

Building Surveyors Conference 2017 Building Health & Safety: The Emerging Risks

14th October 2017 (Saturday) 0900 – 1700 Grand Ballroom I-III,1/F, Crowne Plaza Hong Kong Kowloon East





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TABLE OF CONTENTS>>

Sr Vincent HO, JP

Acknowledgement to Sponsors

About Organising Committee

Sr Bay WONG

Sponsors Advertisements

13

14

15

23

24

02	Programme			
03	About The Hong Kong Institute of Surveyors and Building Surveying Division			
04	Message from the Guest of Honour			
05	Message from the HKIS President			
06	Message from the Building Surveying Division Chairman			
	Speakers and Paper Abstracts			
07	-17	Dr CHEUNG Tin Cheung, JP		
80	-	Sr Samson WONG		
09	Jan.	Ar Anna KWONG Sum-yee, MH		
10	140	Ms Ada FUNG Yin Suen, BBS, JP		
11	à-	Sr David CHAN		
12	200	Ir I AM Tin Sing Fnoch ID		

PROGRAMME

Time	Programme/Topic	Speaker	
08:30 - 09:00	Registration		
09:00 – 09:10	Welcome Speech	Sr Thomas HO President The Hong Kong Institute of Surveyors	
09:10 – 09:40	Opening Keynote Speech	Ir HON Chi Keung, JP Permanent Secretary for Development (Works) Development Bureau, HKSAR Government	
09:40 - 09:45	Group Photo and Souvenir Presentation to Guest of Honour		
Morning Session	Moderator: Sr TSE Chi-kin, Kenny Vice-Chairman, The Hong Kong Institute	e of Surveyors – Building Surveying Division	
09:45 – 10:10	Initiatives for Building Health and Safety	Dr CHEUNG Tin Cheung, JP Director of Buildings Buildings Department, HKSAR Government	
10:10 – 10:35	Our Insight and Foresight – Shaping Future Buildings' Health and Safety	Sr Samson WONG Managing Director, Samson Wong & Associates Property Consultancy Limited Chairman, The Association of Hong Kong Professionals Past President, The Hong Kong Institute of Surveyors	
10:35 - 11:05	Coffee Break		
11:05 – 11:30	I Add Nothing & I Take Away Nothing	Ar Anna KWONG Sum-yee, MH Managing Director Anna Kwong Architects & Associates	
11:30 – 11:55	Pursuing a Safe and Healthy Working Environment in Public Housing Developments in Hong Kong	Ms Ada FUNG Yin Suen, BBS, JP Deputy Director of Housing (Development & Construction) Hong Kong Housing Authority	
11:55 – 12:15	Q&A Session & Souvenir Presentation to Speakers		
12:15 – 12:20	Souvenir Presentation to Sponsors		
12:25 – 14:00	Lunch Break		
Afternoon Session	Moderator: Sr DY Wai-fung, Peter Vice-Chairman, The Hong Kong Institute of Surveyors – Building Surveying Division		
14:00 – 14:25	Devils on the Roads to Safety	Sr David CHAN Past Chairman of BS Division, Past Chairman of Board of Membership, The Hong Kong Institute of Surveyors Founder and Director, Wellgo Archdecor Consultancy Limited	
14:25 – 14:50	Water Management for Buildings in Hong Kong	Ir LAM Tin Sing, Enoch, JP Director of Water Supplies Water Supplies Department, HKSAR Government	
14:50 – 15:15	Emerging Risk: Inherent Risks	Sr Vincent HO, JP Past President The Hong Kong Institute of Surveyors	
15:15 – 15:45	Coffee Break		
15:45 – 16:10	Emerging Concerns on Occupant's Health and Wellbeing	Sr Bay WONG Chairman Hong Kong Green Building Council	
16:10 – 16:35	Q&A Session & Souvenir Presentation to Speakers		
16:35 – 16:45	Closing Remarks	Sr Daniel CHANG Chairman, Building Surveying Division The Hong Kong Institute of Surveyors	
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ABOUT THE HONG KONG INSTITUTE OF SURVEYORS AND BUILDING SURVEYING DIVISION



About The Hong Kong Institute of Surveyors

Established in 1984, The Hong Kong Institute of Surveyors is the only surveying professional body incorporated by ordinance in Hong Kong. As of 28 September 2017, the number of members reached 9,726, of which 6,399 were corporate members. The Institute's work includes setting standards for professional services and performance, establishing codes of ethics, determining requirements for admission as professional surveyors, access and award the professional qualification, and advance members' professional knowledge, technical and services standards through continuing professional development.

The Institute has an important consultative role in government policy making and on issues affecting the profession. We have advised the Government on issues such as unauthorised building works, building safety campaign, problems of property management, town planning and development strategies, construction quality and housing problems. We are working on amendments to standard forms of building contract and have issued guidance notes on floor area measurement methods.

About Building Surveying Division

Established in 1985, Building Surveying Division (BSD) is one of six divisions of The Hong Kong Institute of Surveyors (HKIS). In the past 32 years, the division organised many conferences and visits, and issued many publications to promote the service and image of building surveying profession.

Professional building surveyors are qualified by professional assessments with prescribed practical training. We uphold the stringent professional standards of the Hong Kong Institute of Surveyors, which requires a high level of service and efficiency as well as compliance with a strict code of professional conduct.

MESSAGE FROM THE GUEST OF HONOUR



Ir HON Chi Keung, JP
Permanent Secretary for Development (Works)
Development Bureau, HKSAR Government

政府總部 發展局 工務料 香港都馬泰美道 2 型 政府總部四票



Works Branch Development Bureau Government Secretariat

West Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong

Message

I offer my warmest congratulations to the Hong Kong Institute of Surveyors (HKIS) Building Surveying Division (BSD) for organising the Building Surveyors Conference 2017 "Building Health and Safety: The Emerging Risks".

In response to the growing economy and needs of our society, buildings and infrastructures are being built at a rapid pace. However, these facilities will provide the convenience and comfort and generate value only when they are properly designed, operated and maintained. Aging of the building stocks and lack of proper co-ordination in mitigation will generate a seedbed for health and safety hazards. It is therefore very timely for HKIS to host this Conference and underscore the emerging risks.

I sincerely hope that the Conference will bring the industry stakeholders together to share their experience and excel their expertise to meet the challenges ahead. May I take the opportunity to wish the HKIS BSD every success in pursuing this very meaningful event.

> (Ir HON Chi-keung) Permanent Secretary for Development (Works) Development Bureau



MESSAGE FROM THE HONG KONG INSTITUTE OF SURVEYORS PRESIDENT





Sr Thomas HOPresident
The Hong Kong Institute of Surveyors

On behalf of the Hong Kong Institute of Surveyors (HKIS), I would like to extend my warmest welcome to all government officials, industry professionals and practitioners; thank you for joining us at the Building Surveyors Conference 2017.

I am pleased to have experts from various industries and backgrounds gathered here today to share their experiences and insights on the theme of "Building Health and Safety: The Emerging Risks". I would especially like to thank Ir HON Chi Keung, JP, Permanent Secretary for Development (Works), The Government of the HKSAR for his support as our Guest of Honour.

Hong Kong continues to develop as an international city and a multifunctional centre for business and finance. New infrastructure developments, such as the Hong Kong–Zhuhai–Macau Bridge, are a key to strengthening the economic ties between Hong Kong, Shenzhen and cities along the Pearl River Delta.

In a high-density metropolis, maintenance and rehabilitation of public infrastructure and buildings is critical to people's quality of living. Building surveyors are responsible for monitoring new buildings development, advising on building maintenance management, and executing safety measures and inspections. One of our annual signature events – the Building Surveyors Conference 2017 – will examine the existing built environment, uncover potential threats, and deliver continuing professional development to improve practitioners' knowledge and skills.

It is our honour to have such distinguished speakers today and we are all looking forward to discovering their latest recommendations for developing healthy working environments. I am sure all of you will find the conference enlightening and inspiring, and a great benefit to help you tackle your own challenges in your respective professions.

Finally, I would like to take this opportunity to thank all our guests, speakers, moderators, and sponsors for their generosity and participation, and share our sincere appreciation for the conference organising committee, led by Sr Andrew LAM.

Thank you and I wish you a pleasant day!

MESSAGE FROM THE BUILDING SURVEYING DIVISION CHAIRMAN



Sr Daniel CHANGChairman, Building Surveying Division
The Hong Kong Institute of Surveyors

It is a great honour to welcome you all to the Building Surveyors Conference 2017 – one of the major annual events organised by the HKIS Building Surveying Division (BSD).

Throughout the years, we have strived to deliver Building Surveyors Conferences that provide positive reinforcement to the built environment through inspiration and the cultivation of new ideas. While there have been many successful urban development or projects in Hong Kong, there unfortunately has not been enough effort to revitalise, renovate or properly maintain the majority of the city's aging buildings. The BSD has decided to focus on the emerging threats on Hong Kong's built environment, which sets the stage for this year's theme, "Building Health and Safety: The Emerging Risks".

The Conference is more than just an occasion to network with old colleagues and friends; it is a great opportunity to reinforce our skills and knowledge. Speakers and specialists with a diverse range of backgrounds will highlight the importance of maintaining aged buildings and propose feasible solutions that are vital for the built environment's well-being.

I would like to thank our speakers, moderators, guests and the Organising Committee who generously contributed their time and efforts to help this Conference come to fruition. I must also tender my heartfelt appreciation to the sponsors for their continuous support.

I hope today's event will serve as a valuable opportunity to learn from the challenges of our built environment and gain new insights for building a healthy and safe future!





Dr CHEUNG Tin Cheung, JPDirector of Buildings
Buildings Department, HKSAR Government

About the Speaker

Dr Cheung Tin-cheung is currently the Director of the Buildings Department in the Government of the Hong Kong Special Administrative Region. He joined the Hong Kong Government in September 1982, and has since served in the former Building Development Department and the former Buildings and Lands Department.

Dr Cheung holds a Bachelor of Science Degree in Estate Management from the University of Reading, UK, a Master of Science Degree in Construction Management from the University of Bath, UK, and a Doctor of Philosophy Degree in Fire Engineering from the City University of Hong Kong. He has professional qualifications in building surveying, property management and facility management.

Dr Cheung currently sits on the Hong Kong Housing Society and the Construction Industry Council as member.

Abstract

Initiatives for Building Health and Safety

The Buildings Department (BD) is committed to make the built environment safe and healthy for our community in Hong Kong. For this, BD sets and enforces safety, health and environmental standards for new and existing private buildings, covering the various stages in the life cycle of buildings, i.e. design, construction, operation and maintenance, rehabilitation and revitalisation as well as demolition.

Over the years, BD has been in close collaboration with the professional institutions, relevant government departments and non-governmental organisations, and taken a number of measures to make private buildings in Hong Kong healthier and safer, including the promotion of green and amenity features for enhancing the living environment, and the implementation of the Mandatory Building Inspection Scheme and the Mandatory Window Inspection Scheme to arrest building neglect problem.

This paper presents the BD's holistic and forward-looking efforts in making the built environment safe and healthy for our community.



Sr Samson WONG

Managing Director, Samson Wong & Associates Property Consultancy Limited Chairman, The Association of Hong Kong Professionals Past President, The Hong Kong Institute of Surveyors

About the Speaker

Sr Wong San, Samson is a professional building surveyor and holds a Master Degree of Science in International Real Estate. He is the founder of and the Managing Director of Samson Wong & Associates Property Consultancy Ltd. Sr Wong has over 30 years' experience in property consultancy management, including real estate development, building survey and design, project planning & management and facility management, conversant with the Mainland and international joint venture development projects. He has worked for Buildings Ordinance Office, Mass Transit Railway Corporation, Standard Chartered Bank before establishing his own practice in 1992 and for an international real estate consultancy firm as their CEO from 2006 to 2007. Sr Wong is an Authorised Person and is a fellow member of The Hong Kong Institute of Surveyors, the Hong Kong Institute of Facility Management and The Royal Institution of Chartered Surveyors.

Samson has always been a strong advocate and active supporter contributing insight and foresight for improvement of building health and safety in Hong Kong. He was the Chairman of Building Surveying Division of the HKIS & RICS (Hong Kong Branch) in 1992. He was elected as the President of the Hong Kong Institute of Surveyors in 1998 and was awarded the Distinguished Building Surveyor in 2000. Currently, he is the Chairman of the Association of Hong Kong Professionals and a member of Housing Authority, Commercial Properties Committee. He has led several important research projects in Hong Kong relating to BS knowledgebase, namely 'Building Maintenance Guidebook'; 'Technical Guidelines for Water Seepage Investigation'; 'Water Seepage and Leakage problems in Aged Residential Buildings', 'Design Manual on Barrier Free Access and Facilities for Persons with a Disability and for the Elderly' 2008, BFA compliance in Adaptive Reuse of historic buildings and 'Building Condition Assessment System, Building Pathology & Post Occupancy Evaluation for Buildings.'

Abstract

Our Insight and Foresight – Shaping Future Buildings' Health and Safety

Insight opens the way for an accurate and deep understanding of people, places, and predicaments. It increases observation skills, awareness and improves knowledge of our environment and relationships. Foresight can significantly improve our lives, enabling us to forecast future dangers, opportunities, pitfalls, and challenges. However, the foresight process is not simply about making predictions or forecasts, but is a systematic exploration and investigation of evidence and ideas about future issues and trends.

The world and our living environment are changing rapidly around us and new technologies continue to appear; these trends, along with others, can impact on buildings' health and safety. Hazards are present in all buildings, bringing the risk of accidents and sickness. Dealing with different types of buildings for over several centuries means building surveyors have a unique insight into such issues and should play an important role to proactively anticipate and mitigate against potential problems on buildings and their users.

In addition, our foresight can help us to ascertain these trends, prepare for future changes in built-environment, make better decisions in new developments. Profound changes invariably start as blips on the periphery, and building surveyors in complex, rapidly changing environments require well-developed peripheral vision and an alert sense of anticipation. It is also a matter of leadership and commitment for us to identify knowledge and skills-gaps, utilise new technologies and ensure that critical knowledge is effectively shared across the profession.





Ar Anna KWONG Sum-yee, MH Managing Director Anna Kwong Architects & Associates

About the Speaker

Ar Anna S Y KWONG 鄺心怡建築師 is a practising architect who possesses over thirty five years of professional experience in the industry.

Ms KWONG has worked both in the private and public sector before taking up the post as the Administrator of the Diocesan Building & Development Commission of the Catholic Diocese of Hong Kong in 1997. Her commitment to carry out the renovation to the Catholic Cathedral of the Immaculate Conception, Caine Road and the St Joseph's Chapel, Yim Tin Tsai Island (鹽田梓) Sai Kung, both aged over a century; were recognised by the UNESCO Asia-Pacific Office with a "Cultural Heritage Conservation Award" in 2003 & 2005 respectively. In 2015, her Saltpan Revitalization project at the Yim Tin Tsai Island was recognized by the UNESCO Asia-Pacific Office with an Award of Distinction; and the Island is ranked the only heritage site in HK which has achieved two UNESCO Asia-Pacific Cultural Heritage Conservation Awards.

During her tenure with the Catholic Diocese, Ms KWONG has developed her interest in the design of liturgical space and accumulated her knowledge in the fabrication of stained glass.

Ms KWONG then started her own practice and focused her works on community, health, hospitality and institutional buildings; columbaria, historic and religious buildings; industrial, office and residential buildings; as well as projects involving rural and urban planning.

Ms KWONG has a record of over forty years of community volunteerism at the local, regional and international level; which has been exemplified by her service involvement at the Zonta International and the HK Federation of Women. She has served on the Town Planning Board, HK Green Building Council, Council of Lingnan University and The HK Academy for Performing Arts.

She is an Adjunct Professor (part-time) of the Department of Civil Engineering, HK University and a Trustee of the University Azalea Trust Fund.

Ms KWONG was elected and served as the President of The Hong Kong Institute of Architects in the 2009 – 2010 Biennium.

Abstract

I Add Nothing & I Take Away Nothing

The Revitalization of Yim Tin Tsai since 2003

Yim Tin Tsai Island(鹽田梓) was one of the first few catholic villages in Hong Kong, after the villagers were converted to faith in the late 19th century. With the passing away of time, villagers gradually moved out and the Island remained deserted at the turn of the 21st Century. However, villagers return every year to the Island for the celebration of the St. Joseph's Feast Day in May; as well as to renew the Chan's clan kinship.

In Oct 2003, the Austrian Priest (Fr. Josef Freinademetz) who preached to the villagers in around 1890 was canonized by the Vatican. The Catholic Diocese of Hong Kong assigned a donation of HK\$2 million for the conservation of the St. Joseph's Chapel. This conservation project was submitted to the UNESCO Asia-Pacific Office and was recognized by an "Award of Merit" in 2005.

The conservation of the St Joseph Chapel is a catalyst for the next-in-line project

"Revitalization of the Saltpan project" in 2013; the latter was recognized by UNESCO Asia-Pacific Office with an "Award of Distinction" in 2015.

The Revitalization of the Saltpans celebrates an overlooked form of industrial heritage and contributes to expanding the envelope of conservation practice.

The saltpans now serve as an educational hub for students and as eco-tourism destination for an ever-growing number of visitors to the Island.

Yim Tin Tsai Island is ranked the only heritage site in Hong Kong which has achieved two UNESCO Asia-Pacific "Cultural Heritage Conservation Awards".

* Extract from UNESCO Asia-Pacific Office 2015 Citation







Ms Ada FUNG Yin Suen, BBS, JP
Deputy Director of Housing
(Development & Construction)
Hong Kong Housing Authority

About the Speaker

Ms. Ada FUNG is an Architect by profession. She is an active member in the Architectural field as well as in the construction industry in Hong Kong.

In her career as Deputy Director of Housing, she supervises the Development & Construction Division of the Housing Department, overseeing all facets of public housing development work in Hong Kong covering project management, planning, design and contract management, as well as establishing operational policies on procurement, design, construction, quality, performance assessment, dispute resolution, research and development, safety and the environment. She also promotes partnering, value management, risk management, ethical integrity, site safety, corporate social responsibility, sustainable development, community engagement, green building and Building Information Modeling and product certification in the industry.

She is the Chairperson of the Hong Kong Construction Industry Council's (CIC) Committee on Construction Safety, CIC's Committee on Building Information Modeling, Task Force on Site Safety of Working in Lift Shaft, Task Force on Safety of Lorry-mounted Cranes and Task Force on Safety of Bamboo Scaffolds. She is one of the Directors of the Hong Kong Green Building Council. She is also the Past President of the Hong Kong Institute of Architects (2013-2014), Past Chairperson of the APEC Architect Monitoring Committee of Hong Kong (2012/13-2015/16), and Past Chairperson of the Architects Registration Board (2010/11-2011/12).

Abstract

Pursuing a Safe and Healthy Working Environment in Public Housing Developments in Hong Kong

Pursuing a Safe and Healthy Working Environment in Public Housing Developments in Hong Kong It is our lifetime commitment to pursue a safe and healthy living and working environment in public housing developments in Hong Kong.

Caring for the Safety and Health of Workers

As a proactive and caring public sector developer, the Housing Authority (HA) has been striving to promote safety and health through our system drivers along the supply chain. Bearing the core values of being caring, customer-focus, creative and committed, HA endeavours to protect the lives and health of workers at their workplace. We believe occupational accidents and diseases are preventable.

Safety is Everybody's Business and Prevention is Better than Cure

Our designers include personnel in procurement, works professionals in permanent works and facility management, and builders in design of temporary works in construction and maintenance contract. Safety is everybody's business and designers should adopt risk management comprising risk assessment, elimination and reduction, controlling and finally managing the residual risk. Designers should foster safe practice and address foreseeable risks to occupational safety and health throughout the project life cycle.

Safe Practice throughout Project Life Cycle

Witnessing the success of the Planning and Design for Safety Workshop held on 31 March 2010, HA signed the charter with stakeholders to emphasize "ZERO Incident" as a performance goal to provoke vigilance on all fronts. We support "Vision Zero" that there are no occupational accidents and work-related diseases. We emphasize safe practices from the stage of planning, design, construction, occupation, maintenance to demolition.

Safety DNA in the Mindset of Industry Stakeholders

The best practices presented at the Workshop in 2010 were compiled in the Pictorial Guide for sharing with industry stakeholders. It marked a milestone in our efforts in promoting the concept of our 'Safety DNA' among industry practitioners. An updated version is published in 2017 covering the latest examples of design for safety in HA projects.

Commitment to Planning and Design for Safety

HA pledge our commitment to planning and design for safety. Construction and maintenance works involve hazards and concerted effort from industry stakeholders to manage safety will enhance safety at the workplace. Occupational accidents and diseases are preventable. We strive to nurture a caring and safety culture. Enhanced awareness and practice on planning and design for safety of industry stakeholders can eliminate hazards from the source enabling us to go extra mile towards the goal of ZERO Incident.







Sr David CHANPast Chairman of BS Division, Past Chairman of Board of Membership,
The Hong Kong Institute of Surveyors
Founder and Director, Wellgo Archdecor Consultancy Limited

About the Speaker

Sr David Chan, a down to earth building surveyor with some 38 years of local post-qualification experience. Over the past 2 decades, his main consultancy services are mostly related to disputes on water leakages, defective works, compliance with the Buildings Ordinance and other adversarial matters thereof existing buildings.

Sr Chan has obtained a Higher Diploma in Surveying (Building Surveying) from Hong Kong Polytechnic in 1975; and a BSc in Building Surveying from Leicester Polytechnic (UK) in 1977. Sr Chan's working experiences are as follows:

- · The Buildings Ordinance Office (3 years and 8 months);
- Swire Properties Limited (8.5 years);
- Jones Lang Wootton (1 year);
- Knight Frank Kan and Baillieu (1.5 years); and
- Wellgo Archdecor Consultancy Limited (own practice 1992 to present).

Sr Chan's first affair with the Institute was in 1985, in the "Design and Fit Out Management" of the HKIS and RICS (HK Branch) Joint Headquarters in the previous Swire House. Since then, Sr Chan has involved in numerous HKIS activities, brief abstracts as follows:

- Annual BS Conference organising committee member (1987 to 94);
- HKIS BSD and RICS (HK Branch) Joint BS Council committee member (1988 to 94);
- BSD TPC Assessor and Modulator (1989 to 2003);
- BSD Chairman (1990 to 91);
- Chairman of Membership Sub-Committee (1995 to 97), Membership Committee (1997 to 98), and then the Board of Membership (1998 to 99);
- BS Divisional Spokesman (1999 to 2001, and 2009 to 2016);
- BSD Membership Committee , Interview Panel Chairman (2004 to present);
- Chairman of BSD Committee on Expert Witness List for Water Leakage Disputes (2012 to present);
- HKIS Disciplinary Panel, BSD member (2013 to present).

Sr Chan has also served as members of numerous government appointed committees and panels, such as Hotel and Guesthouse Accommodation Ordinance appeal board; Clubs (Safety of Premises) Ordinance appeal board; Bedspace Apartments Ordinance appeal board; Buildings Ordinance AP & RSE Disciplinary board; Buildings Appeal Tribunal member; Land Survey Ordinance appeal board; and at present Buildings Ordinance Inspectors Registration Committee.

Since acting as the BS Divisional Spokesman in 1990, Sr Chan has been exposed to numerous building accidences which are related to safety and/or health issues of existing buildings, just to name a few, as follows:

- 1990 collapse of an unauthorized canopy in Wearbest Building, Tokwawan;
- 1993 collapse of a balcony in Bowing Street, Jordan;
- 1998 collapse of a village type house balcony in Swallow Garden, Fanling:
- 2003 SARS due to defective drainage stacks in Block E, Amoy Garden;
- 2008 a no. 4 alarm fire in a karaoke bar/nightclub in Cornwall Court, Mong Kok;
- 2010 collapse of a 5 storeys building at No. 45J Ma Tau Wai Road;
- 2011 collapse of a canopy in Winfield Industrial Building, Tuen Mun;
- 2016 May collapse of the "Green Roof" in City University, Kowloon Tong;
- 2016 May collapse of the 150 years old historic former Central Police Station, Hollywood Road;
- 2016 June an 80 hours fire in mini-storage premises in Amoycan Industrial Centre, Ngau Tau Kok.

Sr Chan has been awarded with the following recognitions:-

- 2000 Distinguished Building Surveyor (HKIS BSD); and
- 2006 Distinguished Alumni (HK Polytechnic University, Department of Building and Real Estate).

Abstract

Devils on the Road to Safety

It is trite knowledge that the primary objective of the Buildings Ordinance ["B.O.] is to ensure the SAFETY OF BUILDINGS. That said, the preamble statement of "to provide for the planning, design and construction of buildings and associated works; to make provision for the rendering safe of dangerous buildings and land; and to make provision for matters connected therewith" only first appeared in the 1981 edition. Subsequently in 2012, such was expanded to include the statement of "to make provision for regular inspections of buildings and the associated repairs to prevent the buildings from becoming unsafe". Based on the above, one may infer from the objective statement and the contents of the B.O. & its subsidiary regulations that the issues of health and hygiene are somewhat out of context of the said Ordinance. Despite these apparent limitations and figuratively speaking, we may say that a healthy building is a safe building; and the design and construction of which should not induce any mayor health hazard. As for the issue of environmental hygiene, such could most probably be ensured by proper daily management of buildings under professional input by Building Surveyors and also members of other Divisions of the Institute.

Since elected as the BS Divisional Chairman and acted as a BSD spokesman of the Institute in 1990, my first "public experience" in major building failure is the collapse of an un-authorized RC canopy in Wearbest Building in Ma Tau Wai Road (馬頭圍道唯一大廈) on 27 October 1990. Another major building failure with considerable significance is the collapse of a (flat slab type) balcony thereof a village type house in Fanling Swallow Garden (粉嶺海燕花園) on 24 December 1998. Fast track the above to 2010s, a few of the major building failures and accidents which have occurred and which have prompted subsequent changes in legislative/regulative controls are:

- 2010.01.29 total collapse of a 45 years old 5-storey (with mezzanine floor) building at No. 45J Ma Tau Wai Road (馬頭圍道 45J).
- 2011.06.09 collapse of an approved 1.5m span cantilever flat slab RC canopy of Winfield Industrial Building (永發工業大廈) in Kin Kwan Street and Kin Wang Street, Tuen Mun.
- 2015.04.26 total devastation of Wing On House in Ngan Fung Street (環鳳街永安樓) by a grade 3 alarm fire due to LPG explosion from the G/F garage repair shop.
- 2016.05.20 total collapse of a "green roof" of a multi-purpose hall in the City University of Hong Kong (城市大學陳大河綜合會堂), Tat Chee Road.
- 2016.06.05 part collapse of the 150 years old Previous Married Police Inspectors' Quarters in Hollywood Road (荷李活道前已婚警察宿舍).
- 2016.06.21 a grade 4 alarm fire (which lasted for 108 hours) in SC Storage in Amoy Industrial Centre (淘大工業村時昌迷你倉), Ng Tau Kok.



The Building Authority, the Fire Services Department, the Electrical and Mechanical Services Department and the Labour Department, etc. have made ad hoc retrospective actions to deal with the aftermaths with attempts to enhance the safety aspects of existing buildings. That said, whether or not they are efficient, effective, practical, or otherwise will be subject to your elite personal judgments. In any event, they can hardly cover each and every aspect where safety risks in buildings still exist.

The main coverage of this presentation will focus on some of the seeming minor and not eye-catching aspects which are located along the frontage of buildings. In terms of location, they are right next to pavements where the public will travel along, and may be totally unaware of the potential risks which exist. Typical examples are erection of hoarding and scaffolding structures for facilitation of fit out works; access ramps for wheel chair bound persons; extension of shop front areas beyond site boundary lines; and signboards and projecting features at high level of ground floor shops. Attempts will also be made to address on the issue of: as a building professional, what, if any, we can contribute towards the minimization of these aspects with unknown severity of safety risks.



Ir LAM Tin Sing, Enoch, JP
Director of Water Supplies
Water Supplies Department, HKSAR Government

About the Speaker

Ir LAM Tin Sing, Enoch is a Member of the Hong Kong Institution of Engineers, an Honorary Fellow of the Chartered Institution of Water and Environmental Management, a Fellow Member of the Chartered Institute of Arbitrators and a non-practising barrister.

Ir LAM joined the Hong Kong Government in 1983 as a Civil Engineer. Since then, he has been working in various works departments and policy bureaux such as the Highways Department, the Civil Engineering and Development Department, the Housing Bureau and the Development Bureau and participating in major infrastructure projects including the Kai Tak and the West Kowloon Cultural District Development projects. In 2013, Ir LAM was appointed as the Director of Water Supplies responsible for providing and regulating water supplies to some 7.3 million people. The current major initiatives of the Water Supplies Department include the development of new water resources such as seawater desalination and reclaimed water, the implementation of the water conservation education programmes for primary schools and kindergartens, the installation of floating solar panels on impounding reservoirs, the establishment of the water intelligent network and smart water metres and the enhancement of water safety in Hong Kong.

Abstract

Water Management for Buildings in Hong Kong

Hong Kong is densely populated and packed with high rise buildings which involve complex plumbing systems comprising fresh water, salt water for flushing and fire service supplies. Moreover, many residential buildings in Hong Kong are accommodated within large housing estates with hundreds of metres of underground water pipes which may leak due to aging, thereby resulting in water loss. The management of plumbing systems for buildings in Hong Kong has long been a challenge. It entails tackling the prominent issues of proper maintenance of the water supply systems, ensuring water quality, and minimizing underground water pipe leakage and water loss.

Underpinning the water management for buildings is the pivotal role of property management agents and/or Owners' Incorporation. Under the Waterworks Ordinance (WWO), the agents and the consumers undertake to bear the maintenance responsibility of the communal services and inside services respectively. Apart from the regulatory role of Water Supplies Department (WSD) to guard against water loss and quality deterioration, the department has been supporting and providing guidance to the agents and the consumers for proper water management for buildings. For instance, to ensure proper maintenance and care of inside services, WSD has been promulgating guidelines and implementing the voluntary "Quality Water Supply Scheme for Buildings". WSD has also taken forward various new initiatives including pilot trials of Water Safety Plan for buildings and leak detection of underground water pipes. Furthermore, WSD is conducting a holistic review to revamp WWO with a view to, among others, enhancing the regulatory framework of maintenance of inside service to safeguard the quality of drinking water and reduce water loss.





Sr Vincent HO, JPPast President
The Hong Kong Institute of Surveyors

About the Speaker

Sr Vincent Ho, Managing Director of Freevision Limited which was founded in 2005 providing a wide spectrum of building and property related surveying consultancy services. He was qualified in 1991 as a member of the Hong Kong Institute of Surveyors and the Royal Institution of Chartered Surveyors and since then practicing as a professional building surveyor and an Authorized Person under the Buildings Ordinance. Sr Ho has gained over 18 years' practical experience in a major local developer and a prominent surveying consultant before founding his own consultancy practice. Sr Ho is active in serving and promoting the surveying profession and he has served as the President of The Hong Kong Institute of Surveyors (2014 – 2015) and Chairman of Building Surveying Division of The Hong Kong Institute of Surveyors (2010 – 2012).

Sr Ho is specialized in property development, project management, development planning and study, feasibility study and administration of plans submission under the Buildings Ordinance and land lease. He is also experienced in interpretation and application of the Buildings Ordinance and allied legislation. He is also an expert in building surveying, maintenance, building upgrading and contract dispute resolution matters. Sr Ho is a prominent opinion leader on building safety, design, planning and development matters with wide coverage by the media.

Abstract

Emerging Risk: Inherent Risks

Buildings are constructed to provide various accommodations for economic activities and to address human needs. Good building design should be able of satisfying the functional needs of users in a healthy and safe way while it would also promote visual enjoyment and cultural value to the community.

Modern building design has great emphasize on innovations, energy efficiency, greening, space efficiency and aesthetic. However, risks affecting health and safety of the building in use, maintenance and daily management are embodied in typical design without attracting much attention of the designers and naturally the users of the building.

Design of simple components like window and door to major building elements such as façade and curtain wall if not thoroughly thought out could lead to risk of life and casualty. While the government and construction industry have been awaken by the risks posed to construction workers during construction or daily maintenance works of buildings, the impact caused by the building design on the users or owners of buildings during daily usage and occupation should also be looked into closely.

There are bundles of vigorous standards either of local or international nature governing and guiding the design and construction of buildings from generic safety perspectives such as fire and structural safety. The Hong Kong Housing Authority is also pioneering in promoting good practice in planning and design for safety in project life cycle of public housing construction years ago. However, the emphasis is often put on the works phase rather than on occupation stage.

This presentation is going to give an overview of some common building design aspects and identify what inherent risks are present during the occupation phase of the buildings, particularly in the modern domestic buildings. Highlight of some ideas that may help address the problems and how the government and building professionals should contribute in achieving a healthier and safer living space.



Sr Bay WONGChairman
Hong Kong Green Building Council

About the Speaker

Sr Wong Bay is a Building Surveyor by profession. He is a Fellow of the Hong Kong Institute of Surveyors (HKIS), a Fellow of the Royal Institution of Chartered Surveyors, a retired member of the Chartered Institute of Arbitrators and a holder of Master degree in Business Administration. He is a Registered Professional Surveyor (BS), a Registered Inspector (S) and the President of HKIS in 2010 and 2011.

Sr Wong served in the Hong Kong Government for over 37 years. During his tenure as a civil servant, he spent most of his time in the Architectural Services Department and Housing Department. He escalated from Maintenance Surveyor to Assistant Director of Housing before his retirement in 2010, contributing in public housing development, estate maintenance, improvements and revitalization, estate management, housing subsidies policies and Home Ownership Schemes as well as property marketing and sales.

Sr Wong was presented "Distinguished Building Surveyors 1998 Award" by HKIS. He has taken up various roles at HKIS since 1980s and actively promoted the profession during the past 30 years. Currently he has taken up a role in education at the Department of Real Estate and Construction of The University of Hong Kong, aiming to nurture the young generation. Sr Wong is serving at HKIS as Committee Member of the Planning and Development Division, Member of the Board of Education, Housing Policy Panel, Building Policy Panel, Project Management Committee, and BIM Committee, Member of Working Group on Green Building and Working Group on Lantau. He is also an Assessor of the Building Surveying Division Assessment of Professional Competence.

On public service, Sr Wong was a Member of the Construction Industry Council (CIC) from 2012 to 2014. He was appointed as a Director of the Hong Kong Green Building Council by CIC since 2014. During the past years, he served actively in the Policy and Research, Public Education and Industrial Standards Committees and in the development of the BEAM Plus EB tool. He is currently a Member of Executive Committee and Chairman of Task Force on Design and Construction of the Hong Kong Housing Society, Member of the Advisory Committee on Water Supplies of the Water Supplies Department, and Member of the Antiquities Advisory Board of the Government of the Hong Kong Special Administrative Region.



Abstract

Emerging Concerns on Occupant's Health and Wellbeing

Investigation of the topic on relationships between health, safety, and the built environment is growing both in research and practice. Health and safety is no doubt one of the most important issues affecting construction workers and building users. On the other hand, to ensure occupants' health and wellbeing has also become a critical concern for building owners, designers, operation and maintenance (O&M) professionals and facility managers. A survey carried out by the U.S. Environmental Protection Agency (EPA) revealed that human spent an average of 87%¹ of their time in enclosed buildings. However, enclosed environment are not always the healthiest. Recent study from EPA found that concentrations of certain pollutants are often 2 to 5 times² higher than typical outdoor concentrations. As such, building designers and O&M professionals have to ensure occupants' health and wellbeing by adopting people-focused design that is responsive to the impacts of design and operations on occupant behaviour.

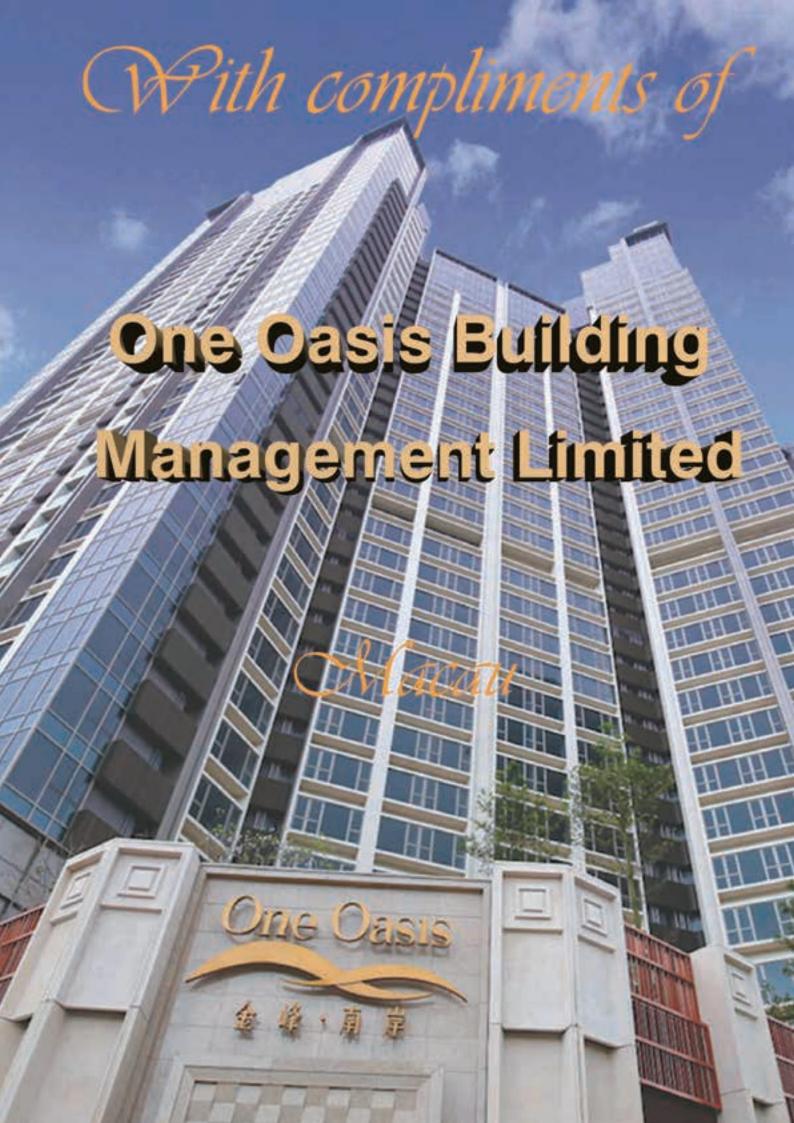
There are reputable and robust studies that suggest the green design features of buildings lead to healthier, more productive occupants. A report issued by the WorldGBC titled "Health, Wellbeing & Productivity in Offices – The next chapter for green building" presented overwhelming evidence that office design significantly impacts the health, wellbeing and productivity of staff. The report finds that a range of factors – from air quality and lighting, to views of nature and interior layout – can affect health, satisfaction of work environment and job performance of office workers. It is affirmed that healthy buildings can maximise benefits for occupants' health and wellbeing, and also emerging great potential for increase in productivity and carbon reduction.

¹ The National Human Activity Pattern Survey (NHAPS), A Resource for Assessing Exposure to Environmental Pollutants, Journal of Exposure Analysis and Environmental Epidemiology (2001) 11,

^{231–252. 10.1038/}sj.jea.7500165http://www.nature.com/jes/journal/v11/n3/full/7500165a.html

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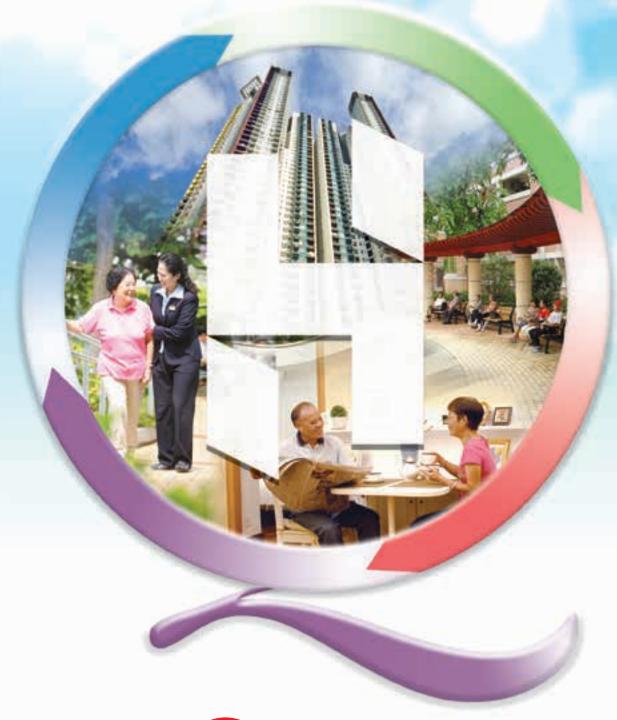
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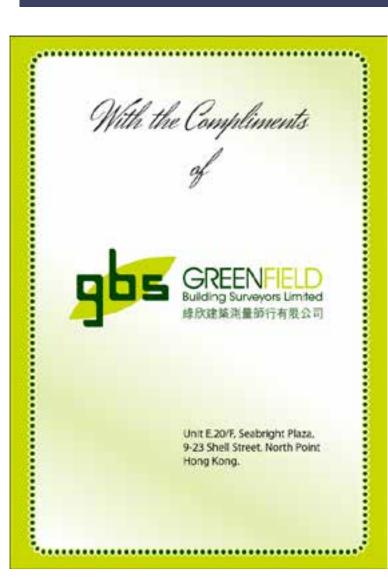


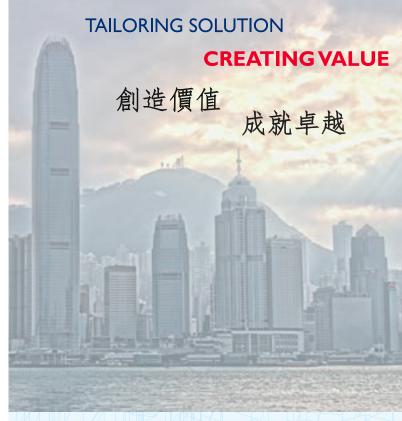




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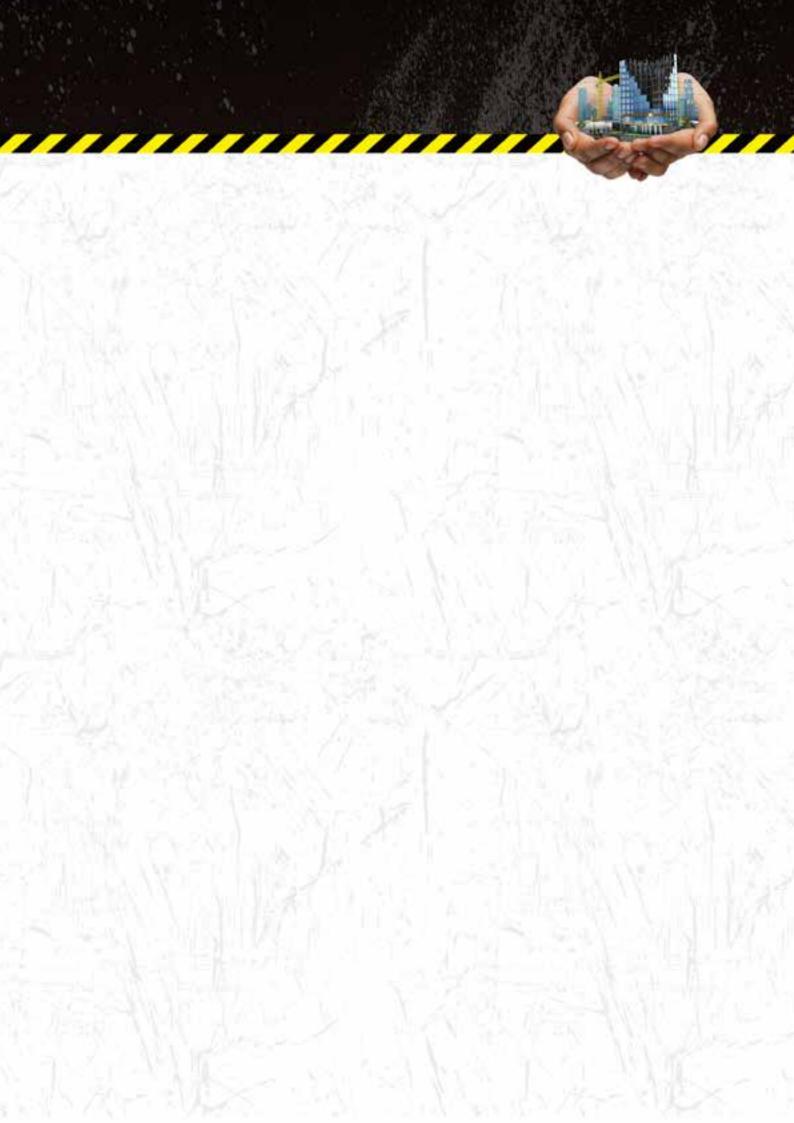
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