

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Our Strategy and Approach

Sustainability drives the way we work with our stakeholders in the communities we serve. The ArchSD has a sound governance system with long-term sustainability objectives and a mechanism for monitoring progress.

From driving development to conserving heritage, we are committed to addressing environmental challenges, providing safe and healthy workplaces, and enriching the well-being and cultural legacy of our communities.

### Senior Staff Forum

Management plays a critical role in overseeing and implementing governance processes, controls and procedures. This includes monitoring key business activities, setting sustainability strategies and targets, and tracking progress to ensure effective outcomes.

Chaired by the Director, the Senior Staff Forum (SSF) is the governing body responsible for setting ArchSD's strategic direction and policies. The SSF provides executive leadership for departmental performance and administration, ensures effective policy implementation, and drives high efficiency and productivity. It also fosters strong staff morale, and manages responses to major issues and emergencies.



# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## ■ Our Strategy and Approach

### Monitoring and Advisory Committee

Chaired by the Director and supported by internal committees and working groups, the Monitoring and Advisory Committee (MAC) drives the implementation of sustainability-related initiatives across the organisation. Its key responsibilities include:

- Provide strategic oversight directing sustainable operations and policy implementation
- Develop the Department's sustainability roadmap and set the agenda for sustainable development
- Formulate, review and evaluate sustainability frameworks, including policies, strategies, goals and performance metrics, while assessing quarterly reports on emerging sustainability-related risks and opportunities.
- Conduct comprehensive assessments of projects' potential environmental and social impacts, including short- and long-term community effects and ecological consequences. These concerns and requirements are embedded in tender documents, which mandate contractors to develop mitigation measures, implement remediation plans, and monitor ongoing impacts.

The ArchSD balances sustainability objectives with practical considerations including cost and manpower availability. This involves evaluating trade-offs such as higher initial investments in energy-efficiency systems against their long-term benefits, or the operational requirements of sustainable practices against project timelines. Where limitations exist, the ArchSD implements scalable solutions that align with both financial parameters and environmental commitments.

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## ■ Embedding Sustainability

We integrate sustainable development considerations into every stage of project delivery and facet of our operations. We have established a set of policies, guidelines and system controls, striving to maintain the highest standards across our services and operations:

### ***Policies and Guidelines***

#### **Quality, Environmental, Anti-bribery, Occupational Health and Safety Policy**

Our commitment to long-term sustainability is reflected in the *Quality, Environmental, Anti-bribery, Occupational Health and Safety Policy* and its guidelines outlined below:

- 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 occupational health and safety risks to ensure and provide a safe and occupational 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 occupational health and safety 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, anti-bribery, occupational health and safety management system to enhance performance and effectiveness.
- Promote ArchSD's principles of quality, environmental sustainability, anti-bribery, occupational health and safety to our partners in work, the construction industry and the general public.
- Prohibit bribery, encourage raising concerns and commit to continual improvement of anti-bribery management system.

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Embedding Sustainability

### Integrated Management System

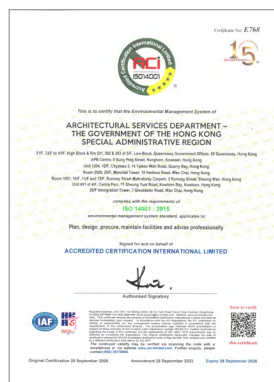
To align our services and operations with globally recognised benchmarks, the ArchSD has implemented a robust Integrated Management System (IMS) comprising aspects of quality, environmental, anti-bribery, occupational health and safety and energy management for a unified framework for operational excellence. We also refer to the ISO 26000:2010 for guidance on operating in a socially responsible way. To foster continuous improvements, we conduct annual performance reviews of the IMS to ensure ongoing compliance and improvement.



**Integrated Management System Accredited Certification**



**ISO 9001:2015 Quality Management Accredited Certification**



**ISO 14001:2015 Environmental Management Accredited Certification**



**ISO 37001:2016 Anti-Bribery Management Accredited Certification**



**ISO 45001:2018 Occupational Health & Safety Management Accredited Certification**



**ISO 50001:2018 Energy Management Accredited Certification**



# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## ■ Embedding Sustainability

In 2024, the ArchSD established approximately 90 annual targets for its IMS system. The table below summaries those targets linked to sustainability.

### 2024 Sustainability-related Targets and Achievements

Targets	Outcome
Maintain an accident rate of less than 0.3 reportable accident per 100 000 man-hours worked in ArchSD Contracts	0.24
Arrange at least 12 external safety training courses annually for project and office staff, covering topics on the latest safety technologies, current legislations and accident investigation	15
Organise at least 4 in-house workshops on safety and health	4
100% of completed projects receive an overall performance rating of 'Satisfied' or above in the Client Satisfaction Survey	100%
At least 95% of new projects shall reduce the use of timber by using alternative structural solutions such as metal hoarding, system formwork, metal formwork, semi-precast flooring system, precast roofing, dry walls and other structural means such as MiC and DfMA	100%
Achieve at least a 6% reduction in electricity consumption (kwh) at both the QGO and APB Centre, using 2018 as the baseline year	QGO: 23.4% APB Centre: 10.7%
Achieve at least a 6% reduction in paper consumption from the 2018 baseline	A4 paper: 40.7% A3 paper: 47.0% Envelope: 26.7%
Recycle at least 50% of annual consumption of used paper (kg) in ArchSD Offices	86%

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Embedding Sustainability

### *Supporting the UNSDGs*

The ArchSD has strategically aligned our operations and sustainability efforts with 9 United Nations Sustainable Development Goals (UNSDGs) with a view to contributing to global sustainable development through local action.



#### **UNSDG 3: Good Health and Well-Being**

We integrate social considerations and people-centric design into our projects to enhance the quality of urban living. We are also committed to fostering the wellness of our employees and value chain in line with international occupational health and safety standards and best practices, as well as through regular risk assessments, safety inspections and wellness programmes.



#### **UNSDG 5: Gender Equality**

We value diversity in the workforce and provide equal opportunities for employment, talent and leadership development.



#### **UNSDG 7: Affordable and Clean Energy**

We integrate renewable energy technologies into all projects, design and construct energy-efficient buildings, and leverage advanced technologies in our offices to enhance energy and resource efficiency.



#### **UNSDG 8: Decent Work and Economic Growth**

We offer training opportunities to enhance service quality, project efficiency and empower personal and professional development of our people. We also create jobs and develop quality, inclusive and sustainable buildings and facilities to support economic, social and environmental developments in Hong Kong.



#### **UNSDG 9: Industry, Innovation and Infrastructure**

We build climate-resilient infrastructure to support sustainable development in Hong Kong. We also foster industry innovation through robust application of innovative and high-productivity construction technologies and materials, guidelines and best practices development, insights sharing, field research, as well as cross-sectoral stakeholder collaboration.

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Embedding Sustainability

### *Supporting the UNSDGs*



#### **UNSDG 11: Sustainable Cities and Communities**

We provide high-quality public buildings and facilities that prioritise safety, inclusiveness and environmental sustainability; promote social interaction among diverse populations; and participate in voluntary services to enhance community wellness. We also embrace innovative technologies and construction methods to reduce our projects' social and environmental impacts, drive development and enrich cultural heritage.



#### **UNSDG 12: Responsible Consumption and Production**

We reduce waste at source, promote recycling, as well as enhance project planning and collaboration through innovative construction technologies and methods. We also adopt green procurement and conduct regular audits to review our carbon footprint and operational practices to optimise resource efficiency.



#### **UNSDG 13: Climate Action**

We have established a departmental climate change sub-group and formulated the Carbon Neutrality Strategic Framework to facilitate the low-carbon transformation in Hong Kong's built environment.



#### **UNSDG 17: Partnerships for the Goals**

We mobilise resources, advocate sustainable building design and construction, and strengthen engagement with the industry as well as the wider community for enhancing policy coherence and building a more sustainable, resilient and low-carbon future together.



# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Managing Risk

We take an active approach to risk management. The potential impacts of climate change, natural disasters and other potential hazards and harms to our operations are managed by

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

## *Climate-related Risks and Opportunities*

Managing climate-related risks and opportunities ensures long-term resilience, business continuity as well as informed decision-making. The ArchSD has adopted the four main recommendations put forth by the Task Force on Climate-related Financial Disclosures (TCFD) for disclosing our climate-related risks and opportunities. Occupational health and safety aspect is also taken into consideration when managing our risks.

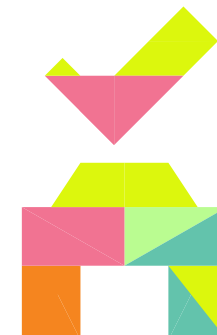
We summarise our approach to corporate governance, strategy, risk management and metrics and targets below according to the TCFD reporting framework.

## Governance

We take both top-down and bottom-up approaches to ensure effective management with respect to our governance around climate-related risks and opportunities.

As part of our top-down approach, the MAC meets regularly to oversee risk management of the Department, including climate-related risks. We have also established a Green Building Committee, which advises and implements policy initiatives, departmental policies and strategies related to green buildings and sustainable construction.

Our staff have an important role to play in our bottom-up management approach. A Design for Climate Change and Resilience sub-group was established to develop best practices and design guidelines against incidents such as extreme weather, outbreaks of disease and vandalism. Staff can also share their opinions through multiple communication channels, such as meeting, internal Chatapp and email.







# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Managing Risk

### Strategy

To address the actual and potential impacts of climate-related risks on the organisation's businesses, strategy, and financial planning, we have formulated a strategy covering the risks and opportunities associated with climate change.

#### Climate-related Risks

##### Physical Risks

These include acute risks, such as increased intensity and frequency of extreme weather events (e.g. typhoons, flooding and extreme heat) and chronic risks, such as rising temperatures and sea levels.



##### Transition Risks

There are also risks associated with the transition to a low-carbon economy:

###### **Policy and Legal Risk**

Keep up with the latest environmental policies

###### **Technology Risk**

Transition to low emissions technology

###### **Market Risk**

Increased market demand for green building guidelines

###### **Reputation Risk**

Increased risk of greenwashing



#### Climate-related Opportunities



The built environment in Hong Kong is experiencing a transformative growth in sustainable development along with a rising market demand for green buildings, driven by heightened environmental awareness in the industry, strengthened government regulations and green incentives, as well as demonstrated economic benefits of sustainable construction practices.

The rising demand will create opportunities for increasing investments in sustainable design and construction and a wider adoption of innovative green technologies in building projects, thereby facilitating low-carbon transformation for sustainable development.

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Managing Risk

### Risk Management

	Current and Anticipated Effect(s)		Our Current and Future Strategies
<b>Physical Risks</b>	Increased physical impacts on existing buildings and infrastructure		<ul style="list-style-type: none"> <li>Conduct routine maintenance to tackle the impacts of physical climate risks on organisation's assets</li> <li>Promote "Design of Resilience" in building design and raise staff awareness to optimise the interaction between a building and its local microclimate</li> <li>Provide technical guidelines on all building works during extreme weather conditions</li> <li>Conduct regular offsite offline backup to secure local storage of all data for ArchSD's operations</li> </ul>
	Staff safety under extreme weather conditions		<ul style="list-style-type: none"> <li>Provide guidelines in our ArchSD Management Plan for Emergency Incidents</li> <li>Launch work arrangements in times of heat stress, tropical cyclones and rainstorms</li> </ul>
<b>Transition Risks</b>	Policy and Legal Risks	Keep up with the latest environmental policies and circulars	<ul style="list-style-type: none"> <li>Engage external committees to keep track of market or policy updates</li> <li>Incorporate updates of the circulars on Green Government Building into departmental environmental objectives and targets and General Specifications</li> <li>Utilise multiple communication channels to update all concerning parties</li> </ul>
	Technology Risk	Transition to low emissions technology	<ul style="list-style-type: none"> <li>Set up the Innovative Construction Focus Group</li> <li>Conduct regular meetings with other government departments and professional institutions to keep abreast of the latest developments</li> <li>Expand resources dedicated to staff training on adopting innovative technologies</li> </ul>
	Market Risk	Increased market demand for green building guidelines to keep up with international standards	<ul style="list-style-type: none"> <li>Update the <i>General Specification for Building</i> and the <i>General Specification for Building Services Installation in Government Buildings</i></li> <li>Provide professional advice and recommendations related to sustainable building design and construction in external committees</li> </ul>
	Reputation Risk	Increased risk of greenwashing	<ul style="list-style-type: none"> <li>Enhance credible third-party certification and sustainability benchmarking</li> </ul>

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Managing Risk

### *Metrics & Targets*

We have set targets to manage climate-related risks and opportunities.

At the organisation level, we have achieved ISO 14001 Environmental Management System certification coupled with annual reviews of our environmental performance, as well as monthly reviews of our green housekeeping progress as metrics.

We have also set annual electricity consumption targets and measured our progress according to the Green Energy Targets (published by the HKSAR Government) and the Green Manager's Environmental Targets (published by the ArchSD). See our data summary.

At the project level, we have included incentive marks to enhance green performance in the tender proposals. Guidelines and checklists are also provided for project proponents to evaluate the environmental impacts of the projects.

Following the consultancy study, we launched the "3A Strategy" under the Carbon Neutrality Strategic Framework in 2024 and engaged our stakeholders. This initiative aims to accelerate progress in decarbonising the built environment by harnessing smart, innovative and green solutions; and advocate for collective action to drive sustainable construction for a low-carbon future in Hong Kong.

### *Contingency Plans*

To protect our operations under a wide range of scenarios, we have set up a Site Safety and Environmental Review Committee to oversee and continuously improve the ArchSD Management Plan for Emergency Incidents. This comprehensive strategy plan not only gives us the ability to recover rapidly from a variety of emergency incidents, such as adverse weather events, natural disasters, fire and accidents, but also to anticipate and deal effectively with crises that may arise.

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Maintaining Integrity and Professionalism

The ArchSD attaches great importance to upholding the highest standards of professional conduct and integrity across all operations and practices.

All ArchSD staff must comply with the Prevention of Bribery Ordinance and related regulations. Any suspected case of bribery or corruption is promptly reported to the MAC and the Independent Commission Against Corruption for investigation. We also adhere to all applicable legal and regulatory requirements, including but not limited to anti-corruption and anti-competitive activities. To reinforce compliance with local and international anti-bribery laws, the ArchSD has implemented the ISO 37001:2016 Anti-bribery Management System. This framework strengthens staff training and ensures rigorous adherence to ethical standards. In 2024, we conducted 4 anti-bribery seminars for staff with no cases of non-compliance identified during the reporting period.

To further promote a culture of integrity, we organised 32 workshops on Corruption Prevention & Capacity Building for ArchSD staff and contractor staff, along with a dedicated Integrity Management workshop for new recruits during the year.

In addition, all ArchSD's contractors and suppliers are required to strictly abide by the Hong Kong Laws, including anti-corruption regulations upon tender submission.

### Employee Rights

We strictly comply with the Employment Ordinance. We uphold the rights of our staff while enhancing their knowledge, capabilities and resilience by:

- providing employee benefits
- offering on-going professional and personal development opportunities
- encouraging cross-generational and multidisciplinary learning initiatives



### Health and Safety

The safety of our staff and industry partners is our top priority. On construction sites ensure strict adherence to – or exceeding – statutory safety requirements and the guidelines published by the Development Bureau. For large-scale projects, Labour Relations Officers are appointed at the outset to address potential safety disputes between contractors and workers.

In addition, we actively promote safety excellence through events, guidelines and initiatives. These include:

- ArchSD Standard on Universal Accessibility Provisions and Elderly-friendly Design Guidelines
- ArchSD's Site Safety Model Workers Award Scheme
- Considerate Contractors Site Award Scheme co-organised by the Development Bureau and Construction Industry Council
- Smart Site Safety System (4S) Labelling Scheme developed by the Development Bureau, in collaboration with the Construction Industry Council

For details of our health and safety management practices and initiatives, see our Holistic Approach to Safety and Sustainability.



### Handling Complaints

A grievance mechanism is in place to enable staff to raise concerns and complaints in strict confidence to his or her Departmental Staff Complaints Officer. Similar procedures are in place for handling sexual harassment complaints according to the procedures established by the Civil Service Bureau. No compliance breach was identified during the reporting period.



### Client Satisfaction

We conduct half-yearly client satisfaction surveys and maintain a dedicated team to address feedback, optimise performance and drive continuous improvements.

During the reporting period, all completed projects achieved a "Satisfied" rating or above on our overall performance.



# BUILD ROBUST SUSTAINABILITY GOVERNANCE



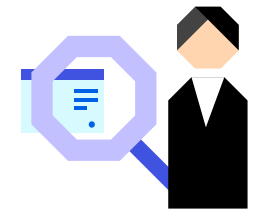
## Stakeholder Engagement and Materiality

### *Listening to our Stakeholders*

The ArchSD maintains an active dialogue with various stakeholders through robust two-way communication channels. This engagement strategy enables us to gain insights into stakeholder concerns, priorities and values.

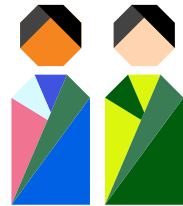
#### **Clients**

- After-action Reviews
- Post-occupancy Evaluations
- Surveys
- Workshops



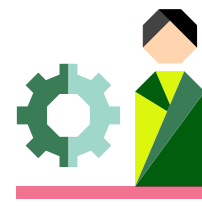
#### **Staff**

- Department Consultative Committee
- Staff Associations
- Staff Motivation Scheme
- Staff Relation Units
- Web Forum



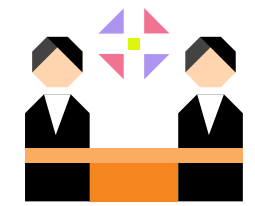
#### **Suppliers**

- Events
- Public Seminars



#### **Legislators and District Councillors**

- Focus Group Meetings



#### **Academic Groups/ Professional Bodies**

- Conferences
- Meetings
- Publications
- Training Sessions



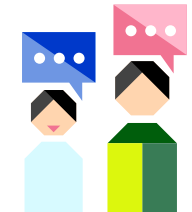
#### **Contractors/Consultants**

- Events
- Extranet
- Green Contractor Award
- Site Visits



#### **General Public**

- ArchSD Sustainability Reports
- Events and Activities
- Exhibitions
- Mass and Digital Media
- Public Seminars



# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Stakeholder Engagement and Materiality

### *Industry Engagement*

The ArchSD strives to strengthen engagement with external stakeholders by participating in various government committees as well as industry and professional associations to provide recommendations, share experiences and promote best practices. These include but not limited to:

- **Advisory Committee on Built Heritage Conservation** to provide advice on built heritage conservation;
- **Committee on Planning & Land Development** to consider and review policies on planning and land development issues;
- **Development Bureau Steering Committee for Building Information Modelling (BIM)** to formulate strategies for a wider adoption of BIM technology in major government capital works projects; and to monitor the implementation of BIM technology in public works projects;
- **Hong Kong Green Building Council Sustainable Development Committee** to provide guidance and advice on advanced and impactful sustainable building environment concepts and practices; and
- **Joint Working Group on Modular Integrated Construction (MiC)** to identify suitable technologies and practices of MiC for Hong Kong's built environment

# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Stakeholder Engagement and Materiality

### Materiality Assessment

To identify the material ESG topics that have the greatest impacts on the ArchSD and our stakeholders, we undertake an annual comprehensive materiality assessment process according to the reporting principles of the GRI Standards.

This year's materiality assessment was conducted by an independent consultant, who used a quantitative approach to identify the material topics, following the steps outlined in GRI 3: Material Topics 2021.

The year's materiality assessment took into account the results of a questionnaire survey conducted in June 2025 among 6 stakeholder groups who have significant impacts on ArchSD's operations or could be significantly affected by our operations. These stakeholder groups included the following:

- ArchSD Staff
- Academic Groups / Professional Bodies
- Client Departments, i.e. other Government Departments
- Consultants
- Contractors
- General Public

Material issues for the organisation as well as industry-specific challenges and global megatrends were identified to produce 20 material ESG topics for this year's Report. A total of 719 responses were received and the materiality results are shown in the table on the right.

Categories	Material topics	Importance
Environment	Energy mix and efficiency	High
	Biodiversity and ecological impacts	Mid
	Management of greenhouse gas (GHG) emissions and related environmental risks	Mid
	Resource efficiency and circularity	Mid
	Water efficiency and recycling	Low
Social	Health and safety for all	High
	User health and safety in using the facilities	High
	Employment practices, welfare and rights	Mid
	Community engagement	Low
	Diverse and comprehensive staff training and development	Low
Governance	Ethical practices	High
	Climate risks and response	Mid
	Data security	Mid
	Management of ESG risks and opportunities related to the ArchSD's operations	Mid
	Management of ESG risks and opportunities related to the supply chain	Low
Value creation	Bring positive impacts on the social well-being, livelihood and prosperity of local communities and individuals	High
	Deliver environmentally and socially responsible projects	High
	Economic performance	Mid
	Use advanced technologies to enhance project quality and productivity	Mid
	Indirect economic impacts	Low



# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Stakeholder Engagement and Materiality

After scrutinising the feedback from all stakeholder groups, we identified 6 material topics (most significant impacts) that are disclosed in detail in the Report.



**Bring positive impacts on the social well-being, livelihood and prosperity of local communities and individuals**



**Deliver environmentally and socially responsible projects**



**Energy mix and efficiency**



**Ethical practices**



**Health and safety for all**



**User health and safety in using the facilities**

With a view to delivering a comprehensive report on ArchSD's sustainability performance, the following material topics with less significant impacts will also be disclosed:

- Climate risks and response
- Community engagement
- Diverse and comprehensive staff training and development
- Economic performance
- Employment practices, welfare and rights
- Management of ESG risks and opportunities related to the ArchSD's operations
- Management of GHG emissions and related environmental risks
- Indirect economic impacts
- Resource efficiency and circularity
- Use advanced technologies to enhance project quality and productivity
- Water efficiency and recycling



# BUILD ROBUST SUSTAINABILITY GOVERNANCE



## Stakeholder Interview

Following the survey, two qualitative face-to-face interviews with both internal and external stakeholders were also arranged to gain insights on our key material issues and their sustainability expectations. We also maintained close communication with and collected feedback from stakeholders during the course of our daily operations.



### *Interview with External Stakeholder*

**Ms Winnie HO, JP**  
Secretary for Housing



### *Interview with Internal Stakeholder*

**ArchSD Working Group for Smart Asset Maintenance**

# INTERVIEW WITH EXTERNAL STAKEHOLDER

## Secretary for Housing

The **Housing Bureau** is committed to solving Hong Kong's housing challenges by increasing supply, enhancing quality of life and fostering thriving communities. Through innovation, advanced technologies and proactive stakeholder collaboration, its core strategies include: expanding public rental housing for low-income families, providing subsidised sale flats for aspiring homeowners, maintaining stability of the residential property market, and optimising land and resources of public housing.

### *Light Public Housing*

- To meet the high demand for public housing, the Government announced the Light Public Housing (LPH) initiative in the 2022 Policy Address to address the short-term gap of public housing supply. This project is providing approximately 30 000 simple, standardised units, with community-centric ancillary facilities in 2 batches within a 5-year period before 2027-28.
- The LPH offers affordable, temporary housing to improve the living conditions for grassroots communities in inadequate housing at the soonest.
- The Housing Bureau leads policy formulation, while the ArchSD oversees development and supervision of design and construction, ensuring the quality and efficiency of Light Public Housing.

### *A Living ESG Showcase: Tackling Hong Kong's Housing Shortage*

The Light Public Housing (LPH) initiative is a transformative social project designed to address Hong Kong's acute housing shortage, providing critical relief for those with pressing housing needs, such as residents of sub-divided units (SDUs). By optimising public resources, LPH delivers quality, temporary accommodation with speed and efficiency, helping to narrow the wealth gap and foster greater social equity. Building on ArchSD's success in delivering emergency quarantine facilities during the COVID-19 epidemic, this initiative underscores ArchSD's pivotal role in meeting societal challenges by overseeing LPH design and construction.



Ms Winnie HO, JP  
Secretary for Housing

## Interview with External Stakeholder

At its core, LPH embodies Environmental, Social and Governance (ESG) principles, integrating rapid delivery, cost-efficiency, safety, and smart technology into a new model for sustainable public housing:

**Environmental sustainability:** The ArchSD leverages advanced prefabrication and precision manufacturing, such as MiC and DfMA to minimise environmental pollution (including noise and waste) and enhance resource efficiency across the entire project lifecycle, from planning and construction to operation, maintenance, and eventual deconstruction or reuse.

**Economic sustainability:** Cost-effective design and construction methods adopted by the ArchSD reduce rental costs, enabling residents to allocate more of their income to other essential needs. LPH establishes economically viable communities that support long-term prosperity.

**Social sustainability:** LPH significantly improves living conditions and quality of life by providing essential community amenities and fostering social inclusion. The people-centric designs and facilities developed by the ArchSD such as study rooms, activity spaces and multi-purpose community areas promote community cohesion and well-being.

**Sustainability governance:** A result-oriented approach, strengthened by strong government leadership and clear objectives, ensures high-quality policy implementation and project delivery.



## Transformative Impacts for Public Development

LPH integrates innovative and smart construction technologies – including BIM, IoT, AI, MiC, DfMA and MiMEP – enable the rapid, cost-effective delivery of affordable housing equipped with integrated social and community services. Delivered in collaboration with NGOs and property management agencies, the unique operational model provides employment and schooling assistance and tailored services for the elderly, person with disabilities, children and families.

This holistic approach has redefined public development by prioritising productivity, quality and inclusion. Through its people-centric designs, LPH promotes urban regeneration, fostering vibrant ecosystems where residents, industries and living environment thrive in synergy. Beyond providing immediate housing solution, LPH serves as:

- **A catalyst for sustainable innovation:** LPH pioneers the MiC approach, utilising full prefabrication, integrated MiMEP lifts, and low-carbon materials like lightweight concrete setting a new benchmark for multi-storey residential developments.
- **A model for social inclusion:** People-centric designs and comprehensive ancillary facilities – including retail shops, self-service laundries, study and activity rooms and multi-purpose community spaces – enhance residents' quality of life and foster integration of grassroots families from diverse backgrounds within the community.



## Interview with External Stakeholder

### Exemplifying Project Excellence

ArchSD's commitment to quality, precision and cost-effectiveness is clearly demonstrated in the LPH project. The adoption of standardised modular designs, lean construction strategies, and a streamlined direct procurement approach has significantly accelerated project timelines while reducing overall costs.

The Choi Hing Road LPH development, Hong Kong's first high-rise LPH project featuring MiC elevators, was completed in just 18 months, setting a new record for high-rise construction speed in the city.

To optimise land use, we have also revitalised sites with lower social value, enabling faster delivery of housing units at reduced construction costs. Furthermore, ArchSD actively promotes community engagement by incorporating residents' artwork into building designs. This participatory approach enhances the projects' socio-cultural value and has garnered widespread acclaim.



Groundbreaking Ceremony of the First Light Public Housing Project

### Fostering Cross-Bureau, Cross-Sector Synergy

LPH creates a cohesive blueprint for community development by fostering deep collaboration across government, construction, social services, and property management sectors. This synergy is built on highly engaged top-level leadership, open dialogue, continuous knowledge exchange, and a responsible, professional ethos, supported by key performance indicators that ensure operational efficiency, sustained improvements and expedited issue resolution.

### ArchSD's Future Contributions

We are delighted to partner with the ArchSD to advance the Government's goal of addressing the housing shortage in the short term. We greatly appreciate the Department's professional expertise and unwavering commitment to continuous evaluation and enhancement, which are essential to ensuring the project's quality, productivity, cost-effectiveness and resource efficiency.



Light Public Housing Project at Yau Pok Road, Yuen Long

Looking ahead, we are confident that the ArchSD will continue to enhance LPH's sustainability and architectural innovation. We look forward to their valuable contributions in promoting community engagement, advancing sustainability research, optimising public architecture designs and enhancing Hong Kong's liveability, while completing the remaining LPH units.

### Our Response

In the past year, the ArchSD made significant strides in advancing sustainable development in Hong Kong's built environment through the LPH project. Our progress was greatly accelerated by highly effective cross-bureau and cross-sectoral collaboration and a steadfast commitment to innovation. This partnership provided invaluable experience, demonstrating the powerful synergy that emerges from pursuing a common goal of sustainability and quality living. We are particularly grateful for the insights shared by the Secretary for Housing in the interview, which have enriched our understanding of the community's evolving needs and aspirations.

Looking ahead, the ArchSD will continue to champion innovation as the key driver of high-quality development. We are committed to leveraging cutting-edge technologies and people-centric designs that enhance liveability and well-being. By expanding our knowledge and deepening partnerships with industry and the community, we will fulfil our mission to build a more sustainable, resilient, and future-ready Hong Kong for all.

# INTERVIEW WITH INTERNAL STAKEHOLDER

## ■ ArchSD Working Group for Smart Asset Maintenance

Established in 2020, the **ArchSD Working Group for Smart Asset Maintenance (SAMWG)** is the central innovation driver for the Property Services Branch. Tasked with developing and implementing integrated smart solutions for the upkeep of ArchSD's maintained government facilities, SAMWG provides strategic direction, formulates objectives and develops programmes to future-proof ArchSD's asset portfolio. Its responsibilities are organised into 5 core pillars: Innovative Technologies/Materials, CO-i Projects, BIM for Facilities Upkeep, Building Resilience and AI & Big Data Analytics.



### *Incubating Smart Solutions for Resilience and Efficiency*

Amidst climate change challenges, rapid technological advancements, and growing societal expectations, the SAMWG is committed to enhancing the resilience, safety, cost-effectiveness and resource efficiency of all buildings and facilities under ArchSD's maintenance purview.

Our approach involves strategically adopting innovative technologies—such as robotic and drone inspections, IoT networks, AI-driven analytics, and sustainable material trials—supported by the digital transformation of systems and workflows. Through cross-disciplinary collaboration and partnerships with local and international academic and research institutions, we tackle critical “pain points” in asset management, turning challenges into opportunities for sustainable progress.

## Interview with Internal Stakeholder

Since its establishment, SAMWG has delivered over 30 projects. Key initiatives include:

### Advancing Net Zero - The Pet Garden Toilet Block Refurbishment Project:

This living laboratory integrates 3D concrete printing, renewable energy systems, and a suite of low-carbon materials, achieving a landmark 60% reduction in embodied carbon and a 70% reduction in operational carbon emission, setting a benchmark for sustainable design and construction.

**Transforming inspections with robotics and AI:** Drones and robotics, powered by AI analytics, enable short-range inspections and defect identification, improve quality control, and support rapid emergency response.

**Driving operational efficiency** by implementing BIM-based asset management, transitioning from 2D to 3D digital modelling, pioneering Heritage BIM, and digitalising processes from planning and estimation to construction and maintenance.

**DfMA application in toilet refurbishment:** This approach minimises wastage, reduces onsite labour force and enhances site safety by shifting high-risk activities to a controlled factory environment. It provides a replicable model for efficient, sustainable maintenance.

**Integrating BIM with IoT sensors:** Real-time monitoring of issues (such as structural stress) facilitates instant alerts and pre-emptive action to enhance climate resilience and user safety.



Cable-driven hammer-tapping robot



Wall climbing robot



Recreational surface inspection robot



## Interview with Internal Stakeholder

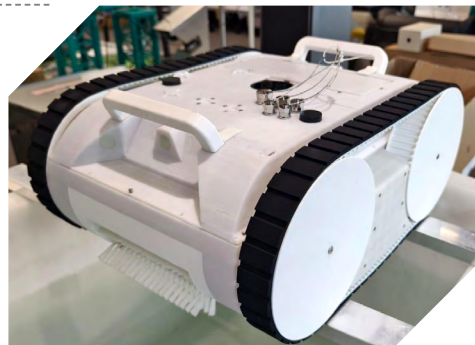
### ***Navigating Challenges: From Concept to Application***

Innovation requires navigating rapid technological change and practical implementation barriers. This demands continuous market assessments, rigorous feasibility reviews, and trusted partnerships with contractors and consultants.

As the vital bridge, the cross-disciplinary SAMWG provides an ideal platform for gathering insights and sharing knowledge, accelerating a cultural shift from reactive maintenance to proactive care. With strong support from ArchSD's senior management, we conduct meticulous trials and identify pilot projects to transform promising concepts into scalable, secure solutions. The insights gained from these projects are also shared across teams, enhancing future building performance and resilience.

### ***Fostering Culture and Ecosystem Change***

Driving innovation also requires a supportive external ecosystem. To promote innovation and efficiency beyond our organisation, we provide guidelines and embed technology adoption requirements (such as hammer tapping robot) into tenders and contracts. Our water tank cleansing robot initiative – developed in collaboration with the Electrical and Mechanical Services Department, Housing Department, Housing Society, Hong Kong Science and Technology Parks Corporation and the Hong Kong University of Science and Technology – consolidates requirements and demands to incentivise market innovation, enhance functionality, and deliver cutting-edge solutions.



Water tank cleansing robotic

### ***Scaling Innovation for Future Growth***

SAMWG's work aligns with ArchSD's sustainability goals, delivering lasting value to the community. To further expand smart asset management capabilities, we will:

- **Develop living showcases:** The award-winning Pet Garden Toilet Block Refurbishment Project serves as a dynamic platform for community education and stakeholder engagement, inspiring broader adoption of advanced technologies and sustainable practices into facilities management.
- **Foster innovative thinking:** Drive mindset and behaviour change to promote a culture of innovation through various learning and development initiatives.
- **Strengthen collaboration:** Engage local, Mainland and international academic and research institutions to promote knowledge exchange and innovation, and accelerate R&D applications.

## ***Our Response***

The SAMWG is a testament to ArchSD's commitment to innovation. This cross-disciplinary team has set new benchmarks in sustainable buildings through its pioneering projects, enhancing the efficiency, safety, and sustainability performance of Hong Kong's built environment. By providing a platform for knowledge-sharing and pilot testing, SAMWG is accelerating a vital cultural shift from reactive maintenance to proactive, intelligent asset care. This initiative drives technical excellence while fostering a strong sense of purpose and engagement within our workplace. Looking ahead, the ArchSD will continue to support SAMWG to explore more integrated smart solutions, ensuring our teams can flexibly apply new knowledge. Through targeted promotion and learning initiatives, we will encourage staff across all disciplines and grades to engage in this innovation journey. Our goal is to instil the mindset and behaviour change essential for remaining at the forefront of the industry, ensuring the ArchSD is agile and fully prepared for the future.