OUR 35-YEAR SUSTAINABILITY JOURNEY

FOR THREE AND A HALF DECADES, ARCHSD HAS ALWAYS KEEP EXPLORING NEW GROUNDS AND PUSHING BOUNDARIES TO SET NEW HORIZONS FOR THE CONSTRUCTION INDUSTRY. AND IN 2021 – THE YEAR OF OUR 35TH ANNIVERSARY – WE CONTINUE TO PURSUE EXCELLENCE AND TO PROVIDE PUBLIC FACILITIES WITH HIGH QUALITY FOR THE EVOLVING NEEDS OF OUR BEAUTIFUL CITY, HONG KONG.

APPLYING CUTTING-EDGE TECHNOLOGY

ArchSD has always been at the frontier of sustainable design approaches, both passive and active design. And we promote and embrace innovative technologies and construction methods that further boost project quality and productivity.

We began to explore building information modelling (BIM) technology in 2012. A dedicated BIM Supporting Team was established in 2018 to monitor its implementation and to support research, development and training. We had developed BIM guides for adoption in construction projects. Since 2014, ArchSD has been receiving great recognition and renowned BIM awards every year. We were regarded as an advanced BIM Adopter in CIC's BIM Adoption Survey 2019.

ArchSD has also pioneered the development and application of innovative construction. We have established "Innovative Construction Focus Group" to acquire new knowledge from global practices on innovative construction and to identify appropriate projects to carry out field trial.

We adopted MiC for the "Fire Services Department Pak Shing Kok Married Quarters" project. For this – Hong Kong's first high-rise concrete MiC building – the productivity of on-site labour when constructing a typical floor improved by 100 per cent, compared with the cast-in-situ baseline. As of 2020, 60 of our projects have utilised this construction method.

2001

PUBLIC HEALTH LABORATORY CENTRE AT NAM CHEONG STREET

- A complex building adopted various sustainability designs:
  - Heat recovery system
  - Air handling system equipped with variable frequency drives
  - Central control and monitoring system
  - Separate switching control of lighting
  - Network analysers for outgoing and incoming electrical risers

Awards

- Hong Kong Institute of Architects Annual Award 2003 – Merit Award
- Quality Building Award 2004 Certificate of Merit (Non-Residential category)

2005

HONG KONG WETLAND PARK

- A prime example of harmony of human and nature
- First geothermal heat pump air-conditioning system installed in Hong Kong
- Reduced electricity consumption by 25% compared to traditional air-conditioning system

Awards

- 2005 Hong Kong Institution of Engineers Environmental Division & Hong Kong Construction Association - Environmental Paper Award – The First runner-up
- 2005 Hong Kong Institute of Architects Annual Award – Medal of the Year
- 2006 Hong Kong Green Building Award – Grand Award (New Buildings Category)

2012

TEMPORARY BUILDING FOR THE ENERGIZING KOWLOON EAST OFFICE

- The first temporary office building rated Final Platinum of BEAM Plus V1.1 for New Buildings in HK
- Environmental Performance:
  - 33% reduction in annual energy consumption
  - 57% reduction in fresh water consumption
  - 22% reduction in flushing water demand
  - 69% construction waste reused
  - 50% building materials are prefabricated

Awards

- Civil Service Outstanding Service Award Scheme 2013 Partnership Award – Meritorious Award

2013
KAI TAK CRUISE TERMINAL BUILDING

- One of the largest public roof gardens in Hong Kong
- Rainwater and air-conditioning condensate water recycling system was adopted

Awards

- HKILA Design Awards 2014 – Merit
- Hong Kong Institute of Engineers – Joint Structural Division Structural Excellence Award 2014 Grand Award
- Green Building Award 2012 – Merit Award (New Buildings Category – Building under Construction)

2015
TRADE AND INDUSTRY TOWER (TI TOWER) IN KAI TAK DEVELOPMENT AREA

- A prominent green and energy conserving building project example deploying passive and active design approaches.
- Special vertical green belt on the building façades
- Renewable energy installations were extensively adopted, including building integrated PV system, solar water heating system, solar chimney, solar tracking optical fiber light pipe, anidolic light pipes and daylight sun-tubes
- BEAM Plus V1.1 for New Buildings Final Platinum Rating Project

Awards

- Green Building Award 2014 – Grand Award (Buildings Under Construction in New Buildings Category)

2015
THE VICTORIA PEAK FIRE STATION

- Heritage Information Modelling (HIM) using advanced BIM, mobile communication, AR technologies was developed
- Enhanced interactions and communications among people by providing visual, interactive and readily accessible information

Awards

- AutoDesk BIM Awards 2015 – Winner
- 2015 – Best BIM Application in Addition & Alteration Project

2017
HONG KONG CHILDREN'S HOSPITAL

- First hospital in Hong Kong specialised to provide family and child-centric tertiary care to children
- Sustainable design features, including:
  - Automatic demand control of chilled water circulation system
  - Reclaim of heat energy and renewable energy source application
  - 40% of greenery coverage to reduce the heat island effect and improve air quality
- BEAM Plus V1.2 for New Buildings Final Platinum Rating Project

Awards

- Asia Pacific Federation of Project Management Awards 2018 – Winner
- Australian Institute of Building 2018 National Professional Excellence Awards – People's Choice Award
- European Healthcare Design Award 2018 – Judges Long List
- RICS Construction Project Management Team of the Year Awards 2019 – Certificate of Excellence

2019
COGNITIO COLLEGE (KOWLOON)

- Passive design approach was applied, including:
  - The podium deck, surrounded by four block clusters linked by semi-open corridors, created spaces in different orientations which allow natural breeze to pass through the building.
  - Exterior spaces were designed in diverse lush ambience to minimise heat island effect
  - Classrooms were designed with 3-side natural lighting and incorporating three window typologies can achieve better sunlight orientation response
  - Rainwater harvesting system was adopted to conserve water resources

Awards

- Green Building Award 2019 – Grand Award (New Buildings Category: Projects Under Construction and/or Design – Institutional Building)

2021
FIRE SERVICES DEPARTMENT PAK SHING KOK MARRIED QUARTERS

- Hong Kong's first high-rise concrete MiC building project
- Reduced over 50% construction waste and around 70% on-site water and electricity consumption
- Enhanced productivity, site safety, environmental performance and cost-effectiveness

Awards

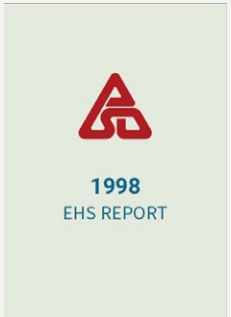
- Organisations Category – Project Owner (Public Sector) – Merit Award

COMMUNICATING OUR COMMITMENT & ACHIEVEMENTS

To share our environmentally sustainable efforts and achievements, we began publishing Environmental, Health and Safety (EHS) Reports in 1998. From 2004, the coverage expanded, and they were renamed Sustainability Reports.

As our sustainability journey progresses, our disclosure practices evolve. Where once we followed departmental guidelines, now we adhere to international protocols including the GRI Standards and Sustainability Accounting Standards Board (SASB) Standards.

Our annual sustainability reports let our stakeholders and the public whom we serve understand our performance. Their expectations – communicated to us via interviews and consultations – have helped us devise more effective strategies and goals. In pursuit of a fully sustainable operation, our performance is reviewed on a regular basis to ensure we meet our annual objectives and targets.



1998

First EHS Report

2004

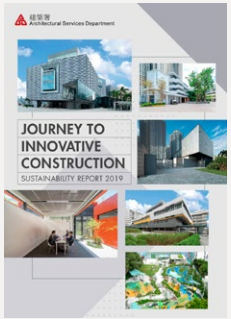
First Sustainability Report published

2010

Verified to GRI G3 guidelines, fulfilling the highest requirement of “A+” application level

2013

First government department in HK to publish sustainability report in accordance with the GRI G4 Guidelines



2019

Mapping with United Nations’ Sustainable Development Goals (UNSDGs)

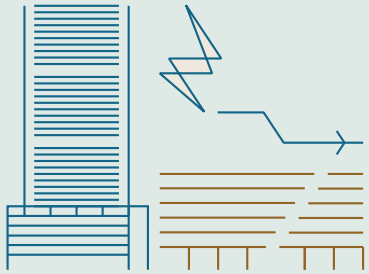
2021

The first government department in HK to take reference to SASB Standards

CELEBRATING OUR ACHIEVEMENTS

We have achieved outstanding results in terms of environmental efficiency, project quality and social responsibility.

ENVIRONMENTAL EFFICIENCY



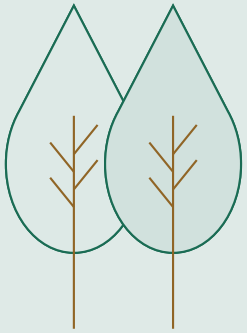
2005-2020

↓55%

2005-2020

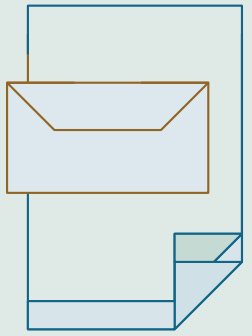
↓33%

Our Queensway Government Offices and APB Centre have reduced electricity consumption by 55% and CO_2 emissions by 33% compared with 2005.



6 MILLION TREES

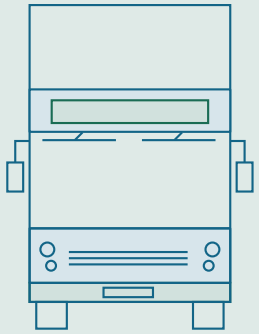
Energy-efficient installation in our projects saved an estimated 208 GWh from 2005 to 2020. This reduced CO_2 emissions by 145 kilotonnes; equivalent to planting 6 million trees per year.



↓ 19%

↓ 64%

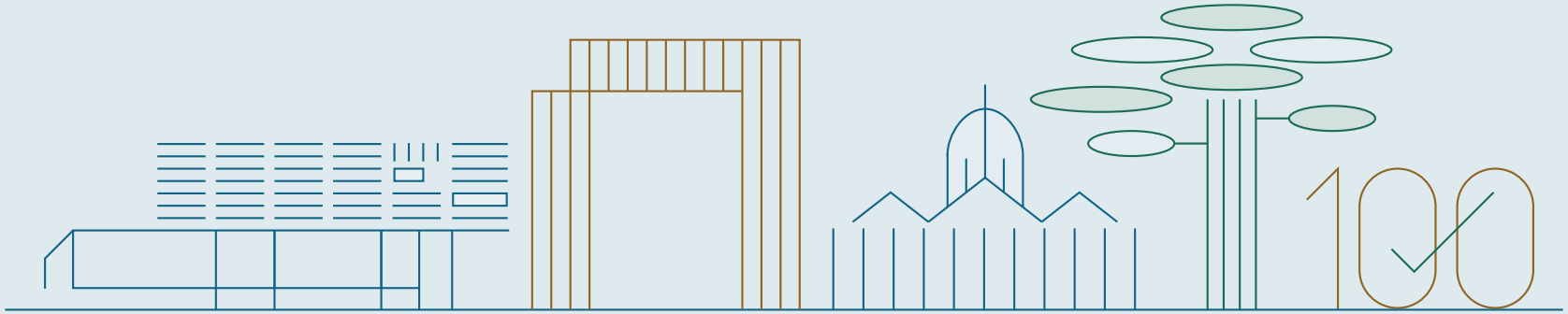
At our offices, we have achieved a 19% reduction in A4 paper consumption and a 64 per cent reduction in envelopes comparing with 2005 level.



8 DOUBLE DECK BUS

A total of 214 tonnes of wastepaper has been recycled since 2005, equivalent to the weight of 8 double-decker buses.

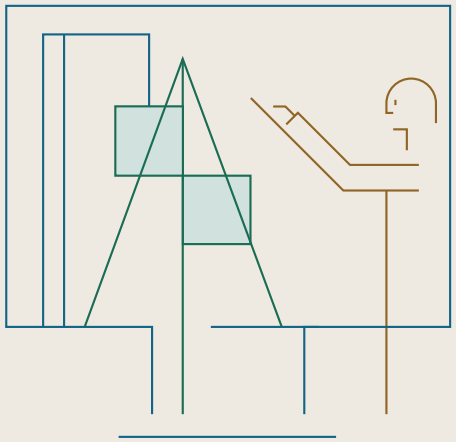
PROJECT QUALITY



ArchSD has long been dedicated to providing high quality service to our city. We set targets to enhance the quality of our services and our project delivery. Through regular review, we achieved most of our targets in environmental, project quality and social issues.

In our client satisfaction surveys, 100% of the cited projects have achieved an overall performance rating of ‘Satisfied’ or above.

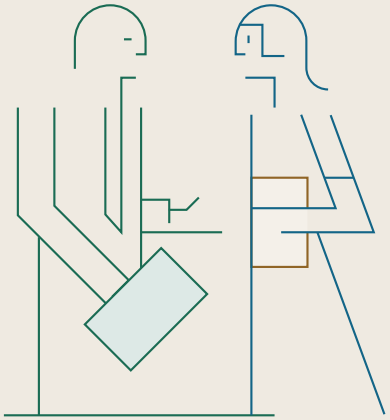
SOCIAL RESPONSIBILITY



2005–2020

↑78%

Our staff training courses – including seminars, workshops, courses and visits – have risen from 237 in 2005 to 422 in 2020.



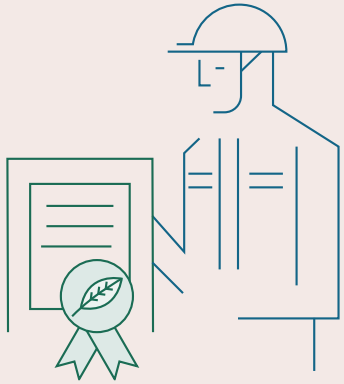
2005–2020

↑580%

Meanwhile, the number of trainees has risen from 1,255 in 2005 to 8,551 in 2020.

AWARDS & RECOGNITIONS

- Over the past 35 years, ArchSD has earned more than 260 awards. These include 35 from the Hong Kong Institute of Architects, 23 at the Green Building Awards and 23 at the Quality Building Awards.
- Other sustainability-related wins include Hong Kong Green Awards, an Award for recognising companies or organisations with exceptional performance on green management and/or sustainable procurement and CIC Construction Innovation Award, plus citations from the Inclusive Environment Recognition Scheme and Hong Kong Awards for Environmental Excellence.



We also encourage contractors' sustainability development and push for higher environmental and health standards in our industry. In 2001, we initiated the Green Contractor Award to encourage the former. These awards continue today.

ArchSD has been striving for low carbon construction over the past 35 years through deploying various sustainable and innovative ideas, covering from facility development to upkeep. In supporting the Hong Kong Government's commitment to achieving carbon neutrality before 2050, we will make every effort to bring our practices to a higher level along our sustainable journey to shape the future of Net Zero.