Facilities development

Providing efficient, costeffective and timely architectural and associated professional and project management services for the design and construction of buildings and related facilities. **Management Team**



OUR ORGANISATION AND ROLES



Mr. Alan SIN Assistant Director (Property Services)

Mr. Frank WONG, JP Project Director/1

Deputy Director of Architectural Services

Mr. K.M. LEUNG, JP Assistant Director (Quantity Surveying)



Assistant Director (Architectural)

Mr. C.C. CHOY Assistant Director (Structural Engineering)



Assistant Director (Building Services)

Ms. Winnie CHONG 8 Departmental Secretary

Ms. Lilian CHEUNG Project Director/4



DEPARTMENT FUNDING AND EXPENDITURE

Funding

Our Departmental operation is funded by:



the Capital Works Reserve Fund, which is approved, monitored and reviewed by the Legislative Council



the Lotteries Fund, which is approved by the Director of Social Welfare



the Anti-epidemic Fund, which is launched by the Government in 2020

In 2021, we created a total of 8,347 jobs by awarding works contracts and consultancies. We commenced 34 new works and term contracts during the year.

Expenditure

In the financial year 2021-22, our department expenditure recorded an overall decrease of around 0.26%^[1] as comparing with the previous financial year in 2020-21. A breakdown of our department and programme areas^[2] for 2021-22 appears below.

Financial information and key performance details can be found in the ArchSD Controlling Officer's Report of the 2022-23 Estimates of the Government of the HKSAR, available at www.budget.gov.hk

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Actual Department Expenditure:



(0.26% decrease as comparing with last financial year)

Breakdown are shown as below:



^[1] The actual Departmental Expenditure 2021-22 was HK\$ 2,605.03 million, there was around 0.26% decrease as comparing with the actual Departmental Expenditure 2020-21 of HK\$2,611.83 million.

^[2] There are three programme areas of ArchSD's services: Monitoring and advisory services, Facilities upkeep and Facilities development.

O Founded on

11 April, 1986

O----- Staff establishment

2,042 Employees as of 31 March 2022

>----- Headquarters

The headquarters are located at Queensway Government Offices, 66 Queensway, Hong Kong

O Other offices are located at

- APB Centre, Hunghom, Kowloon
- Cityplaza 3, 14 Taikoo Wan Road, Quarry Bay, Hong Kong
- Wanchai Tower, 12 Habour Road, Wan Chai, Hong Kong
- Rumsey Street Carpark, 2 Rumsey Street, Sheung Wan, Hong Kong
- Other Premises (employed by ArchSD in delivering public services)

O----- The total office area



Our services (for the calendar year 2021)

- Number of subvented/entrusted projects reviewed: 670
- Number of facilities development projects completed: 31
- Building floor area of properties maintained: 33,440,000 m²
- Government spending on building projects: HK\$ 18,520.4 million
- Value of new works under development: HK\$ 334.6 billion

KEY FACTS OF THE DEPARTMENT

AWARDS AND TARGET ACHIEVEMENTS

AWARDS AND ACHIEVEMENTS

ArchSD is committed to serving the community with dedication and heart. Despite different challenges, including pandemic threat and climate change, we attach firmly to our visions to enrich the living environment of the community through our professionalisms and deployment of innovative

designs and features. In 2021, we were honoured to receive a number of awards and achievements in recognition of our efforts from the following professional bodies, institutions and award organisers. A selection follows.

Green Building Award 2021



ArchSD - Green Building Leadership Category

Government, Institutions & NGOs - Pioneer Award



Fire Services Department Pak Shing Kok Married Quarters

New Buildings Category - Completed Projects (Residential) - Merit Award; Special Citation on UN Sustainable Development Goals



Water Supplies Department Tin Shui Wai Building and H,OPE Centre

New Buildings Category - Completed Projects (Institutional) - Merit Award



Heung Yuen Wai Boundary Control Point Buildings and Associated Works

New Buildings Category - Completed Projects (Institutional) - Merit Award



Che Kung Temple Sports Centre

New Buildings Category - Completed Projects (Institutional) - Merit Award



Slope and Vegetation Maintenance for New Territories and Outlying Islands (North)

Existing Buildings Category - Facilities Management - Merit Award

European Healthcare Design Award 2021



North Lantau Hospital - Hong Kong Infection Control Centre

Design for Adaptation and Transformation Category - Highly Commended Award

RICS Awards Hong Kong 2021



North Lantau Hospital Hong Kong Infection Control Centre

Management Team of the Year Category - Winner



Woosung Street Temporary Cooked Food Hawker Bazaar Refurbishment/ Revitalisation Team of the Year Category - Highly Commended

CIBSE HK Awards 2021



North Lantau Hospital Hong Kong Infection Control Centre

COVID-19 Achievement Award



West Kowloon Government Offices

Public Use Building Category - Project of the Year Award - Winner



Tin Shui Wai Hospital

Public Use Building Category - Project of the Year Award - Merit

Building Surveyor Awards 2021



Construction of New Wave Breaking Boundary Wall at Siu Sai Wan Sports Ground

A&A and Conversion (Client/Client's Representative) Category - Winner



Conversion of Face Mask Workshops at Lo Wu Correctional Institution

A&A and Conversion (Client/Client's Representative) Category - Merit



Woosung Street Temporary Cooked Food Hawker Bazaar

Sustainability Award; New Development (Client/Client's Representative) Category - Merit



Refurbishment of Toilets at Ngau Chi Wan Park

Maintenance and Rehabilitation (Client/Client's Representative) Category - Merit

Repair of Timber Pitched Roof System at Annex Block of the Old Pathological Institute

Maintenance and Rehabilitation (Client/Client's Representative) Category - Merit

Slope Maintenance Term Contract for New Territories and Outlying Islands (North)

Maintenance and Rehabilitation (Client/Client's Representative) Category - Merit

ASHRAE Hong Kong Chapter Technology Award 2021



Tin Shui Wai Hospital

Health Care Facilities Category

Autodesk Hong Kong - BIM Awards 2021



Fu Shan Public Mortuary

Award Winner



Transport Department's Vehicle Examination Complex (VEC)

Award Winner

2021 Architizer A+ Awards



Hoi Ha Visitor Centre

"Gallery & Exhibition Spaces" Category - Popular Choice Winner Award

ArchSD

The Age-friendly Facilities Award

CIC Construction Digitalisation Award 2021

"Towards Corporate Intelligence CO-i"

Organisation Category - Bronze Award



Award for Excellence in Training and Development 2021



"TechnoLand - We Build our City, Turn Lines to Dreams"

Excellence in Future Skills Development and Campaign Category - Silver Award Excellence in Future Skills Development

Construction Industry Outstanding Young Person Award 2021

ArchSD - Mr. Matthew YUET

Design & Management Category





OBJECTIVES AND TARGETS

ArchSD would not be satisfied with our achievements and takes initiative to pursue continual improvement. To this end, a wide range of targets were formulated every year to track our sustainability performance. The following are our achievement highlights during the reporting year:

Aspect		Targets for 2021	Achievements (From 1.1.2021 To 31.12.2021)
Innovation	Promoting sustainable and innovative building methods	At least 80% of the new projects shall adopt MiC/DfMA design approach for Building Services installation to enhance works quality.	100% of projects complied with the target.
	Adopting renewable energy	Renewable energy technologies (RETs) such as solar panels, solar hot water panels and wind turbines shall be provided to at least 80% of new buildings with CFA more than 10,000 m ² , contributing to at least 1.5% of total energy consumption for general power and lighting or to cover at least 25% of the available roof space unless installation of RETs are justified not feasible.	100% of projects complied with the target.
	Promoting the use of Electric Vehicles	At least 8 numbers or 40% of the total numbers of contract vehicle (whichever is less) procured during the year for new maintenance term contracts shall be provided with at least 1 number of an electric vehicle.	8 numbers of contract vehicles for the new maintenance term contracts were electric vehicles.

Aspect		Targets for 2021	Achievements (From 1.1.2021 To 31.12.2021)
Collaboration	Knowledge sharing events	To conduct at least 5 numbers of seminars/experience sharing sessions to cultivate innovation design/construction such as MiC / DfMA for Building Services installations.	15 numbers of seminars /experience sharing sessions were conducted.
		To hold at least 18 numbers of knowledge sharing or collaboration events with external stakeholders with an aim to generate utmost stakeholder value and enhance collaborative innovation.	23 numbers of knowledge sharing event were conducted with external stakeholders.
	Departmental Knowledge Hubs	To have not less than 70 numbers of consolidated knowledge papers submitted and uploaded to the ArchSD Knowledge Hubs.	105 numbers of knowledge papers were uploaded to various Knowledge Hubs.
Corporate Communication	Public engagement	To organise/contribute to publicity events by working together with project staff to publicise our achievements by at least 4 planned publicity event per month.	More than 8 publicity events were organised / participated per month.
	Promoting transparency	100% compliance with the target response time under the Code on Access to Information.	100% of cases received were replied within the timeframe set out in the Code on Access to Information.
Nurturing of Talents	Briefing sessions and trainings	To strengthen staff training on innovation by organising Academy talks on BIM, MiC, CO-i, etc. by at least 8 sessions.	24 sessions on innovation (including 13 sessions on MiC and 5 sessions on BIM) were conducted.
		At least 12 external safety training courses on the latest safety technology, current safety legislation, accident investigation, etc. should be arranged for project and office staff per year.	20 external safety training courses were conducted.

GROUNDED ON ROBUST GOVERNANCE

VISION, MISSION AND VALUE



We promote inclusiveness and value diversity in workforce by providing equal opportunities in employment practices



We provide training opportunities for all people working for or on behalf of ArchSD to improve efficiency, service quality and long-term environmental and social performance



We focus on the needs of citizens and promote sustainable development in community facilities

VALUES

- O- Professionalism
- $\bigcirc \text{Commitment}$
- \bigcirc Accountability
- − Integrity
- O- Versatility
- O— Continuous Improvement
- O- Team Spirit
- O- Partnering Spirit
- O- Caring Attitude





VISION

- \bigcirc To serve the community
- $\bigcirc -$ Take care of the community
- O- Provide quality professional services
- O- Improve the quality of the living environment

MISSION

- Ensure the quality, cost effectiveness and sustainable development of community facilities
- Ensure the quality and cost effectiveness in the upkeeping of community facilities
- Provide quality professional advisory services on community facilities and related matters
- Promote best practices in the building industry



We are committed to promote healthy lives and well-being for employees by different measures



We manage climate risk through various measures



OUR STRATEGY AND **MANAGEMENT APPROACH**



We design a wide range of training and development programmes and offer adequate training resources for our employees



13 CLIMATE ACTION

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We maintain strong corporate governance and uphold high ethical standards and professional integrity. We have zero tolerance for any form of corruption

Upholding High Standards on Strategy and Management

ArchSD believes robust governance is the cornerstone for long-term sustainable development. A Senior Staff Forum (SSF) chaired by the Director is in place to oversee the internal operations and implementation of sustainability strategies and policies.





We work hand in hand with heart and care to drive excellence in design and construction practices for enhancing quality of our city



Explore new grounds and go beyond boundaries to pursue excellence in projects for evolution of our city



Unleash our creativity. We build our city with dream aesthetically



Adopt scientific approach in engineering design to drive low-carbon transformation in built environment



Embrace smart technologies to deliver high quality, efficient and reliable services to upkeep government facilities



Focus with precision, work in concision



Uphold high standards for a safe and resilient community



Work smart, trim and streamline procedures and practices for high efficiency and effectiveness



Prioritise our goals to construct dynamic community facilities meeting diverse human needs



Facing obstacles and challenges, we uphold our can-do attitude to reach our destination



Details create the big picture. We look into people-centric details to create environment in a quality liveable city



We care.

We integrate social considerations in projects to build public facilities professionally

Establishing Policies and Guidelines

To demonstrate ArchSD's commitment to long-term sustainability across our operations, we have put in place a Departmental Quality, Environmental, Health, and Safety Policy.

We adhere to the following guidelines for all services and operations:

- Fulfil the agreed requirements of our clients to the highest professional standards.
- Deliver our services in an environmentally responsible manner by implementing conservation of energy, preventing pollution and reducing the consumption of natural resources to protect the environment.
- Manage to eliminate our hazards and reduce our health and safety risks to ensure and provide a safe and healthy environment for the prevention of work-related injury and ill health from our staff, our contractors and other people who may be affected by our work.
- Involve and, where appropriate, consult our staff, our contractors and other people who may be affected by our work, and their representatives in the improvement of our safety and health performance.
- Fulfil all compliance obligations including applicable legislation and other requirements, and wherever practicable, to achieve standards beyond those that are legally required.
- Provide adequate resources and training to all staff and provide appropriate training to persons working for or on behalf of ArchSD and to continually improve our quality, environmental, occupational health and safety management system to enhance performance and effectiveness.
- Promote ArchSD's principles of quality, environmental sustainability, health and safety to our partners in work, the construction industry and the general public.

To align our services and operations with international standards, ArchSD establishes an Integrated Management System (IMS) comprising quality, environmental, occupational health and safety and energy with following international standards:

Continue for Q1264



We also refer to ISO 26000 for guidance on operating in a socially responsible way. To foster continual improvement, ArchSD will monitor and review the performance of our IMS at least once a year.

Managing Risk

To minimise potential hazards and harms to our operations, we actively manage risks by:

- identifying, assessing, mitigating and monitoring potential risks within our operational control;
- reporting details of the assessment to the Department for considerations in any decision-making process;
- following guidelines published by the Development Bureau, including the Technical Circular (Works) No. 6/2005: Implementation of Systematic Risk Management in Public Works Projects;
- conducting integrated risk assessment workshops throughout entire project lifecycle to identify
 project risks and formulate precautionary control measures for effective monitoring.

With rising temperatures, sea level rise and the expected increase in the frequency and magnitude of extreme weather events, the impacts of climate change are constantly a wake-up call of the urgency to manage the climate related risks in our operation and services. We have identified the climate risks (both physical and transition) and we have been working in different ways to excel our flexibility to improve the resilience of our operation and also for our city.

With regard to AchSD's operation and services, the physical climate risks we have identified are related to physical impacts of climate change, such as floods, typhoons, extreme heat. Transition climate risks we have identified are related to the transition to a lower-carbon economy, which entails change of facility development and upkeeping policies, practices and technologies.

To tackle climate risk, ArchSD has set up a knowledge community on "Design for Resilience" to develop best practices and design guides against adverse weather, epidemic, vandalism, etc. Furthermore, we have commissioned a consultancy study on "Design Considerations for Government Infrastructures Under Extreme Temperatures" to study the effects of extreme temperatures and their potential impacts on major Government infrastructures and to advise on the possible measures / action plans for consideration. We have thus followed up with the study findings and reviewed and updated our specifications based on the recommendations provided from the study.



Maintaining Ethics and Professionalism

ArchSD upholds a high level of integrity and ethics.

We require all staff to comply with the regulations stated in the Prevention of Bribery Ordinance. Any suspicions of bribery or corruption is immediately reported to the SSF and the Independent Commission Against Corruption for further investigation. We are committed to fulfilling all compliance obligations including applicable legislations and other requirements including but not limited to anti-corruption and anticompetitive activities.

During the reporting period, no such cases were reported.

We take an active role in organising and participating in events to encourage proactive safety management practice. Events include:

- ArchSD's Site Safety Model Workers Award Scheme;
- Considerate Contractors Site Award
 Scheme co-organised by DEVB and CIC.

We strictly uphold safety at our construction sites, adhering to or outperforming statutory requirement and DEVB guidelines. For large-scale projects, Labo

 \bigtriangledown

_ ☆ ☆ ☆ We spare no effort to secure employment rights and enhance the capabilities and technical proficiency of our staff by:

- Providing employee benefits
- Offering on-going training opportunities

adhering to or outperforming statutory requirements and DEVB guidelines. For large-scale projects, Labour Relations Officers are appointed at early stage to resolve any disputes between contractors and workers.

> We conduct annual client satisfaction surveys to review our performance and service quality. Our dedicated team handles clients' feedback and opinions to drive continuous improvement.

During the reporting period, 100% of the completed projects achieved level of "Satisfied" level or above on overall performance.

Way Forward

ArchSD always keeps exploring new grounds and pushing boundaries for continual improvement. To this end, departmental annual plan is formulated and outlines four key focus areas, including Innovation, People-centric Design, Sense of Purpose, and Slim and Trim.

Detailed descriptions of the four key focus areas are listed below.

Focus Area	Description	
Innovation	Innovate and discover new knowledge and technique to enhance internal processes, smart workflow, business facilitation, and quality of professional services in facilities development and upkeep Support R&D and promote collaboration with stakeholders and multi-disciplinary teamwork to fertilise and scale up new concepts and technologies through wider adoption in our projects	
People-centric Design	Promote best practices, empathetic approach and long-term sustainability in the design and construction of public architecture to enhance the well-being of the city and its citizens Engage stakeholders through wider participation and various communication channels & platforms to understand people's needs and to build up wider consensus and recognition of our works	
Sense of Purpose	Empower new generation and groom talents to foster a sense of purpose, recognition and team spirit in serving the community Encourage continual improvement and cultivate resilience and can-do attitude to accept challenge amid normalcy as well as critical times	
Slim and Trim	Trim & streamline cumbersome procedures and obsolete practices to spur changes for higher efficiency and effectiveness Promote work smart culture and harness on the benefits of digitalization, e-workflow and new information technology	

Targets for 2022

ArchSD puts in place a wide range of targets to track our progress towards an all-round sustainable operation, including but not limited to:

- 1. 100% of the new projects shall adopt MiC/MiMEP approach.
- 2. At least 90% of the building inspections scheduled in selected buildings be assisted with unmanned aircraft systems /drones.
- 3. To strengthen staff training on innovation by organising at least 9 nos. of Academy talks on BIM, MiMEP, MiC, CO-i, etc.
- 4. 100% of the completed projects to achieve Satisfied Level or above on the overall performance in Client Satisfaction Survey.
- 5. All new projects shall adopt at least one design recommendation under each of the four overarching principles (i.e. safety, support, cognition and wellbeing) as described in the Elderly-friendly Design Guidelines unless exempted.
- At least 50% of the new projects with central air conditioning system shall adopt smart IAQ sensors for real-time monitoring of indoor air quality (such as temperature, humidity, CO₂, TVOCs and PM2.5).
- 7. To sustain continuous enrichment with stakeholders to have at least 18 nos. of knowledge sharing or collaboration events with external stakeholders endeavoring to generate utmost stakeholder value and enhance collaborative innovation.
- 8. To organise/contribute at least 5 publicity events per month by working together with project staff to publicise the Department's achievements.
- 9. To ensure 100% of capital and minor works projects to be completed within the agreed time scale.
- 10. At least 99% emergency repairs, e.g. a burst water pipe, to be attended to within one hour of notification in Hong Kong, Kowloon and new towns in the New Territories.
- 11. To implement a digital platform for collection and analysis of BS key data for capital works projects.



We value multi-disciplinary collaboration and proactively engage with peers to promote cross-fertilisation of innovative ideas in green and sustainable development



LISTENING TO OUR STAKEHOLDERS

ArchSD maintains our pragmatic engagement mechanism to gain an in-depth understanding of the opinions, priorities and values of stakeholders. To respond to their needs and to foster long-term trust, we maintain two-way communication with them via diverse channels:



Stakeholder Interviews

In addition to the ongoing engagement with our major stakeholders, four independent interviews were conducted with members of our workforce, contractors, professional institution and client to obtain an

in-depth understanding of their expectations and gather feedback for continuous improvement on longterm sustainability and overall performance in preparing this report.

Stakeholders' Interview

Interview with Professional Institution

Interviewee:

Mr. CHEUNG Hau Wai, SBS Chairman of the Hong Kong Green Building Council

Hong Kong Green Building Council (HKGBC) strives to promote the standard and development of sustainable buildings in Hong Kong. We have been working closely with ArchSD in developing and using building life cycle approach to minimise the carbon footprint in Hong Kong's built environment. Leading by example, ArchSD proactively implements a wide array of green building initiatives in their projects and the department is also one of the pioneers in adopting Hong Kong's own green building rating tool, the Building Environmental Assessment Method (BEAM) Plus, in Hong Kong. This helps raise green building awareness in the industry and community to scale up efforts of green building development in Hong Kong.

ArchSD does not limit itself to green government building achievements but contributes to facilitating green and low carbon development for the whole Hong Kong's built environment. ArchSD has been playing an active role in various HKGBC's committees for giving expertise advice on green building initiatives and also sustainable innovations. We appreciate ArchSD's view on the importance of setting up science-based framework, decarbonisation roadmap and also third-party accreditation for encouraging building sector's decarbonisation towards Government's commitment to achieving carbon neutrality by 2050. We also value ArchSD's contribution in HKGBC's current initiative to develop a target setting tool and a certification scheme for net-zero ready and super-low energy buildings.

To address the potential physical risk associated with climate change on the built environment, we anticipate ArchSD would strive to adopt climate risk management strategy and further promote naturalbased solutions and climate-resilient design in the industry. We look forward to ArchSD leveraging its leading position to facilitate climate action and deep decarbonisation of Hong Kong's built environment with its dedication.



Our Response

We regard the HKGBC as one of the most valuable partners that shares our commitment and goals in promoting green and low carbon development in Hong Kong's built environment. We are pleased to know that our efforts are appreciated by HKGBC. In supporting Government's commitment to achieving carbon neutrality by 2050, we will keep working hand-in-hand with all stakeholders and continue to develop and support a wider adoption of green and low carbon building initiatives in the industry, aiming to promote best practices and innovation for sustainability to accelerate Hong Kong's built environment's decarbonisation journey.

Stakeholders' Interview

Interview with Contractors

Interviewees:

Mr. Ko Siu PANG, Raymond Executive Director of SOBC and SOC (Left)

Ms. Rosana WONG

Executive Director of Yau Lee Holdings Ltd. (Right)

Over the years, we have maintained close partnership with ArchSD. As the design and build contractors for ArchSD's projects such as the Kwai Chung Hospital (Phase 2) and Community Health Centre cum Social Welfare Facilities at Pak Wo Road in North District, we appreciate the guidance and support ArchSD has been providing all along our cooperation journey.

ArchSD's determination and leadership in maintaining and improving project quality and construction efficiency, are clearly reflected throughout the project construction cycle. ArchSD's proactive approach in promoting smart and innovative construction is particularly evident. With the policy support fromArchSD by enhancing the tender requirements, we are able to scale up the application of innovative construction technologies and methods, inlcuding BIM, MiC and MiMEP, which further improves construction productivity and resources efficiency of our projects. ArchSD always facilitates sharing of experiences and insights via diversified channels on the practicality of these advanced methods and technologies and the possible challenges that may be encounterede. This accelerates the adoption of innovative and smart construction practices and constributes to sustainable development of the industry.

On the other hand, ArchSD spares no efforts in improving construction site's environmental performance, occupational health and safety as well as workers' wellbeing through providing on-going support to enhance contractors' management approach and performance. Beyond fulfilling statutory and contractual requirements, numerous meetings and workshops are organised between ArchSD and contractors to review and enhance the actual implementation of measures related to environmental, occupational health and safety as well as workers' wellbeing. ArchSD also encourages its partners to strive for excellence and continually improve to exceed industry standards. The quarterly-issued 'Contractor Performance Report' comprehensively assesses the quality of our work. Contractors' efforts to enhance sustainability performance are also well recognised in various annual incentive schemes, such as 'Green Contractor Award (GCA)'. This year, we are honoured to receive the Special Award (Worker Wellbeing) under the GCA scheme. A special sharing session has been arranged by ArchSD for GCA awardees, which provides precious opportunities for the participants to exchange insights and keeps us abreast of the industry best practices.

All in all, our long-term partnership with ArchSD has been a fruitful one. ArchSD has always been engaging us in an open dialogue that embodies mutual trust and serves to achieve effective communication and interaction. We look forward to ArchSD leveraging its leading role to further promote best practices to drive innovation in construction and contribute to sustainable development, thereby raising the benchmark for the construction industry.



Our Response

We value our partnership with our contractors and appreciate their efforts. We are keen to seek collaboration with our contractors on discovering innovative and sustainable solutions for leveraging the sustainability performance in construction projects. Moving forward, we will continue to engage and interact with our contractors to enhance and prolong our partnership with trust as we move towards our vision of sustainable development.

Stakeholders' Interview

Interview with Client

Interviewee:

Harbourfront Commission, DEVB

The Wan Chai promenade from Tamar in Admiralty to the Hong Kong Convention and Exhibition Centre was opened in mid-2021, adding a child-friendly green space along the Wan Chai waterfront for public to enjoy diversified activities and to appreciate the panoramic view of Victoria Harbour.

We are glad to have ArchSD overseeing the project, from design to post-construction stage. ArchSD has demonstrated a high level of professionalism and dedication at different stages of project. We appreciate ArchSD's effort in proactively exploring innovative approaches and bringing new ideas in designing the space. Unlike conventional children's playgrounds mainly featuring fixtures or proprietary playing equipment, ArchSD proposed the "FunScape" theme with an open lawn setting of the activity area for improvised games or group activities by ways of horticulture design and undulating grass berms with colourful pipes tunnelling, offering users an inclusive, imaginative and fun play experience. Besides, suitable provisions such as enhanced lighting and hoarding along the site boundary were provided during the construction period and that would upkeep and even add value to the adjacent environment for public uses at the project implementation stage.

On the other hand, ArchSD's team was very helpful and responsive during the whole project lifecycle. ArchSD has displayed foresight and actively engaged with DEVB and other stakeholders to seek thorough understanding of the public and other stakeholders' needs and concerns, sort out possible technical issues and explore effective solutions together. For example on the safety concern of the facilities at activity area, ArchSD took the initiative to study similar designs of the parks in foreign countries and responded quickly to refine the setting to strike a balance between safety and excitement of the facilities.

Since its opening to public, the promenade has become one of the most popular walking routes between Central and Wan Chai. People from all walks of life enjoyed diversified activities at the new space round the clock, ranging from jogging, playing ball games, sunbathing, etc., creating memorable moments together. We appreciate ArchSD's effort in this project and look forward to future collaborations with ArchSD to promote sustainability and provide quality facilities to the public.



Our Response

It is ArchSD's pleasure to work in close partnership with Harbourfront Commission of DEVB in the design and construction of the Wan Chai promenade, and the collaboration has been highly efficient and successful. We share common commitment and goals to promote sustainability and provide quality facilities to the public. ArchSD will continue our dedication and leveraging our expertise to create inclusive public spaces that can be enjoyed by different groups of members of the community to enhance interactions and foster social cohesion despite differences in needs and interests.
Stakeholders' Interview

Interview with Staff

Interviewee:

Community Isolation Facilities Team

With a sense of purpose, we, as ArchSD staff, are dedicated to serving the community. When faced with the 5th wave of COVID-19, we all held the same belief in completing the community isolation facility (CIF) projects as soon as possible to cater to the community's needs.

Anticipating the dramatic need for CIF in the community, ArchSD reacted promptly to initiate projects and foster partnerships with different parties through prior communication. This significantly facilitated communication and cooperation with various working parties throughout the project cycle. Furthermore, colleagues that held experience in running projects adopting innovative construction method i.e. MiC were assigned to take the lead as to facilitate the design and construction of the CIFs in this intensive wave. Their experience in dealing with the obstacles, including project management and logistics issues in fast-track projects, was precious in helping resolve the various issues that emerged. This contributed to the extraordinary engineering miracle that ArchSD helped make happen by delivering six community isolation facilities within 7 to 33 days.

Working closely with our stakeholders and with the strong support from our management level helped boost the project efficiency and enhance our working experience with multiple governmental departments and public utilities. We received not only full support from our colleagues but also from other external parties to prioritise the CIFs projects. For example, there were working panels responsible for processing the application of on-site tree removal in CIFs in Kai Tak, which would generally take several months to process with the application. Amid the critical times, the approving authority prioritised our applications, and the application was approved with condition within 4-10 days. This promptness helped create a positive working atmosphere to energise and drive us further to overcome the obstacles we faced whilst always being dedicated to serving the community.

Through these CIF projects, our perseverance to overcome challenges and our determination to serve the community as a team both grew exponentially. We are grateful that our contribution during the intensive wave of COVID-19 is well recognised by the department. The department treasures our contribution with the distribution of appreciation letters and little gift to recognise the effort of all staff members. We have also received thank you messages from the management level during different occasions to recognise our contribution. We will continue to strive for further improvement in future projects, enhancing the community with heart and care.



Our Response

ArchSD appreciates and treasure our colleagues' efforts and dedication to different projects. In the future, ArchSD will continue to devote more resources to enrich our staffs with various kind of exposure and experiences and equip them with skills to stay agile amid critical times to cope with the emerging environmental and social crisis and adverse situations.

Associations & Committees

ArchSD strives to further strengthen external stakeholder engagement by appointing representatives to provide recommendations and undertake experience sharing with professional bodies and external committees, including but not limited to:

- Steering Committee on Climate Change and Carbon Neutrality to pilot long-term strategy to combat climate change and achieve carbon neutrality in Hong Kong;
- DEVB Building Information Modelling (BIM) Working Group to compose strategies to facilitate BIM and digital technology adaptation in the construction industry;
- Joint Working Group on Modular Integrated Construction (MiC) to determine suitable technology and method of modular integrated construction in Hong Kong;
- Steering Committee on the Promotion of Green Building and Renewable Energy to formulate strategies to foster green buildings and renewable energy and provide recommendations on relevant measures; and
- **Task Force on Accessibility** to review barrier-free design of buildings and transportation, and formulate strategies and measures on related matters.



ESTABLISHING ESG MATERIALITY

Materiality Assessment

Following reporting principles and requirements of the GRI Standards, ArchSD identifies material economic, environmental and social topics that pose greater impacts on ArchSD and its stakeholders through a comprehensive materiality assessment process.

This year, ArchSD has commissioned an independent consultant to conduct an ESG materiality assessment, using a quantitative approach to identify the material topics, which followed the steps stated in 'GRI 3: Material Topics 2021'.

Questionnaire surveys were conducted in July 2022 and six prioritised stakeholder groups who have significant impacts on ArchSD's operations or could be significantly affected by our operations were invited to provide feedbacks on sustainability topics relevant to the nature of ArchSD's operations. These stakeholder groups included:



Academia / Professional Bodies



Clients i.e. other Government Departments



Consultants



Contractors



Staff





21 relevant sustainability topics including environmental protection, social responsibility and human rights protection, staff welfare and development, etc. were covered in the surveys. Total 527 responses were received. In addition to launching the surveys, we also maintain close communication and collect

feedback from stakeholders via our well-established communication channels in the course of daily operation as mentioned in sub-section 5.3. Materiality of all 21 topics is listed in the table below.

	Topics	Materiality
Environmental	Material Consumption and Sourcing	High
	Energy Use and Efficiency	High
	Water Consumption and Conservation	High
	Protection of Biodiversity	Low
	Waste Management	High
	Climate Change Adaptation	High
	Greenhouse Gas Emission Management and Monitoring	High
	Supplier Environmental Assessment	Medium
Social	Human Resources Management System (e.g. staff recruitment, promotion, etc.)	Medium
	Occupational Health and Safety	High
	Staff Training and Development	High
	Equal Opportunity and Tolerance (e.g. ratio of male and female employees)	Low
	Non-Discrimination (e.g. handling of discriminatory behaviour)	Low
	Community Engagement (e.g. conversate with stakeholders in the community, organise engagement programmes)	Medium
	Users' Health and Safety in Using the Facilities	High
	Social Assessment of Suppliers (e.g. performance in occupational health and safety)	Medium
	Protection of Data Privacy (e.g. compliance with the Personal Data (Privacy) Ordinance)	Medium
Governance	Economic Performance (e.g. operating costs)	Low
	Indirect Economic Impacts (e.g. jobs created by consultants and contractors)	Low
	Local Procurement (e.g. proportion of spending on local suppliers)	Low
	Anti-Corruption (e.g. policy communication and training)	High

After reviewing the consolidated feedback from all stakeholder groups, we have identified 10 material topics, which will be disclosed in details in the Report to respond to the stakeholders voluntarily. In addition, extra information that related to employment, non-discrimination and procurement for

stakeholders will also be disclosed in this report in order to give stakeholders a better understanding on ArchSD's sustainability issues.

Supporting the UN Sustainable Development Goals (SDG)

We have reviewed the mapping with the UNSDGs by identifying the direct and indirect impacts created by ArchSD's operations. This exercise has helped us to focus on the formulation of policies and measures to improve our sustainability performance.

Economic

- O- Procurement Practices
- O— Anti-corruption



In the reporting year, we have updated the list of sustainability issues as material to our operations, with

our strategies and practices showcased in the relevant chapters.





Social

- O— Employment
- O- Occupational Health and Safety
- O- Training and Education
- O- Non-discrimination
- O— Community Investment





Environmental

- O— Energy
- O— Emissions
- O- Effluents and Waste
- O— Supplier Environmental Assessment
- O— Green Building









FORGING AHEAD ON THE JOURNEY OF SUSTAINABILITY THROUGH OUR PROJECTS

Driving Low Carbon Transformation in Built Environment



We actively adopt renewable energy technologies to generate clean energy for building usage



We provide citizens with safer, more inclusive and accessible green public spaces $% \left({{{\mathbf{r}}_{i}}} \right)$

Adoption of Low-Carbon Design and Smart Technologies

Buildings in Hong Kong account for about 90% of the city's electricity usage and over 60% of our carbon emissions are attributable to generating electricity for buildings. ArchSD attaches great importance to deep decarbonisation in Hong Kong's built environment and throughout the years, we have devoted considerable effort towards adopting innovative, low-carbon building designs to drive for the efficient utilisation of energy and material resources.





We strive to reduce waste generation during the construction process by adopting different innovative construction methods



We actively apply low carbon design to reduce carbon emissions

Passive Design Approaches

Passive design approaches harness building architecture to provide energy saving benefits and enhance thermal comfort. Appropriate measures in suitable planning, disposition, orientation, building form and material selection are adopted to optimise the interaction between a building and its local microclimate. The aspects taken into consideration include:



Active Sustainable Building Design Approaches

As opposed to passive design, active design approaches utilise electrical and mechanical systems to create and sustain comfortable conditions. These installations contribute to improving building energy efficiency, water conservation and enhance indoor air quality. The aspects taken into consideration include:



Heating, ventilation and air conditioning (HVAC) systems and water efficient devices



Lighting systems



Renewable energy technologies

As per the objective in fostering climate change mitigation and achieving carbon neutrality, ArchSD has also pioneered projects with smart technologies and digital infrastructure such as Building Information Modelling (BIM), smart asset management and artificial intelligence (A.I.), to improve both construction and operational quality and efficiency, minimising carbon footprint in Hong Kong's built environment.







Driving Low Carbon Transformation in Built Environment

Case Study

Cheung Sha Wan Catholic Primary School

Cheung Sha Wan Catholic Primary School

Cheung Sha Wan Catholic Primary School is the reprovisioning of Pak Tin Catholic Primary School in the Sham Shui Po District. The school, on site of approximately 6,500 square metres, accommodates 30 typical classrooms with other teaching rooms and ancillary facilities. A wide range of passive and active designs such as green planting, natural lighting and ventilation, renewable energy technologies have been applied to reduce the overall carbon footprint.



A sustainable school for a greener society









Driving Low Carbon Transformation in Built Environment

Case Study

Reprovisioning of Fu Shan Public Mortuary at Sha Tin

Reprovisioning of Fu Shan Public Mortuary at Sha Tin

Located in Sha Tin, the re-provisioned Fu Shan Public Mortuary is the largest public mortuary building in Hong Kong with construction floor area of approximately 18,200 m². It is one of the pilot projects in ArchSD which integrates advanced technologies and digital infrastructure with the use of Multitrade integrated Mechanical, Electrical and Plumbing (MiMEP), Building Information Modelling (BIM) and Cloud-based Common Data Environment (CDE) in reducing manpower and enhancing site safety, construction efficiency and sustainability performance.





The use of BIM improves the overall building quality through optimising design and planning, bridging communication and reducing waste. It minimises abortive works caused by unfeasible designs and safety pitfalls Case Study - Reprovisioning of Fu Shan Public Mortuary at Sha Tin



With the help of BIM, standardisation of DfMA and MEP module is possible because dimensions are precisely coordinated. Time and manpower are greatly reduced.





Driving Low Carbon Transformation in Built Environment

Case Study

Community Isolation and Treatment Facilities

at Penny's Bay (Phase 5 & 6), Kai Tak, Tam Mei in Yuen Long, Hung Shui Kiu, Ma Sik Road at Fanling, Hong Kong Boundary Crossing Facilities Island of the Hong Kong-Zhuhai-Macao Bridge, San Tin and Tsing Yi

Community Isolation and Treatment Facilities

at Penny's Bay (Phase 5 & 6), Kai Tak, Tam Mei in Yuen Long, Hung Shui Kiu, Ma Sik Road at Fanling, Hong Kong Boundary Crossing Facilities Island of the Hong Kong-Zhuhai-Macao Bridge, San Tin and Tsing Yi

To tackle the fifth wave of the epidemic, ArchSD was devoted and promptly responded to the shortage of Community Isolation and Treatment Facilities (CITFs) with assistance from Central Government. ArchSD applied efficient construction methods and delivered six community isolation facilities within 7 to 33 days. Two other community isolation and treatment facilities in larger scale were also completed in phases from late April to June 2022. Completion of CITFs within such a short period of time is a miracle of construction in Hong Kong.





Despite facing the urgent needs, ArchSD held its professionalism. Efficient construction methods were used to develop the CITFs with high standard and inclusion of sustainable design features Case Study - Community Isolation and Treatment Facilities at Penny's Bay (Phase 5 & 6), Kai Tak, Tam Mei in Yuen Long, Hung Shui Kiu, Ma Sik Road at Fanling, Hong Kong Boundary Crossing Facilities Island of the Hong Kong-Zhuhai-Macao Bridge, San Tin and Tsing Yi

Fact Sheet

Locations:

Penny's Bay

Former runway area of Kai Tak

Tam Mi, Yuen Long (private land lent by Sun Hung Kai Properties)

Former site of The Boxes, San Tin (private land lent by Sun Hung Kai Properties and Henderson Land Development)

Hung Shui Kiu, near Kai Pak Ling Road

Tsing Yi Town Lot No. 200

A site located in Fanling North New Development Area, next to Ma Sik Road, Fanling (private land lent by New World Development)

A site on the south-eastern part of the Hong Kong Boundary Crossing Facilities Island of the Hong Kong-Zhuhai-Macao Bridge, north of Tuen Mun Chek Lap Kok Tunnel Road



MiC and pre-fabricated MiMEP modules were adopted to facilitate on-site installation and connection of building services equipment to reduce construction time.

Application of DfMA concept and standardisation of pre-fabricated components for assembly to improve installation efficiency and quality.

> Sustainable features were included in community isolation and treatment facilities projects, such as variable refrigerant volume airconditioning system.

Case Study - Community Isolation and Treatment Facilities at Penny's Bay (Phase 5 & 6), Kai Tak, Tam Mei in Yuen Long, Hung Shui Kiu, Ma Sik Road at Fanling, Hong Kong Boundary Crossing Facilities Island of the Hong Kong-Zhuhai-Macao Bridge, San Tin and Tsing Yi





Driving Low Carbon Transformation in Built Environment

Case Study

Installation of Renewable Energy Technologies in Existing Government Facilities

Installation of Renewable Energy Technologies in Existing Government Facilities

To reduce carbon emission in combating climate change, ArchSD has endeavoured to deliver renewable energy projects in collaboration with various Bureaux and Departments. From 2020, ArchSD had completed various renewable energy projects in existing government buildings including schools. 24 projects had installed photovoltaic (PV) systems to meet on-site energy demand and feed-in extra energy generated to the grid. 4 projects in leisure and cultural venues including government-managed parks and town halls had installed solar lamp poles with batteries operating in a self-powered manner to aid the development of sustainable urbanisation. ArchSD will continue to take the lead in implementing renewable energy projects at various government facilities, moving towards to a low carbon city.





ArchSD make use of natural sunlight in renewable energy projects to assist the development of low-carbon and sustainable urbanisation





Case Study - Installation of Renewable Energy Technologies in Existing Government Facilities



Driving Low Carbon Transformation in Built Environment

Case Study

Smart Toilet at APB Centre

Smart Toilet at APB Centre

The toilet on 9/F, Main Block of APB Centre in Hung Hom is the first project under the toilets refurbishment programme to implement Smart Toilet Management System. The pilot scheme infuses smart applications and Internet of Things (IoT) devices. The Smart Toilet Management System and the data collected (such as toilet cubical occupancy, queuing situation) allow us to formulate preventive maintenance plan which ultimately extend the lifespan of building elements and bring down maintenance needs, hence reduce carbon footprint and contribute towards carbon neutrality. The wash-basin cabinets in the smart toilet also adopt Design for Manufacture and Assembly (DfMA) approach. By maximising off-site prefabrication through DfMA, material wastage can be reduced and operations on-site can be minimised.





The Smart Toilet adopted various types of IoT sensors to send out real-time alert to enhance service quality and formulate preventive maintenance plan for optimisation of resource management

Case Study - Smart Toilet at APB Centre



Case Study - Smart Toilet at APB Centre



Quality Green and Sustainable Buildings

We work closely with our contractors and industry partners to implement a wide range of green building initiatives and promote sustainability across multiple sectors. ArchSD underlines its strategic approach to sustainability by adopting the BEAM Plus New Buildings for new projects. As of the end of 2021, we have earned BEAM Plus (New Buildings) certification for 41 new buildings, BEAM Plus Interior certification for 4 offices and BEAM Plus Existing Building (Selective Scheme) for 3 buildings.

Certified Buildings under the BEAM up to 2021

Type of Certificate	Rating		Subtotal
	Platinum	Gold	
BEAM Plus (New Buildings) Certification* (Version 1.1, 1.2)	15	26	41
	Platinum		
BEAM Plus (Interior) Certification	4		4
	Excellent	Satisfactory	
BEAM Plus Existing Building (Version 2.0 Selective Scheme) Certification	2	1	3

* Reference to specific versions of the BEAM Certificate: Version 1.1 – BEAM Plus New Buildings. 2010; and Version 1.2 – BEAM Plus New Buildings. 2012.



We strive to promote a sustainable city and living through providing the community with safe, inclusive and accessible public facilities with finest quality



CREATING HEALTHY AND SUSTAINABLE LIFESTYLE

ArchSD is dedicated to build a more sustainable city in developing and maintaining the public facilities for the general public with our industry partners, user departments and stakeholders. With this commitment, ArchSD is determined to integrate social considerations in our projects to improve the quality of urban living through a variety of means, including providing green, high-quality and accessible public spaces, and encouraging activities to advocate communication between members of the community, allowing public to enjoy drops of leisure moments and get a respite from the fast-paced city life.





Creating Healthy and Sustainable Lifestyle

Case Study

Advance Promenade from Central & Western District Promenade (Central Section) to the Hong Kong Convention and Exhibition Centre

Advance Promenade from Central & Western District Promenade (Central Section) to the Hong Kong Convention and Exhibition Centre

The Advance Promenade connecting Tamar to the Hong Kong Convention and Exhibition Centre provides a children-friendly green space along the Wan Chai Waterfront and offers breath-taking views of Victoria Habour. The promenade is about 560m long and easily accessible from Admiralty MTR Station, Central Piers and Wan Chai Ferry Pier. The promenade has different forms of sitting-out areas and topography landscaping. It provides 7,800 m² of lawn area for strolling and playing, which serves as an ideal venue for public leisure activities.

The Victoria Harbour Promenade, which stretches to a total length of 5.5 km with the addition of this Advance Promenade, is by far the longest harbourfront trail in Hong Kong.





Play together along the promenade



Use of wind-powered and solar-powered lamp poles contribute to a green city.





Creating Healthy and Sustainable Lifestyle

Case Study

Improvement of Hoi Bun Road Park and adjacent area

Improvement of Hoi Bun Road Park and adjacent area

Adjoining to Kwun Tong Promenade, Hoi Bun Road Park is an urban sanctuary in a dense industrial district. Mediating a piece of nature amid the city fabric, the park allows pedestrian flow by bridging the inner city to the waterfront. The pavilions are situated on the garden edge to screen off the busy street and manifest a theatre backdrop for the central lawn. Carefully placing transparent screens and trellis within the park, different outdoor rooms are characterised to allow the public to enjoy at all times. Numerous activities could be held, varying from family gatherings at sitting-out areas, music busking at pavilions, elderlies' working-out at fitness areas, picturing the magnificent sunset views at the blossoming garden to holding events, at the multi-purpose plaza.





Located in the hustle industrial area of Kwun Tong, the Park serves as a Green Oasis for enjoyment and refreshment


Apply eco-friendly materials and reutilise existing resources to reduce waste and provide revitalised refreshments to users.



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Creating Healthy and Sustainable Lifestyle

Case Study

Phase 2 Development of Oil Street Art Space

Case Study

Phase 2 Development of Oil Street Art Space

The project includes the development of an additional two-storey exhibition block and open spaces adjacent to a Grade 2 Historic Building in Hong Kong's Eastern District. The building is the former Clubhouse of Royal Hong Kong Yacht Club built in 1908. It is currently used by the Art Promotion Office as an Art Space called "Oi!". Located in a densely populated urban area, the Art Space is a valuable leisure place in the city. It preserves the site's tranquillity and create new spaces for art exhibitions and activities with different characters, satisfying the diverse needs of different community groups in the city.





One of the best places for art and culture enthusiasts

Case Study - Phase 2 Development of Oil Street Art Space



an open-air museum, are intended for outdoor theatre and other multicultural activities.





Creating Healthy and Sustainable Lifestyle

Case Study

Expansion of Tuen Mun Wu Hong Elderly Health Centre at G/F and 1/F (part), Tuen Mun Wu Hong Clinic

Case Study

Expansion of Tuen Mun Wu Hong Elderly Health Centre at G/F and 1/F (part), Tuen Mun Wu Hong Clinic

Tuen Mun Wu Hong Elderly Health Centre welcomes the aged community to a sustainably designed elderly-friendly medical retreat. The elderly-friendly design principles in the centre were implemented via zoning, interior design, clear signage, finishing materials, etc., which carefully considered safe use by the elderlies in the centre. With its simple layout and circulation planning design, this centre provides an uplifting environment for the elderly, improving their well-being to receive high-quality medical, physical and psychological services.





By integrating the outdoor natural environment with the indoor elderly-friendly design, Tuen Mun Wu Hong Elderly Health Centre allows the elderly to receive medical treatments with a calm and positive mentality for healing



Provision of wall-mounted handrails and benches can encourage the elderly to navigate safely with ease.





ENHANCING WELLNESS OF OUR PEOPLE

NURTURING OUR PEOPLE



We strive to uphold the highest health and safety standards through our commitments in the Quality, Environmental, Health and Safety Policy and by conducting regular safety inspections and risk assessments to safeguard our workforce



We support our team in developing professional capabilities to unleash their potential by offering diverse and innovative learning and development opportunities

8 DECENT WORK AND ECONOMIC GROWN

We provide opportunities and support our employees by offering training for them to develop professional qualifications



Providing Diversified Training and Development Opportunities

ArchSD understands building a professional and skilled workforce is critical to its delivery of service to clients and the general public, especially in the ever-changing environment in the architecture and construction industry. Catching up with the pace of construction technology advancement, we continue to expand the resources dedicated to employee training and development. During the year, we have allocated particular emphasis on innovation and technology such as DfMA, MiC, MiMEP and BIM to ensure the agility of our talents when adapting to industry trends.

To bring the most values out of our training programmes while catering the needs of our staff, we deliver the training through diverse choices of platform and format. Staff can access the resources in forms of, for example, academic talks, structured classroom training, workshops and seminars, large-scale symposiums, oversea visits, on-the-job training, coaching and mentoring, e-learning and competitions.



Academic talks



Structured classroom training



Workshops and seminars



Large-scale symposiums



Oversea visits



On-the-job training



Coaching and mentoring



E-learning and competitions



During the reporting year, ArchSD has successfully provided 653 training courses, totaling 55,543 hours. Each staff member received an average of 27 hours of training.

Training Hours Per Staff



Training Categories

Training Type	Number of Trainees	Number of Training Hours
Leadership & Management Skills	46	1,197
Professional & Vocational Training	15,585	49,906
Career Development	947	4,441
Total	16,578	55,544

Caring for Staff Wellbeing

ArchSD encourages our staff to pursue work-life balance and maintain a good mental and physical wellbeing. We also strive to foster a harmonious working environment and a strong team spirit, of which

the team supports each other through work and personal challenges and ultimately achieve a collective success. We continue to organise a broad spectrum of sports and recreational activities, such as:



Visit to Hoi Ha Visitor Centre



Visit to Hong Kong Palace Museum



Visit to the maintenance project of the Big Buddha



Development Bureau (Works Branch) Inter-departmental Bowling League

In addition, ArchSD organises an innovative programme, "Lunchat" in our Mentorship Scheme this year. Over lunch, staff can examine various topics, from wellness, sports, to outdoor activities and travelling

with the purpose of fostering the development of a harmonious working environment.



Year 2021 marked the 35th anniversary of ArchSD. A celebration event "ArchSD Fun Day" was organised to allow staff and their family members to share the Department's latest development and achievements.





We have established a robust IMS and aligned our operations with international standards for environmental protection, occupational health and safety, and quality management, aiming to create a green working space



We minimise the use of resources and reduce the waste for our daily operation



PROMOTING A GREEN WORKING



We adopt sustainable building designs and new technologies in our offices to improve energy efficiency



We conduct regular carbon audits at our offices to quantify our carbon footprint and explore technological advancement as well as good operational practices to optimise resources consumption

In light of the pressing climate change challenges, ArchSD shoulders our indispensable responsibilities as a government department to create a green workplace. We develop a departmental Quality, Environmental, Health and Safety Policy and incorporate departmental environmental practices in our daily operations to reduce our impacts to the environment. We also focus on fostering employee environmental awareness through programmes and daily engagement to optimise our sustainability efforts.

Along with the policy, we actively introduce various waste reduction, energy and water saving measures to reduce the overall carbon footprint. Below are the highlights of the measures.

Aspect	Highlight of Environmental Measures
Waste Reduction	 Issue green housekeeping guidelines to disseminate information about appropriate practices in waste reduction, recycling and handling, for example: Adopt electronic functions / systems to reduce paper consumption / printing need; Reuse materials i.e. single-sided paper, envelopes, files, tags, etc instead of using virgin materials. Set up a multitude of collection points to collect materials such as metal and plastic waste for recycling. Monitor the implementation progress of different waste reduction measures and formulate annual targets on waste reduction to drive further improvement.

Aspect	Highlight of Environmental Measures
Energy Saving	 Manage our consumption practices across our operating premises to ensure efficient energy utilisation, for example: Use occupancy/motion sensors to automatically switch on and off the lighting in areas with low traffic flow; Maintain room temperature at 25.5°C to avoid excessive cooling; Set all office equipment to energy saving mode during office hour and switch off the equipment after office hour. Monitor energy use pattern to identify abnormalities in energy consumption and explore energy efficiency enhancement opportunities, such as lighting retrofitting works at our offices. Target on energy saving is set annually to further drive the energy reduction effort.
Water Reduction	 Manage our consumption practices across our operating premises to ensure efficient water utilisation, for example: Use auto-sensing taps and dual flush cisterns to avoid excessive use; Inspect and maintain the water supply system regularly to avoid leakage. Monitor water consumption pattern to identify abnormalities and explore water use efficiency enhancement opportunities.

To further reduce our carbon footprint, we ought to understand our own carbon emissions thoroughly in order to identify and implement targeted measures to reduce greenhouse gas emissions in an effective way. We regularly conduct carbon audits to quantify our carbon footprint. The audits are carried out in

accordance to the international standards Greenhouse Gas Protocol and making reference to guidelines published by the Environmental Protection Department and the Electrical and Mechanical Services Department.

Carbon emissions produced by QGO office



PROMOTING A GREEN WORKING CULTURE



^[1] A territory-wide default emissions factor was used to calculate these emissions.

^[2] The figures were calculated by measuring the actual usage of fuel in mobile sources and paper consumption (A3 and A4) and wastepaper collected for recycling at QGO.

Carbon emissions produced by APB centre



PROMOTING A GREEN WORKING

^[3] A territory-wide default emissions factor was used to calculate these emissions.

The concerted efforts from our management and staff has earned ArchSD the Hong Kong Green Organisation Certificate (HKGOC). The consecutive recognition from the Environmental Campaign Committee serves as a testimony and future motivation to our conscientious contributions to the environmental protection in workplace.



'Good Level' IAQwi\$e certificates (APB centre and QGO)

Hong Kong Green Organisation

ACTIVATING SUSTAINABILITY SYNERGY IN OUR VALUE CHAIN

VALUING OUR CLIENTS

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ArchSD makes continuous effort in reaching client satisfaction through constant review, measurement and analysis of clients' feedback. We continued to focus on taking clients' interests and expectations into account throughout the lifecycle of projects. With ongoing improvement in our operations and project management, we are committed to delivering high quality and professional services to our clients.

To better understand and surpass the expectation of our clients, a Client Satisfaction Survey is conducted as one of our key performance assessment metrics on an annual basis. In 2021, a total of 18 surveys were conducted to reflect the overall outstanding performance of projects at different stages. Satisfied Level on Overall Performance

100% of the completed projects achieved "Satisfied" level or above on overall performance





PROMOTING SAFETY CULTURE AT CONSTRUCTION SITES

Adhering to the core values of professional integrity and sustainability, ArchSD has always been providing public facilities of finest quality for society. We maintain a robust ongoing stakeholder engagement with our key stakeholders, including clients and business partners, to ensure sustainability best practices are pursued throughout our value chain. We require all ArchSD's contractors and suppliers to strictly abide by the Hong Kong Laws, such as the anti-corruption laws, upon submission of their tenders.

As a part of ArchSD's commitments to maintaining workplace safety, we required our contractors to strictly adhere to all applicable site safety requirements while inducing industry best practices. To raise the safety awareness of our contractors, contractors are encouraged to access comprehensive guidance materials in our knowledge bank, including site safety checklists, briefng notes, safety audit results, and other relevant documents, alongside with the regular dissemination of information regarding Work Safety Alerts issued by Labour Department and other safety reminders.

To further safeguard occupational health and safety of contractors, members of our Departmental Safety & Environmental Advisory Unit visit project locations to perform surprise inspections in relation to specific site safety issues that have been brought to our concerns and to ensure corrective actions are taken in a timely manner.

In 2021, a total of 196 site inspections were conducted on selected topics or issues related to site safety and unannounced safety inspections for new worksites, including:



In addition, we arrange regular project progress meetings to keep track and review on contractors' environmental and safety performance. We also proactively and conscientiously discuss with contractors to formulate actions and remediation plans to improve substandard performance.





We strive to promote adoption of renewable energy technologies at construction sites



IMPLEMENTING GREEN AND SMART PRACTICES AT CONSTRUCTION SITES



We encourage waste reduction at source and promote active recycling across construction sites

In ArchSD's projects, diversified practices have been initiated and applied on site operations by our contractors to monitor on-site sustainability performance and progressively outperform the industry for

demonstration of best practices. Innovative and self-initiated practices were also introduced. The four major green and smart practices are described as follows:



Energy Efficiency

- O— Install energy-saving lighting systems
- O— Use intelligent sensors
- O— Use renewable energy
- O— Build temporary transformers



Emission Mitigation

- O Dust suppression
- Install noise enclosure and acoustic screen
- Operate hydraulic crusher for demolition work

Waste Management & Reduction

- Use pre-cast concrete
- O— On-site sorting of C&D waste
- O— Encourage recycling
- O Upcycle of used materials



People

- Provide rechargeable cordless tools for workers
- Conduct volunteer renovation work for neighbouring stakeholders
- Establish a 24-hour enquiry and support hotline for stakeholders





We uphold high quality, environmental and occupational health and safety standards in our projects and promote sustainability awareness to our industry partners and other stakeholders



We strive to promote good practices in resource consumption efficiency at our projects

ArchSD is committed to collaborating with our industry partners and other stakeholders in developing and maintaining the public facilities for providing a better service to the general public, as well as achieving outstanding sustainability performance. During the reporting year, we conducted a total of 38 workshops and talks, 104 publicity events, to share knowledge and promote best practices on creating quality and sustainable built environment.

On the other hand, we recognise commendable and outstanding performance of contractors, subcontractors and site personnel in demonstrating good environmental performance, site safety and considerate manner in carrying out public works. We offer formal commendation mainly through two award schemes, namely the Green Contractor Award and the Considerate Contractors Site Awards.

Green Contractor Award

ArchSD organises the Green Contractor Award annually to encourage green initiatives e.g. energy saving, water conservation, waste reduction, emissions mitigation, and environmental management, etc. during construction, as well as to compliment contractors' continual efforts in achieving sustainability. In 2021, 1 Gold, 1 Silver, 1 Bronze, 2 Special Awards and 1 Term Contact Award were presented to the following contractors involving projects under construction or maintenance projects with contract amount exceeding \$30 million. Green Contractor Award 2021 - Award Presentation Ceremony 環保承建商獎勵計劃 2021 - 頒獎典禮



PROMOTING SUSTAINABILITY

AWARENESS

Award	Awardee	Contracts
Gold	Paul Y. – Able Joint Venture	Contract no.: SSF501 Design and Construction of Redevelopment of Queen Mary Hospital Phase I - Main Works at Pok Fu Lam Road, Hong Kong
Silver	Hip Hing Construction Co.,Ltd	Contract no.: SSF505 Design and Construction of Inland Revenue Tower in Kai Tak Development Area Contract no.: SSG501 Design and Construction of Immigration Headquarters in Area 67, Tseung Kwan O
Bronze	Able – Paul Y. Joint Venture	Contract no.: SSH502 Design and Construction of Joint-user Government Office Building in Area 67, Tseung Kwan O
Special Award 1	Shui On Joint Venture	Contract no.: SSF506 Design and Construction of a Purpose-Built Multi-Welfare Services Complex in Area 29 of Kwu Tung North Development Area Contract no.: SSG502 Design and Construction of Redevelopment of Kwai Chung Hospital (Phase 2) at 3-15 Kwai Chung Hospital Road, New Territories Contract no.: SSH503 Design and Construction of Drainage Services Department Building at Cheung Sha Wan Sewage Pumping Station
Special Award 2	Yau Lee Construction Company Limited	Contract no.: SSH501 Design and Construction of a Community Health Centre cum Social Welfare Facilities at Pak Wo Road, North District
Term Contract	Chun Wo Joint Venture	Contract no.: TC E952 Term Contract for the Alterations, Additions, Maintenance and Repair of Buildings and Lands and Other Properties for which Architectural Services Department (Property Services Branch) is Responsible [Designated Contract Area : Tai Po, North District and Outlying Islands (North)]

This year, amid the COVID-19 pandemic situation, a real-time virtual award presentation ceremony of the Green Contractor Award was held to not only commend the awardees' remarkable environmental

performances, but also to provide a platform for the awardees to share their on-site environmental good practices, hoping to inspire the industry to strive for excellence in sustainable construction.



Considerate Contractors Site Award Scheme Award

The award programme, jointly organised by DEVB and the CIC, is designed to motivate contractors, subcontractors and all site personnel to operate responsibly and considerably at all times and take environment, public health and safety into consideration. In the 28th Considerate Contractors Site Award Scheme Award, the contractors of ArchSD received a total of 15 awards in the Considerate Contractors Site Award (CCSA), Outstanding Environmental Management and Performance Award (OEMPA) and Innovation Awards for Safety and Environmental Excellence (IASEE) categories, including:

Public Works - New Works

Award

CCSA	OEMPA	IASEE		
Bronze	Merit	Bronze	Dragages Hong Kong Limited	Contract no.: SSJ501 Design and Construction of Hospital Authority Supporting Services Centre in North Lantau
Merit	Bronze	Silver	Paul Y. – Able Joint Venture	Contract no.: SSF501 Design and Construction of Redevelopment of Queen Mary Hospital (Phase 1) – Main Works
Merit	Merit	Bronze	Shui On Joint Vonturo	Contract no.: SSF506 Design and Construction of a Purpose-built Multi-welfare Services Complex in Area 29 of Kwu Tung North Development Area
Merit	Merit	Merit	Shur on joint venture	Contract no.: SSH503 Design and Construction of Drainage Services Department Building at Cheung Sha Wan Sewage Pumping Station
Merit	Merit	N/A	Yau Lee Construction Company Limited	Contract no.: SSH501 Design and Construction of a Community Health Centre cum Social Welfare Facilities at Pak Wo Road, North District

Public Works - RMAA Works

	Award			
CCSA	OEMPA	IASEE		
Silver	N/A	N/A	Cheung Hing Construction Company Limited	Contract no.: TCH938 Term Contract for the Maintenance of Slopes for which the Architectural Services Department (Property Services Branch) is Responsible [Designated Contract Area: New Territories and Outlying Islands (North)]



care

We encourage and mobilise our staff to participate in different volunteer services with



CREATING A CARING AND INCLUSIVE SOCIETY

At ArchSD, we advocate the culture of creating positive impact for the community. We spares no effort in supporting community wellness through volunteering activities. A volunteer Service Team has been established to foster the active participation of our colleagues.

Under the pandemic and the regulation of social distancing, activities have been significantly reduced since 2020 to protect our staff's safety. Nevertheless, we participated in 4 voluntary projects, contributing 594 hours of service to the community.

	2019	2020	2021
Volunteers	46	37	43
Voluntary projects completed	16	9	4
Active Volunteer Service Team members [1]	19	0	15
Staff commended for voluntary service ^[2]	15	0	0
Total hours of staff volunteer service	1,128	219	594



^[2] Team members who contribute more than 30 hours of volunteering.

DATA SUMMARY

Highlights for 2021

Energy Use and Efficiency

Energy consumption at our Queensway Government Offices and APB centre have

decreased

XX

19% between 2020 and 2021

Projects completed in 2021 help to

3.5 GWh every year, equivalent to ~2,450 tonnes CO₂-e and >100,000 trees

Staff Training and Development



16,391 number of trainees, **90%** more than last year



Resources Usage – Energy

	UNITS	2017	2018	2019	2020	2021
Energy used at QGO and APB Centre						
Electricity consumed ^[1]	kWh/m²	200	196	190	125	109
CO_2 emission equivalent to electricity consumption ^[2]	Tonnes CO ₂ -e	3,553	3,489	3,371	2,979	2,590
Total Electricity consumed per employee	kWh/employee	2,719	2,598	2,456	2,095	1,812
Total CO ₂ emission equivalent to electricity consumption per employee	Tonnes CO ₂ -e/employee	1.904	1.819	1.719	1.466	1.268
Energy saved by projects [3]						
Total energy saving due to green and low-carbon design	GWh	17.4	2.5	24.3	11.0	3.5
CO ₂ emission equivalent	Kilotonnes CO ₂ -e	12.2	1.8	17.0	7.7	2.4
No. of certified green buildings or under application ^[4]						
Certified green buildings against third-party standard	Number	6	6	7	13	12
Active projects seeking green building certifications against third-party standard	Number	49	58	56	56	69

^[1] Offices in QGO and APB Centre represent a majority of total ArchSD office space. The percentage of electricity consumption of the whole premises for ArchSD office at APB Centre & QGO is assumed to be 100% and 20% respectively.

^[2] Territory wide default GHG emission factors (0.7) were used based on the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for buildings (Commercial, Residential or Institutional Purpose) in Hong Kong.

^[3] Energy saving is calculated by considering green and low carbon design features i.e, building envelope, building services systems and renewable energy technologies, etc. adopted in projects.

^[4] Third-party standards refer to BEAM Plus certified by Hong Kong Green Building Council.

Resource Usage – Fuel

	UNITS	2017	2018	2019	2020	2021
Fuel consumption by ArchSD's pool cars	Litre	12,626	14,686	14,556	13,197	13,543
GHG emission equivalent to fuel consumption by ArchSD pool cars ^[5]	Tonnes CO ₂ -e	34.2	39.8	39.4	35.7	36.6
NOx emission equivalent to fuel consumption by ArchSD pool cars ^[6]	Kg	9.7189	10.456	9.975	8.200	8.017
SOx emission equivalent to fuel consumption by ArchSD pool cars ^[6]	Kg	0.186	0.216	0.214	0.194	0.199
PM emission equivalent to fuel consumption by ArchSD pool cars ^[6]	Kg	0.716	0.770	0.734	0.604	0.590
Total Fuel consumption by ArchSD's pool cars per employee	Litre/employee	6.792	7.701	7.423	6.495	6.632
Total GHG emission equivalent to fuel consumption by ArchSD pool cars per employee	Tonnes CO ₂ -e/employee	0.018	0.021	0.020	0.018	0.018

(5) GHG emission factors for mobile combustion are based on the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for buildings (Commercial, Residential or Institutional Purpose) in Hong Kong.

⁽⁶⁾ Air pollutant emission factors for mobile combustion are based on The Hong Kong Environmental Protection Department's ("EPD") EMFAC-HK Vehicle Emission Calculation model (http://www.epd.gov.hk/epd/english/environmentinhk/air/ guide_ref/emfac-hk.html) and the United States Environmental Protection Agency's Vehicle Emission Modeling Software - MOBILE6.1 (http://www3.epa.gov/otaq/m6.htm)

Resource Usage – Water

	UNITS	2017	2018	2019	2020	2021
Water consumption by ArchSD ^[7]	m ³	12,945	15,923	13,109	10,485	9,553

(7) Offices in QGO and APB Centre represent a majority of total ArchSD office space. In the calculation process, ArchSD office at APB Centre and QGO is assumed to consume 100% and 20% of the water of the whole premise respectively.

Resource Usage – Office Materials

	UNITS	2017	2018	2019	2020	2021
A4 paper consumption	Reams	16,947	16,136	16,534	17,249	16,486
A3 paper consumption	Reams	1,020	1,124	1,247	1,252	1,385
Envelope consumption	No	37,615	29,718	34,203	27,415	36,784

Waste Management in Programme Areas of Facilities Development and Upkeeping

	UNITS	2017	2018	2019	2020	2021
Construction & demolition (C&D) materials						
C&D waste disposed of to landfills	Tonnes	44,891	57,571	43,970	47,768	42,047
C&D materials disposed of to public fill areas	Tonnes	518,946	679,910	745,343	839,544	799,066
Recyclable waste collected at APB Centre						
Waste paper	Kg	15,579	12,094	8,243	8,119	7,800
Aluminium	No.	2,050	1,985	4,560	3,871	5,569
Plastic bottles	No.	4,102	3,918	7,071	4,237	6,209

Environmental Convictions^[8] of Contractors

	UNITS	2017	2018	2019	2020	2021
Convictions per 100,000 man-hours	ArchSD sites (HK sites)	0.034 (0.216)	0.032 (0.192)	0.374 (0.197)	0.118 (0.087)	0.037 (0.065)
Monetary value of fines	НК\$	5,000	25,000	112,000	22,000	2,000

^(B) Environmental convictions refers to instances of non-compliance associated with the environment, including, but not limited to violations of permits, standards, and/or regulations associated with waste, air quality and/or emissions, water discharges, hazardous spills, etc.

Staff Establishment

	UNITS	2017	2018	2019	2020	2021
Staff establishment (as at 31 December of the year)	No.	1,859	1,907	1,961	2,032	2,042

^[9] Staff data is extracted from the records kept in the personnel section.

Staff Establishment Breakdown

		Employees 2021/22			Employees 2021/22
	Directorate grade staff	42 (2.1%)		Age under 30	311 (15.8%)
By post (based on staff establishment)	Professional grade staff	572 (28.0%)	By age (as at 31 March 2022)	Age 30-49	1,116 (56.5%)
	General grade staff	380 (18.6%)		Age 50 or above	547 (27.7%)
	Site supervisory staff	614 (30.1%)		Local	2,170 (100%)
	Technical grade staff	434 (21.3%)	By ethnicity	Non-local	O (O%)
	Full-time	2,154 (99%)	Pu gondor	Male	1,448 (66.7%)
By employment type	Part-time	16 (1%)	вуgender	Female	722 (33.3%)
	Permanent (male)	1,291 (59.5%)			
	Permanent (female)	674 (31.1%)			
De constante en transferante	Contract (male) full-time	146 (6.7%)			
By employment contract	Contract (female) full-time	43 (2.0%)			
	Contract (male) part-time	11 (0.5%)			
	Contract (female) part-time	5 (0.2%)			

Staff Training

	UNITS	2017	2018	2019	2020	2021
No. of training courses (including internal and external seminars/ workshops/ training courses/ visits)	No.	412	417	422	422	653 [10]
Numbers of trainees	No.	7,488	8,068	9,447	8,551	16,391 ^[10]

⁽¹⁰⁾ The significant increase in number of courses and trainees are due to several reasons: (a) some of the courses were postponed from 2020; (b) significant increase of online courses also led to the increase in no. of trainees; (c) branch specific training have been increased significantly.

Training Hours Breakdown [11]

TYPE OF STAFF	TOTAL TRAINING HOURS RECEIVED (HOURS)	TRAINING HOURS PER STAFF (HOURS)
Directorate grade staff	901	21.5
Professional grade staff	19,223	33.6
Technical grade, site supervisory and general grade staff	35,420	24.8
Total	55,544	27.2

[11] Training programmes that were postponed from 2020, together with the increase in number of on-line programmes and branch specific programmes led to the significant increase in number of training hours.

Anti-Corruption Training

TYPE OF STAFF	NUMBER OF STAFF PARTICIPATED ANTICORRUPTION TRAINING	PERCENTAGE OF STAFF PARTICIPATED ANTI-CORRUPTION TRAINING ^[12]
By Employee category		
Directorate grade staff	0	0.0%
Professional grade staff	105	18.4%
Technical grade, site supervisory and general grade staff	183	12.8%

^[12] According to DEVB's 'Guidelines for Integrity Training Workshop' dated 16 July 2018, a 5-year training cycle has been adopted for ArchSD staff to receive integrity training at regular intervals. In the 5-year cycle of 2017–2021, 22 nos. of directorate grade staff, 452 nos. of professional grade staff and 940 nos. of technical grade, site supervisory and general grade staff in total have been received integrity training.

Staff Turnover

New Employee Hired

	MALE	FEMALE		MALE	FEMALE
Age under 30	1.10% (34)	0.78% (17)	Age under 30	2.53% (55)	1.56% (34)
Age 30-50	1.88% (41)	0.87% (19)	Age 30-50	1.84% (40)	1.47% (32)
Age 51-55	0.13% (3)	0.13% (3)	Age 51-55	O% (O)	O% (O)
Age 56 or above	2.53% (55)	1.10% (24)	Age 56 or above	O% (O)	0% (0)

Occupational Health and Safety Management System

	NUMBER OF ALL EMPLOYEES AND WORKERS	PERCENTAGE OF ALL EMPLOYEES AND WORKERS [13]
Covered by the system	2,046	100%
Covered by system that has been internally audited	2,046	100%
Covered by the system that has been audited or certified by an external party	2,046	100%

^[13] Workers refer to persons who are not employees but whose work and/or workplace is controlled by ArchSD. The contractors' staff, who are directly employed and controlled by the contractors, are excluded from this disclosure.

Staff Injury

	UNITS	2017	2018	2019	2020	2021
Staff injury cases [14]	No.	2 (Male: 1, Female: 1)	1 (Male: 1)	2 (Male: 2)	2 (Male:1, Female: 1)	4 (Male:3, Female: 1)
Staff sick leave granted for staff injury cases	Days	14.5	9.5	20	19	38.5

^[14] The definition of staff injury cases is the reported cases of occupational injuries, under Employee's Compensation Ordinance, resulting in death or incapacity for work over 3 days.
Contractor's Accident Rate

	UNITS	2017	2018	2019	2020	2021
No. of fatalities [15] (ArchSD)	No.	1 (Male: 1)	0	0	1 (Male: 1)	0
Fatal accident rate [15] (ArchSD)	per 200,000 man-hours	0.0015	0	0	0.0015	0
Fatal accident rate [16] (HK Construction Industry)	per 200,000 man-hours	0.0025	0.0015	0.002	0.0015	0.0015 [17]
No. of non-fatal accidents ^[15] (ArchSD)	No.	103 (Male: 92, Female: 6, Unidentified: 5)	154 (Male: 133, Female: 19, Unidentified: 2)	81 (Male: 68, Female: 10, Unidentified: 3)	55 (Male: 42, Female: 13)	94 (Male: 81, Female: 13)
Non-fatal accident rate [15] (ArchSD)	per 200,000 man-hours	0.21	0.135	0.095	0.155	0.15
Non-fatal accident rate [16] (HK Construction Industry)	per 200,000 man-hours	0.455	0.44	0.4	0.265	0.415 [17]

^[15] Data of 2021 and the previous years was extracted from PWP Construction Site Safety and Environmental Statistics System (PCSES) of DEVB as at 21 Mar 2022. In 2017 to 2020, the number of non-fatal accidents and the non-fatal accident rate were adjusted.

^[16] The accident rate of the Hong Kong Construction Industry is based on the published statistics of the Labour Department and using a conversion of 1.67 accidents per 100,000 man-hours equivalent to 60 accidents per 1,000 workers per year.

^[17] The non-fatal and fatal accident rate (Hong Kong Construction Industry) for 2021 was projected based on the data from Labour Department and Census & Statistics Department up to Q3 of 2021.

REPORT VERIFICATION

Verification



Assurance Statement

The Architectural Services Department ("ArchSD") has prepared its Sustainability Report 2022 (hereinafter referred to as "the Report") in accordance with the Global Reporting Initiative Sustainability Reporting Standards 2021 (GRI Standards). The Hong Kong Productivity Council (HKPC) was commissioned by ArchSD to provide independent verification¹ of the Report for its sustainability performance in terms of environmental, social and economic aspects between 1 January 2021 and 31 December 2021. It covers the sustainability performance and initiatives of ArchSD's four project management branches, five functional branches and two central management divisions.

Objectives

The main objective of HKPC's verification work was to provide independent assurance on the completeness, accuracy and reliability of the information presented in the Report. More specifically, the objectives were to:

- assess whether the scope of the Report covered all significant aspects of ArchSD's sustainability performance;
- check whether the Report is in accordance with the GRI Standards;
- review whether the data collection and information management mechanisms used to prepare the Report were reliable; and
- provide recommendations for future reports.

Approach

HKPC's verification procedures consisted of a comprehensive review of the Report, followed by the selection and verification of a representative sample of statements and data pertaining to the significant sustainability topics of ArchSD². During an interview with the ArchSD representatives we reviewed and examined the data collation systems and supporting materials relating to the selected statements and data as well as ArchSD's relevant management practices and initiatives.

Conclusion

The Report generally conforms to the GRI Standards. It presents an overview of ArchSD's environmental, social and economic performance with respect to its key services activities and initiatives. In terms of the accuracy and reliability of the Report, the selected sample of statements and data examined during the verification process was consistent with the source materials reviewed and reflected a fair account of ArchSD's environmental, social and economic performance. The data collation and information management systems adopted were generally considered to be reliable.

Ir Kenny Wong Head Carbon and Environmental Excellence Green Living and Innovation Division Hong Kong Productivity Council 21 October 2022

¹ This verification statement has been prepared for ArchSD for the purpose of assuring the statements and data presented in its Sustainability Report 2022 only. The statement was prepared based on HKPC's review of the selected sample of information provided by ArchSD during the verification process. HKPC will not accept or assume any responsibility or liability (legal or otherwise) in relation to this verification statement.

² Our verification work did not cover data and information which had already been published in the press releases, on ArchSD's website, in its annual report s or other publications.



Thank you for reading our report. Your comments and suggestions for our continuous improvement are invaluable.

Please take a few minutes to complete this form and send it back to us.

Please rate the quality of our Sustainability Report 2022 based on the following criteria:

	Excellent	Good	Fair	Marginal	Poor
Content clarity					
Visual design					
Ease to find information					
Overall rating on our sustainability performance					

Which of the following best describes you?

Client of ArchSD	Architect / Engineer / Landscape Architect / Surveyor	Staff of ArachSD
O Government Department	Non-governmental Organisations	General Public
O Consultant / Contractor / Supplier	Academic / Education Sector	Other

Additional Comments

The information will be used in strict confidence and for communication and statistical purpose only. All personal data are handled in accordance with the provision of the Personal Data (Privacy) Ordinance and our Privacy Policy Statement.

GRI CONTENT INDEX



"For the Content Index - Advanced Service, GRI Services reviewed that the GRI content index is clearly presented, in a manner consistent with the Standards, and that the references for all disclosures are included correctly and aligned with the appropriate sections in the body of the report."

The GRI index labelled with "*" are the material topics identified by ArchSD, while the index labelled with "#" are the additional items covered in this report.

GRI STANDARD	MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
Auchite stumpl Commisse D	ensurement has non-orted in a second second the the	DI Ctan dauda fau tha	naviad 1 January 2021	ta 21 December 2021	

Architectural Services Department has reported in accordance with the GRI Standards for the period 1 January 2021 to 31 December 2021.

GRI 1: Foundation 2021

GRI 2: General	Organis	sational profile			
Disclosures 2021	2-1	Organisational details		ArchSD at a Glance - Our Organisation and Roles	\checkmark
	2-2	Entities included in the organisation's sustainability reporting		ArchSD at a Glance - Department funding and expenditure	\checkmark
	2-3	Reporting period, frequency and contact point		About this Report – Scope Feedback	\checkmark
	2-4	Restatements of information		About this Report Data Summary	\checkmark
	2-5	External assurance		About this Report - Principles Report Verification	\checkmark
	Activiti	es and workers			
	2-6	Activities, value chain and other business relationships	KPI B5.1 KPI B5.2 KPI B5.3 KPI B5.4	ArchSD at a Glance - Our Organisation and Roles ArchSD at a Glance - Key Facts of the Department Grounded on Robust Governance	V
	2-7	Employees	KPI B1.1	Data Summary	\checkmark
	2-8	Workers who are not employees		We have created job opportunities through different construction projects. The number of projects is listed in: ArchSD at a Glance - Department funding and expenditure	\checkmark

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
	Govern	ance				
	2-9	Governance structure and composition			ArchSD at a Glance - Our Organisation and Roles Grounded on Robust Governance - Our strategy and management approach The structure is about senior management but not board of directors as ArchSD is the governmental department of Hong Kong Special Administrative Region.	V
	2-10	Nomination and selection of the highest governance body			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	\checkmark
	2-11	Chair of the highest governance body			ArchSD at a Glance - Our Organisation and Roles The content is about senior management but not board of directors as ArchSD is the governmental department of Hong Kong Special Administrative Region.	\checkmark
	2-12	Role of the highest governance body in overseeing the management of impacts			ArchSD at a Glance - Our Organisation and Roles The content is about senior management but not board of directors as ArchSD is the governmental department of Hong Kong Special Administrative Region. "Senior management oversees and directs our overall sustainability strategies and policies. Meanwhile, representatives and groups drive	V
	2-13	Delegation of responsibility for managing impacts			sustainability across the organisation." ArchSD at a Glance - Our Organisation and Roles Grounded on Robust Governance - Our strategy and management approach	V
	2-14	Role of the highest governance body in sustainability reporting			Grounded on Robust Governance - Our strategy and management approach The content is about senior management but not board of directors as ArchSD is the governmental department of Hong Kong Special Administrative Region.	V
	2-15	Conflicts of interest			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	\checkmark
	2-16	Communication of critical concerns			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region As ArchSD is the governmental department of Hong Kong Special Administrative Region.	\checkmark

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
	2-17	Collective knowledge of the highest governance body			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	V
	2-18	Evaluation of the performance of the highest governance body			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	√
	2-19	Remuneration policies			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	√
	2-20	Process to determine remuneration			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	√
	2-21	Annual total compensation ratio			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	√
	Strateg	y, policies and practices				
	2-22	Statement on sustainable development strategy			Message from the Director	√
	2-23	Policy commitments			Grounded on Robust Governance - Vision, Mission and Value: Grounded on Robust Governance - Our strategy and management approach	√
	2-24	Embedding policy commitments			Grounded on Robust Governance - Our strategy and management approach	\checkmark
	2-25	Processes to remediate negative impacts			Grounded on Robust Governance – Listening to our stakeholders	√
	2-26	Mechanisms for seeking advice and raising concerns	KPI B7.2		Grounded on Robust Governance - Listening to our stakeholders Activating Sustainability Synergy in our Value Chain – Valuing Our Clients	V
	2-27	Compliance with laws and regulations	GD A1 GD B6		Grounded on Robust Governance - Our strategy and management approach	√
	2-28	Membership associations			Grounded on Robust Governance - Our strategy and management approach	\checkmark

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
	Stakeh	older engagement				
	2-29	Approach to stakeholder engagement	KPI B6.2		Grounded on Robust Governance - Listening to our stakeholders	\checkmark
	2-30	Collective bargaining agreements			None. There is no collective bargaining legislation that exists in Hong Kong but we have maintained various staff engagement channels such as the Departmental Consultative Committee, Joint Staff Consultation Group, Staff Motivation Scheme, Web Forum, Staff Relation Units and other staff associations.	√
GRI 3: Material Topics	3-1	Process to determine material topics			Grounded on Robust Governance - Establishing ESG materiality	\checkmark
2021	3-2	List of material topics			Grounded on Robust Governance - Establishing ESG materiality	\checkmark

Climate Change Adaptation*

GRI 3: Material Topics 2021	3-3	The management approach and its components	GD A4 KPI A4.1	Grounded on Robust Governance - Our strategy and management approach	√
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	KPI B8.2	ArchSD at a Glance - Department funding and expenditure	\checkmark
	201-2	Financial implications and other risks and opportunities due to climate change	KPI A4.1	Grounded on Robust Governance - Our strategy and management approach	1
	201-3	Defined benefit plan obligations and other retirement plans		Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	√
	201-4	Financial assistance received from government		ArchSD at a Glance - Department funding and expenditure	\checkmark

Local Procurement*

GRI 3: Material Topics 2021	3-3	The management approach and its components	Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites Activating Sustainability Synergy in our Value Chain - Implementing Green and Smart Practices at Construction Sites	√
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	In 2021, all our purchases were from local suppliers (defined as companies registered in Hong Kong) except the procurement of publications.	\checkmark

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
Anti-corruption*						
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD B7 KPI B7.2	IF-EN-510a.3	Grounded on Robust Governance - Our strategy and management approach	V
GRI 205: Anti- corruption 2016	205-1	Operations assessed for risks related to corruption			Grounded on Robust Governance - Our strategy and management approach	√
	205-2	Communication and training about anti-corruption policies and procedures	KPI B7.3		Data Summary	V
	205-3	Confirmed incidents of corruption and actions taken	GD B7 KPI B7.1		Grounded on Robust Governance - Our strategy and management approach	\checkmark
Material Consumption	and Sourcir	ng*				
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD A2 GD A3		Forging Ahead on the Journey of Sustainability Through Our Projects – Driving Low Carbon Transformation in Built Environment	\checkmark
GRI 301: Materials 2016	301-1	Materials used by weight or volume	KPI A2.5 KPI A3.1		Data Summary	\checkmark
	301-2	Recycled input materials used			Not applicable. It is not material to ArchSD due to its operational nature.	\checkmark
	301-3	Reclaimed products and their packaging materials			Not applicable. It is not material to ArchSD due to its operational nature.	\checkmark
Energy Use and Efficier	1cy *					
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD A2 GD A3	IF-EN-410a.2	Forging Ahead on the Journey of Sustainability Through Our Projects – Driving Low Carbon Transformation in Built Environment	.[
			КРІ А2.3		Activating Sustainability Synergy in our Value Chain – Promoting sustainability awareness	v
GRI 302: Energy 2016	302-1	Energy consumption within the organisation	KPI A2.1		Data Summary	\checkmark

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
	302-2	Energy consumption outside the organisation			Not applicable. It is not material to ArchSD due to its operational nature.	\checkmark
	302-3	Energy intensity	KPI A2.1		Data Summary	\checkmark
	302-4	Reduction of energy consumption	KPI A2.3		Data Summary	\checkmark
	302-5	Reductions in energy requirements of products and services	KPI A2.3		Data Summary	\checkmark

Water Consumption and Conservation*

GRI 3: Material Topics 2021	3-3	The management approach and its components	GD A2 GD A3	IF-EN-410a.2	Enhancing Wellness of our People - Promoting a Green Working Culture	√
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	KPI A2.2 KPI A2.4 KPI B5.3		Forging Ahead on the Journey of Sustainability Through Our Projects – Driving Low Carbon Transformation in Built Environment	√
	303-2	Management of water discharge- related impacts		IF-EN-160a.2	Effluents of ArchSD are discharged into municipal sewage treatment systems, and comply with local regulatory standards of effluents discharge	√
	303-3	Water withdrawal			Not applicable. It is not material to ArchSD due to its operational nature.	\checkmark
	303-4	Water discharge			Effluents of ArchSD are discharged into municipal sewage treatment systems, and comply with local regulatory standards of effluents discharge	√
	303-5	Water consumption	KPI A2.2		Data Summary	\checkmark

Greenhouse Gas Emission Management and Monitoring*

GRI 3: Material Topics 2021	3-3	The management approach and its components	gd A1 gd A3 KPI 1.5 KPI A3.1 KPI A4.1	IF-EN-160a.2	Enhancing Wellness of our People - Promoting a Green Working Culture	√
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	KPI A1.1 KPI A1.2		Enhancing Wellness of our People – Promoting a Green Working Culture Data Summary	√

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
	305-2	Energy indirect (Scope 2) GHG emissions	KPI A1.1 KPI A1.2		Data Summary	\checkmark
	305-3	Other indirect (Scope 3) GHG emissions	KPI A1.1		Enhancing Wellness of our People – Promoting a Green Working Culture Data Summary	\checkmark
	305-4	GHG emissions intensity	KPI A1.2		Data Summary	\checkmark
	305-5	Reduction of GHG emissions	KPI A1.5		Data Summary	\checkmark
	305-6	Emissions of ozone-depleting substances (ODS)	KPI A1.1		Not applicable. It is not material to ArchSD due to its operational nature.	\checkmark
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	KPI A1.1		Data Summary	\checkmark
Waste Management*						
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD A1 GD A3 KPI A1.6	IF-EN-160a.2	Enhancing Wellness of our People - Promoting a Green Working Culture Activating Sustainability Synergy in our Value Chain - Implementing Green and Smart Practices at Construction Sites	√
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	KPI A3.1	IF-EN-160a.2	Enhancing Wellness of our People - Promoting a Green Working Culture Forging Ahead on the Journey of Sustainability Through Our Projects – Driving Low Carbon Transformation in Built Environment	√
	306-2	Management of significant waste- related impact	КРІ АЗ.1	IF-EN-160a.2	Enhancing Wellness of our People - Promoting a Green Working Culture Activating Sustainability Synergy in our Value Chain - Implementing Green and Smart Practices at Construction Sites Forging Ahead on the Journey of Sustainability Through Our Projects – Driving Low Carbon Transformation in Built Environment	V
	306-3	Waste generated	KPI A1.3 KPI A1.4		Data Summary	\checkmark
	306-4	Waste diverted from disposal	KPI A1.6		Data Summary	\checkmark
	306-5	Waste directed to disposal	KPI A1.6		Data Summary	\checkmark

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
Supplier Environmenta	l Assessme	ent#				
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD B5 KPI B5.3 KPI B5.4		Activating Sustainability Synergy in our Value Chain - Promoting sustainability awareness	V
GRI 308: Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	KPI B5.2 KPI B5.3		Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites	
2016					100%. ArchSD only appoints contractors and suppliers from lists of relevant categories, which are maintained by the Government of Hong Kong Special Administrative Region. ArchSD expects contractors and suppliers to abide by the environmental terms set forth in their tenders. Anyone who violates the project terms will be disqualified or unlikely to be selected in the next round of bidding.	V
	308-2	Negative environmental impacts in the supply chain and actions taken	KPI B5.2 KPI B5.3		Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites	\checkmark
					All sites have carried site inspection.	
Employment*						
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD B1		Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	\checkmark
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	KPI B1.2		Data Summary	\checkmark
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees			Not applicable. ArchSD follows the rules and regulations shown in Civil Service Bureau, Hong Kong Special Administrative Region as ArchSD is the governmental department of Hong Kong Special Administrative Region.	\checkmark
	401-3	Parental leave			100% return to work after parental leave.	\checkmark

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
Occupational Health and	d Safety*					
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD B2 KPI B2.3	IF-EN-250a.2	Grounded on Robust Governance - Our strategy and management approach	√
GRI 403: Occupational Health and Safety	403-1	Occupational health and safety management system	GD B2 KPI B2.3	IF-EN-250a.2	Grounded on Robust Governance - Our strategy and management approach	√
2018	403-2	Hazard identification, risk	GD B2		Grounded on Robust Governance - Our strategy and management approach	
		assessment, and incident investigation	KPI B2.3		Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites	\checkmark
	403-3	Occupational health services	GD B2		Grounded on Robust Governance - Our strategy and management approach	
			KPI B2.3		Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites	√
	403-4	Worker participation, consultation, and communication on occupational health and safety	GD B2		Enhancing Wellness of our People - Promoting a Green Working Culture	
					Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites	\checkmark
	403-5	Worker training on occupational health and safety	GD B2 KPI B2.3		Awards and Target Achievements – Objectives and Targets	\checkmark
	403-6	Promotion of worker health	GD B2		Enhancing Wellness of our People - Promoting a Green Working Culture	
					Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites	\checkmark
-	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	GD B2 KPI B2.3		Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites	1
	403-8	Workers covered by an occupational	GD B2		Data Summary	√
		near and safety management system	KPI B2.3			
	403-9	Work-related injuries	KPI B2.1 KPI B2.2	IF-EN-320a.1	Data Summary	\checkmark
	403-10	Work-related ill health	KPI B2.1		Activating Sustainability Synergy in our Value Chain - Promoting Safety Culture at Construction Sites Data Summary	V

GRI STANDARD		MATERIAL TOPICS	HKEx	SASB INDICATORS	REFERENCE OR DIRECT ANSWER	EXTERNAL ASSURANCE
Staff Training and Deve	lopment*					
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD B3		Enhancing Wellness of our People - Nurturing our People	1
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	KPI B3.1 KPI B3.2		Enhancing Wellness of our People - Nurturing our People	\checkmark
	404-2	Programs for upgrading employee skills and transition assistance programs			Enhancing Wellness of our People - Nurturing our People	√
	404-3	Percentage of employees receiving regular performance and career development reviews			All staff receive regular performance appraisal	V
Non-Discrimination*						
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD B1		Grounded on Robust Governance - Our strategy and management approach	√
GRI 406: Non- discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	GD B1		No incident of discrimination was reported in 2021.	√
Users' Health and Safe	ty in Using	the Facilities*				
GRI 3: Material Topics 2021	3-3	The management approach and its components	GD B6		Forging Ahead on the Journey of Sustainability Through Our Projects	\checkmark
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories			Forging Ahead on the Journey of Sustainability Through Our Projects	√
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	GD B6		Not applicable. It is not material to ArchSD due to its operational nature.	\checkmark

GLOSSARY

O-Building Environmental Assessment Method (BEAM) Plus

Quote from BEAM Society, 'A means by which to benchmark and improve performance in the planning, design, construction, commissioning, operation and management of buildings.' BEAM Plus is a comprehensive environmental assessment scheme recognised by the Hong Kong Green Building Council (HKGBC). Issued in 2012, BEAM Plus Version 1.2 for New Buildings and Existing Buildings was enhanced from the earlier version in providing Passive Design as an alternative method for assessment. BEAM Plus Version 2.0 for Existing Buildings has been officially launched in 2015. The new version contains major revisions to the assessment guidelines and offers greater flexibility in the scope of assessment, with a view to encouraging more participation by the existing buildings in Hong Kong. BEAM Plus Version 2.0 for New Buildings has been officially launched in 2019. The new version introduces new assessment credits that promote healthy living in order to place more emphasis on wellness of building users. In whilst, new assessment aspect Integrated Design and Construction Management is added to encourage adoption of integrated design approach to green buildings.

• Building Information Modelling (BIM)

Building Information Modelling is the process of generating and managing building data during its planning, design, construction and operation stage. The process uses multi-dimensional building modelling software and unified data structure to enhance team collaboration and increase productivity.

Occess to Information

The Code on Access to Information (the Code) defines the scope of information that will be provided, sets out how the information will be made available either routinely or in response to a request, and lays down procedures governing its prompt release. The Code authorises and requires civil servants, routinely or on request, to provide information, and sets out procedures for review or complaint if a member of the public considers that the provisions of the Code have not been properly applied.

• Corporate Intelligence (CO-i)

ArchSD aims at enhancing its operational efficiency by applying smart and innovative technologies in the work process through the CO-i development. The core of the proposed CO-i development is a big data bank with linkage to various application systems to facilitate the 'Architectural Intelligence', including integrated project management platform, advanced asset information system integrated with Building Information Modelling (BIM), mobile platform for construction site supervision and work flow digitalisation, etc.

O- Design for Manufacture and Assembly (DfMA)

It is a proactive design approach which focuses on the ease of manufacture and efficiency of assembly, enables offsite manufacture of high-quality construction components and efficient assembly of components on site. It is a wellestablished approach for accomplishing significant improvements in productivity, safety, quality and sustainability. It also enables identification, quantification and elimination of waste or inefficiency in product manufacture and assembly to achieve lean construction.

• Extranet

The ArchSD Extranet is a private secured web portal with restricted access to enhance communication and information exchange with external users such as consultants and contractors, and to streamline contract management of works projects undertaken by the Department.

• Global Reporting Initiative (GRI)

A multi-stakeholder-governed institution which provides a framework for sustainability reporting, which is commonly used all over the world. This framework sets out the principles and disclosure requirements that entities can use to measure and report their economic, social and environmental performance. GRI launched its Sustainability Reporting Standards (GRI Standards) in 2021.

• Greenhouse Gases

Greenhouse gases refer to those which absorb and hold heat in the atmosphere, either occurring naturally (e.g. carbon dioxide, methane, ozone and water vapour) or exclusively resulting from human activities (e.g. hydroflurocarbons).

O----- Greenhouse Gas Protocol

Greenhouse Gas Protocol establishes comprehensive global standardised frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions. It also supplies the world's most widely used greenhouse gas accounting standards.

O-Hong Kong's Climate Action Plan 2050

In line with the spirit of the Paris Agreement, the Hong Kong's Climate Action Plan 2050 report, published by the Environment Bureau, sets out the strategies and targets for combating climate change and achieving carbon neutrality before 2050. The new plan outlines the four major decarbonisation strategies and measures, namely net-zero electricity generation, energy saving and green buildings, green transport and waste reduction.

O Hong Kong Green Organisation Certificate (HKGOC)

The Hong Kong Green Organisation Certification (HKGOC) aims to benchmark green organisations with substantial achievement in green management, to encourage participants to adopt environmental practices in different aspects and to recognise their efforts and commitments to the environment. It consists of five Certificates, namely 'Wastewi\$e Certificate', 'Energywi\$e Certificate', 'Productwi\$e Certificate', 'IAQwi\$e Certificate' and 'Carbon Reduction Certificate'.

O-ISO 14001 Environmental Management System

ISO 14001 is an international standard first published by International Organisation for Standardisation (ISO) in 1996, which specifies requirements for the establishment of an environmental management system. It is intended for use by organisations seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability.

• ISO 45001 Occupational Health and Safety Management System

ISO 45001 is an international standard first published by International Organisation for Standardisation (ISO) in 2018. The standard specifies requirements for an occupational health and safety management system, and gives guidance for its use, to enable organisations to provide safe and healthy workplaces by preventing work-related injury and ill health, as well as by proactively improving its OH&S performance.

O-ISO 50001 Energy Management System

ISO 50001 is an international standard first published by International Organisation for Standardisation (ISO) in 2011, which specifies requirements for the establishment of an energy management system. Adopting ISO 50001 Energy Management System enables organisations to improve their energy performance, which generally includes energy use, energy efficiency and energy consumption, in a systematic approach.

— ISO 9001 Quality Management System

ISO 9001 is an international standard first published by International Organisation for Standardisation (ISO) in 1987, which specifies requirements for the establishment of a quality management system. Adopting ISO 9001 Quality Management System supports organisations to consistently provide products and services that meet customer and applicable statutory and regulatory requirements and enhance customer satisfaction through the different improvement processes.

• Integrated Management System (IMS)

The Integrated Management System is the combination of our obtained certification of ISO 9001 Quality Management Standard, ISO 14001 Environmental Management Standard and ISO 45001 Occupational Health and Safety Management Standard which altogether constitute our Integrated Management System.

O- Microclimate

Microclimate generally refers to the specific climatic conditions within a small area (such as street, park, riverside). Due to the influence of the surrounding terrain, orientation and density of buildings, weather conditions during the time as well as other factors, the climatic characteristics at an area may differ from those prevailing over the surrounding large region.

• Modular Integrated Construction (MiC)

Modular Integrated Construction (MiC) refers to a construction method whereby free-standing volumetric modules (with finishes, fixtures, fittings, etc.) are manufactured off-site and then transported for constructing buildings.

• Multi-trade Integrated MEP (MiMEP)

Multi-trade integrated Mechanical, Electrical and Plumbing (MiMEP) refers to the integration of multi-trade building services components into a single assembly of prefabricated modules, manufactured in a factory then transported to the site for connection of modules to complete various trades of building services installations on site.

O-Sustainability Accounting Standards Board (SASB)

The Sustainability Accounting Standards Board (SASB) is an independent non-profit organisation that sets standards to guide the disclosure of financially material sustainability information by companies to their investors.

O— United Nations Sustainable Development Goals (UNSDGs)

The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice.

• WEB Content Accessibility Guidelines (WCAG)

Web Content Accessibility Guidelines (WCAG) covers a wide range of recommendations for making Web content more accessible. These guidelines help make content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these.