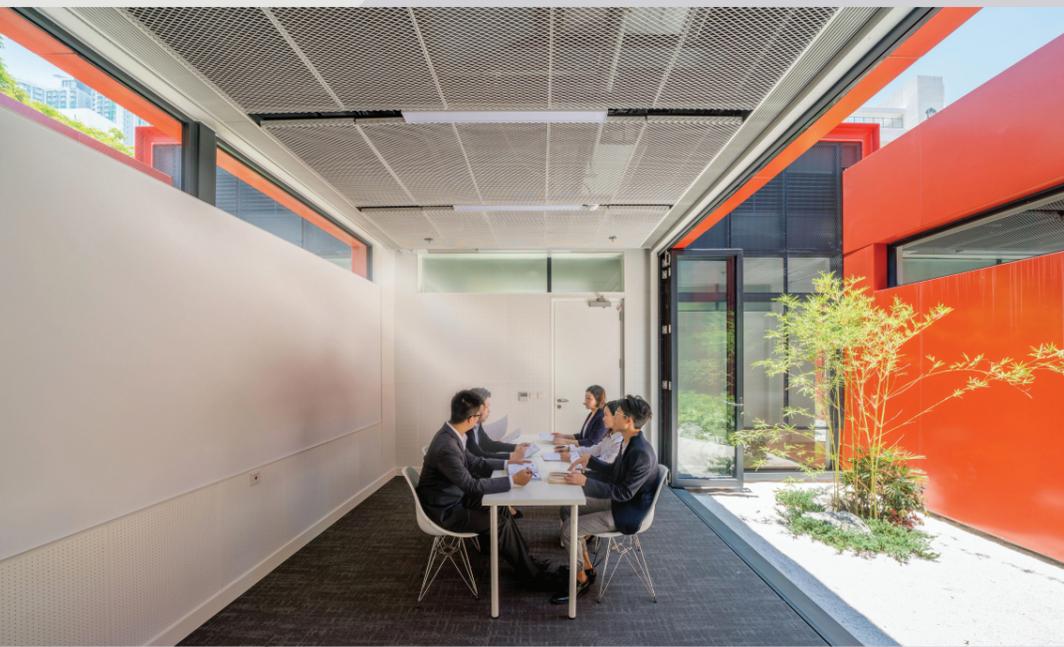




JOURNEY TO INNOVATIVE CONSTRUCTION

SUSTAINABILITY REPORT 2019



ArchSD Sustainability Report 2019 – Table of Contents

1. Message from the Director	1
2. About this Report	2
3. ArchSD at a Glance	4
• Roles and Orgainsation Structure	4
• Funding and Mode of Operation	7
• Departmental Expenditure	7
• Key Facts of the Department	8
4. Awards and Achievements	9
5. Management and Engagement	15
• Strategy and Management	16
• Departmental Annual Plan	19
• Engagement Approach	20
• Main Focus Areas and Materiality	21
6. Managing Resources and Environmental Impact	22
• Fostering Sustainable Building Design	23
• Creating a Green Workplace	40
7. Engaging out Partners and Community	47
• Excellence through Partnership	48
• Supporting Community Development	56
8. Caring for the Staff	62
9. Objectives and Targets	69
10. Data Summary	76
11. Report Verification	83
12. GRI Content Index	85
13. Glossary	94
14. Feedback	100



Message from the Director

Dear friends

Welcome to ArchSD's 2019 Sustainability Report. Let's embark together on the 'Journey to Innovative Construction'!

The rapid development of innovations and technologies (I&Ts) brings about a game-changing epoch to conventional industries, including the construction sector. ArchSD endeavours to facilitate and collaborate with our partners to harvest optimal I&Ts for the sustainable development of the industry at large.

This Report highlights our extensive use of BIM from facilities development to upkeep, examples include the West Kowloon Government Offices and a refuse collection point in Kai Tak; our adoption of MiC in a 648 quarter units project with modular installations to be completed early next year; and our incorporation of a passive environmental design strategy for the expansion and renovation of the Hong Kong Museum of Art to uphold sustainable building concepts. We venture innovative solutions for facilities upkeep through using IoTs such as active water leakage detection and tree motion sensing systems. Meanwhile, ArchSD continues to pursue our Corporate Intelligence (CO-i) for a more sustainable and efficient office operations, to nurture young colleagues, and to capture knowledge of the veterans through our ArchSD Academy.

I am sincerely grateful for the endless efforts made by our partners, clients and colleagues that have culminated in our achievement. Regardless roles or positions, please continue to support ArchSD in this 'Journey to Innovative Construction', for enriching our built environment in a sustainable manner. I hope you enjoy reading the Report, and please do share your Feedback.

Cheers,

Alvinia

About this Report



Reporting Objectives

Published over 20 annual environmental reports and sustainability reports in total, Architectural Services Department (ArchSD) of the Government of the Hong Kong Special Administrative Region is dedicated to promote sustainability and innovativeness in construction of buildings. With the topic of Journey to Innovative Construction, the 16th annual sustainability report continues to present our initiatives and performance on economic, environmental and social aspects in 2018.

In addition to demonstration of our achievement during the reporting year, this report also emphasise our commitment to serving better in the future with continuous efforts and improvement in sustainability.

Reporting Scope

GRI102-46

The Sustainability Report 2019 ('the Report') highlights ArchSD's key sustainability initiatives and achievement from 1 January 2018 to 31 December 2018. The Report covers the sustainability performance and initiatives of our six functional branches and two Central Management Divisions. Data in the Report are presented as absolute figures as of 31 December 2018 (unless otherwise stated) to the best of our knowledge. Financial data are reported for the financial year ended 31 March 2019. All monetary values are in Hong Kong Dollars.

Reporting Principles

This Report has been prepared in accordance with the GRI Standards: Core option of the Sustainability Reporting Standards as well as the Environmental Protection Department's A Guide to Environmental Reporting for Controlling Officers and the Director of Information Services' memo dated 20 October 2016 – 'Guidelines on preparation of annual departmental reports'.

The GRI Content Index correlates GRI disclosures with associated sections in the Report. An independent third party was engaged to assure the materiality, credibility and reliability of the Report and ensure its attainments to the Core option of GRI Sustainability Reporting Standards. We also went through the GRI 'Materiality Disclosures Service' to ensure General Disclosures 102-40 to 102-49 were correctly located and can be easily found by readers.

Notes to Reader

The Report is published online in web-based interactive html version and PDF version. The Report is available in English, Traditional Chinese and Simplified Chinese. The interface has been prepared in accordance with the Level AA of the [W3C Web Content Accessibility Guidelines 2.0](#). In addition, the Report can also be viewed by tablet computers. Key features of the Report are highlighted as follows:

- ▶ On-screen font size setting provides more comfortable reading options for various users;
- ▶ Picture enlargement function presents larger and clear photo images, graphics and charts to readers;
- ▶ Search function facilitates readers to locate any specific interested sections or information efficiently;
- ▶ 'My Report' function enables readers to temporarily store any selected section(s) for consolidation and printing;
- ▶ 'Data Summary' section furnishes readers with a quick review of our performance on various key indicators; and
- ▶ 'Glossary' section provides definitions of the technical terms using in or relevant to the Report.

ArchSD at a Glance

- Roles and Organisation Structure
- Funding and Mode of Operation
- Departmental Expenditure
- Key Facts of the Department

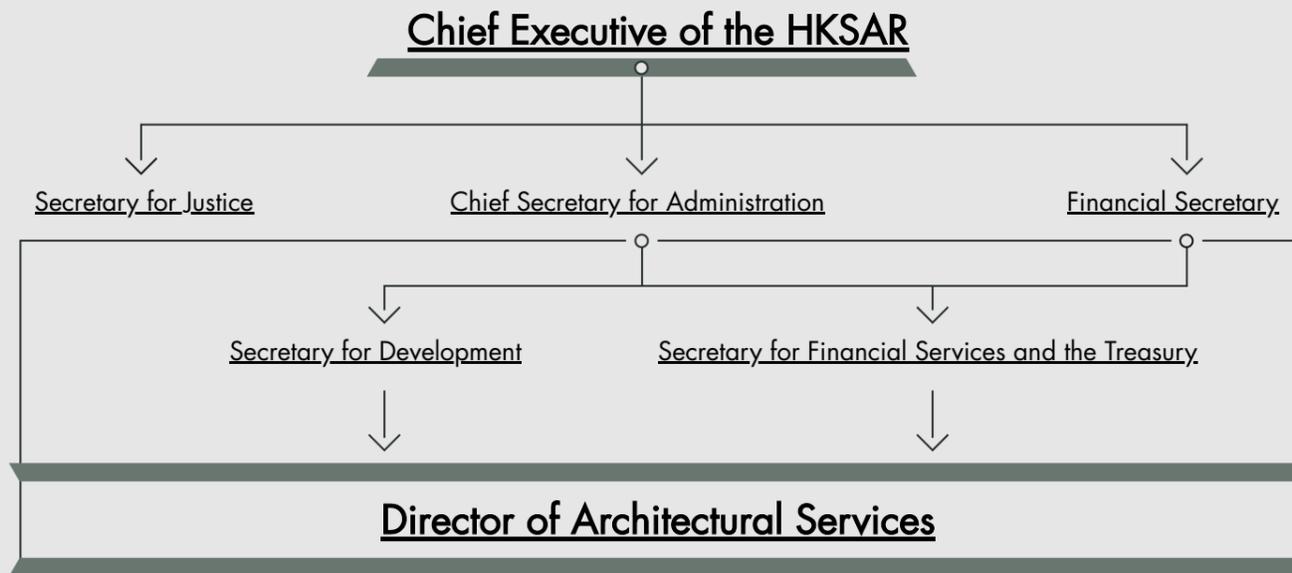


Roles and Organisation Structure

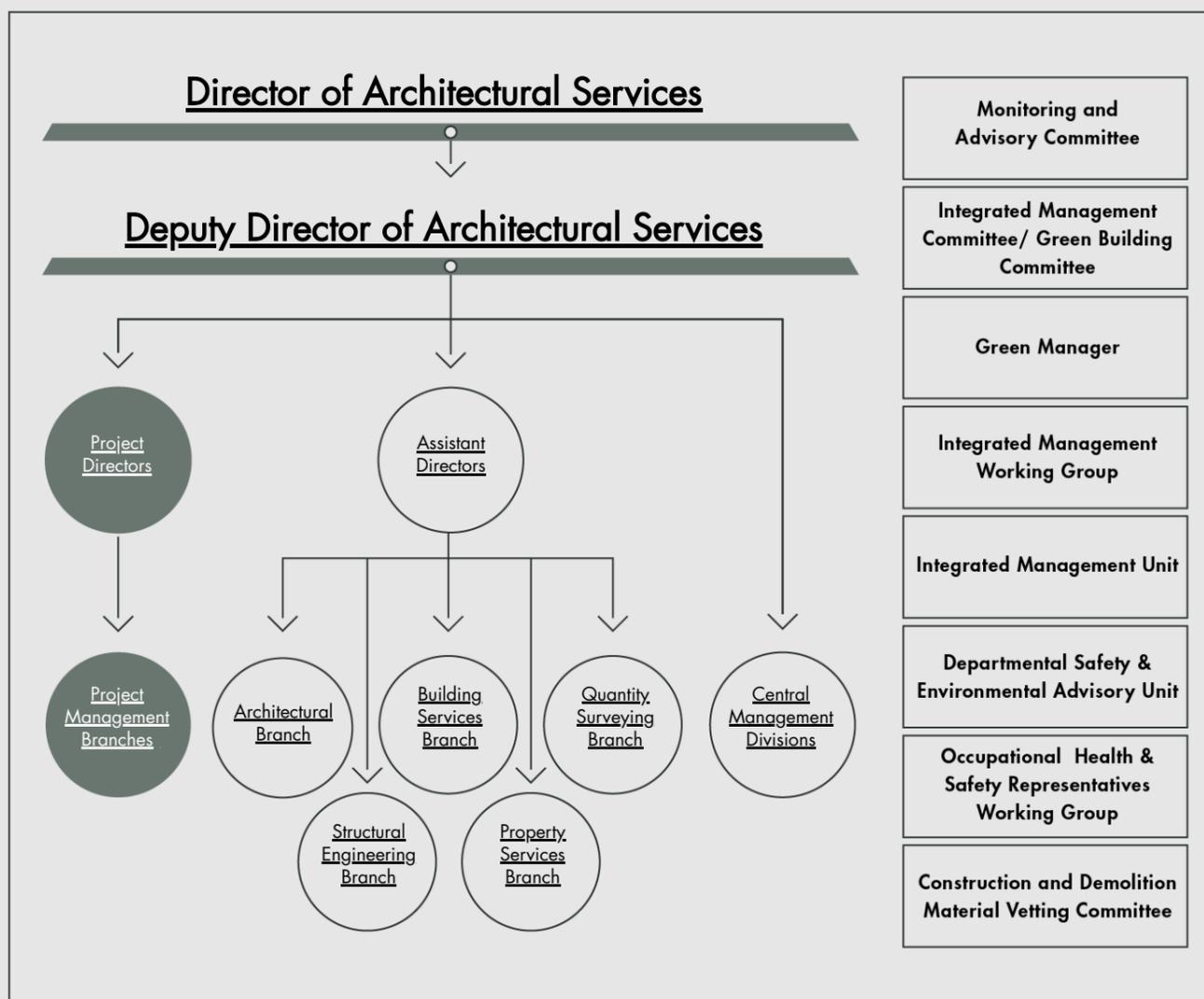
Architectural Services Department (ArchSD) performs three core functions in relation to Government-owned and Government-funded facilities in the following programme areas:

- ▶ **Monitoring and advisory services** - to provide effective professional and technical advice to the Government and quasi-government organisations and to oversee subvented, joint-venture and entrusted projects;
- ▶ **Facilities upkeep** - to provide efficient and cost-effective professional and project management services for the maintenance and refurbishment of buildings and facilities; and
- ▶ **Facilities development** - to provide efficient, cost-effective and timely architectural and associated professional and project management services for the design and construction of buildings and related facilities.

ArchSD Role in the Government of HKSAR



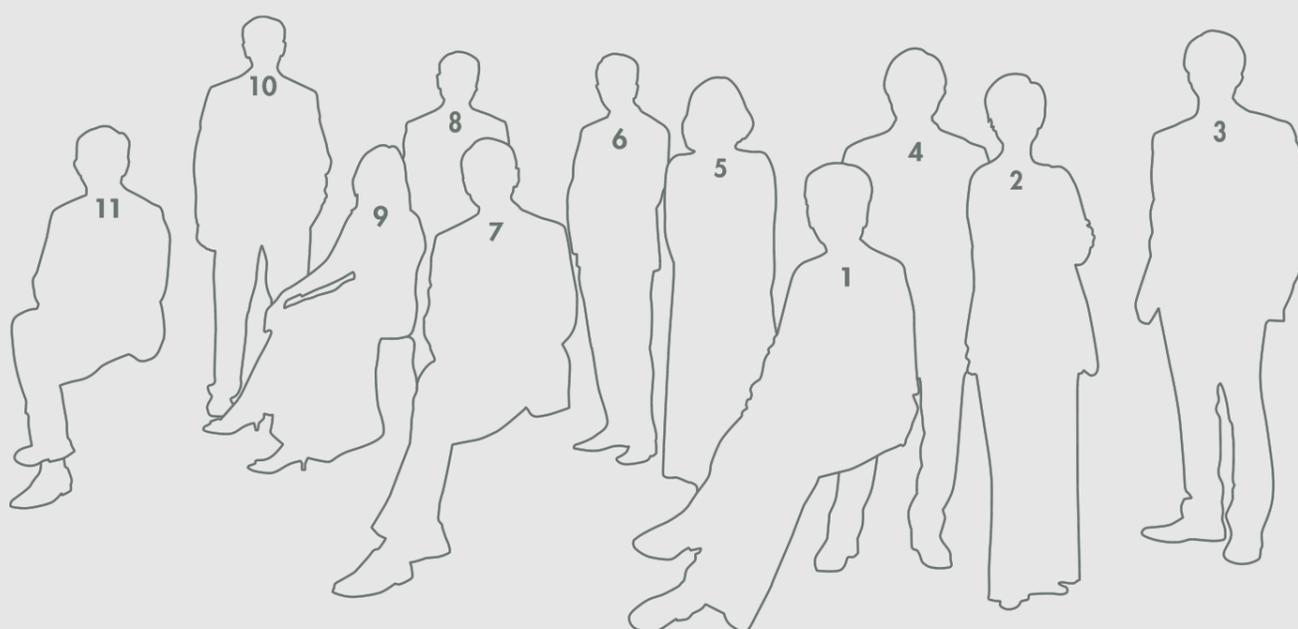
Organisation Structure



Management Team



1. Mrs. Sylvia LAM, Justice of the Peace, Director of Architectural Services
2. Ms. Winnie HO, Justice of the Peace, Deputy Director of Architectural Services
3. Mr. Frank WONG, Justice of the Peace, Project Director/1
4. Mr. K.M. LEUNG, Assistant Director (Quantity Surveying)
5. Ms. Alice YEUNG, Justice of the Peace, Assistant Director (Architectural)
6. Mr. K.L. TSE, Justice of the Peace, Assistant Director (Structural Engineering)
7. Mr. K.P. LEUNG, Assistant Director (Property Services)
8. Mr. K.C. MAK, Justice of the Peace, Assistant Director (Building Services)
9. Ms. Doreen KWAN, Departmental Secretary
10. Mr. Edward TSE, Justice of the Peace, Project Director/3
11. Mr. Michael LI, Project Director/2



Funding and Mode of Operation

Our Departmental operation is funded by the Capital Works Reserve Fund which is approved, monitored and reviewed by the Legislative Council (LegCo).

During 2018, we have created a total of 9,562 jobs by awarding works contracts and consultancies. We commenced 21 new works and term contracts during the year.

GRI102- 45

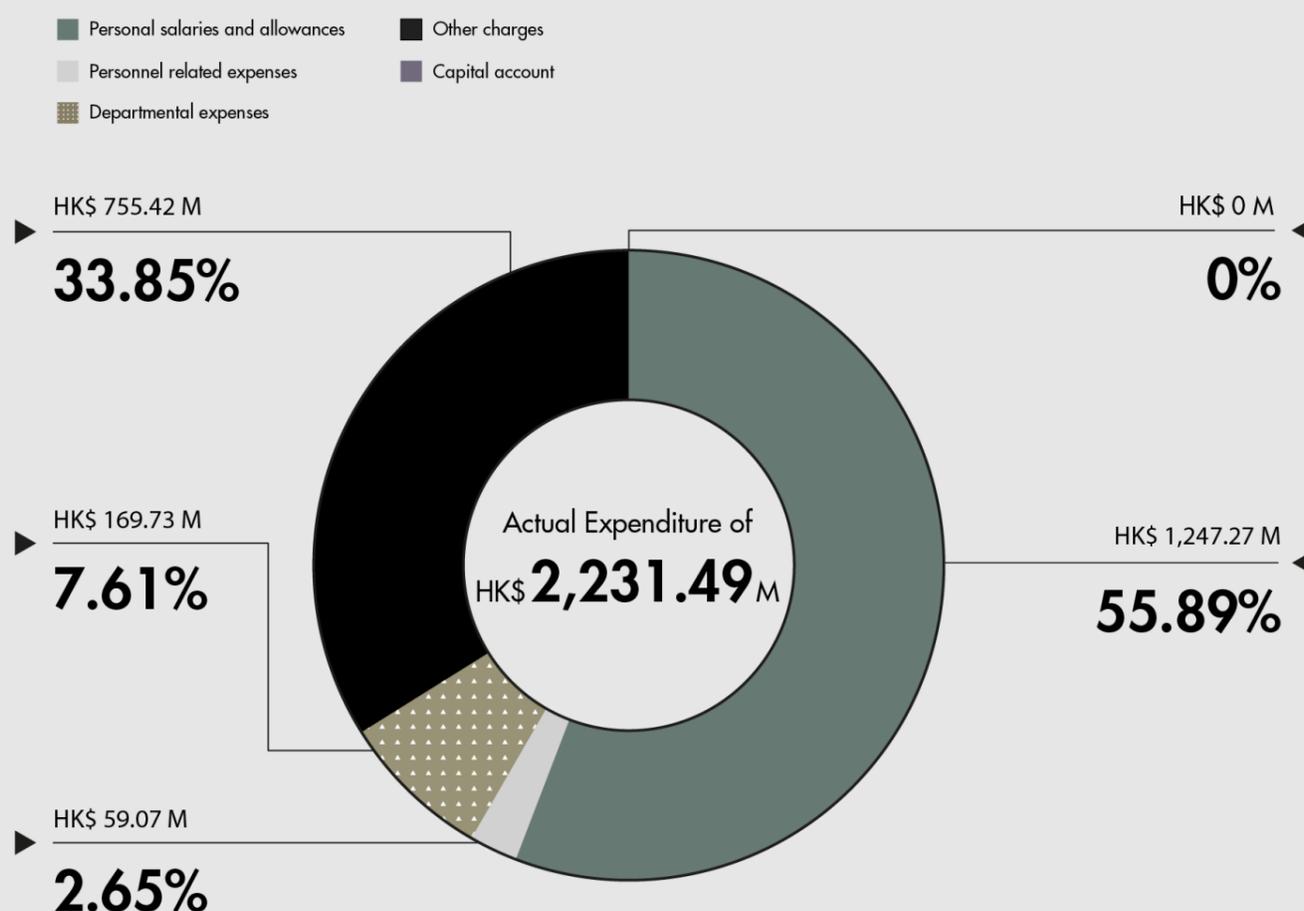
Department Expenditure

In the financial year 2018-19, we recorded an overall increase of around 8.04%^[1] as comparing with the previous financial year in 2017-18. Expenditure breakdown of our department and by different programme areas^[2] for the financial year 2018-19 are provided below. Details of our financial information and key performance of 2018-19 can be found in the ArchSD Controlling Officer's Report of the 2019-20 Estimates of the Government of the HKSAR, which is available online at www.budget.gov.hk.

[1] The actual Departmental Expenditure 2018-19 was HK\$2,231.49 million, there was around 8.04% increase as comparing with the actual Departmental Expenditure 2017-18 of HK\$2,065.44 million.

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

Departmental Expenditure Breakdown by Subhead



Personal salaries and allowances HK\$ 1,247.27 M (55.89%)

Personnel related expenses HK\$ 59.07 M (2.65%)

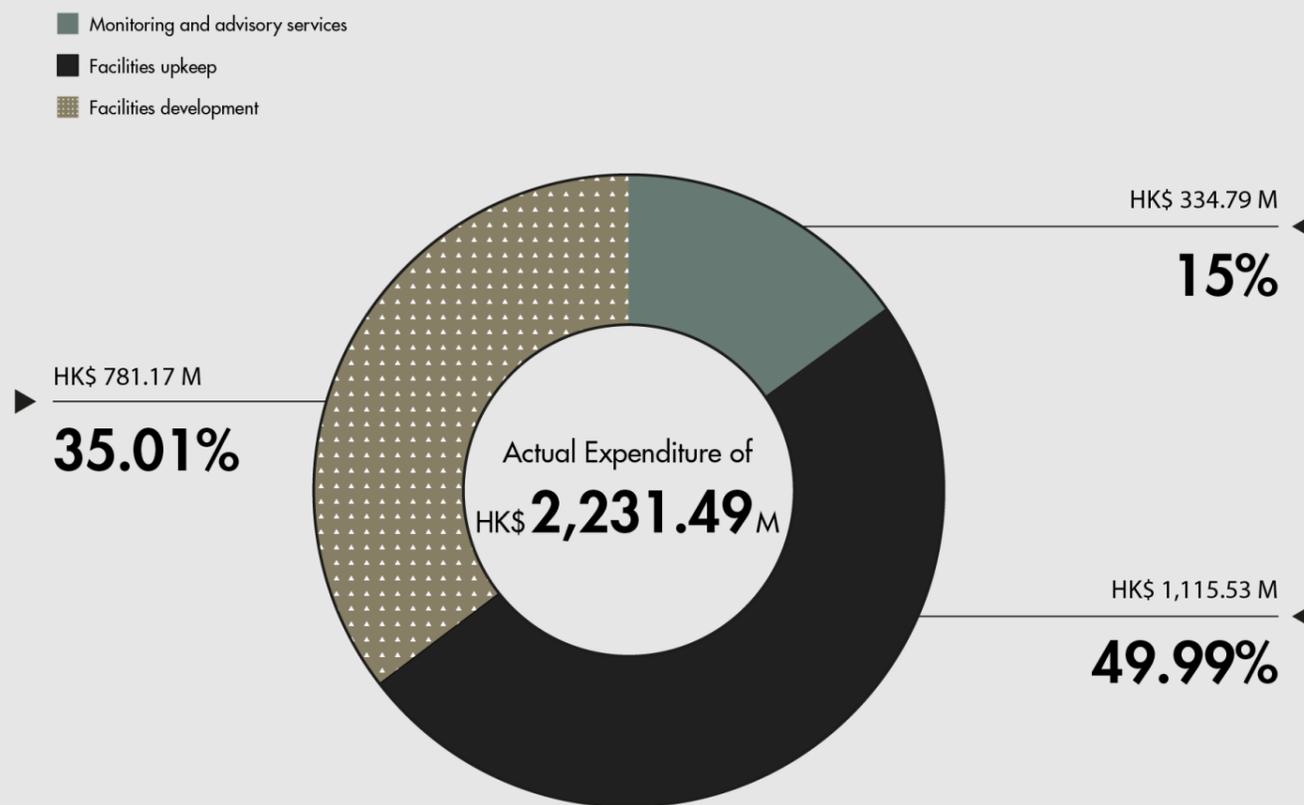
Departmental expenses HK\$ 169.73 M (7.61%)

Other charges HK\$ 755.42 M (33.85%)

Capacity account HK\$ 0 M (0%)

Actual expenditure of HK\$ 2,231.49 M

Departmental Expenditure Breakdown by Programmes



Monitoring and advisory services HK\$ 334.79 M (15.00%)

Facilities upkeep HK\$ 1,115.53 M (49.99%)

Facilities development HK\$ 781.17 M (35.01%)

Actual expenditure of HK\$ 2,231.49 M

Key Facts of the Department

Founded on: 11 April 1986

Staff establishment: 1,908 as by 31 March 2019

Headquarters: Queensway Government Offices, 66 Queensway, Hong Kong

Other offices:

- ▶ APB Centre, Hunghom, Kowloon
- ▶ Cityplaza 3, 14 Taikoo Wan Road, Quarry Bay, Hong Kong

Total office area: 34,450.47m²

Scale of Services (2018 Calendar Year):

- ▶ Number of subvented / entrusted projects reviewed: 764
- ▶ Number of facilities development projects completed: 27
- ▶ Building floor area of properties maintained: 32,512,000 m²
- ▶ Government spending on building projects: HK\$ 12,158.8 million
- ▶ Value of new works under development: HK\$ 246 billion

Awards and Achievements



ArchSD strives for excellence in delivering our architectural services. We always equip our staff to keep abreast of the latest requirements and trends related to the development and upkeep of buildings and facilities. In 2018, we were delighted to receive a number of awards and achievements from the following professional bodies, institutions and award organisers.

Quality Building Award (QBA) 2018

QBA is a biennial award jointly organised by nine local professional organisations in Hong Kong. It gives public recognition to buildings of outstanding quality that have demonstrated excellent teamwork. Its mission is to promote a collective commitment by the building industry to maintain the highest standards of professionalism and competitiveness. We are honoured to receive a number of recognition for the following architectural projects:

- ▶ **'Fire and Ambulance Services Academy'**
Grand Award
- ▶ **'Tsing Yi Southwest Sports Centre'**
Merit
- ▶ **'Kai Tak Primary Schools (S.K.H. Holy Cross Primary School & PLK Stanley Ho Sau Nan Primary School)'**
Merit
- ▶ **'Redevelopment of Tai Lam Centre for Woman'**
Merit
- ▶ **'Queen Elizabeth Hospital Ambulatory Care Centre (Extension)'**
Finalist
- ▶ **'Reprovisioning of Yau Ma Tei Police Station'**
Finalist



Fire and Ambulance Services Academy



ARCASIA Award for Architecture (AAA) 2018

The AAA aims at acknowledging exemplary architectural work in Asia, which encourages the sustenance of the Asia spirit, the development and improvement of the Asian built environment and enhancement of the awareness of the role of architects in the socio-economic and cultural life of Asian countries. During the year, our 'Hong Kong East Community Green Station' has been awarded with *Gold (Winner – the top prize) in Category C 'Industrial Building'*.

Hong Kong Institute of Project Management Awards (HKIPM Awards 2018) and Asia Pacific Project Management Awards (apfpm Awards 2018)

Organised by the Hong Kong Institute of Project Management (HKIPM), the HKIPM Awards is an annual award held in Hong Kong. It aims to recognise the project success of organisations and project managers in different disciplines. The winners under each category of HKIPM Awards would be endorsed by HKIPM to submit to the international judging panel of the apfpm Awards. During the year, our projects received the following recognition from the Awards:

- ▶ **'Hong Kong Children's Hospital'**
HKIPM Awards and apfpm Awards - Winner of Category A – Construction and Engineering
- ▶ **'Community Green Station Development Programme'**
HKIPM Awards – Winner of Category A – Construction and Engineering
HKIPM Awards – Winner of Category F – Sustainable Project
- ▶ **'Harbourfront Enhancement and Revitalisation at the Western Wholesale Food Market (the HEAR Project)'**
HKIPM Awards - Winner of Category A – Construction and Engineering



Community Green Station in Kwun Tong



Structural Excellence Award 2018

The Structural Excellence Award is organised by the Hong Kong Institution of Engineers (Joint Structural Division). It aims to promote excellence in structural engineering demonstrated through the design and construction of buildings and structures. In 2018, we were conferred the following awards:

- ▶ **'Hong Kong Children's Hospital'**
Project Award - *Commendation Merit Award*
- ▶ **'Queen Elizabeth Hospital Ambulatory Care Centre (Extension)'**
Project Award - *Commendation Merit Award*



Queen Elizabeth Hospital Ambulatory Care Centre (Extension)



The Hong Kong Institute of Landscape Architects (HKILA) Design Awards 2018

The awards are held bi-annually with an aim to promote excellence in landscape planning, design, and research, to recognise outstanding achievements, and to bring the work of landscape architects and students to the public's attention.

In HKILA Design Awards 2018, we were honoured to have **'Tuen Mun Park Inclusive Playground'** bestowed the *Gold Award*.



Tuen Mun Park Inclusive Playground



Hong Kong Institute of Urban Design (HKIUD) Urban Design Awards 2018

The HKIUD Urban Design Awards aims at recognising urban design related projects with outstanding performance and contribution to promoting excellence in Urban Design. During the year, our '**Kwun Tong Promenade**' was granted the *Grand Award*.

The Hong Kong Institute of Building Information Modelling Award (HKIBIM Award) 2018

The HKIBIM Award is organised by the Hong Kong Institute of Building Information Modelling (HKIBIM), with an aim to reward companies and organisations which have been actively using Building Information Modelling (BIM) technology in their projects. ArchSD was commended with *Certificate of Grand Award of Employer Category* at the inaugural HKIBIM Award Dinner 2018.

Autodesk Hong Kong BIM Awards 2018

Hong Kong BIM Awards 2018 recognises outstanding project teams that deployed BIM in building projects. In 2018, we were honoured to have our '**Reprovisioning of Shing Yip Street Rest Garden as Tsui Ping River Garden**' project receiving the *Honorable Mention of Hong Kong BIM Awards 2018*.

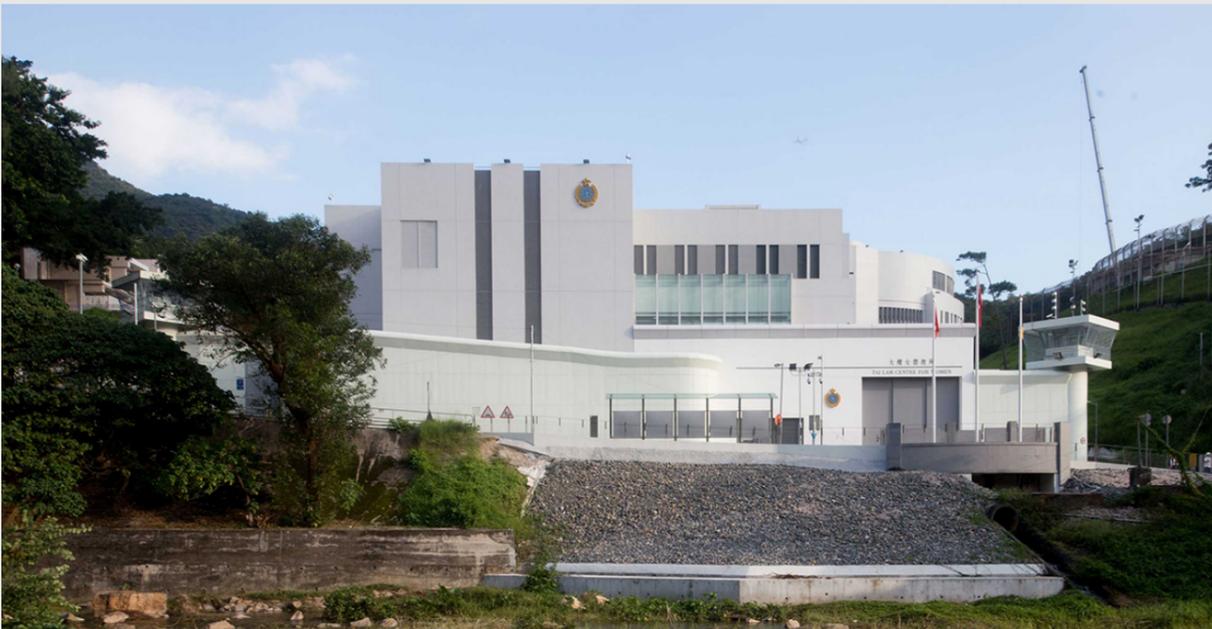
BEAM Plus Certification 2018

Recognised and certified by the Hong Kong Green Building Council (HKGBC), BEAM Plus Certification 2018 recognises outstanding BEAM Plus projects which adopted an affordable range of best practices to reduce environmental impacts while also improving environmental quality and user satisfaction. Our achievements for this year were as follows.

- ▶ '**Trade and Industry Tower**'
Final Platinum
- ▶ '**Fire and Ambulance Services Academy**'
Final Gold
- ▶ '**The Main and East Wings of Justice Place**'
Final Gold
- ▶ '**Redevelopment of Tai Lam Centre for Woman**'
Final Gold
- ▶ '**APB Centre**'
Excellent



The Main and East Wings of Justice Place



Redevelopment of Tai Lam Centre for Woman



Australian Institute of Building (AIB) 2018 National Professional Excellence in Building Awards

Established by AIB, the Award aims to provide an opportunity to showcase and reinforce the role of the building professional in managing the construction process and to provide a forum to acknowledge industry leadership and management teams that deliver their projects with the highest levels of expertise. During the year, our project '**Hong Kong Children's Hospital**' was granted the *People's Choice Award*, *Professional Excellence Award* and *Building Professional of the Year*.

DFA Design for Asia Awards 2018

The DFA Design for Asia Awards is the annual flagship programme of the Hong Kong Design Centre to celebrate design excellence and acknowledge outstanding designs with Asian perspectives. During the year, we are honoured to receive the *Bronze Award* for our project '*Fly The Flyover 02 and 03 beneath Kwun Tong Bypass*'.

Temporary Works Excellence Award (TWEA) 2017

The newly introduced TWEA is jointly organised by the Development Bureau and the Construction Industry Council. The award recognises excellence of construction professionals at the design and execution of temporary works that contribute to an exemplary safety performance. Our project 'Hong Kong Children's Hospital' was granted the *Bronze Award* under the Building Works category.



Hong Kong Children's Hospital

2017/18 Family-friendly Employers Award Scheme

Organised by the Home Affairs Bureau and Family Council, the Family-friendly Employers Award Scheme aims to raise employers' awareness of the importance of family core values, and to foster a pro-family culture and environment. It also gives recognition to employers that demonstrate a family-friendly spirit and encourage them to implement family-friendly employment policies and practices. We were honoured to receive the *Awards for Breastfeeding Support* in 2017/18.

Management and Engagement

- Strategy and Management
- Departmental Annual Plan
- Engagement Approach
- Main Focus Areas and Materiality.



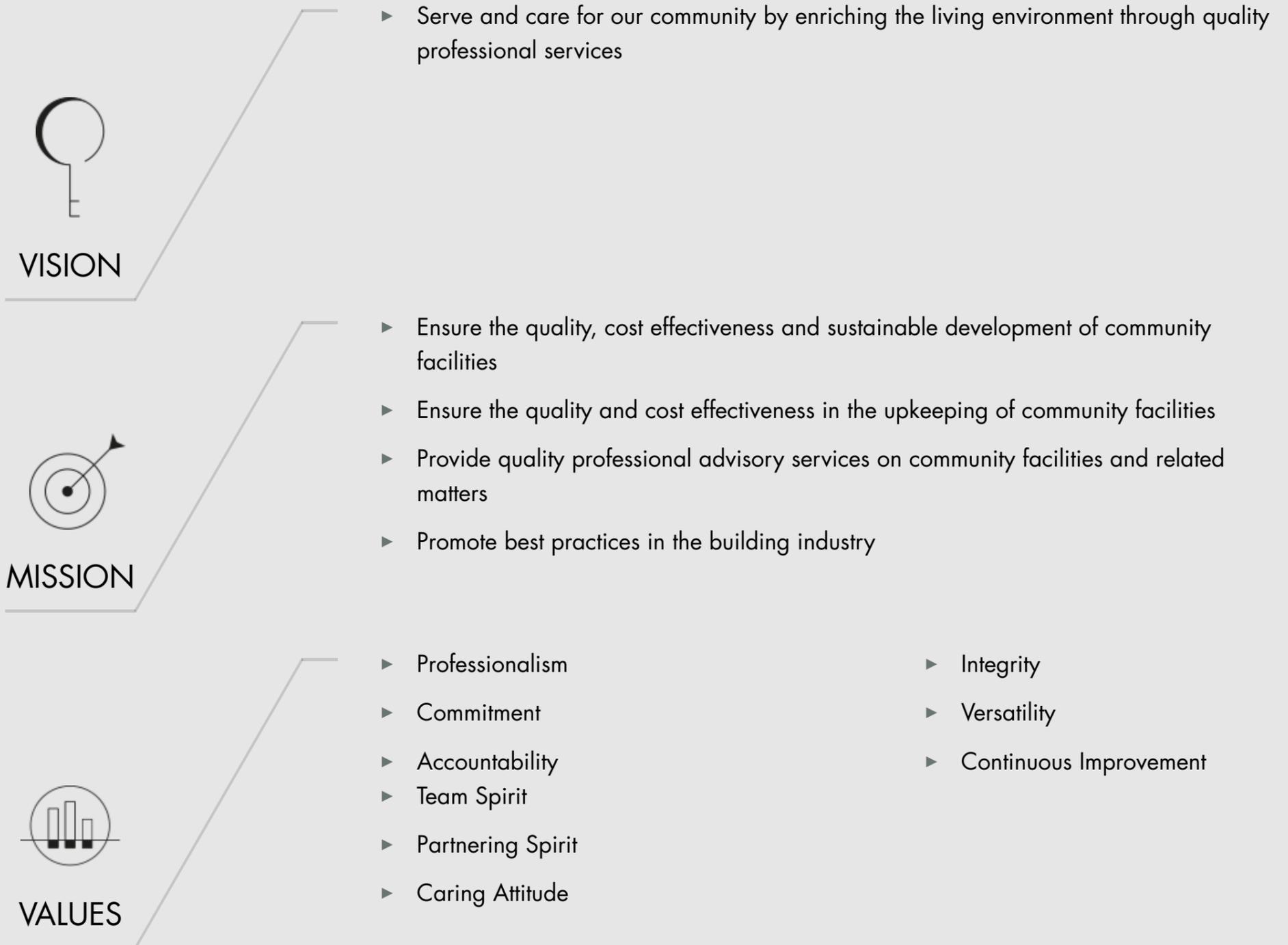
UNSDGs

- We promote great inclusiveness and value diversity in the workforce by providing equal opportunity in recruitment
- We provide appropriate training to all staff and persons working for or on behalf of ArchSD, to continually improve our quality, environmental, health and safety management system to enhance performance and effectiveness
- We are committed to maintaining a strong corporate governance free of corruption and bribery and with high level of ethical standards and professional integrity

Strategy and Management

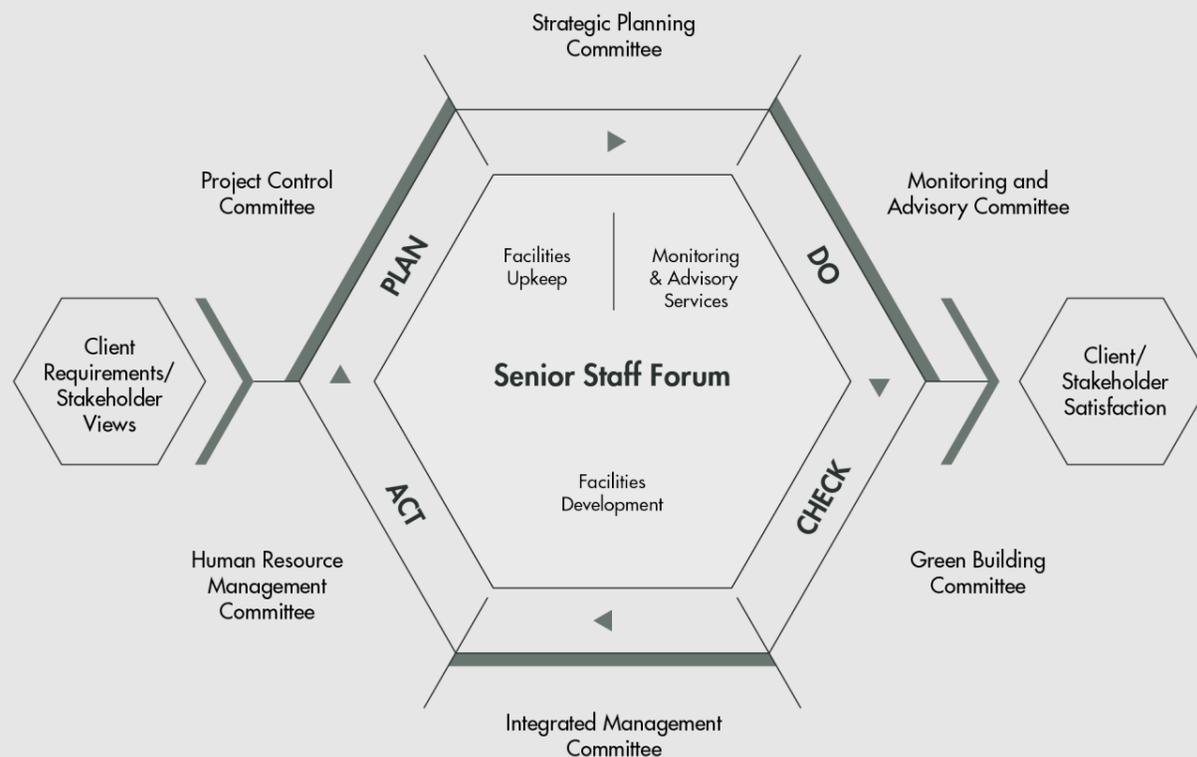
ArchSD believes that responsible and ethical governance is the foundation to ensuring sustainability of the department. With our senior management overseeing and directing the overall sustainability strategies and policies of ArchSD, we continue to strive in attaining and upholding a high standard of ethics and professionalism in the interest of all stakeholders.

Our Vision, Mission and Values



Governance Structure

ArchSD adheres to the highest level of governance, policies and practices set out by the Civil Service Bureau. Our Senior Staff Forum (SSF), chaired by the Director, has in place a management framework to oversee internal operational and sustainability agenda. The SSF develops and regularly reviews Departmental policies, strategies and goals. In addition, we have also established a number of steering committees to monitor different areas of operation of ArchSD.



Policy and Guidelines

We have in place a Departmental Quality, Environmental, Health and Safety Policy to provide a favorable working environment and to ensure the long-term sustainable development in our operations.

ArchSD strives to adhere to the below guidelines for all our 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 our health and safety risks to ensure a safe and healthy environment for our staff, our contractors and other people who may be affected by our work;
- ▶ Fulfil all compliance obligations including applicable legislations 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, to continually improve our quality, environmental, health and safety management system to enhance performance and effectiveness; and
- ▶ Promote ArchSD's principles of quality, environmental sustainability, health and safety to our partners in work, the construction industry and the general public.

To ensure our services are on par with international standards and industry best practices, ArchSD has achieved ISO 9001 Quality Management Standard, ISO 14001 Environmental Management Standard and OHSAS 18001 Occupational Health and Safety Management Standard. Our APB Centre in Hung Hom has achieved ISO 50001 Energy Management since 2014. With the aim to drive for continuous improvement, the performance of our integrated management system is monitored and reviewed by the SSF at least once per year.

Risk Management

We proactively monitor and identify emerging risks and seize the opportunity to minimise our negative impacts as far as practicable through mitigation plans. Our risk management approach is to identify, evaluate, mitigate and monitor the potential risks that affects our operations through a comprehensive risk assessments exercise and report to the Department.

For our projects, our risk management assessment exercise strictly follows the guidelines published by the Development Bureau (DEVB), for instance, Technical Circular (Works) No. 6/2005 on 'Implementation of Systematic Risk Management in Public Works Projects'. We take into account the entire lifecycle to manage and control potential risks that will affect our projects. Project teams would carry out integrated risk assessment workshops to identify, evaluate and design effective precautionary control measures to monitor the risks.

Ethics and Professionalism

ArchSD upholds high standards of integrity and ethics. All staff are required to follow the regulations stated in the Prevention of Bribery Ordinance. Any cases of suspected bribery or corruption shall immediately be brought to the attention of the SSF and the Independent Commission against Corruption for further investigation. During the reporting period, no relevant cases were reported.

We put great emphasis in protecting the employment rights and building the capability of our staff. We fully comply with the Employment Ordinance, and offer our staff with welfare and training opportunities. ArchSD strictly adheres to the safety guidelines published by the DEVB to ensure that provisions such as site safety training, and Pay for Safety Scheme. We have also properly addressed ArchSD Site Safety Model Workers Award Scheme in our works contracts. Labour Relations Officers would be appointed for large-scale construction projects for resolving disputes between contractors and workers in early stage.

Quality of service is also one of our focuses. Every year, we conduct the client satisfactory survey to review on our performance and work quality. We have a dedicated team in handling feedbacks and comments from our clients to drive continuous improvements.

Way Forward

One of our goals in the coming years is to promote the adoption of innovative construction methods such as BIM, MiC and prefabrication to drive for better efficiency in design, production and operation in the construction industry. In addition to implementing these methods, we will continue to put into practice the 'No Frills' principle in design and contractual requirements, the '3S' (Standardisation, Simplification and Single Integrated Element) and other relevant measures to enhance buildability and strengthen cost control.

ArchSD will also continue to incorporate inclusive design in order to improve accessibility and public safety in government buildings. Further studies on advanced building materials and measures to enhance building resilience will also be conducted for operation and sustainability improvement.

Another strategic focus of ArchSD is to drive and enhance knowledge management across Branches and Divisions within ArchSD and promote knowledge sharing amongst relevant stakeholders. We will continue to arrange corresponding training programs on topics including innovative construction and Building Information Modelling (BIM).

We are developing 'Corporate Intelligence (CO-i)' to drive digital transformation. The core of CO-i development is an electronic business platform with linkage to various application systems to promote 'architectural intelligence', including digital site supervision, digital collaboration platform for BIM, electronic submissions and building data analytics, etc. We will also enhance operational efficiency by applying innovations and technologies (I&Ts) in the work process, such as mobile application system, unmanned aerial vehicle, chatbot, artificial intelligence and cloud computing, etc.

Departmental Annual Plan

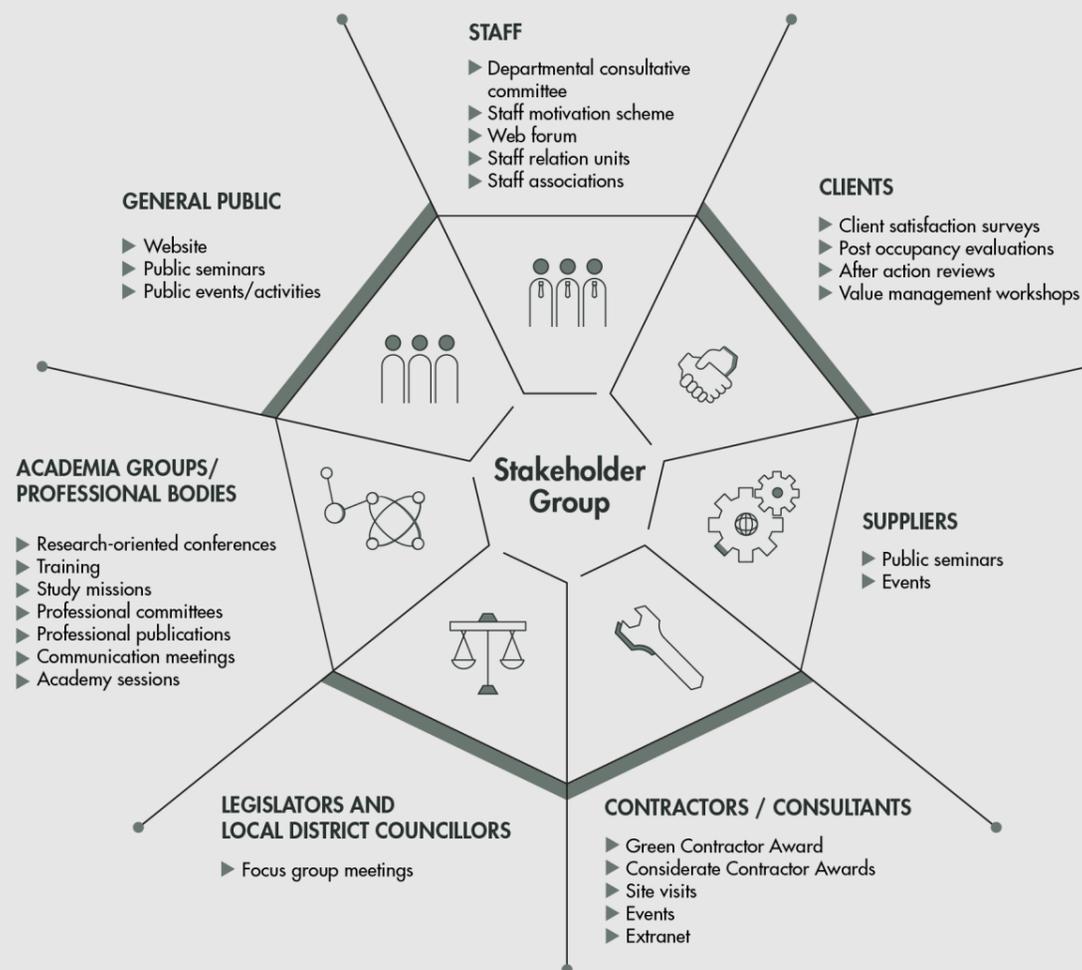
ArchSD remains resolute in improving departmental performance. A Departmental Annual Plan (DAP) that encompasses our objectives and targets is prepared annually. In addition, cross-functional review meetings were conducted on a regular basis to review the progress for each objective. Four focus areas were outlined in our DAP 2018/19 and we have marked the highlights of our major achievements as below:

Focus Area in Annual Plan 2018/19	Achievement Highlights
<p>Enhance design optimisation, innovative construction and cost control</p>	<ul style="list-style-type: none"> ▶ Established the InnoC Focus Group to support project teams in exploring innovative construction opportunities ▶ Explored innovative construction ideas within the industry by organising symposium, sharing sessions and factory visits ▶ Adopted Modular Integrated Construction (MiC) in the Disciplined Services Quarters at Pak Shing Kok as a pilot public works project ▶ Established a cost analysis framework for innovative construction methods, e.g. '3S' (Standardisation, Simplification and Single Integrated Element) and MiC ▶ Conducted a symposium on innovation as a knowledge sharing platform for professionals and academics in the construction industry
<p>Enhance public safety and building resilience</p>	<ul style="list-style-type: none"> ▶ Conducted detailed structural surveys for around 2,920 government buildings (as at 31 March 2019) ▶ Promoted best practices by launching the Community of Practice (CoP) for Curtain Wall & Façade Cladding Design and conducting academy session on Quality Control on Design & Installation of External Façade Stone Cladding ▶ Explored building resilience enhancement measures through studies on threats of critical building services (BS) system breakdown under extreme weather and corresponding BS design measures
<p>Enhance Corporate Intelligence and Knowledge Management (KM) development</p>	<ul style="list-style-type: none"> ▶ Established the CO-i Steering Committee (CO-iSC) and CoP on BIM and InnoC, and Advanced Technologies ▶ Commenced Information System Study (ISS) and established a dedicated IT team for the CO-i development ▶ Enhanced efficiency and capabilities through the implementation of BIM ▶ Collaborated with Buildings Department to organise 14 Academy talks and BD's sharing sessions for exchange of knowledge ▶ Developed or revised particular specification for BIM, BIM Clause for Lead Consultancy and BIM guide for different branches respectively
<p>Enhance staff training and development programme</p>	<ul style="list-style-type: none"> ▶ Organised a study tour to Shenzhen and Huizhou as one of the staff's career development activities with a total of 33 professional, site supervisory and technical grade staff participated ▶ Conducted 56 Academy talks and participated a total of 33 training programmes on InnoC and BIM

Engagement Approach

ArchSD has established an ongoing stakeholder engagement mechanism to gain a deeper understanding on the opinions, priorities and values of our broad range of stakeholders. We strive to maintain a two-way communication channel to address the needs and build long-term loyalty among our stakeholders. Our engagement channels are summarised as below:

GRI102- 40
GRI102- 43
GRI102- 44



In preparation of this Report, a total of five independent interviews were undertaken in addition to our ongoing engagement practice with delegates of our key stakeholder groups. Representatives from staff, contractor, professional institution and client were engaged to better understand their concerns and obtain feedback for the continuous improvement in relation to ArchSD's sustainability initiatives and performance.

Involvement in External Associations and Committees

As a part of our external engagement channel, ArchSD also has designated representatives to provide our recommendations and experience-sharing in professional bodies and external committees including but not limited to:

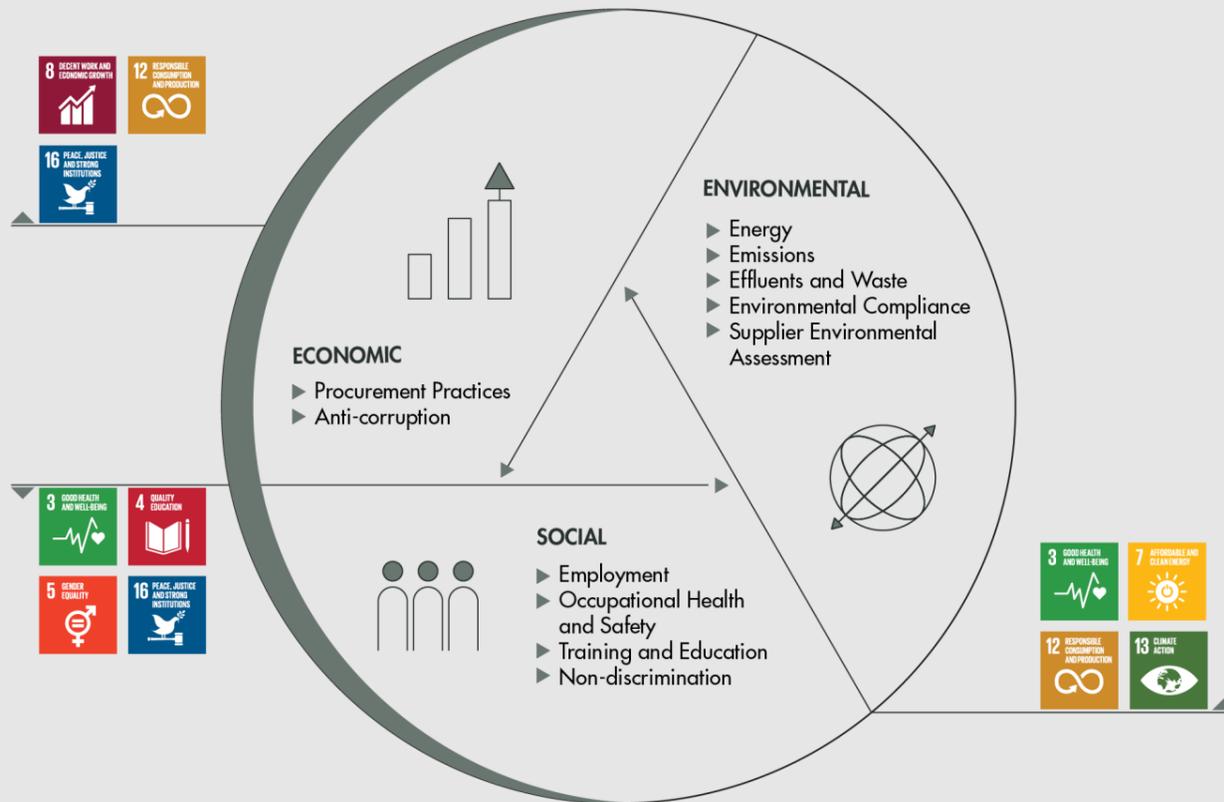
- ▶ **Construction Industry Council Committee on Building Information Modelling** to formulate strategies for market transformation promote the use and facilitate the application of BIM, digital its related technologies in construction industry;
- ▶ **Hong Kong Green Building Council Green Labelling Committee** to define and steer the strategic development, policies, processes, advocacy and promotion of BEAM Plus and Green Building Labelling;
- ▶ **DEVB-CIC Joint Working Group for Consultancy Study on Improving the Environmental Performance on the Hong Kong Construction Industry** to monitor the consultancy study on following up the recommendations of promoting a greener built environment in CIC's Report on 'The Development Strategy for the Hong Kong Construction Industry' published in January 2016, and studying strategies to reduce carbon emission of the construction industry;
- ▶ **Steering Committee on the Promotion of Green Building and Renewable** to formulate strategies to further promote green buildings and make recommendations on relevant measures; and
- ▶ **Advisory Committee on Barrier Free Access** to consider application for Exemption for Disabled Access.

Main Focus Areas and Materiality

Through our ongoing stakeholder engagement channels and independent interviews with our key stakeholder groups, we confirmed our prioritised sustainability issues remained unchanged as previous year based on our stakeholder groups' interests in and influence on ArchSD's operation and sustainable development as well as the impacts or potential impacts on them as a result of our operation, services and relationships.

GRI102- 42
GRI102- 44
GRI102- 46
GRI102- 47

At ArchSD, we aspire to support the United Nations' Sustainable Development Goals (UNSDGs) to contribute to the global sustainability strategy. In this reporting year, we have mapped our sustainability practices to the UNSDGs that we identified as the most relevant with our operations and in which we have the most significant impact on. The boundaries of our Report are set with the following material topics and details of our strategies and practices can be found in the reference chapters.



Managing Resources and Environmental Impact

- Fostering Sustainable Building Design
- Creating a Green Workplace



UNSDGs

- We have green housekeeping guidelines in place to promote green office practices
- We have established a robust IMS encompasses aspects of environmental protection, occupational health and safety, and quality management to benchmark our environmental performance and ensure it remains at international standards
- We regularly conduct carbon audits to quantify our carbon footprint



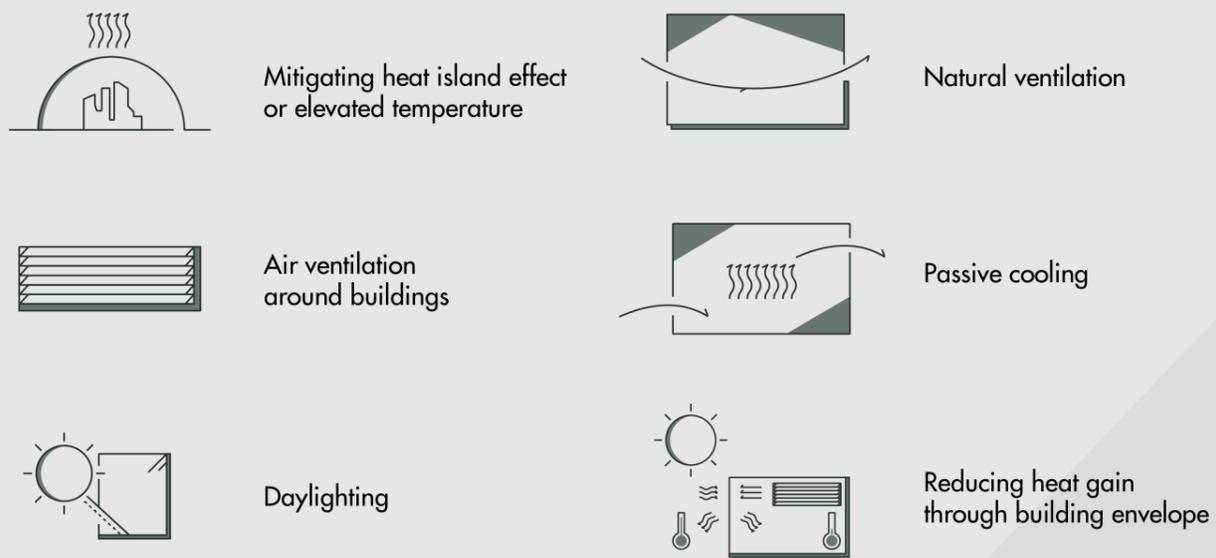
Fostering Sustainable Building Design

Sustainable Building Design

Hong Kong buildings account for the majority of city-wide electricity consumption and carbon emissions – over 90% and 60% respectively. Over the years, we have spared no effort to adopt innovative sustainable and smart building designs which efficiently use energy, materials and land resources.

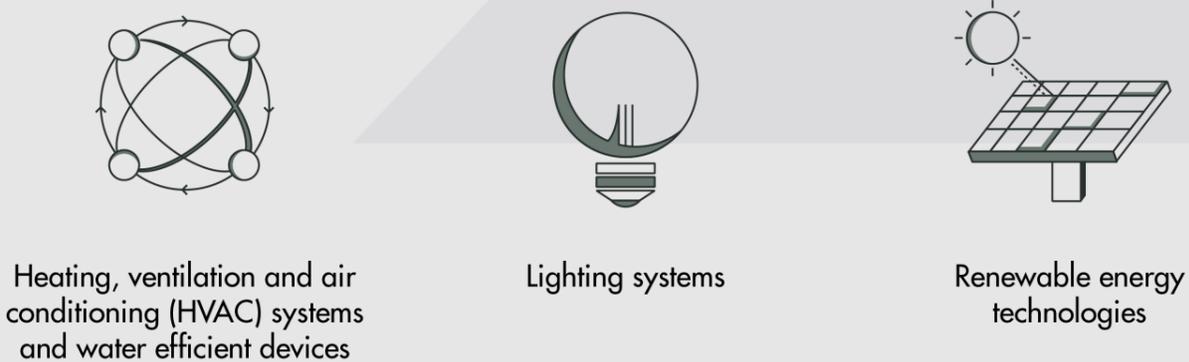
Passive Design Approaches

Passive design approaches use the architecture of a building to minimise energy consumption and improve thermal comfort. These approaches adopt suitable planning, disposition, orientation, building form and material selection measures to optimise a building’s interaction with the local microclimate. The aspects considered include:



Active Design Approaches

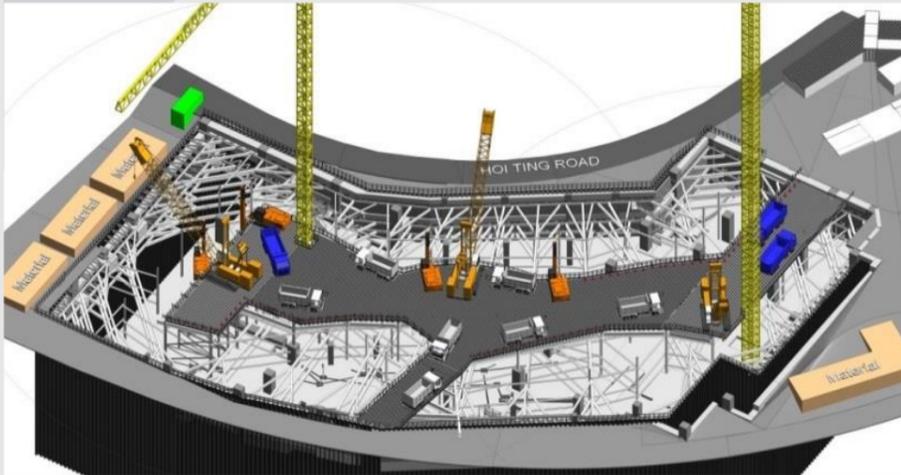
Active design approaches use electrical and mechanical systems to create and maintain comfortable conditions. These installations facilitate energy efficiency and the conservation of water, and improve indoor environmental quality. The aspects considered include:



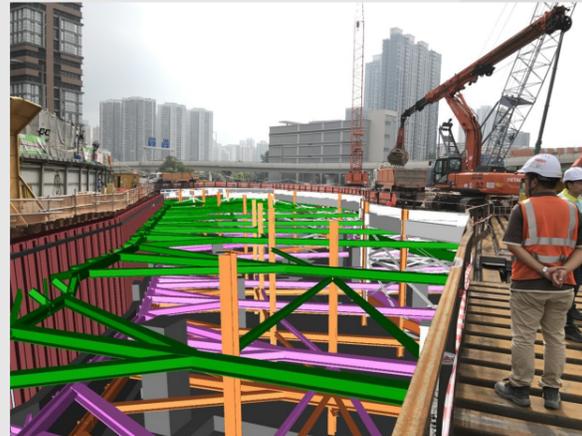
Innovative Construction Methods

Building Information Modelling

Building Information Modelling, or BIM, technology is essentially the process of generating a digital visual representation of building data. BIM can effectively improve overall building quality through design optimisation, communication enhancement and waste minimisation. For example, BIM allows the visualisation of designs that enhance the planning process; they can also simulate the entire construction process to facilitate more efficient coordination between stakeholders. The technology has contributed to a significant reduction in aborted works caused by unworkable designs and safety pitfalls.



Visualising designs to enhance planning



Simulating the whole construction process to facilitate coordination

During the reporting year, ArchSD used BIM on several projects. One of these projects was the construction of West Kowloon Government Offices, for which BIM was used to enhance project efficiency.

Design for Manufacture and Assembly and Modular Integrated Construction

Modular Integrated Construction (MiC) is a catch-all term for an important concept: factory assembly followed by on-site installation. MiC is one example of Design for Manufacture and Assembly (DfMA), which refers to a construction method that uses free-standing volumetric modules with completed finishes, fixtures and fittings. This construction method transfers traditional on-site construction processes to an off-site prefabrication factory; something which can substantially improve construction productivity by minimising site constraints and ensuring a higher degree of quality control. During the year, ArchSD commenced the first pilot public building project to adopt MiC in Hong Kong - The Construction of Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok in Tseung Kwan O.



The construction site of the Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok in Tseung Kwan O



The ground-breaking ceremony for the first MiC public project ever conducted in Hong Kong was held on 24 September 2018. The Director of Architectural Services, Mrs Sylvia LAM, JP, is on the second right

Selection of Construction Methods and Materials

Another important aspect of sustainable buildings is the selection and use of sustainable construction methods and materials. Common practices include prefabrication, pollution control during construction, and the application of the 3R principles – reduce, reuse and recycle – to manage construction and demolition waste. In terms of using sustainable materials, recycled materials and timber from well-managed sources are widely adopted in ArchSD's new building projects.

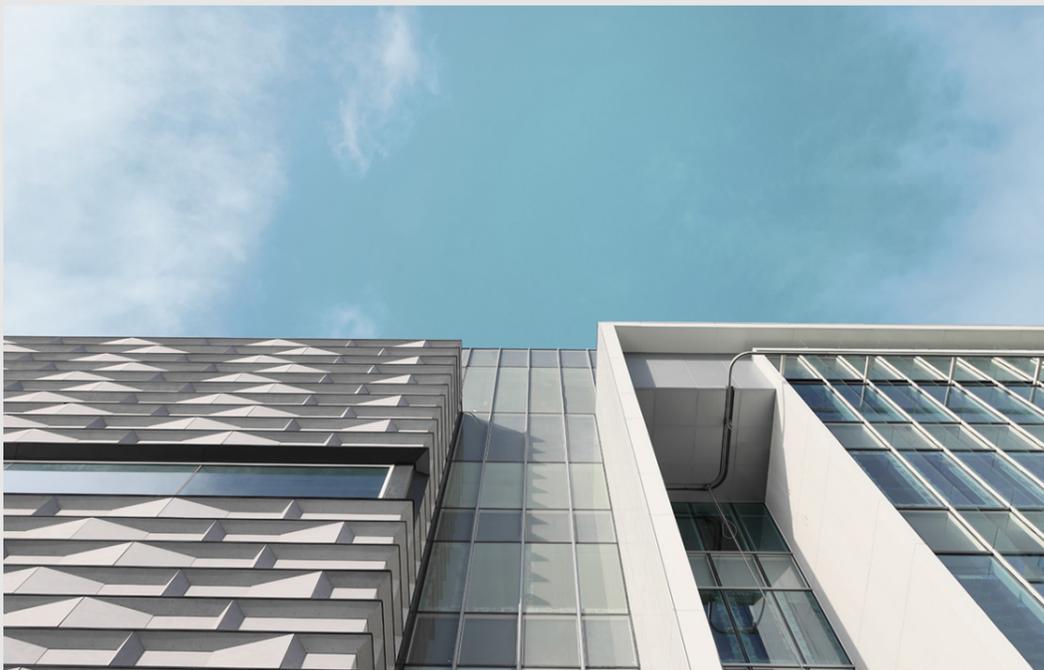
Social Considerations

As a cosmopolitan city, Hong Kong places a high value on the accessibility and quality of public spaces. ArchSD strives to incorporate social considerations into our buildings in a number of ways, including enabling group activities and fostering communication between community members in order to create and sustain a harmonious atmosphere for the city.

Sustainable Building Projects

The Expansion and Renovation of the Hong Kong Museum of Art

The existing Hong Kong Museum of Art (HKMA) has been serving the public since 1991. To address a long-standing problem of a shortage of art exhibition space and to enhance the overall visitor experience, an expansion and renovation project is being carried out to upgrade the museum's facilities. The existing building volume is being preserved and redecorated to emphasise its symbolic value as a public museum belonging to all inhabitants of the city. Meanwhile, new cladding provides tangible texture that is reminiscent of a Chinese masonry pattern, while the façade's 'ripple effect' echoes the wave patterns of the waters of the adjacent Victoria Harbour.



MORE DETAILS ▾



Sustainable Building Projects

The Expansion and Renovation of the Hong Kong Museum of Art



New building canopy



Use of a ventilated façade to improve ventilation, durability, noise insulation and energy saving performance



Maximising the use of natural daylight



New view of the building as seen from the south side of Victoria Harbour

Sustainable Features

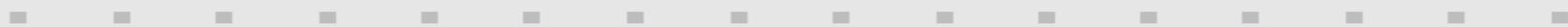
- ▶ Adoption of a passive environmental design strategy to lower the building's energy consumption
- ▶ Use of a ventilated façade to improve ventilation, durability, noise insulation and energy saving performance
- ▶ Selection of recyclable materials for the ventilated façade to lower carbon emissions and reduce energy consumption
- ▶ Substantial reduction in the amount of project construction and demolition waste achieved by keeping the majority of the existing museum wall tiles intact
- ▶ Provision of low-e glass and laminated mesh to filter direct sunlight and ultraviolet (UV) rays
- ▶ Installation of high efficiency air-cooled chillers with variable speed drives
- ▶ Installation of demand controls for fresh air supply, which are aided by carbon dioxide sensors

Renovation Project for the Policy Innovation and Co-ordination Office on the 26/F of the Central Government Offices at Tamar

The Policy Innovation and Co-ordination Office (PICO) commenced operation in 2018. The aim of PICO is to enhance policy innovation through collaboration on evidence-based policy research, support the senior leadership in the Government to focus on Hong Kong's strategic positioning in the global economic arena, co-ordinate major policies and programmes across bureaux and departments, and provide 'first-stop and one-stop' project consultation and co-ordination services to innovative projects to help maximise benefits to society. To improve the office design and enhance operational efficiency, a comprehensive renovation project was completed at PICO, located on the 26/F of the Central Government Offices at Tamar. The project included renovating the reception area, co-working area and open plan office.



MORE DETAILS ▾

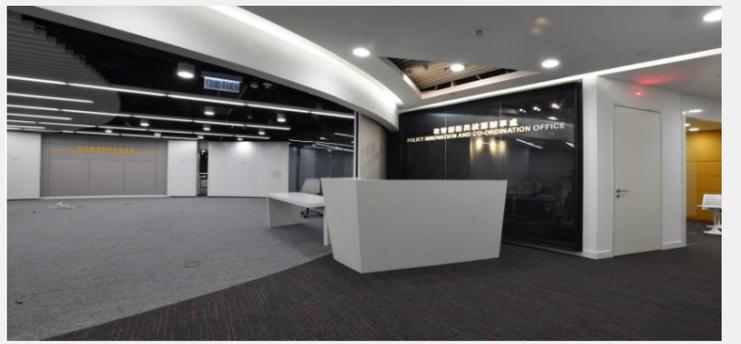


Sustainable Building Projects

Renovation Project for the Policy Innovation Co-ordination Office on the 26/F of the Central Government Offices at Tamar



Open plan office design with pendant lighting and a glass partitions to improve natural lighting penetration into the space



Use of energy efficient LED lighting in the reception area is improved by motion sensors



LED down light and lighting panel in the co-working area creates a more modern office design



Conference Room



Sustainable Features

- ▶ Open office design with glass partitions to improve the penetration of natural light into the space
- ▶ Use of pendant lighting to create a more modern office design
- ▶ Use of energy efficient LED lighting, aided by motion sensors, lighting sensors and a lighting control system
- ▶ Fixed partitions are minimised for the spatial flexibility

Signature Project for Wong Tai Sin District – The Enhancement of the Leisure Facilities at Morse Park

Covering a total area of 15.8 hectares, Morse Park in Wong Tai Sin includes the Morse Park Sports Centre and Morse Park Swimming Pool. Serving the community since 1967, the park facilities have been continuously improved and upgraded over the years, with new facilities added to maintain an excellent standard of service and meet the emerging needs of the public. This project, conducted during the reporting year, is typical of these upgrades – enhancing the park’s amphitheatre, including extending the cover at the stage and spectator areas, enlarging the stage area and rearranging the spectator area, to accommodate events of today allowing sustainable development of the amphitheatre as well as the park and the district.



MORE DETAILS ▼



Sustainable Building Projects

Signature Project for Wong Tai Sin District – The Enhancement of the Leisure Facilities at Morse Park



Open sides of the amphitheatre



Enhancement project

Sustainable Features

- ▶ Extending the shelters over the amphitheatre and incorporating trellis and vertical greening for sun shading
- ▶ Open sides of the amphitheatre is maintained to let in natural lighting and ventilation
- ▶ Skylight is introduced to enhance the effect of natural daylight
- ▶ Use of LED lighting to reduce carbon emissions and save energy



Extension of the shelter



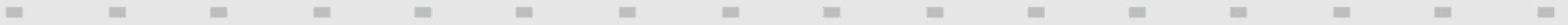
Skylight to enhance natural daylight

The Church of Christ in China Mongkok Church Kai Oi School

Under the Government's policy to improve the physical conditions of sub-standard school premises, ArchSD has carried out the construction of the new special school for children for the re-provisioning of The Church of Christ in China Mongkok Church Kai Oi School at a site near Hoi Lai Estate, Sham Shui Po. Located on an around 4,400 meter-square site, the newly built 4-storey building is equipped with multi-purpose facilities and designed to adopt extensive friendly and inclusive features for the special-needed students. For example, low-rise approach is adopted to ensure staff can maintain sight inspection of all students and easily accessible pocket spaces are available at different levels as calm-down spaces for students with special emotional needs.



MORE DETAILS ▼



Sustainable Building Projects

The Church of Christ in China Mongkok Church Kai Oi School



Building set back from the main street to create a green and calm campus



Low-rise approach with central courtyard to ensure imminent visual connections of staff and students



Oasis-like setting in a urban context



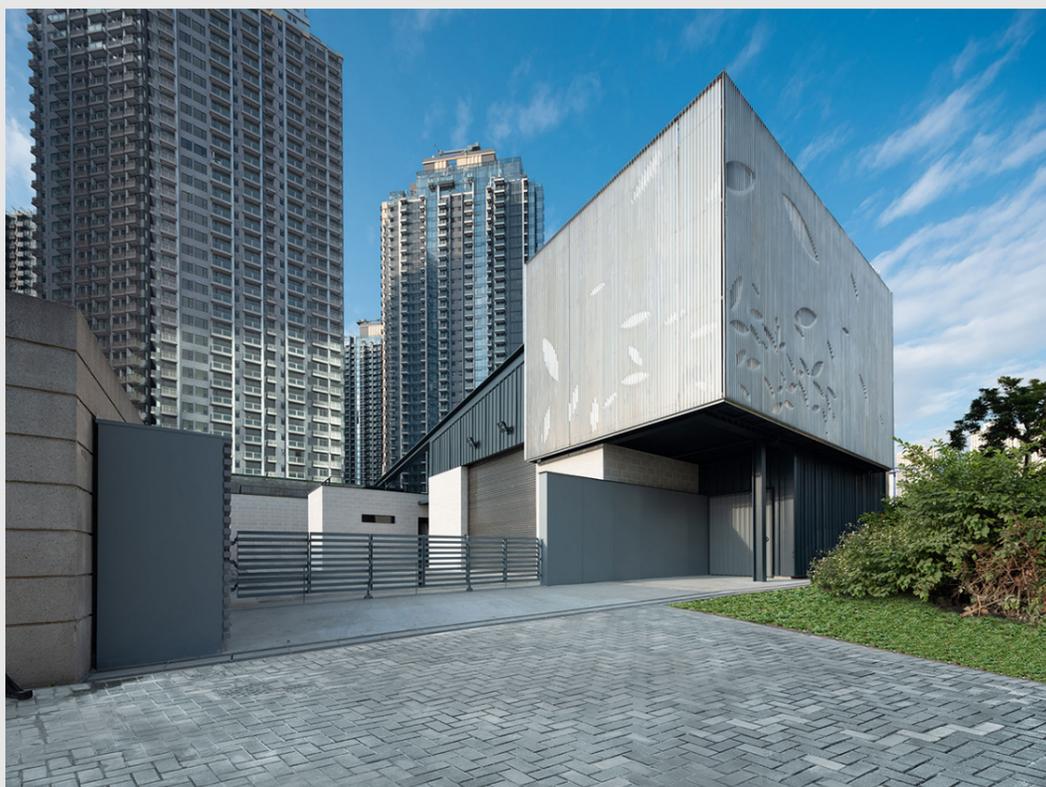
View of the school farm

Sustainable Features

- ▶ Adoption of green roofs, green terraces and vertical greening on its building façade to maximise the green landscape coverage of the school
- ▶ Use of 3 sky lights to make use of natural daylight and save energy
- ▶ Use of photovoltaic system and rainwater harvesting system for landscape irrigation to conserve energy and water resources

The Construction of a New Refuse Collection Point at Site 1J4 at the Kai Tak Development

The objective of this project is to design and construct a refuse collection point (RCP) for the Kai Tak Development in Kowloon, located on the eastern corner of an existing pumping station. The site was bound by Kai Tak Second Lane to the northeast and Shing Kai Road to the southeast. The project provides basic facilities like a refuse collection vehicle parking and loading area, a material recovery store, an office, staff toilets and changing rooms to accommodate the daily operations of a typical RCP.



MORE DETAILS ▾



Sustainable Building Projects

The Construction of a New Refuse Collection Point at Site 1J4 at the Kai Tak Development



Aluminium fins with cut-out graphics representing the Kai Tak area



Aerial view of the new RCP



The full-height glass wall brings in natural light



The site's different functions are separated by greenery and courtyard

Sustainable Features

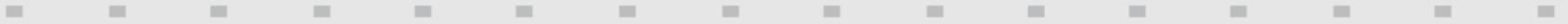
- ▶ Adoption of a 'dry construction' method minimised the duration of site works and lowered the amount of manpower necessary, resulting in better overall site management
- ▶ Use of BIM to integrate precast elements into the project, like external block walls, sandwich panels and aluminium fins, to achieve a lean construction process
- ▶ Inclusion of a full-height glass wall to bring natural light into the Refuse Collection Vehicle (RCV) parking and loading area, resulting in lower energy consumption

Redevelopment of Kwai Chung Hospital – Phase 1

Phase 1 of the redevelopment of Kwai Chung Hospital (KCH) comprises the construction of a decantation building and renovation works at existing premises of KCH for decanting purposes, so as to facilitate the next phases of the hospital redevelopment. The decantation building is a 5-storey building located at the existing car park area of Princess Margaret Hospital, accommodates facilities decanted from the existing KCH including rehabilitation facilities, ambulatory care facilities, administrative & supporting services, and other ancillary facilities.



MORE DETAILS ▼



Sustainable Building Projects

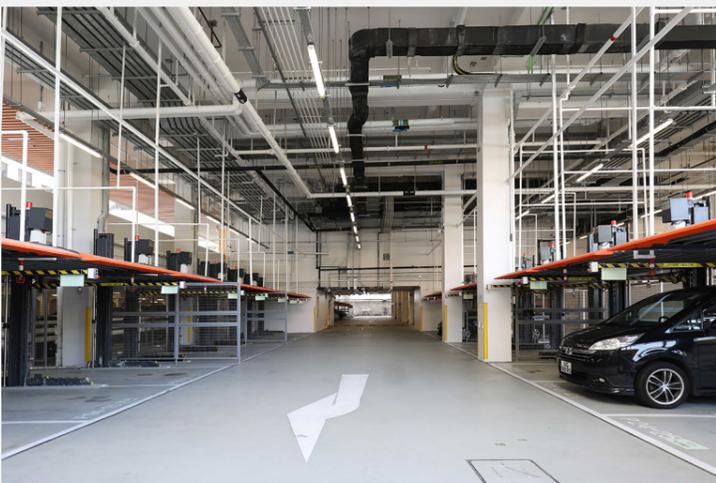
Redevelopment of Kwai Chung Hospital – Phase 1



Modern design of the decantation building of Redevelopment of Kwai Chung Hospital – Phase 1



Enhanced penetration of natural sunlight with the central courtyard design



Adoption of double-deck car parking units (DDPU) to better utilise space



A specially designed garden at 3/F for horticultural activities and greening purposes

Sustainable Features

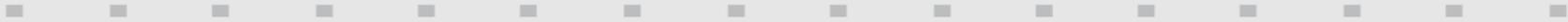
- ▶ Enhancement of natural daylight penetration into the building by the introduction of a central courtyard for 1/F to 3/F
- ▶ Design of a horticultural garden at 3/F for both horticultural activities by patients and greening purposes
- ▶ Retention of existing car park structure and adoption of 44 sets of double-deck car parking units (DDPU) to minimise demolition work on site and enhance efficient use of car parking spaces respectively

Construction of Staff Quarters for Immigration Department at Heng Lam Street, Kowloon

In order to satisfy the growing demand of departmental quarters for married rank and file staff from the Immigrant Department, ArchSD commenced this project to construct a 15-storey quarters block for provision of a total of 112 units. With a total construction floor area of 8,800 meter square, the project comprises ancillary facilities including a management office, a multi-function room, small-scale outdoor children playing fixtures and facilities, 15 car parking spaces and two motorcycle parking spaces.



MORE DETAILS ▾



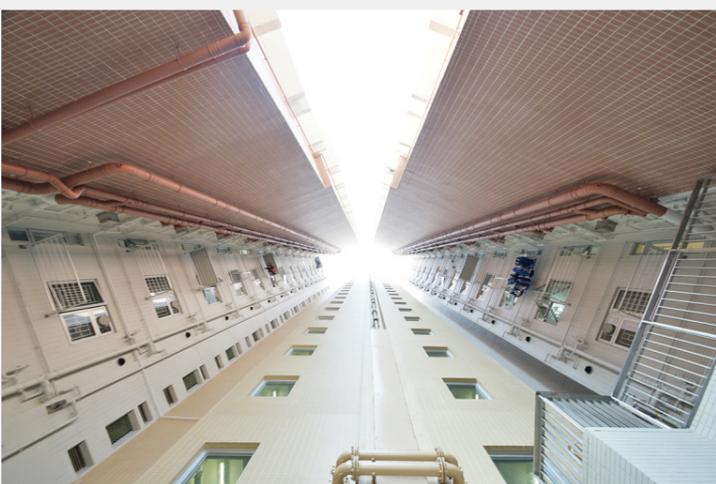
Sustainable Building Projects

Construction of Staff Quarters for Immigration Department at Heng Lam Street, Kowloon



Blend of comfortable contemporary living and the architectural design

Preservation and enhancement of greenery to create pleasant outdoor environment to residents



Utilisation of natural sunlight and facilitation of cross ventilation



Installation of photovoltaic system to adopt renewable energy

Sustainable Features

- ▶ Adoption of the best possible orientation and view for flats by design
- ▶ Utilisation of natural lighting and cross ventilation by provision of ample windows
- ▶ Reduction of solar heat gain and optimisation of air conditioning by adopting sun-shading architectural features on building facades
- ▶ Use of renewable energy by installing solar photovoltaic system on the roof
- ▶ Preservation and enhancement of greenery to achieve instant shading and visual linkage with the adjacent open space

INTERVIEW WITH PROFESSIONAL INSTITUTION



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

Building and sustainability, from sustainable development, energy saving, health and wellbeing are important considerations in the planning, construction, management, operation and maintenance of buildings. ArchSD and the Hong Kong Green Building Council have been working closely in developing and using building life cycle approach in the choice of green building materials and building design in minimising the emission of carbon. The department is also one of the pioneers in adopting the Building Environmental Assessment Method (BEAM) in the design, construction and maintenance of buildings.

ArchSD's representatives plays an active role in Green Building Council's committees, participating in discussions and providing expert advice on green building initiatives and the BEAM Plus rating system's certification and development. We are also pleased to see that the department has taken the initiative in adopting new technologies and innovative construction methods for new building developments, including the application of Modular Integrated Construction in a pilot project the Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O.

We look forward to ArchSD's continuing effort to lead by example and to share experience with professionals in the building industry, and wish to express our appreciation of ArchSD's contributions. ☺☺

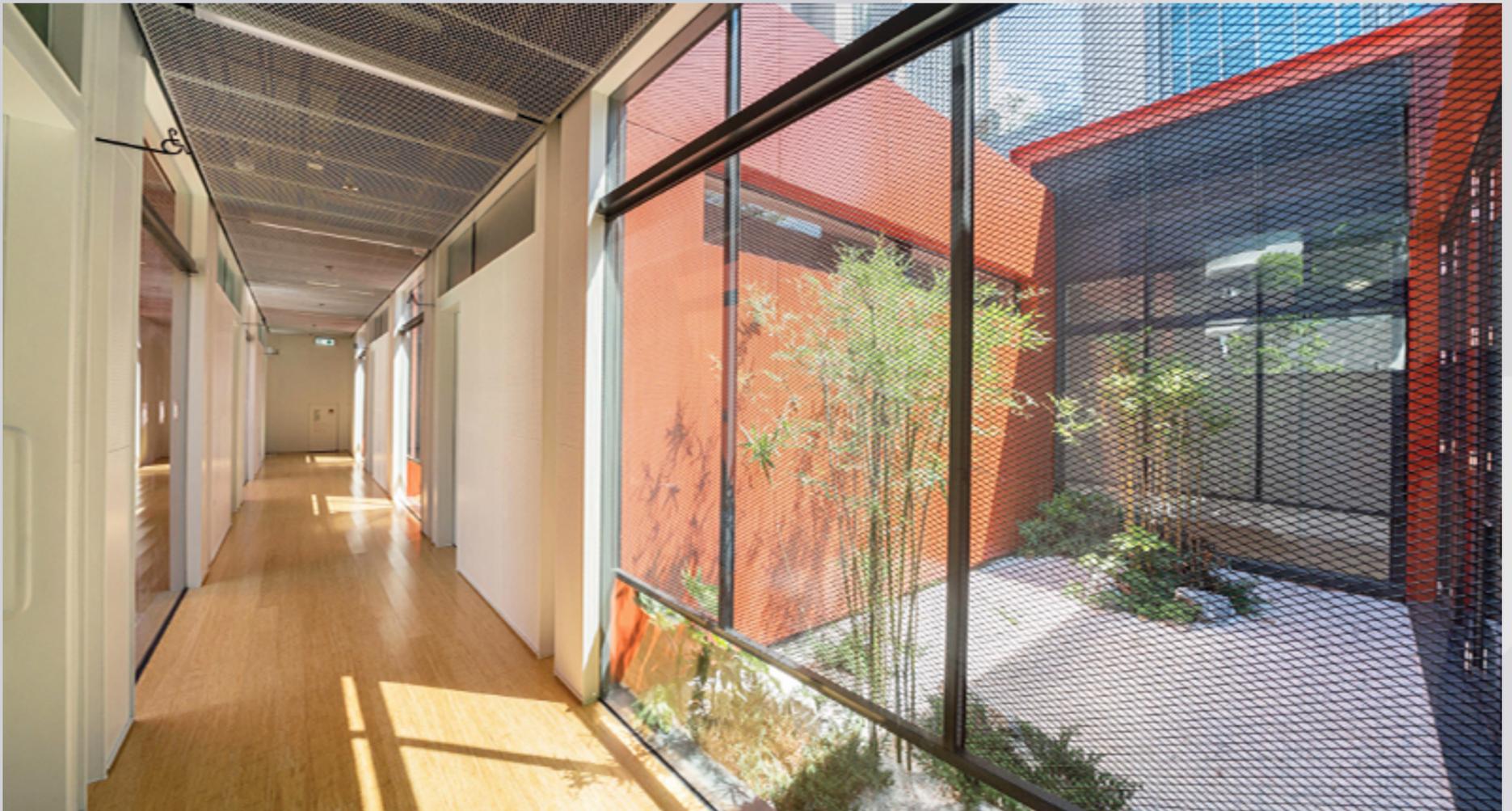
OUR RESPONSE

Apart from new buildings, ArchSD has put great effort to improve the environmental performance of existing buildings through initiatives such as retrofitting and recommissioning. We devote ourselves to promote building sustainability in Hong Kong. We continue to practise sustainable building design and innovative construction methods in our projects. Moreover, we will collaborate with various professional bodies in organising regular briefings and sharing sessions on the latest trends of the building industry in order to raise public awareness and understanding. ☺☺



Managing Resources and Environmental Impact

- Fostering Sustainable Building Design
- Creating a Green Workplace



UNSDGs

- We have green housekeeping guidelines in place to promote green office practices
- We have established a robust IMS encompasses aspects of environmental protection, occupational health and safety, and quality management to benchmark our environmental performance and ensure it remains at international standards
- We regularly conduct carbon audits to quantify our carbon footprint

Creating a Green Workplace

As a government department, ArchSD is fully aware of our indispensable role in advocating green office management, something which is of paramount importance to the mitigation of climate change. As we move forward, continuously striving to create a more sustainable workplace, we have begun to adopt an integrated management system (IMS) which closely monitors our environmental performance in the areas of energy, waste, water and indoor air quality, thus optimising our sustainability efforts. Apart from actively integrating green practices into our office operations, we are also committed to nurturing environmental awareness among our staff in all branches and all offices.

Our robust IMS, which encompasses aspects of environmental management (ISO 14001), occupational health and safety (ISO 18001), energy management (ISO 50001) and quality management (ISO 9001), was established at ArchSD to benchmark our environmental performance and ensure the management system remains at international standards. The IMS allows us to formulate guidelines, procedures and strategies which ensure that our day-to-day office operations meet and comply with the requirements of management system.

Energy Use and Carbon Emissions

As we work to prioritise improvement measures and devise strategies to reduce greenhouse gas (GHG) emissions, it is pivotal for us to understand the nature of our direct and indirect GHG emissions.

Energy consumption accounts for a significant part of our carbon footprint, hence we monitor our electricity use and implement energy efficiency measures such as lighting retrofitting works at our offices which echo our commitment to energy reduction. During the reporting year, ArchSD maintained a 'Class of Excellence' Energywi\$e Certificate, awarded by the Hong Kong Green Organisation Certification (HKGOC) scheme in recognition of our outstanding energy saving efforts.



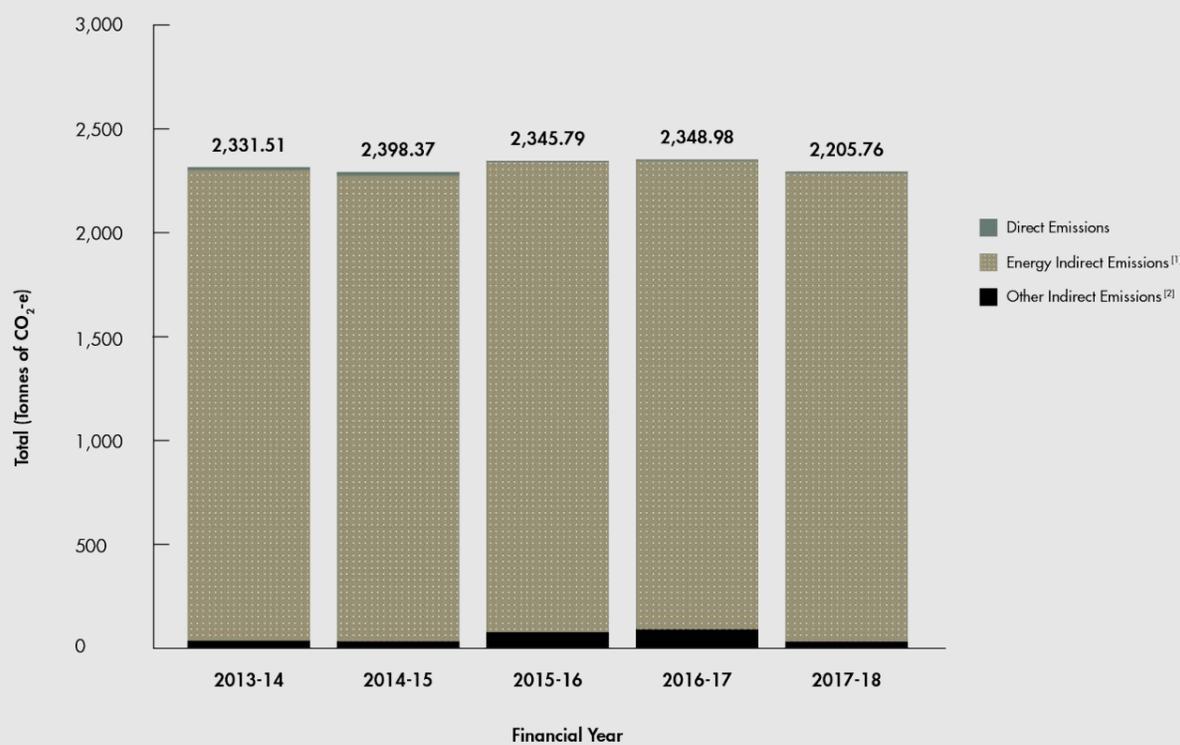
'Class of Excellence' Energywi\$e
Certificate

To strive for even greater environmental excellence, we proactively seek to use clean, renewable energy whenever appropriate. For example, during the reporting year, we installed over 100 photovoltaic panels on the rooftop of the APB Centre. These panels cover a portion of our energy needs.

In alignment with the carbon emissions reduction targets set out in the Hong Kong Climate Action Plan 2030+, we regularly conduct carbon audits to quantify our carbon footprint. Our carbon audits are carried out in accordance with the international standard Greenhouse Gas Protocol, while also making reference to guidelines published by the Environmental Protection Department and the Electrical and Mechanical Services Department. These audits take into account three major greenhouse gases: CO₂, CH₄ and N₂O. Our electricity and town gas consumption, as well as other operational data, are also regularly tracked for our annual management review to help identify areas for improvement.

Carbon Emissions Produced by the Queensway Government Offices

The carbon emissions produced by the Queensway Government Offices (QGO) have remained stable over the past five financial years. In fact, a 5.4% reduction in carbon emissions has been realised over this five-year period, the result of increased energy conservation awareness among staff and the adoption of energy-saving measures at QGO.



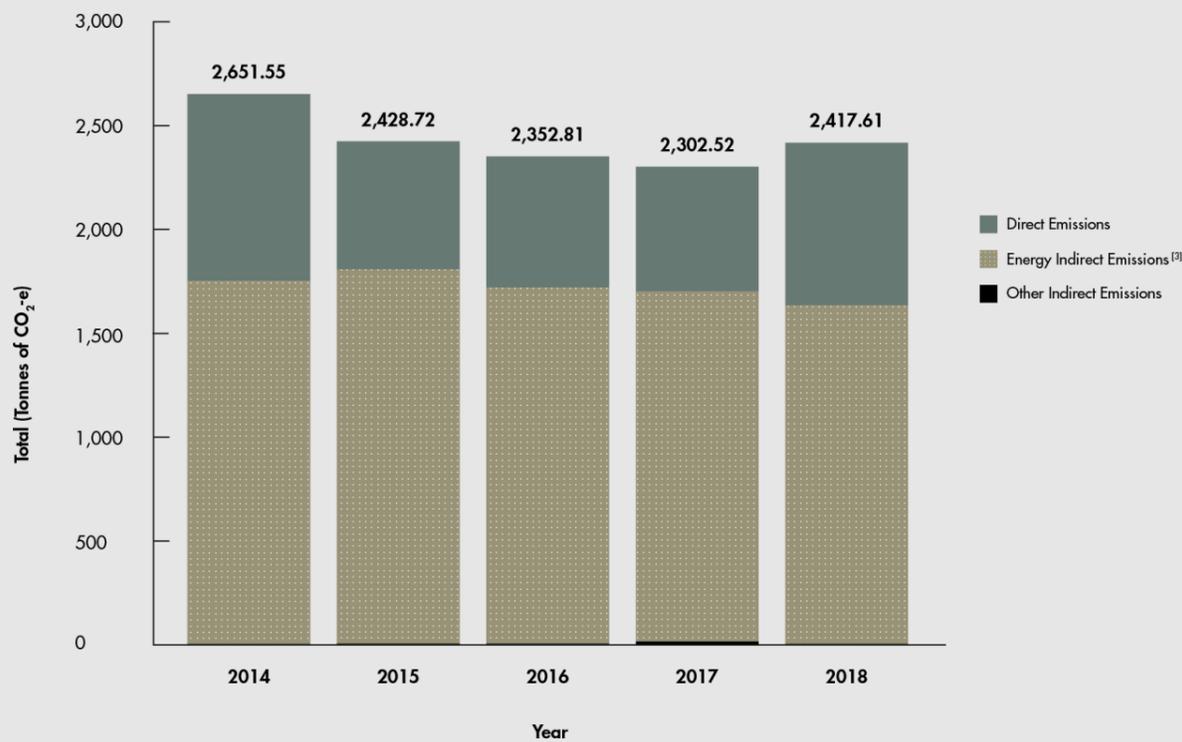
	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Direct Emissions (Tonnes of CO ₂ -e)	14.90	18.92	6.90	6.87	7.12
Energy Indirect Emissions (Tonnes of CO ₂ -e) [1]	2,277.59	2,344.73	2,255.11	2,247.02	2,169.03
Other Indirect Emissions (Tonnes of CO ₂ -e) [2]	39.02	34.72	83.78	95.09	29.61
Total (Tonnes of CO₂-e)^[2]	2,331.51	2,398.37	2,345.79	2,348.98	2,205.76

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

[2] The figures in FY 2013-14, FY 2014-15, FY 2015-16, FY 2016-17 and FY 2017-18 were calculated by measuring the actual paper consumption (A3 and A4) and waste paper collected for recycling at QGO.

Carbon Emissions Produced by APB Centre

Upgrades made to the building's air conditioning system, regular maintenance and the application of various energy efficiency features at the APB Centre resulted in a gradual drop in carbon emissions of about 8.8% in 2018 as compared to 2014.



	2014	2015	2016	2017	2018
Direct Emissions (Tonnes of CO ₂ -e)	886.29	619.08	628.22	601.86	769.69
Energy Indirect Emissions (Tonnes of CO ₂ -e) [3]	1,756.58	1,802.93	1,719.53	1,686.67	1,642.88
Other Indirect Emissions (Tonnes of CO ₂ -e)	8.68	6.72	5.05	13.98	5.04
Total (Tonnes of CO₂-e)	2,651.55	2,428.72	2,352.80	2,302.51	2,417.61

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

Waste Management

ArchSD is dedicated to responsibly managing our waste. To ensure that our actions match this dedication, we have introduced a series of measures to reduce waste at source and encourage recycling. For example, we issued green housekeeping guidelines on areas including reduction of paper consumption and waste minimisation to facilitate our staff to adopt best waste management practice. Our recycling efforts are also on display at the APB Centre and QGO, where we have set up various waste collection facilities which collect a vast array of recyclables, including waste paper, plastic bottles, used toner cartridges, aluminium cans, and used CDs.

As we work to continuously improve, every year we set up targets to enhance our waste management practices. During the reporting year, we established various targets such as to increase waste paper recycling. Finally, we successfully recycled around 20,000 kg of A3 and A4 waste paper and were also awarded the 'Class of Excellence' Wastewi\$e Certificate for consecutive years under the Hong Kong Green Organisation Certification Scheme.



'Class of Excellence' Wastewi\$e Certificate

Water Management

To conserve water resources, ArchSD is committed to reducing our total potable water usage. In addition to installing water saving devices like sensor taps and dual-flush cisterns, we also keep track of our potable water and flushing water consumption, and carry out regular maintenance on our water supply system. In parallel, we have also issued a general circular entitled 'Measures of Green Housekeeping' to help raise awareness of the importance of water conservation.

Indoor Air Quality Management

We are fully aware that our staff spend most of their working time indoors. As such, we endeavour to provide a pleasant indoor environment which safeguards their health and well-being. We ensure that we adhere to good indoor air quality (IAQ) management practices by sticking to guidelines published by the Environmental Protection Department. Over the years, we have supported the government's IAQ advocacy by participating in the IAQ Certification Scheme, which works to improve IAQ and engages accredited bodies to conduct IAQ assessments. Upon the completion of various indoor air quality measures, both APB Centre and QGO were awarded 'Basic Level' IAQwi\$e Certificates during the reporting year.

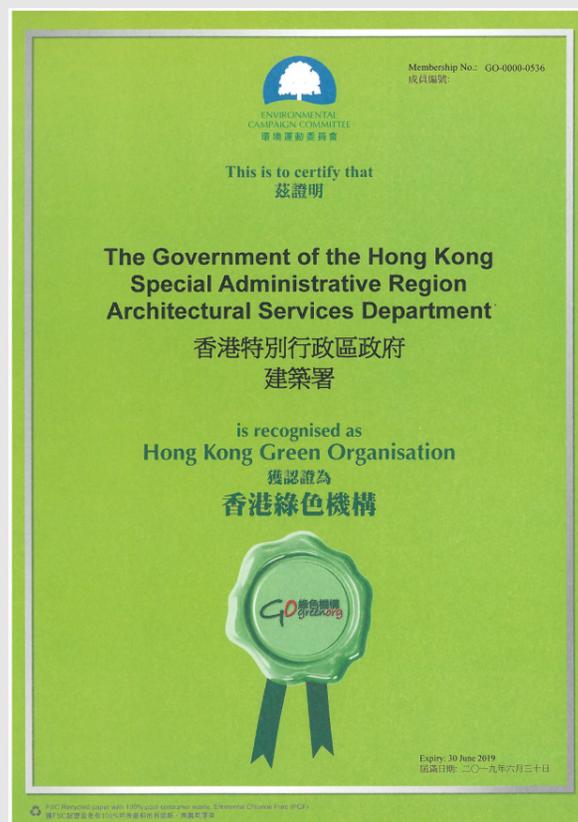




The APB Centre and QGO both received the 'Basic Level' of IAQwi\$e Certificates

Hong Kong Green Organisation

In 2017/18, ArchSD was once again awarded with a Hong Kong Green Organisation Certificate. We are proud that multiple aspects of our environmental practices have continued to gain recognition.



Hong Kong Green Organisation Certificate

Cultivating a Green Culture

Our determination to protect the environment is not limited to our office operations. We are a firm believer in promoting environmental awareness at multiple touch points in the workplace, as this allows our staff to gain a deeper understanding of global environmental issues and consequently provide further support to our environmental initiatives.

As such, we are continuously working to encourage a green culture at ArchSD, one which puts environmental principles into practice and disseminates environmental messages to our staff via the intranet, emails and other channels. A designated team of 64 Green Wardens, made up of staff from various branches and divisions, has been appointed to spread green messages

and assist in organising ArchSD's various environmental awareness enhancement programmes and activities. Our staff also proactively participate in environmental activities and training sessions, for instance, Annual International Arboriculture Summit (Hong Kong), Seminar on Strategic Street Tree Planting and Urban Forestry in Hong Kong, and Seminar on Waste Reduction and Recycling in Hong Kong and Environmental Compliance in BEAM Plus Submission, to enhance their environmental awareness and gain professional qualifications in various environmental domains. We also maintain a group of staff members with the BEAM Pro qualification.

INTERVIEW WITH STAFF



Mr. CHAN Siu Ming
Chief Technical Officer (Building Services)

☞ In the Building Services Branch, my major responsibilities involve monitoring quality controls over our building services, mainly through conducting site visits and audits on construction sites to ensure that our products and services comply with applicable requirements and standards. As the Chief Technical Officer, I also oversee staff training to promote staff's overall sustainability awareness, career development and promotion matters in the branch.

ArchSD always strives to stay at the forefront of technological innovations with sustainable features, share the latest trends and development of industry insights with the staff, and adopt smart and innovative technologies in practice. A number of new technologies including Building Information Modelling (BIM), Modular Integrated Construction (MiC) and Design for Manufacturing and Assembly (DfMA) have recently been applied in more and more of our projects to enhance site environmental performance and better manage the construction schedule and quality. To enhance staff competence in the relevant areas, we have continuously arranged and provided various trainings courses to equip our colleagues with sufficient knowledge to meet operational needs. Besides, our Knowledge Management Hub, as a centralised online library, provides abundant information and publications to facilitate us in learning continuously at our own paces.

At ArchSD, we have a harmonious working atmosphere that motivates everyone to perform and excel. The management maintains regular and effective communication with all levels of staff through various channels such as meetings, forums, email, intranet, and newsletters. The latest information regarding sustainability initiatives, technology development, staff activities and other department updates would also be shared among our staff in a timely manner. ☞☞

OUR RESPONSE

☞ We are pleased to know that our efforts are recognised by our staff. We believe that providing professional trainings to promote our staff's environmental awareness and the implementation of sustainability initiatives as well as technologies are crucial in achieving our aspirations in sustainable development. We will continue to monitor latest trends to identify the sustainable development opportunities and enhance the sustainable culture amongst our workplace. ☞☞



Engaging our Partners and Community

- Excellence through Partnership
- Supporting Community Development



UNSDGs

- We provide staff training based on their role to enhance staff's technical knowledge and management skills
- We collaborate with bureaux and departments and other industry partners to organise seminars, experience sharing and focus groups

Excellence through Partnership

In addition to provision of high-quality public buildings and facilities for society, ArchSD upholds the values of professional integrity and sustainability. To ensure sustainability practices are maintained across the supply chain, we actively engage and closely communicate with our key stakeholders including clients and business partners. 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.

Exceeding Customer's Expectation

Client's satisfaction is one of ArchSD's top concerns. We make every endeavour to collect client's feedback, including constant review, measurement and comprehensive analysis. In the year under review, we continued to put emphasis on clients' interests and expectations throughout the lifecycle of projects. Continuous improvement and breakthroughs are foreseeable with our dedication to excellence in service delivery.

To better understand our client satisfaction level, Client Satisfaction Survey is conducted annually as one of our key assessment metrics. In 2018, a total of 9 surveys were conducted for projects that were under planning or newly completed. The survey result was an objective indicator of ArchSD's overall performance throughout the year and our responsiveness in communication with clients.

Satisfied Level on Overall Performance

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

Over 90% of the completed projects achieved level of 'Totally Satisfied' or 'Very Satisfied' on overall performance

Enhancement on the Communication with Clients

100% achieved the target – replying the clients within 2 months after the survey on the progress of the observations raised

Commitment to Quality Green Buildings

Being one of the industry pioneers at the same time aligning with the Government's strategies in climate change mitigation, ArchSD is committed to embedding sustainability elements into both new and existing projects. We drive the implementation of green building initiatives across industries, in particular our contractors and industry partners.

One significant example is that ArchSD has been proactively adopting the Building Environmental Assessment Method (BEAM) on new projects in recent years. This voluntary labelling scheme is welcomed by more industry peers in Hong Kong with our support and effort. The entire life cycle performance of buildings from planning, design and construction to management, operation and maintenance will be examined under the scheme. Buildings will be awarded applicable credits under each performance category as well as an overall performance grade upon fulfilling the assessment criteria.

As of the end of 2018, we have successfully earned the BEAM and BEAM Plus certifications for 54 buildings, and BEAM Plus Interior certifications for 2 offices and BEAM Plus Existing Building (Selective Scheme) for one office.

Certified Buildings under the BEAM up to 2018

Type of Certificate	Rating		Subtotal
	Excellent	Very Good	
BEAM Certification* (Version 1/96R, 2/96 & 2/96R)	11	2	13
	Platinum	Gold	
BEAM Certification** (Version 4/03 & 4/04)	18	11	29
BEAM Plus (New Buildings) Certification*** (Version 1.1 & 1.2)	5	7	12
	Platinum		
BEAM Plus (Interior) Certification	2		2
	Excellent		
BEAM Plus Existing Building (Version 2.0 Selective Scheme) Certification	1		1
Total			57

* Reference to specific versions of the BEAM Certificate:

Version 1/96R – An Environmental Assessment Method for New Air-conditioned Office Premises. 1999;
Version 2/96 – An Environmental Assessment Method for Existing Air-conditioned Office Premises. 1996; and
Version 2/96R – An Environmental Assessment Method for Existing Air-conditioned Office Premises. 1999.

** Reference to specific versions of the BEAM Certificate:

Version 4/03 – Pilot Version of Hong Kong Building Environmental Assessment Method for New Buildings Developments. 2003; and
Version 4/04 – Hong Kong Building Environmental Assessment Method for New Buildings. 2004.

*** 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.

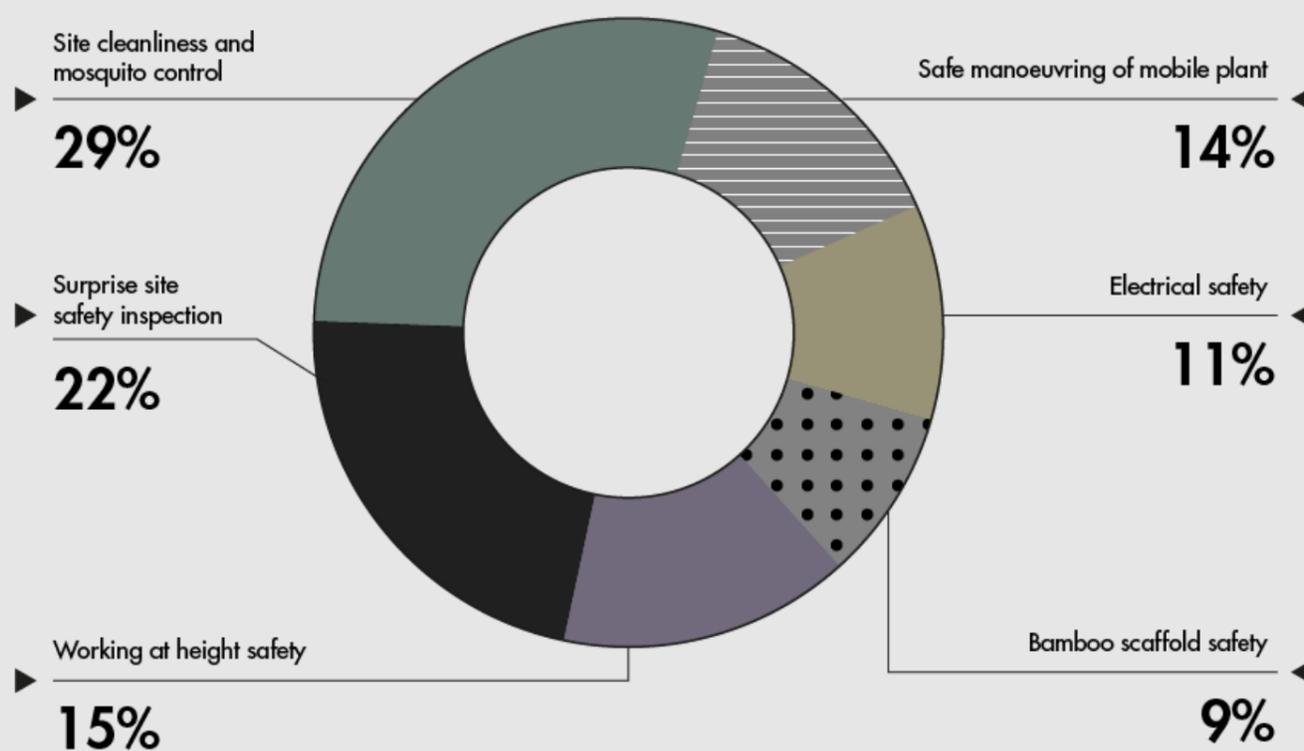
Enhancing Green and Safety Culture of Contractors

ArchSD always prioritise workplace safety and therefore all of our contractors are required to follow applicable site safety requirements and apply industry best practices. Contractors are encouraged to access comprehensive guidance materials in our knowledge bank, including site safety checklists, briefing notes, safety audit results, and other relevant documents. To raise the safety awareness of our contractors, we also actively disseminate information regarding Work Safety Alerts issued by Labour Department and other safety reminders to them periodically.

In order to safeguard the public interest and occupational health of employees, members of our Departmental Safety & Environmental Advisory Unit visit project locations to perform surprise inspections regarding particular site safety issues and to ensure corrective actions are taken in a timely manner.

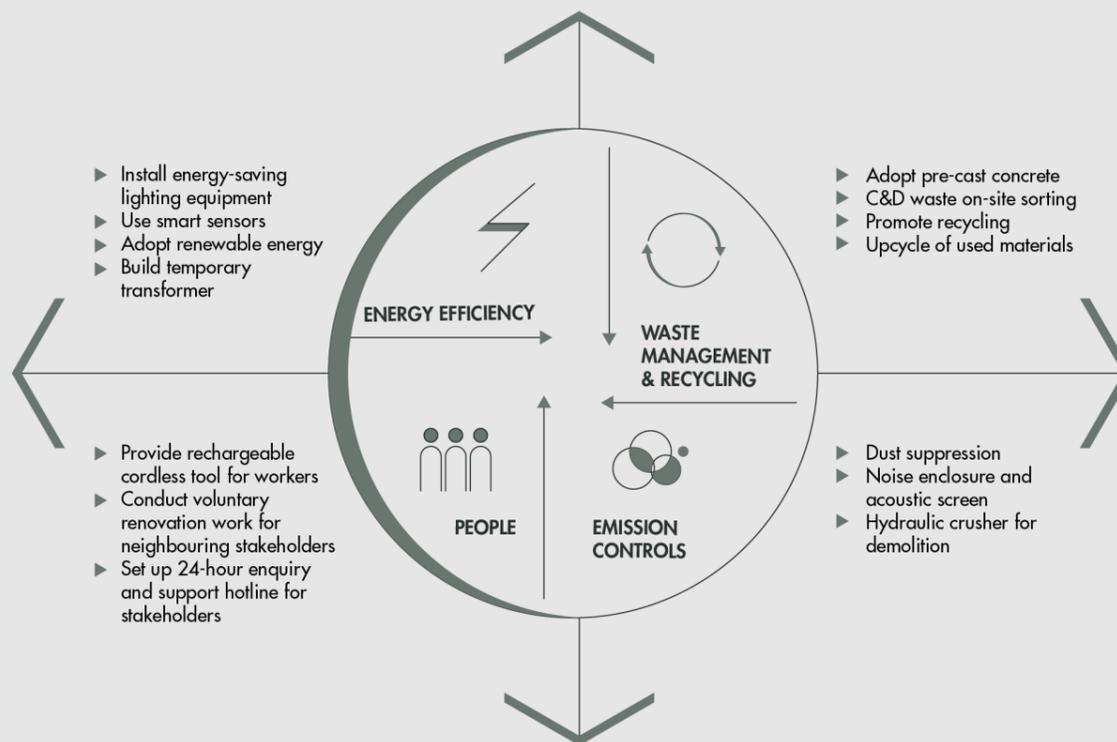
In 2018, we completed a total of 132 site inspections on selected site safety topics or issues and surprise site safety inspections for new works sites, including:

- ▶ Site cleanliness and mosquito control (38 nos. of inspection)
- ▶ Safe manoeuvring of mobile plant (19 nos. of inspection)
- ▶ Electrical safety (14 nos. of inspection)
- ▶ Working at height safety (20 nos. of inspection)
- ▶ Bamboo scaffold safety (12 nos. of inspection)
- ▶ Surprise site safety inspection (29 nos. of inspection)



Green and Smart Practices of Contractors

In order to monitor on-site environmental performance and facilitate continual improvement, diversified measures have been adopted by our contractors and applied on site operations regarding on ArchSD's projects. Innovative and self-initiated practises were also introduced. The four major green and smart practices are described as follows:



Recognitions to Contractors

ArchSD highly appreciates outstanding performance of contractors, subcontractors and site personnel in demonstrating good environmental performance, site safety and considerate manner in carrying out public works. Therefore, two formal commendation – Considerate Contractors Site Awards and the Green Contractor Award are offered annually.

Considerate Contractors Site Awards

With the objectives of raising awareness of construction site safety and promoting good practices in both safety and environmental aspects, the Considerate Contractors Site Award Scheme is jointly organised by DEVB and Construction Industry Council annually to recognise the contractors' effort. For public works sites, nominated entrants of public work site are divided into two categories based on the contract nature – (i) New Work Contracts and (ii) Repair, Maintenance, Alteration and Addition (RMAA) Works Contracts. To ensure fairness and objectivity, comprehensive assessment will be done with coverage of multiple aspects such as environmental consciousness, site safety performance and management. There are six award categories in total, including Considerate Contractors Site Awards, the Outstanding Environmental Management and Performance Awards, Model Worker Awards, Model Frontline Supervisor Awards, Model Subcontractor Frontline Supervisor Awards and Model Subcontractor Awards.

The 25th Considerate Contractors Site Award Scheme Award Presentation Ceremony was held on 27 May 2019, where top performing 'considerate' sites from both the public works and the non-public works celebrated their success. ArchSD's contractors received the great honour of 4 awards including:



25th Considerate Contractors Site Award Scheme Award Presentation Ceremony

Contracts	Achievements
	Considerate Contractors Site Award
New Works Category	
Construction of Sports Centre, Community Hall and Football Pitches in Area 1, Tai Po (Contract No. SS E509) Contractor: Hanison Construction Company Limited	Gold
Conversion of the Former French Mission Building for Accommodation Use by Law-related Organisations and Related Purposes at Battery Path, Central (Contract No. RF E512) Contractor: Hop Lee Builders Company Limited	Merit
Design and Construction of Kwun Tong Staff Quarters at 4 Tseung Kwan O Road, Kowloon (Contract No. SS D502) Contractor: Yau Lee Construction Company Limited	Merit
RMAA Works Category	
Term Contract for Ground Investigation and Laboratory Testing for which Architectural Services Department is Responsible in Hong Kong, Kowloon, New Territories and the Outlying Islands (Contract No. TC E521) Contractor: Geotechnics & Concrete Engineering (H.K.) Limited	Merit

INTERVIEW WITH CONTRACTOR



Mr. Alvin KWOK
Project Manager of Yau Lee Construction Company Limited

As a contractor for the design and construction of Kwun Tong Staff Quarters at 4 Tseung Kwan O Road, we work closely with ArchSD to demolish two blocks of existing residential buildings and develop the new staff quarters. In this project, we achieved BEAM Plus, practised dust suppression control measures and complied with other environmental regulations as set out in the contract specification, while adopting innovative measures including prefabrication and precast elements. ArchSD management staff made frequent site visits to monitor progress and provide technical support to our frontline staff as well as to keep us abreast of the latest OHS practices to ensure zero accidents. ArchSD solicited some of our ideas and suggestions during construction phase such as putting on hold the percussive piling during students' examination period to control the noise impact to the neighbourhood.

We are also encouraged by ArchSD to strive for excellence while benchmarking our site performance with the industry. As such, we participated in different incentive schemes such as 'Pay for Safety and Environment Scheme' and 'Green Contractor Award 2018' to apply more green measures on site. We are pleased that our project was commended with Merit Award in Public Works – New Works of the 25th Considerate Contractors Site Award Scheme.

Throughout this project, we are happy to create partner synergy and build up a closer relationship with ArchSD, who has offered us sufficient resources and professional guidance. We look forward to our future partnership and will continue to explore sustainable initiatives for the industry. ☺☺

OUR RESPONSE

☺☺ We highly appreciate the dedication of our contractor and project team in completion of this project successfully. On top of advocating mutual trust and collaboration to remain steadfast in our mission, we will continue to listen to the feedback and suggestions of our contractor and encourage them to provide innovative solutions for delivering quality, cost effectiveness and sustainable facilities for the community. ☺☺



Green Contractor Award

To reinforce the importance of environmental conservation during construction, ArchSD organises the Green Contractor Award annually to compliment contractors' effort in sustainability. Aiming to minimise environmental impact at construction sites, green measures taken regarding daily operations are highly appreciated, such as energy saving, water conservation, waste reduction, emissions mitigation and environmental management.

In 2018, 1 Gold, 2 Silver, and 1 Term Contract Awards were presented to the following contractors, which involved projects under construction during the year or maintenance projects with contract sums exceeding \$30 million.

Gold Award

Yau Lee Construction Company Limited



Contract No. SS D502
Design and Construction of Kwun Tong Staff
Quarters at 4 Tseung Kwan O Road, Kowloon

Silver Award

Hop Lee Builders Company Limited

Contract No. RF E512
Conversion of the Former French Mission Building
for Accommodation Use by Law-related
Organisations and Related Purposes at Battery
Path, Central



Silver Award

Hip Hing Joint Venture



Contract No.: SS C502
Design and Construction of West Kowloon
Government Offices in Yau Ma Tei

Contract No.: SS E501
Design and Construction of Transport
Department's Vehicle Examination Centre at Sai
Tso Wan Road, Tsing Yi, New Territories

Term Contract Award

Cheung Hing Construction Company Limited

Contract No.: TC E971

Term Contract for the Design and Construction of Minor Works to Government and Subvented Properties for which the Architectural Services Department is Responsible [Contract Area : Hong Kong Island, Lantau Island and Outlying Islands (South)]



Engaging our Partners and Community

- Excellence through Partnership
- Supporting Community Development



UNSDGs

- We provide staff training based on their role to enhance staff's technical knowledge and management skills
- We collaborate with bureaux and departments and other industry partners to organise seminars, experience sharing and focus groups

Supporting Community Development

Throughout the years, ArchSD has been supporting the industry and the society through our participation in events and exhibitions. We treasure every opportunity to demonstrate and display our designs and best building practices to industry partners and professionals and at the same time engage and interact with the public community.

InnoCarnival 2018

Echoing with the theme of 'Innovate for a SmartFuture', ArchSD continued to participate in the InnoCarnival 2018 from 3 November to 11 November organised by the Innovation and Technology Commission (ITC). During the event, our display booth displayed innovative sustainable building designs and our colleagues explained the intelligent designs of our project works to visitors.



Display Booth at InnoCarnival 2018

Embracing Joy in the City – Hong Kong Flower Show 2018

ArchSD has continuously supported the annual Hong Kong Flower Show organised by the Leisure and Cultural Services Department (LCSD) since 1990s. The event theme of 2018 is 'Joy in Bloom' and it was ArchSD's mission to design creative and aesthetic landscape features to demonstrate the beauty of the theme flower, Dahlia. Spherical designs and floral art displays allowed our visitors to enjoy the beautiful greenery in our city. This year, we made use of environmentally friendly and recycled materials in our designs to extend the sustainable development message to the general public.



Circular Shapes as the Major Design Element of ArchSD's Display

Developing Community Projects

Open Space at Hing Wah Street West in Sham Shui Po

- ▶ Inclusive facilities design for people of all ages, for example, fitness stations for elderly, play area and tri-cycling area for children
- ▶ Application of renewable energy by solar hot water system and solar-wind powered light fittings
- ▶ Installation of LED type exit signs and general lightings to enhance energy efficiency
- ▶ Use of rainwater recycling system



A garden with soft landscaping and seating areas



A children's playground with a designated tri-cycling area



A seven-a-side artificial turf soccer pitch



A service block with ancillary facilities including toilets, changing rooms, a baby care room, a management office and a store room

Community Green Station in Tai Po

- ▶ Use of recycled materials, including paver blocks made from recycled glass, a pathway made from timber from felled trees and a fence made from reused bamboo
- ▶ Adoption of a natural cross-ventilation design to reduce reliance on air conditioning
- ▶ Installation of energy-efficient equipment including T5 fluorescent tubes, LED lighting and motion sensors for lighting control based on room occupancy



Paver blocks made from recycled glass



A pathway made from timber from felled trees



Energy-efficient equipment is installed throughout



A fence made from reused bamboo

Tuen Mun Park Inclusive Playground

- ▶ Inclusive design concept allows children of different ages and abilities to play with each other harmoniously
- ▶ Adoption of winning concepts of Inclusive Play Space Design Ideas Competition
- ▶ Water and sand as the two main natural elements of the playground, with composition of two portions with seven play zones
- ▶ Play experience, inclusiveness and safety are the three key considerations of the 'Play for All' playground



Sensory walls with children's design elements incorporated



Themed wheelchair accessible fossil sand table and egg hunting sand pit enrich quality sand play and encourages social interaction for children



Trampoline for wheelchair users promotes equitable play experience



Water cascade platform – various types of water play equipment offers diverse water play experience

INTERVIEW WITH USER



Ms. Regin LEUNG
Principal of The Church of Christ in China Mongkok Church Kai
Oi School

“ The new school premises are beautiful, comfortable and spacious! With more open space and barrier-free school facilities like student activity centers and multi-purpose rooms for students with special needs, the teaching and learning environment of Kai Oi School has been significantly improved by innovative design. Overwhelmed with appreciation from all stakeholders of the school, including our honored guests, Incorporated Management Committee members, visitors, parents, teachers and students, the reprovisioning project of Kai Oi School supervised by ArchSD is doubtlessly a huge success.

We are glad to have ArchSD overseeing the reprovisioning project, from campus design to post-construction maintenance. The department demonstrated a high degree of professionalism throughout the project. ArchSD has maintained close communication with us and offered technical advisory to tailor-made campus facilities regarding safety concerns of our students. Their representatives even stationed on-site after the completion of construction for around six months to ensure smooth and satisfactory operation of the newly-built campus.

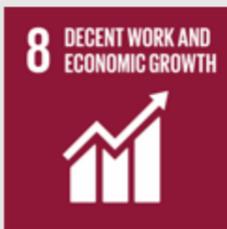
In addition to satisfying our demand for school facilities, ArchSD placed particular attention to adding sustainability elements in the project. For example, the retention of old trees and installation of solar panels on campus. Their effort in conserving the environment is appreciated by the school community. Having both the user and environmentally friendly school environment, we are delighted to organise tours and introduce our campus to all stakeholders. We look forward to future opportunities engaging ArchSD or its contractors in sharing of their sustainable building knowledge and experience. ”

OUR RESPONSE

“ Achieving client satisfaction remains the core of our services. We make every endeavor to understand their needs and requirements by continuous communication. Project design and construction methods are also subject to individual case and targeted user groups – we put emphasis on accessibility of campus facilities for Kai Oi School. With our expertise in construction and experience in project management, we are pleased to share the knowledge with our peers in the industry. ”



Caring for the Staff



UNSDGs

- We have a Quality, Environmental, Health and Safety Policy in place and conduct regular safety inspections and risk assessment to ensure a safe and healthy working environment for the entire workforce
- We conduct regular occupational safety and health training to ensure our operations are carried out with the highest safety standards

Caring for the Staff

Human resources are our greatest asset at ArchSD, for our every success rests upon their professional expertise, collective wisdom and deep dedication. In order to deliver quality professional services to our clients and the general public, we strive to build a well-trained workforce by providing adequate training opportunities as well as individual development programme to our staff. In parallel, we endeavour to create a healthy, safe, and fun working environment where values of our staff can be realised and enhanced, and at the same time enjoying a high level of satisfaction and fulfillment.

Occupational Health and Safety

A workplace free of occupational health and safety hazards and risks is essential to safeguard our staff wellbeing and ensure our service delivery, which is why we take every opportunities to evaluate risks and minimise the likelihood and impacts of hazards when encountered. To ensure compliance of all safety standards, we conduct regular safety inspections to identify, evaluate and monitor hazards. Workplace safety walk, workplace risk assessment and workplace accident investigation are conducted for whole workplaces of ArchSD, covering employees of ArchSD as well as workers working in workplace controlled by ArchSD. Any new hazards or near misses will be reported and investigated promptly at both the departmental and project levels to safeguard the safety of our employees. Thorough risk assessments as well as formulate mitigation plans and control measures are also performed regularly to minimise and avoid potential risks.

The Quality, Environmental, Health and Safety Policy sets out our strong commitment in ensuring a safe and healthy working environment for the entire workforce and exhibits our dedication to improve our health and safety management system continuously. To this end, we incorporate international best practices and industry standards into our operations by implementing OHSAS 18001 Occupational Health and Safety Management System under our Integrated Management System (IMS). Performance and measures related to health and safety are monitored regularly and reviewed quarterly by the Occupational Health and Safety Representatives Working Group (OHSRWG) for continuous improvement. The OHSRWG consults and communicates to and from staff and those affected on all occupational health and safety matters and provide feedback to the Integrated Management Committee chaired by the Deputy Director of Architectural Services.

In line with our occupational health and safety related policy, guidelines and management systems, we arrange an array of trainings for the staff, including but not limited to Safety Training Course for Site Management Staff, Certificate in Safety and Health for Supervisors (Construction), and Mandatory Basic Safety Training Course (Construction Work). Emergency evacuation exercises are conducted to all levels of staff to raise their awareness and emergency preparedness.

Training and Development

In view of the ever-changing environment in the industry and rising challenges faced by the organisation, we continue to develop our workforce through offering multifaceted training and development opportunities for our staff to keep abreast of the latest trends in their professions while motivating them to realise their potential.

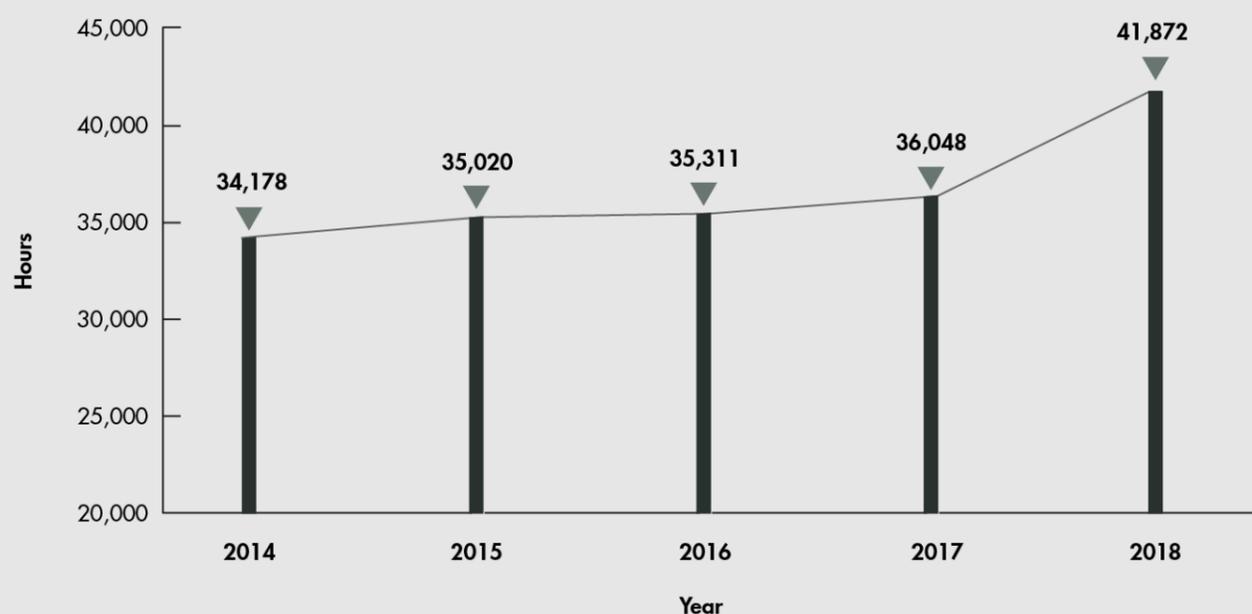
By offering a comprehensive range of training and development programmes which are aligned with departmental business goals and staff development needs, ArchSD endeavours to equip our staff with the knowledge and skills required for meeting the increasing challenges. Our programmes are arranged to fit in with the needs of professional officers, technical officers and site supervisory staff; which cover topics related to Leadership & Management Skills, Professional & Vocational Training, and Career Development.

Various delivery modes of training activities are provided to staff to meet their job needs and to enhance their learning experiences. They include regular Academy talks, structured classroom training, workshops, seminars, large-scale symposiums, experience sharing sessions, on-the-job training, coaching and mentoring, e-learning, among others. During the year, we organised 417 training courses that account for a total of 41,872 training hours. Each staff member, on average received 22.4 hours of training.

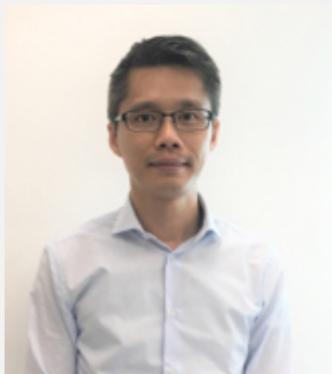
Training Summary of 2018

Training Types	No. of Trainees	No. of Training Hours
Leadership & Management Skills	176	2,247
Professional & Vocational Training	6,958	33,206
Career Development	934	6,419
Total	8,068	41,872

Staff Total Training Hours



INTERVIEW WITH STAFF



Mr. LEE Chun Kau, Paul
Senior Project Manager

It has been my honour to be involved in the first government project implementing the Modular Integrated Construction (MiC), Pak Shing Kok Disciplined Services Quarters Project (PSKDSQ), commenced in August 2018. This new construction method allows building units to be prefabricated and assembled at factories then transported to the project site for installation. As most of the building process were completed at factories, the quality and productivity would be greatly enhanced as compared to traditional construction method. In addition, with workplace safety as one of our most important aspects, MiC also brings benefits to on-site workers by improving the safety and cleanliness at the project site.

ArchSD also provides various professional trainings for our staff and has maintained an experience-sharing platform for different project teams to showcase and share their project learnings. I have attended several sharing sessions and find it particularly useful especially when the project types are different from my previous projects. It provides a good communication channel for knowledge and ideas exchange. The PSKDSQ project would also demonstrate the contractor's MiC installation method to our colleagues to solicit more innovative ideas in construction for further improvement.

Apart from workplace safety and trainings, ArchSD also makes efforts in showing care for staff's families. I remember upon completion of some of our public projects, ArchSD organised tours to the project sites which welcome colleague's family members to join. Looking ahead, I hope more of these similar family events could be arranged in the future to let our children to have a better understanding about their parents' work. ☺☺

OUR RESPONSE

☺☺ To enhance site safety and productivity of building projects, it is anticipated that more and more ArchSD projects will adopt new construction methods in the coming years. Besides offering relevant training courses and seminars for our staff, we continue to facilitate knowledge exchange in recent years by enhancing digitisation and smart sharing platform. We also attach great importance to the value of a healthy work-life balance for our staff members and continue to look for opportunities to organise family-friendly events for staff and their families to enjoy. ☺☺



Recreational Activities

The pursuit of work-life balance and a strong foundation of mutual understanding among employees are instrumental in achieving high level of performance at ArchSD. As such, we are dedicated to creating a harmonious working culture that is conducive to team building. During the reporting year, we continued to organise a range of sports and recreational activities through our ArchSD Site Supervisory Staff's Recreation, Sports and Welfare Group to help support the holistic wellbeing and foster stronger team spirit among our staff.

A total of 20 sports and recreational activities such as hiking, sports competition and hobby classes were organised in the reporting year.

Highlights of Sports and Recreational Activities in 2018



Islands District Distance Run



Joining summer bowling class



Competing at badminton tournament organised by the Development Bureau



Inter-governmental department bowling competition



Enjoying a hike at Tsuen Kam Au



A hot spring tour to Shaoguan Xiaokeng National Forest Park



Competing at the football championship organised by ArchSD



Annual Dinner 2019

Volunteer Activities

As committed civil servants, we dedicated to leveraging our resources to connect, support and thrive together with the community. We actively encourage our colleagues to make positive impact on society by taking part in community services. To foster a volunteering culture within the organisation, we organise voluntary services through Volunteer Service Team on a regular basis.

In the reporting year, we participated in 21 community activities, contributing a total of 1,044 hours of service to the society.

Summary of Volunteer Service

	2016	2017	2018
Total Number of Hours of Staff Volunteer Service	1,185	1,248	1,044
Number of Volunteers	46	48	58
Number of Voluntary Projects Completed	18	24	21
Number of Active Volunteer (delete extra space) Service Team Members ^[1]	16	19	14
Number of Staff Received Commendation for Voluntary Service ^[2]	11	14	11

[1] - Active Volunteer Service Team member is defined as team member contributes more than 20 hours on volunteer service.

[2] - Staff who receives commendation for volunteer service is defined as team member contributes more than 30 hours on volunteer service.

Snapshot of Volunteer Services in 2018



A visit to the Elderly Home



Threw a birthday party for the disabled



Participating in Oxfam Trail Walker 2018 to support Oxfam's work on poverty alleviation and emergency relief



Our volunteer team received the Construction Industry Volunteer Award



Ngong Ping Charity Walk 2018

Objectives and Targets



Objectives and Targets

We perform regular review on our sustainability performance to ensure we work towards our sustainability objectives and targets each year. In 2018, we achieved most of our targets in environmental, project quality and social issues. Details of our achievements during the year and the targets for 2019 are tabulated below.

On Environmental Issues

Long Term Objectives	Targets for 2018	Achievements	Target Compliances	Targets for 2019
Reduce water consumption	<ul style="list-style-type: none"> ▶ Water taps in 100% of new projects to be Grade 2 or above ▶ 50% of these projects to be Grade 1 under the Mandatory Water Efficiency Labelling Scheme (WELS) of WSD unless there are genuine operational or technical needs for not doing so 	<ul style="list-style-type: none"> ▶ All water taps in 100% of the 16 new projects are Grade 2 or above ▶ 75% of water taps in these projects are Grade 1 or above 	Complied	2018 targets to be maintained in 2019

Long Term Objectives	Targets for 2018	Achievements	Target Compliances	Targets for 2019
Reduce energy consumption	<ul style="list-style-type: none"> ▶ To achieve overall thermal transfer value (OTTV) of not more than 23 W/m² in 100% of new projects with air conditioning installations ▶ 75% of these projects to achieve an even lower OTTV of not more than 18 W/m² 	<ul style="list-style-type: none"> ▶ 100% projects with OTTV less than 23 W/m² ▶ 80% projects with OTTV less than 18 W/m² 	Complied	2018 targets to be maintained in 2019
Promote a healthy and sustainable development	<ul style="list-style-type: none"> ▶ 87% of the new in-house and outsourced projects with Capital Project Estimate (CPE) / Approved Project Estimate (APE) greater than \$30 millions shall use pulverised-fly ash (PFA) or ground-granulated blast-furnace slag (GGBS) in concrete 	<ul style="list-style-type: none"> ▶ 100% of the new projects have used PFA or GGBS concrete 	Complied	Enhanced to 90% of the new in-house and outsourced projects with Capital Project Estimate (CPE) / Approved Project Estimate (APE) greater than \$30 millions shall use pulverised-fly ash (PFA) or ground-granulated blast-furnace slag (GGBS) in concrete
Reduce the consumption of natural resources	<ul style="list-style-type: none"> ▶ To 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 steel structural section, left-in formwork, etc 	<ul style="list-style-type: none"> ▶ 0.235 m³/\$millions timber saved 	Complied	2018 targets to be maintained in 2019
Comply with all relevant environmental legislation	<ul style="list-style-type: none"> ▶ To maintain a database to collect and analyse information regarding contractors' environmental regulatory performance 	<ul style="list-style-type: none"> ▶ In 2018, there was 0.032 environmental legislation conviction per 100,000 man-hours in our sites against 0.192 no. of convictions per 100,000 man hours in all HK sites 	Complied	2018 targets to be maintained in 2019

Long Term Objectives	Targets for 2018	Achievements	Target Compliances	Targets for 2019
Increase environmental awareness	<ul style="list-style-type: none"> To record and monitor general technical advice on environmental protection measures in line with ArchSD environmental policy 	<ul style="list-style-type: none"> 1,367 nos. of environmental advice given as at 31 December 2018 	Complied	2018 targets to be maintained in 2019
Improve Green Housekeeping Management	<ul style="list-style-type: none"> To reduce A4 paper consumption by 7.5% as compared with the base year 2005 	<ul style="list-style-type: none"> With data normalised, there was 59.2% and 11.2% saving when compared with 2005 and 2017 respectively 	Complied	2018 targets to be maintained in 2019
	<ul style="list-style-type: none"> To reduce electricity consumption (exclude A/C system) by 1.5% at QGO as compared with the base year 2013 	<ul style="list-style-type: none"> With data normalised^[1], there was 23.2% and 3.1% saving when compared with 2013 and 2017 respectively 	Complied	Enhanced to reduce electricity consumption (exclude A/C system) by 2% at QGO as compared with the base year 2013
	<ul style="list-style-type: none"> To reduce electricity consumption by 2% at APB Centre as compared with the base year 2013 	<ul style="list-style-type: none"> With data normalised^[1], there was 12.5% and 1.7% saving when compared with 2013 and 2017 respectively 	Complied	Enhanced to reduce electricity consumption by 2.5% at APB Centre as compared with the base year 2013

[1] The electricity consumption was normalised with the consideration of number of server rooms and number of staff.

On Project Quality Issues

Long Term Objectives	Targets for 2018	Achievements	Target Compliances	Targets for 2019
<p>Improve the quality of our services and project delivery</p>	<ul style="list-style-type: none"> ▶ To commence not less than 90% of new Public Works Programme (PWP) projects scheduled in 2018 in accordance with the commencement dates committed in the 2017 Resource Allocation Exercise (RAE) 	<ul style="list-style-type: none"> ▶ 100% of the new projects commenced works in 2018 	<p>Complied</p>	<p>To commence not less than 90% of new Public Works Programme (PWP) projects scheduled in 2019 in accordance with the commencement dates committed in the 2018 Resource Allocation Exercise (RAE)</p>
	<ul style="list-style-type: none"> ▶ To ensure 100% of capital and minor works projects to be completed within the agreed time scale (in the Quarter of the year calendar) 	<ul style="list-style-type: none"> ▶ 100% have been completed within the approved time scale in the scheduled quarter of 2018 	<p>Complied</p>	<p>2018 targets to be maintained in 2019</p>
	<ul style="list-style-type: none"> ▶ 100% of the completed projects to achieve Satisfied Level or above on the overall performance in Client Satisfaction Survey 	<ul style="list-style-type: none"> ▶ 100% of the projects have achieved Satisfied Level or above on the overall performance 	<p>Complied</p>	<p>2018 targets to be maintained in 2019</p>
	<ul style="list-style-type: none"> ▶ 90% of projects to complete outstanding works and defects rectification and issue maintenance certificate within 6 months from the expiry of the maintenance period 	<ul style="list-style-type: none"> ▶ 100% of maintenance certificate was issued within 6 months from the expiry of the maintenance period 	<p>Complied</p>	<p>2018 targets to be maintained in 2019</p>

Long Term Objectives	Targets for 2018	Achievements	Target Compliances	Targets for 2019
	<ul style="list-style-type: none"> ▶ 100% compliance with the target response time under the Code on Access to Information 	<ul style="list-style-type: none"> ▶ 100% of cases received were replied within the timeframe set out in the Code on Access to Information 	Complied	2018 targets to be maintained in 2019
	<ul style="list-style-type: none"> ▶ To submit not less than 40 harvested knowledge papers to the ArchSD Knowledge Hubs for knowledge sharing 	<ul style="list-style-type: none"> ▶ 101 harvested knowledge papers were uploaded 	Complied	Enhanced to submit not less than 45 harvested knowledge papers to the ArchSD Knowledge Hubs for knowledge sharing
	<ul style="list-style-type: none"> ▶ To sustain continuous enrichment of knowledge with stakeholders to have not less than 5 knowledge sharing or collaboration events with external stakeholders endeavoring to generate utmost stakeholder value and enhance collaborative innovation 	<ul style="list-style-type: none"> ▶ 29 knowledge sharing events were conducted with external stakeholders 	Complied	Enhanced to sustain continuous enrichment of knowledge with stakeholders to have not less than 7 knowledge sharing or collaboration events with external stakeholders endeavoring to generate utmost stakeholder value and enhance collaborative innovation

On Social Issues

Long Term Objectives	Targets for 2018	Achievements	Target Compliances	Targets for 2019
Minimising accident rate for ArchSD staff	<ul style="list-style-type: none"> ▶ Accident rate for ArchSD staff should be not more than 0.18 occupational injuries per 100,000 man-hours worked per year 	<ul style="list-style-type: none"> ▶ There was 1 reportable accident with an accident rate of 0.026 per 100,000 man-hours worked 	Complied	2018 targets to be maintained in 2019
Minimising the accident rate in ArchSD contracts	<ul style="list-style-type: none"> ▶ Accident rate in ArchSD contracts should be less than 0.6 reportable accident per 100,000 man-hours worked 	<ul style="list-style-type: none"> ▶ 0.36 reportable accidents per 100,000 man-hours worked 	Complied	2018 targets to be maintained in 2019
Promoting the awareness on safety and health amongst construction workers	<ul style="list-style-type: none"> ▶ At least 45% of ArchSD contracts would participate in the ArchSD Site Safety Model Worker Award Scheme 	<ul style="list-style-type: none"> ▶ 69% of ArchSD contracts participated in Safety Model Worker Award Scheme in 2018 	Complied	Enhanced to at least 50% of ArchSD contracts would participate in the ArchSD Site Safety Model Worker Award Scheme
Promoting the awareness on safety and health amongst contractors	<ul style="list-style-type: none"> ▶ At least 50% of ArchSD eligible new works contracts and 50% of eligible maintenance term contracts would participate in Development Bureau Considerate Contractors Site Award Scheme (CCSAS) 	<ul style="list-style-type: none"> ▶ 100% of eligible ArchSD new works contracts and 100% of eligible maintenance term contracts participated in CCSAS 2018 	Complied	At least 50% of ArchSD eligible contracts would participate in Development Bureau Considerate Contractors Site Award Scheme (CCSAS)

Long Term Objectives	Targets for 2018	Achievements	Target Compliances	Targets for 2019
Enhancing the occupational safety and health within the workplace	<ul style="list-style-type: none"> ▶ Safety walk for workplaces would be conducted at least quarterly 	<ul style="list-style-type: none"> ▶ Safety walk for workplaces has been conducted accordingly 	Complied	2018 targets to be maintained in 2019
Strengthening health and safety knowledge for project staff with external training	<ul style="list-style-type: none"> ▶ At least 12 external safety training courses should be arranged for project and office staff per year 	<ul style="list-style-type: none"> ▶ 17 external training courses were conducted and attended by 961 professional/technical/site staff in 2018 	Complied	2018 targets to be maintained in 2019
Upkeeping safety and health awareness of professional, technical and site supervisory staff, consultants and contractors with in-house briefing	<ul style="list-style-type: none"> ▶ At least 4 in-house workshops on safety and health should be organised 	<ul style="list-style-type: none"> ▶ 4 in-house workshops / seminars were conducted 	Complied	2018 targets to be maintained in 2019

Data Summary



Environmental Performance Resources Usage – Energy

	Units	2018	2017	2016	2015	2014
<i>Energy used at QGO and APB Centre</i>						
Electricity consumed	kWh/m ²	196	200	208	217	219
CO ₂ emission equivalent to electricity consumption	Tonnes CO ₂ -e	3,489	3,553	3,664	3,840	3,817
<i>Energy saved by projects</i>						
Estimated energy saved due to energy efficient installations ^[1]	GWh	0.76 ^[2]	4.44	5.74	5.16	0.79 ^[2]
Equivalent monetary savings ^[3]	HK\$ million	0.91 ^[2]	5.33	6.89	6.19	0.95 ^[2]
Avoided CO ₂ emissions ^[1]	Kilo Tonnes CO ₂ -e	0.53 ^[2]	3.11	4.02	3.61	0.55 ^[2]

[1] Energy efficient features refer to energy saving installation for air-conditioning systems, lighting systems, hot water systems, lift & escalator systems, building energy management system and renewable energy technologies.

[2] The nature of the completed projects (i.e. parks, open spaces, promenade, aqua privies, radar station, school and staff quarters etc.) in 2014 and 2018 did not warrant significant energy saving in term of BS installations.

[3] The electricity tariff is assumed to be HK\$ 1.2 per kWh from 2014 onward.

Resource Usage – Fuel

	Units	2018	2017	2016	2015	2014
Fuel consumption by ArchSD's pool cars	Litre	14,686	12,626	12,656	13,071	12,800
GHG emission equivalent to fuel consumption by ArchSD pool cars ^[4]	Tonnes CO ₂ -e	39.8	34.2	34.3	35.4	34.7

[4] 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 issued by the Environmental Protection Department, HKSAR in February 2010.

Resource Usage – Office Materials

	Units	2018	2017	2016	2015	2014
A4 paper consumption	Reams	16,136	16,947	18,082	18,169	18,485
A3 paper consumption	Reams	1,124	1,020	1,169	1,171	1,118
Envelop consumption	No.	29,718	37,615	35,672	42,883	44,084

Waste Management in Programme Areas of Facilities Development and Upkeeping

	Units	2018	2017	2016	2015	2014
<i>Construction & demolition materials</i>						
C&D waste disposed of to landfills	Tonnes	57,571	44,891	36,775	46,822	37,593
C&D materials disposed of to public fill areas	Tonnes	679,910	518,946	543,054	693,029	604,238
<i>Recyclable waste collected at APB Centre</i>						
Waste paper	kg	12,094	15,579	15,717	15,932	19,522
Aluminium	No.	1,985	2,050	1,676	1,631	4,918

Environmental Convictions of Contractors

	Units	2018	2017	2016	2015	2014
Convictions per 100,000 man-hours	ArchSD sites (HK sites)	0.032 (0.192)	0.034 (0.216)	0.122 (0.191)	0 ^[5] (0.25)	0.35 (0.275)
Monetary value of significant fines	HK\$	25,000	5,000	100,000	0 ^[5]	227,000

[5] In 2015, most of the on-site projects were in the final stages of the construction, hence environmental impacts to the neighbourhood were manageable and contented.

Environmental Expenditure

	Units	2018	2017	2016	2015	2014
Resources devoted to environmental works ^[6]	HK\$ million	1,506.8	1,101.3	568.4	639.3	761.6
Percentage of annual expenditure	%	12.8	9.7	6.3	7.3	10.9

[6] Resources devoted to environmental works included the expenditures on environmental nature projects and associated personal emoluments and departmental charges, staff's environmental training and works on maintaining environmental management system.

Social Performance^[7] Staff

	Units	2018	2017	2016	2015	2014
Staff establishment (as at 31 December of the year)	No.	1,907	1,859	1,835	1,814	1,810

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

Staff Establishment Breakdown

By Post (based on staff establishment)		
Directorate grade staff	%	2
Professional grade staff	%	26
Technical grade staff	%	22

Site supervisory staff	%	30
General grade staff	%	20
By Employment Type^[8]		
Full-time	%	99.1
Part-time	%	0.9
By Employment Contract		
Permanent (male)	%	62.8
Permanent (female)	%	31.3
Contract (male)	%	3.7
Contract (female)	%	2.2
By Age (as at 31 March 2019)		
Age under 30	%	14
Age 30-49	%	48
Age 50 or above	%	38
By Ethnicity		
Local	%	100
Non-local	%	0
By Gender		
Male	%	67
Female	%	33

[8] The full-time and part-time staff have been included this year for better reflection of the actual staff breakdown.

Staff Training

	Units	2018	2017	2016	2015	2014
No. of training courses (including internal and external seminars/ workshops/ training courses/ visits)	No.	417	412	366	374	287
Numbers of trainees	No.	8,068	7,488	8,302	6,961	6,619

Training Hours Breakdown^[9]

Type of Staff	Total Training Hours Received (hours)	Training Hours Per Staff (hours)
Directorate grade staff	1,414	34
Professional grade staff	18,146	38
Technical grade, site supervisory and general grade staff	22,312	17
Total	41,872	22

[9] As there is no distinct requirement regarding receiving training in terms of gender, we do not report the data broken down by gender.

Anti-corruption Training

Type of Staff	Number of Staff Participated Anti-corruption Training	Percentage of Staff Participated Anti-corruption Training
Directorate grade staff	19	46.3%
Professional grade staff	88	18.2%
Technical grade, site supervisory and general grade staff	227	16.9%

Staff Turnover

	Male	Female
Age under 30	1.4% (27)	0.3% (5)
Age 30-50	1.9% (36)	0.7% (13)
Age 51-55	0.2% (3)	0% (0)
Age 56-60	4.7% (87)	0.8% (15)

New Employee Hires

	Male	Female
Age under 30	3.8% (70)	1.3% (24)
Age 30-50	4.0% (74)	1.4% (26)
Age 51-55	0.2% (4)	0.1% (2)
Age 56-60	0% (0)	0% (0)

Occupational Health and Safety Management System

	Number of all employees and workers ^[10]	Percentage of all employees and workers ^[10]
Covered by the system	117	5.9%
Covered by the system that has been internally audited	117	5.9%
Covered by the system that has been audited or certified by an external party	117	5.9%

[10] 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	2018	2017	2016	2015	2014
Staff injury cases ^[11]	No.	1 (Male: 1)	2 (Male: 1, Female: 1)	5 (Male: 4, Female: 1)	4	4
Staff sick leave granted for staff injury cases	Days	9.5	14.5	168.5	50	174

[11] 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	2018	2017	2016	2015	2014
No. of fatalities ^[12] (ArchSD)	No.	0	1 (Male:1, Female:0)	2 (Male:2, Female:0)	0	1 (Male:1, Female:0)
Fatal accident rate ^[12] (ArchSD)	per 100,000 man-hours	0	0.003	0.007	0	0.004
Fatal accident rate ^[13] (Hong Kong Construction Industry)	per 100,000 man-hours	0.003	0.005	0.003	0.006	0.007
No. of non-fatal accidents ^[12] (ArchSD)	No.	133 (Male: 120, Female: 13)	96 (Male: 90, Female: 6) ^[12]	70 (Male: 64, Female: 6)	98	80
Non-fatal accident rate ^[12] (ArchSD)	per 100,000 man-hours	0.36	0.29 ^[12]	0.26	0.34	0.30
Non-fatal accident rate ^[13] (Hong Kong Construction Industry)	per 100,000 man-hours	0.88	0.91	0.96	1.08	1.16

[12] Data of 2018 and the previous years was extracted from PWP Construction Site Safety and Environmental Statistics System (PCSES) of DEVB as at 17 May 2019. In 2017, the number of non-fatal accidents (ArchSD) and the non-fatal accident rate (ArchSD) were adjusted.

GRI102- 48

[13] 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.

REPORT VERIFICATION



Scope and Objective

Hong Kong Quality Assurance Agency ('HKQAA') was commissioned by the Architectural Services Department (hereinafter referred to as 'ArchSD') of the Government of the Hong Kong Special Administrative Region to undertake an independent verification for the Sustainability Report 2019 (hereinafter called 'the Report'). The Report stated the sustainability performance of ArchSD in economic, environmental and social aspects in the period of 1st January 2018 to 31st December 2018.

The aim of this verification is to provide a reasonable assurance on the reliability of the report contents. The Report has been prepared in accordance with the Core Option of the GRI Sustainability Reporting Standards (GRI Standards).

Level of Assurance and Methodology

The process applied in this verification was based on the International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. Our evidence gathering process was designed to obtain a reasonable level of assurance as set out in the standard for the purpose of devising the verification conclusion. The extent of this verification process undertaken covered the criteria set in the GRI Standards: Core Option.

The verification process included verifying the systems and processes implemented for collecting, collating and reporting the sustainability performance data, reviewing relevant documentation, interviewing responsible personnel with accountability for preparing the reporting contents and verifying selected representative sample of data and information. Raw data and supporting evidence of the selected samples were also thoroughly examined during the verification process.

Independence

ArchSD is responsible for the collection and presentation of the information presented. HKQAA does not involve in the collection and calculation of data or the compilation of the reporting contents where HKQAA's verification activities were entirely independent from ArchSD. There was no relationship between HKQAA and ArchSD that would affect the independence of HKQAA for providing the verification service.

Conclusion

Based on the verification results and in accordance with the verification procedures undertaken, HKQAA has obtained reasonable assurance and is in the opinion that:

- ▶ The Report has been prepared in accordance with the GRI Standards: Core Option;
- ▶ The Report illustrates the sustainability performance of ArchSD, covering all material aspects, in a material, responsive, fair and balance manner; and
- ▶ The data and information disclosed in the Report are reliable and complete.

Nothing has come to HKQAA attention that the selected sustainability performance information and data contained in the Report has not been prepared and presented fairly and honestly, in all material aspects, in accordance with the verification criteria.

In conclusion, the verification team confirmed that the Report was prepared based on factual statements and that the data contained within the Report are accurate. It is a fair and honest representation of initiatives, targets, progress and performance on ArchSD's sustainable development achievements.

Signed on behalf of Hong Kong Quality Assurance Agency



Jorine Tam
Director, Corporate Business
September 2019

GRI Content Index



This report has been prepared in accordance with the GRI Standards: Core option. The General Disclosures and Topic-specific Standards are presented below with either linkage to the reported section(s) or direct answer. For the Materiality Disclosure Services, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report.

General Disclosures

GRI Standards	General Disclosures	Reference or Direct Answer	External Assurance
GRI 101: Foundation 2016			
GRI 102: General Disclosures 2016	Organisational Profile		
	102-1	Name of organisation	<u>ArchSD at a Glance</u>

102-2	Activities, brands, products, and services	<u>ArchSD at a Glance</u>	✓
102-3	Location of headquarters	<u>ArchSD at a Glance</u>	✓
102-4	Location of operations	Hong Kong only	✓
102-5	Ownership and legal form	Part of the Hong Kong SAR Government	✓
102-6	Markets served	<u>Strategy and Management</u>	✓
102-7	Scale of the organisation	<u>ArchSD at a Glance</u>	✓
102-8	Information on employees and other workers	<u>Data Summary.</u>	✓
102-9	Supply chain	<u>Excellence through Partnership</u>	✓
102-10	Significant changes to the organisation and its supply chain	No significant change	✓
102-11	Precautionary Principle or approach	<u>Strategy and Management</u>	✓
102-12	External initiatives	<u>About this Report</u> <u>Strategy and Management</u>	✓
102-13	Membership of associations	<u>Strategy and Management</u>	✓
Strategy			

102-14	Statement from senior decision-maker	<u>Message from the Director</u>	✓
Ethics and Integrity			
102-16	Values, principles, standards, and norms of behaviour	<u>Strategy and Management</u>	✓
Governance			
102-18	Governance structure	<u>ArchSD at a Glance</u>	✓
Stakeholder Engagement			
102-40	List of stakeholder groups	<u>Engagement Approach</u>	✓ <u>Report Verification</u>
102-41	Collective bargaining agreements	None. There is no collective bargaining legislation 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.	✓ <u>Report Verification</u>
102-42	Identifying and selecting stakeholders	<u>Main Focus Areas and Materiality</u>	✓ <u>Report Verification</u>
102-43	Approach to stakeholder engagement	<u>Engagement Approach</u> We have regular engagement with members of each group: (i) annual appraisals for staff; (ii) quarterly performance reports for consultants and contractors; and (iii) Client Satisfaction Survey for clients.	✓ <u>Report Verification</u>

102-44	Key topics and concerns raised	<u>Engagement Approach</u> <u>Main Focus Areas and Materiality</u> <u>Fostering Sustainable Building Design</u> <u>Creating a Green Workplace</u> <u>Excellence through Partnership</u> <u>Supporting Community Development</u> <u>Caring for the Staff</u>	✓ <u>Report Verification</u>
Reporting Practice			
102-45	Entities included in the consolidated financial statements	<u>ArchSD at a Glance</u>	✓ <u>Report Verification</u>
102-46	Defining report content and topic boundaries	<u>About this Report</u> <u>Main Focus Areas and Materiality</u>	✓ <u>Report Verification</u>
102-47	List of material topics	<u>Main Focus Areas and Materiality</u>	✓ <u>Report Verification</u>
102-48	Restatements of information	<u>Data Summary</u>	✓ <u>Report Verification</u>
102-49	Changes in reporting	No significant change	✓ <u>Report Verification</u>
102-50	Reporting period	<u>About this Report</u>	✓
102-51	Date of most recent report	ArchSD Sustainability Report 2018 was published in September 2018.	✓
102-52	Reporting cycle	<u>About this Report</u>	✓
102-53	Contact point for questions regarding the report	<u>Feedback</u>	✓

	102-54	Claims of reporting in accordance with the GRI Standards	About this Report GRI Content Index	✓
	102-55	GRI content index	GRI Content Index	✓
	102-56	External assurance	About this Report Report Verification	✓

Topic-specific Standards

GRI Standards	Material Topics	Reference or direct answer	External Assurance
	Procurement Practices		
GRI 103: Management Approach 2016	103-1 103-2 103-3	Excellence through Partnership	✓
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers In 2018, all our purchases were from local suppliers (defined as companies registered in Hong Kong) except the procurement of publications.	✓
	Anti-corruption		
GRI 103: Management Approach 2016	103-1 103-2 103-3	Strategy and Management	✓
GRI 205: Anti-corruption 2016	205-2	Communication and training about anti-corruption policies and procedures Data Summary.	✓

	205-3	Confirmed incidents of corruption and actions taken	<u>Strategy and Management</u>	✓
	Energy			
GRI 103: Management Approach 2016	103-1 103-2 103-3		<u>Fostering Sustainable Building Design</u> <u>Creating a Green Workplace</u> <u>Objectives and Targets</u>	✓
GRI 302: Energy 2016	302-1	Energy consumption within the organisation	<u>Data Summary.</u>	✓
	302-4	Reduction of energy consumption	<u>Data Summary.</u>	✓
	Emissions			
GRI 103: Management Approach 2016	103-1 103-2 103-3		<u>Creating a Green Workplace</u> <u>Objectives and Targets</u>	✓
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	<u>Creating a Green Workplace</u>	✓
	305-2	Energy indirect (Scope 2) GHG emissions	<u>Creating a Green Workplace</u>	✓
	305-3	Other indirect (Scope 3) GHG emissions	<u>Creating a Green Workplace</u>	✓
	Effluents and Waste			
GRI 103: Management Approach 2016	103-1 103-2 103-3		<u>Creating a Green Workplace</u> <u>Objectives and Targets</u>	✓

GRI 306: Effluents and Waste 2016	306-2	Waste by type and disposal method	<u>Data Summary</u>	✓
Environmental Compliance				
GRI 103: Management Approach 2016	103-1 103-2 103-3		<u>Strategy and Management</u>	✓
GRI 307: Environmental Compliance 2016	307-1	Non- compliance with environmental laws and regulations	<u>Data Summary</u>	✓
Supplier Environmental Assessment				
GRI 103: Management Approach 2016	103-1 103-2 103-3		<u>Excellence through Partnership</u>	✓
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	ArchSD only appoints contractors and suppliers from lists of relevant categories, which are maintained by the Government of HKSAR. The listed contractors and suppliers have to fulfill certain requirements, which are mainly related to the establishment of their companies, set out by the administrators of these lists. Contractors and suppliers are also required to achieve ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007 certifications in order to be included in these lists.	✓
Employment				
GRI 103: Management Approach 2016	103-1 103-2 103-3		<u>Caring for the Staff</u>	✓
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	<u>Data Summary</u>	✓

Occupational Health and Safety				
GRI 103: Management Approach 2016	103-1		<u>Excellence through Partnership Objectives and Targets</u>	✓
	103-2			
	103-3			
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	<u>Caring for the Staff</u>	✓
	403-2	Hazard identification, risk assessment, and incident investigation	<u>Caring for the Staff</u>	✓
	403-3	Occupational health services	<u>Caring for the Staff</u>	✓
	403-4	Worker participation, consultation, and communication on	<u>Caring for the Staff</u>	✓
	403-5	Worker training on occupational health and safety	<u>Caring for the Staff</u>	✓
	403-6	Promotion of worker health	<u>Caring for the Staff</u>	✓
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	<u>Caring for the Staff</u>	✓

	403-8	Workers covered by an occupational health and safety management system	<u>Data Summary</u>	✓
	Training and Education			
GRI 103: Management Approach 2016	103-1 103-2 103-3		<u>Caring for the Staff</u>	✓
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	<u>Data Summary</u>	✓
	404-3	Percentage of employees receiving regular performance and career development reviews	All staff receive regular performance appraisal.	✓
	Non-discrimination			
GRI 103: Management Approach 2016	103-1 103-2 103-3		<u>Strategy and Management</u>	✓
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	No incident of discrimination was reported in 2018.	✓

Glossary



<p>Building Environmental Assessment Method (BEAM)</p>	<p>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 is enhanced from the earlier version in providing Passive Design as an alternative method for assessment.</p>
<p>Building Energy Codes (BEC)</p>	<p>Building Energy Codes is a suite of guidance that covers five aspects of installation practices, including lighting, air conditioning, electrical and lift & escalator installations. It stipulates the minimum energy performance standards (MEPS) of these installations practices.</p>
<p>Buildability Evaluation System (BES)</p>	<p>The Buildability Evaluation System is an assessment and scoring approach to rationalise project designs and facilitate asset maintenance; promote mechanisation and prefabrication; enhance construction productivity and project cost management to achieve value for money in public building projects.</p>
<p>Building Information Modelling (BIM)</p>	<p>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.</p>
<p>Carbon Audit</p>	<p>A systematic and scientific approach to account for the greenhouse gas emissions arising from the operations of the buildings.</p>

Carbon Footprint	The carbon footprint is the measurement of all greenhouse gases an individual produces in daily lives through burning fossil fuels for electricity, heating, transportation, etc, usually in the unit of tonnes (or kg) of carbon dioxide equivalent.
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.
Community Green Station	A Community Green Station is operated by non-profit-making organisations to provide support for the community in the collection of low economic value recyclables such as electrical appliances, compact fluorescent lamps, fluorescent tubes, glass bottles and rechargeable batteries. With a view to promoting green living at the community level, the collected items will be delivered to qualified recyclers for proper treatment and turning waste into resources.
Considerate Contractors Site Award	It is an award to promote a considerate attitude and good site safety, health and environmental practices for both Public Works and non-Public Works sites.
Design for Manufacture and Assembly (DfMA)	It is a proactive design approach which focuses on ease of manufacture and efficiency of assembly, enables offsite manufacture of high-quality construction components and efficient assembly of the components on site. It is a well-established 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.
Designated Projects	Designated projects are projects or proposals that may have an adverse impact on the environment. They are covered by the Environmental Impact Assessment Ordinance in which they are categorised into two schedules: Schedule 2 and 3. (Details please refer to A Guide to the Environmental Impact Assessment Ordinance .)
Energy Audit	An Energy Audit is an examination of an energy consuming equipment/system to ensure that energy is being used efficiently. It is an effective energy management tool. By identifying and implementing the means to achieve energy efficiency and conservation, not only can energy savings be achieved, but also equipment/system services life can be extended. All these mean savings in money.
Environmental Impact Assessment (EIA)	A process to assess the potential environmental impacts and environmental benefits (in quantitative and qualitative terms) of a project in the early planning stages as well as identify any alternatives or mitigation measures.
Environmental Impact Assessment Ordinance (EIAO)	An Ordinance to assess the impact on the environment of certain projects and proposals, for protecting the environment and for incidental matters through the application of the EIA process and the environmental permit system.

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 disclosures that entities can use to measure and report their economic, social and environmental performance. GRI launched its Sustainability Reporting Standards (GRI Standards) in October 2016.
Green Building Awards (GBA)	Jointly organised by the Hong Kong Green Building Council and the Professional Green Building Council, GBA is a biennial industry award which aims to provide recognition to building-related projects with excellent performance and contributions in sustainability and the built environment. It also encourages the industry to transform the mainstream market towards wider adoption of sustainable planning, design, construction, management, operation, maintenance, renovation and decommissioning of buildings.
Green Contractor Award	Green Contractor Award is organised by ArchSD every year to appraise contractors that have excellent performance in construction sites through demonstrating their environmental and social conscious commitments with the implementation of effective green measures.
Greenhouse Gases	Greenhouse gases refer to those which are able to 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. hydrofluorocarbons).
Grey Water	Grey water is the wastewater generated from domestic activities such as hand washing and cloth laundering. It is suitable for reuse as landscape irrigation or even toilet flushing.
Hong Kong Energy Efficiency Registration Scheme for Buildings	This scheme was launched by the Electrical & Mechanical Services Department for promoting the application of Building Energy Codes since October 1998. It provides an official platform for interested parties to register their buildings which comply with BECs.
Important Tree	Important Trees are trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria: trees of 100 years old or above; trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event; trees of precious or rare species; trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or trees with trunk diameter equal or exceeding 1.0 m (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.
Innovative Construction (InnoC)	Innovative Construction Focus Group (InnoC FG) was formed in 2018 to provide support to various project teams for exploring different possibilities in the direction of innovative construction for their projects. Sharing sessions with building contractors and consultants, etc. were also held for exchange of views on innovative construction.

<p>ISO 50001 Energy Management System</p>	<p>ISO 50001 is an international standard first published by International Organization for Standardization (ISO) on 15 June 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. Similar to other well-known ISO standards such as ISO 9001 and ISO 14001, ISO 50001 is also based on the PLAN-DO-CHECK-ACT approach to assist organisations in achieving continual improvement.</p>
<p>Knowledge Management (KM) Portal</p>	<p>KM portal is to manage the knowledge life cycle from generation, harvesting, formation of practice wisdom and sharing to publishing, monitoring and renewal. The whole process is manifested in the operational regime under a 3-tier system, i.e. the ArchSD Knowledge Bank (K-Bank), branches/divisions KM hubs and knowledge community workspace.</p>
<p>Leadership in Energy and Environmental Design (LEED)</p>	<p>The Leadership in Energy and Environmental Design (LEED) Green Building Rating System, developed by the U.S. Green Building Council (USGBC), provides a suite of standards for environmentally sustainable construction.</p>
<p>Microclimate Study</p>	<p>Microclimate study acts as an environmental performance factor of the site providing environmental characteristic of the site for the purpose of creating a sustainable environment which provides the greater comfort for the development.</p>
<p>Modular Integrated Construction (MiC)</p>	<p>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.</p>
<p>Overall Thermal Transfer Value (OTTV)</p>	<p>A measure of the energy transferred through the envelope of a building and has a direct correlation with energy consumption.</p>
<p>Preliminary Environmental Review (PER)</p>	<p>It is a study that determines the current environmental conditions of the project site through inspecting the potential environmental impacts associated with the project and recommending corresponding mitigation measures.</p> <p>All Government Projects are required to carry out PER at the early stage of the projects (Feasibility Study Stage).</p>
<p>Practice Note for Authorized Persons and Registered Structural Engineers (PNAP)</p>	<p>It was formerly known as <u>Practice Note for Authorized Persons and Registered Structural Engineers (PNAP)</u> have been issued since 1974. The Building Authority issues practice notes to authorised persons, registered structural engineers and registered geotechnical engineers from time to time to promulgate how the Authority applies and enforces the provisions of the Buildings Ordinance (BO) and its subsidiary regulations as well as other administrative and advisory matters in the administration of the BO.</p>

Program on Source Separation of Commercial and Industrial Waste	It has been launched by EPD since 2007. It aims to encourage the property management sector to undertake initiative to set up and implement suitable mechanism to separate and recover waste within commercial & industrial (C&I) premises. This will facilitate the tenants / occupants to practice waste separation and recycling in workplace with ease.
Post Occupancy Evaluation (POE)	Post Occupancy Evaluation is a management tool tailor-made to evaluate the performance, assess the effectiveness of sophisticated building services systems after client occupancy, and to address clients' concerns on the functional requirements and energy consumption of their recently completed building projects.
Quality Building Awards (QBA)	QBA is jointly launched by nine professional organisations in Hong Kong at biennial intervals to present public recognition to buildings of outstanding quality that have demonstrated excellent teamwork. The Award aims to promote a collective commitment by the building industry to maintain the highest standards of professionalism and competitiveness.
Register of Old and Valuable Trees	The Leisure and Cultural Services Department, Agriculture, Fisheries and Conservation Department and Housing Department have identified some 500 Old and Valuable Trees on unleased Government land within built-up areas or tourist attractive spots in village areas to provide priority protection.
Resource Allocation Exercise (RAE)	It is a practice to schedule activities and assign available resources in an economic way, so that predetermined constraints of resource availability and/or project time are not exceeded. Each HKSAR Government Department has to earmark an amount of Recurrent/Capital spending in October that to be included in the budget of the following year.
Smart City	A Smart City is a city which capitalises on new technologies and developments to enhance its systems, operations and service delivery. Smart Cities share one thing in common, the application of information and communications to connect and integrate the systems and services of the city. The goal for Smart Cities is to improve city management and residents' quality of life through the efficient use of resources and service delivery whilst at the same time reducing environmental footprint.
Stakeholder	It refers to individuals, groups or organisations which experience directly or indirectly the actions and policies implemented by an organisation.
Sustainable Development	Sustainable development is the development approach which meets the desires of the present and preserves the environment and natural resource for the future generations.
Testing and Commissioning (T&C)	Testing and Commissioning (T&C) is generally regarded as testing of equipment and systems separately, in order to ensure that they are safe and meet the design requirements.
Universal Accessibility	The concept of Universal Design forms the backbone of Universal Accessibility. It is a design approach to a universally accessible standard in which all products, environments and communications will allow for the widest spectrum of our community regardless of diversity, age and ability.

U-value	The rate of heat flow through a material. It is measured as the amount of heat flow through 1 m ² of the material for every degree difference in temperature each second.
Valuable Tree	Refers to the 'valuable trees' in the Register of Old and Valuable Trees which are distinguished in the following categories: Trees of large size; Trees of precious or rare species; Trees of particularly old age (e.g. aged 100 or above); Trees of cultural, historical or memorable significance; and Trees of outstanding form.
Vertical Greening	Vertical greening is the application of a vegetative cover to a wall/vertical structure. It serves as the thermal insulation to building to moderate temperature and relative humidity to the site. It also helps in filtrating dust pollution, reducing noise pollution and enhancing the biological diversity of the building and its surroundings.

Feedback



Sustainability Report 2019

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.

Feedback

1. How strongly do you agree with the following statements about the report?	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Additional comments
Most relevant issues are covered.						Enter Comments
Content is balanced and reliable.						Enter Comments
Content is clear and easy to understand.						Enter Comments
Structure and layout are rational and easy to use.						Enter Comments

2. How would you rate the overall report?

Excellent

Good

Adequate

Marginal

Poor

Additional comments

Enter Comments

3. In accordance with the report, how would you rate our sustainability performance?

Excellent

Good

Adequate

Marginal

Poor

Additional comments

Enter Comments

4. What information would you like to see in future reports?

Enter Comments

//

5. Other comments:

Enter Comments

//

6. Which of the following best describes you?

Client of ArchSD

Government Department

Consultant / Contractor / Supplier / Construction Industry

Architect / Engineer / Landscape Architect / Surveyor

Non-governmental Organisation

Academic / Education Sector

Staff of ArchSD

General Public

Other

Enter Comments

If you would like to receive future reports / information from us, please provide your contacts:

Your Name:

Your Organisation:

Your Telephone: e.g. 2596 0361

Your Email address: e.g. imu@archsd.gov.hk

Submit

Reset

Thank you and we appreciate your feedback.

You may also print this page and fax to: +852 2596 0361 or contact our Integrated Management Unit by email to imu@archsd.gov.hk.

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](#).