



Maintenance and Repair of Aluminium Windows



Maintenance of Drainage Pipes



Seepage at Roof



Fire Safety

Theme II

Modules:

- Personal Development and Interpersonal Relationships
- Hong Kong Today
- Energy, Technology and the Environment



Alteration and Addition Works



Problems on Walls

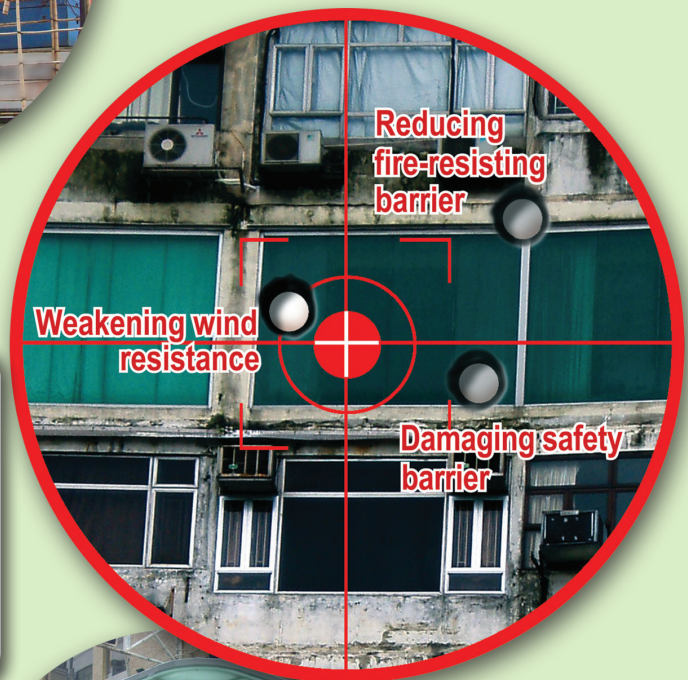


Environmental Hygiene



Alteration of External Walls of Buildings

Alteration of External Walls of Buildings



Topics to be Studied

- 2.1: The Relationship between the External Wall of a Building and the Owners
- 2.2: Problems Caused by Alteration of External Walls of Buildings





Alteration of External Walls of Buildings

Modules :

Personal Development and Interpersonal Relationships

Hong Kong Today

Energy, Technology and the Environment

Introduction

The external walls of buildings act as protective barriers to prevent people or objects from falling. The design and use of materials of external walls that meet the requirements of the Buildings Ordinance should be able to resist the impact force, wind effect and to prevent the spread of fire in the buildings. The external walls of buildings in Hong Kong have many unique characteristics. For example, there are advertisement signboards and TV displays on external walls. There are also external walls that have been altered either to become glass panel walls or to incorporate unauthorised additional fixtures. These installations, alterations and additional fixtures have different impacts on the residents living nearby and passers-by. For example, advertisement signboards will cause nuisance to the residents. External walls that are not well maintained will pose dangers to the public. In this theme, we will make use of different cases to help students to understand the underlying causes of such a situation. Having completed this theme, students should be able to understand who are responsible for the safety of external walls and to make suggestions for effective improvements.



Questions for Enquiry

- What are the functions of external walls of buildings?
- What are the common problems of the external walls of buildings in Hong Kong?
- Who should assume responsibility for the problems related to the external walls of a building?
- Installations, alterations and additions on the external walls of buildings are commonly found in Hong Kong. What are their impacts on the public? How should such impacts be dealt with?



Information on Building Safety 1



Roles of the Buildings Department (BD) of the HKSAR Government

- ◆ The BD enforces the Buildings Ordinance, and provides professional services to the owners and occupants of private buildings in Hong Kong
- ◆ Except for the pre-war buildings and exempted houses in the New Territories, the Building Information Centre of the BD keeps copies of building plans/records and occupation permits for all private buildings. Members of the public may apply to the BD for inspection of these copies and records
- ◆ The BD provides loans to individual owners of private buildings to carry out maintenance and repair works voluntarily or in compliance with statutory orders.
- ◆ The BD handles complaints from members of the public



Key Concepts

1. Addition Works

Addition works are not restricted to those works within the building or flat. They also cover constructing an additional floor, or a cockloft or providing other installations which are not shown on the approved plan of the building. Moreover, addition works also include the construction of a new structure next to an existing building.

2. Alteration Works

Alteration works mean changing the installations shown on the approved plan of the building. Common alteration works include demolishing the walls in the flat, combining adjacent flats or altering the facilities for persons with a disability and so on.

Key Concepts

3. Building Safety

Building safety includes four aspects, namely structural safety, fire safety, environmental hygiene and public safety.

4. Building Safety: Structural Safety

The structure of a building refers to its framework which includes structural members such as beams, floor slabs, columns and load-bearing walls. They are used to support the weight of the whole building and to resist external forces such as wind and earthquake. The structural safety of a building is the integrity of the framework formed by these members.

5. Building Safety: Fire Safety

A building is formed by different components. Some of them can resist fire so that when a fire breaks out, the structure of the building will not be damaged easily and can prevent the fire from spreading. The concern of fire safety in a building is whether the fire-resisting components can protect the lives and property of the residents, for example, the design of escape routes in the building should enable the residents to escape from the building safely when a fire breaks out.

6. Building Safety: Environmental Hygiene

This refers to the environmental hygiene problems inside and outside the building, such as defective sewers and mis-connection of drains.

7. Building Safety: Public Safety

This concerns whether the conditions of the building will pose threats to public safety. For example, aluminium windows that fall from height, or spalling of concrete or loosening of rendering on the external wall can cause deaths.

8. Deed of Mutual Covenant

The deed of mutual covenant (DMC) is a document with legal effect which is binding on all owners registered at the Land Registry. Owners should be familiar with the conditions in the DMC of their building, fulfill their responsibilities and exercise their rights in accordance with the DMC. Copies of the DMC can be obtained from the lawyer during the transaction of flats or bought from the Land Registry.

Topic 2.1 : The Relationship between the External Wall of a Building and the Owners

Chi Hang runs an upstairs café in a commercial and residential building in Mongkok. The café is located on the 1st floor. In order to make the café look more beautiful, Chi Hang removed the external wall of the building and installed floor-to-ceiling glass panels instead when the café first opened. Outside the glass panels, there was the top of the canopies of the building.

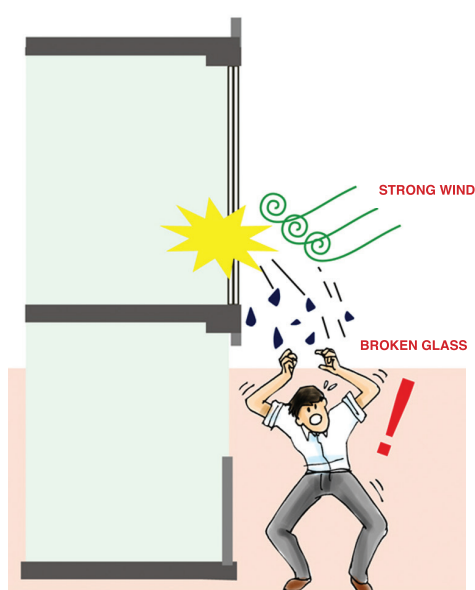
The business of the café was very good. Chi Hang found that there was not enough space to hold the many customers. Therefore, he wanted to add an open café on the canopies of the building. Chi Hang contacted the owner of the flat. The owner agreed to let Chi Hang use the canopies as long as he was willing to pay an additional rent of \$5,000.

Is the owner right in doing so? Was he required to assume any legal responsibility for the alteration of the flat?



1 Alterations and Additions on the External Walls of Buildings in Hong Kong

1.1 Function of the External Wall



The external wall of a building has its functions. Indiscriminate alteration and addition on the external wall of a building may cause serious consequences such as casualties. Basically, the external wall of a building serves as a barrier to prevent persons or objects from falling out and also serves to prevent the spread of fire between floors as required under the Buildings Ordinance.

Therefore, the external wall of a building should comply with the provisions stipulated in the Buildings Ordinance. Its design and the building materials used should be appropriate so that the wall can withstand the stresses and wind and can prevent the spread of fire.

1.2 Additions on the External Wall

Advertisement Signboards

Hong Kong is known as the “Pearl of the Orient”. One of the contributing factors that makes this Pearl of Orient shine brightly is the many neon advertisement signboards in the streets. If one walks down the busy streets in Hong Kong, one will find all kinds of advertisement signboards erected on the external walls of many buildings. Though colourful advertisement signboards are beautiful, inappropriate erection or disrepair may cause accidents and impose danger on the passers-by.

The erection of an advertisement signboard and its supporting structures comes within the purview of the Buildings Ordinance. Carrying out such works requires prior approval and consent from the Building Authority. Otherwise, it may be classified as unauthorized building works and subject to an statutory order for its removal. In addition to the Buildings Ordinance, advertisement signboards are also controlled by other relevant departments including the Electrical and Mechanical Services Department, Fire Services Department, Civil Aviation Department, Transport Department, Country and Marine Parks Authority, etc.



Additional Information:

For details of the guidelines on erection of advertisement signboards, please refer to “Guide on erection and maintenance of advertising signs”. This document can be downloaded from the website of the Buildings Department (Website:http://www.bd.gov.hk/english/documents/guideline/Ad_Signs_E.pdf).



Erection and Maintenance of Advertisement Signboards

Any person who intends to erect a sign should obtain permission from the building owners and/or owners’ corporation and prior approval from the electricity supplier concerned as appropriate, and check that the signboard does not contravene the conditions of the land lease. The erection of advertisement signboards should proceed in compliance with the Buildings Ordinance. Except for those works exempted by the Building Authority, no building or other structure shall be erected in, over or upon any portion of any streets.

Existing advertisement signboards on the external walls should be inspected and maintained regularly to ensure the safety of the public. Any signboard that is liable to cause danger to the public or the structure of its parent building may be subject to removal order under Section 24 of the Buildings Ordinance. If the owners cannot be found and the advertisement signboards are erected on a common part of the building, such as the external wall, all the owners of the building have the responsibility to conduct the removal works required. If the advertisement signboards concerned are located in private premises, the owner concerned shall assume full responsibility.

Abandoned or Dangerous Advertisement Signboards

To attract customers, many shops would erect advertisement signboards outside the shop or on the external walls of the buildings where the shops are located. However, when the shops are closed down, many such advertisement signboards are not removed and thus become abandoned or dangerous signboards.

The Buildings Department has been proactive in taking enforcement action against abandoned or dangerous signboards. The target of the Buildings Department is to remove 1 600 abandoned or dangerous advertisement signboards every year. Moreover, in March 2009, the Department launched a special 12-month operation to remove 5 000 additional abandoned signboards so as to ensure the safety of the public.

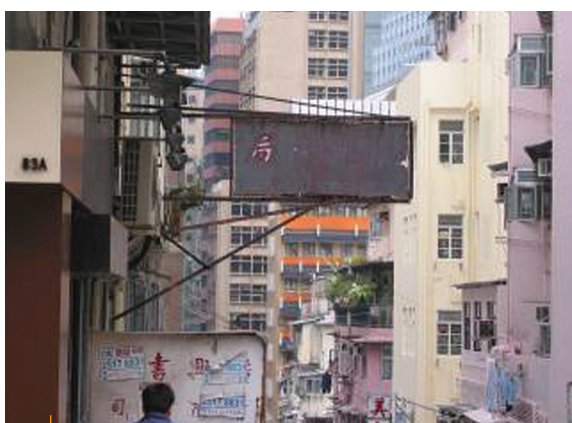
Examples of Abandoned Signboards:



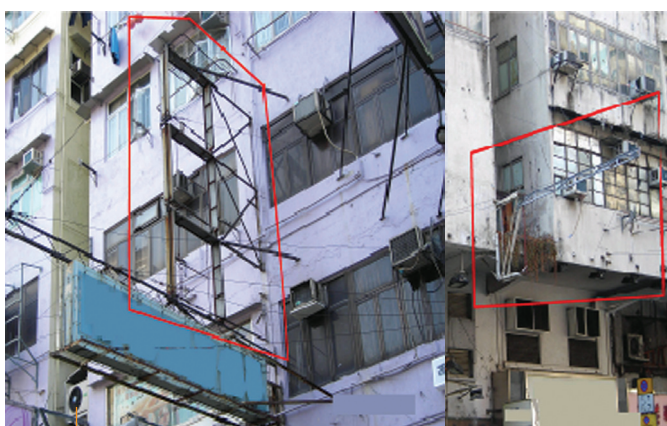
Information on Building Safety 2

Characteristics of Abandoned Signboards

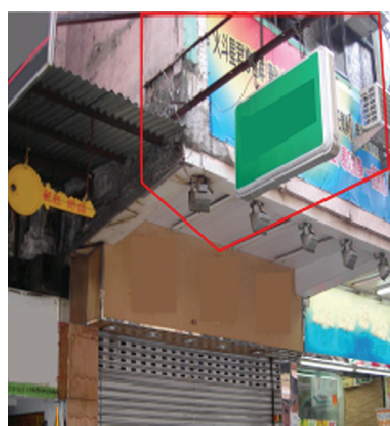
- ◆ The display surface of the signboard is removed or blank, i.e. it does not display any advertising words or logo for a shop or a product.
- ◆ The shop for which the signboard was erected cannot be found at any premises of the building to which the signboard is affixed.



Names of shops on signboards erased or removed



Signboards/ displays surfaces removed, only supporting metal frames left



Signboards abandoned by moved away shops

Examples of Dangerous Signboards:

- The display surfaces of the signboards are seriously damaged
- The supporting metal frames are seriously twisted
- The supporting metal frames are corroded and the display surfaces have become tilted



Corroded and tilted supporting metal frames



Signboards abandoned by moved away shops

Information on Building Safety 3

Characteristics of Dangerous Signboards

- ◆ The signboard shows poor structural integrity, is dilapidated or heavily rusty.
- ◆ The components used to fix the signboard to the parent building are dilapidated or heavily rusty or damaged.
- ◆ The signboard, including the display surface, is seriously damaged, dilapidated or loosened.



Twisted supporting metal frames

Case Study

28 June 2008

Shopfront structure in Wanchai killed a woman

A woman went past a restaurant in Wanchai on her way to work. Suddenly a big wooden shopfront structure fell down and the upper part of the woman's body was trapped under it. The woman subsequently died.



Unauthorized Building Works (UBWs)

The common types of unauthorized building works (UBWs), apart from the usual external projections such as balconies and canopies, will affect the means of escape in case of fire, in particular for those rooftop structures on single staircase buildings that will jeopardise the lives of occupiers. Other common examples of UBWs that will affect the means of escape include: installing swing-out metal gates at staircase and removing smoke lobby doors.

What are Unauthorized Building Works (UBWs)?

The Buildings Ordinance stipulates that all building works in private buildings and land require the submission of plans by an authorized person (AP) for prior approval from the Building Authority. Any alterations and additions to buildings without prior approval of the Building Authority, such as metal cages, supporting structures of air-conditioning cooling towers, canopies, flat roof structures, rooftop structures, structural alterations, etc., are regarded as UBWs. They are illegal and subject to removal or reinstatement to the originally approved conditions. Owners who fail to comply with the statutory orders may face prosecution, fine or even imprisonment.

The following are examples of UBWs:

- Canopies, metal flower racks, frames supporting air-conditioning units, etc. projecting from the external walls of buildings;
- Unauthorised structures on the rooftop, flat roof, yards and light wells;
- Dangerous or over-sized advertisement signboards
- Removal of smoke doors at the lobby (both at common parts or at entrances to units)



Supporting frames of A/C units on external wall



Over-sized signboards



Unauthorised rooftop structures

Canopies and Balconies

Among the building appendages, canopies and balconies are particularly susceptible to misuses. Canopies are originally designed to shelter the pedestrians from wind and rain while balconies are mainly designed to enhance ventilation, to shelter against sunlight and to allow residents to view the scene outside the buildings. But they can collapse causing serious or fatal injuries if there is lack of maintenance/repair, misuses, erection of UBWs above or below the canopies, material corrosion/deterioration, poor construction, etc. There are also cases where the collapsed canopy itself is an unauthorised addition. Cases in which approved balconies were overloaded due to misuse for storage purpose leading to eventual collapse have also been found.

Defects in canopies and balconies may not be identified just by visual inspection. Whenever there is a concern about the safety of such structures, the owner should appoint a building professional to carry out an investigation. If assessment by the building professionals reveals that the structures have become unsafe, remedial works such as additional strengthening are required. In some cases, partial or even total demolition of the structures may be necessary.



Case Study

1 August 1994

Collapse of the canopy of a building in Aberdeen

The canopy of a restaurant in Aberdeen collapsed, which resulted in the death of one person and injury of 13 persons. Later, six parties involved in the case had to make compensations for the victims.

Daily News



Canopy

Case Study

26 October 1990

Collapse of a canopy of a building in Tokwawan

The concrete canopy of a building in Tokwawan collapsed which resulted in the death of six people and injury of seven people. Later, the Buildings Department confirmed that part of the collapsed canopy was unauthorized building works.

Daily News



Unauthorised canopy

1.3 Alteration of External Walls

Glass Panels and TV Displays

Altering the external walls of a building by installing large glass panels or TV displays is a kind of alteration works. The works necessitate the removal of all or part of the external walls of the upper floors of the building and installation of components made of other materials. Since the external walls of the building can prevent people or objects from falling and stop the fire from spreading among the floors, unauthorised alteration works may have serious consequences such as causing injury to people or damage to property.

The installation of large glass panels as external walls of buildings, the erection of advertisement signboards, and the installation of TV displays on the external walls of buildings are building works regulated by the Buildings Ordinance (BO). Like any other building works, prior approval of the building plans and consent to commencement of the building works are required under the BO from the Building Authority for the installation of large glass panels, advertisement signboards and TV displays on external walls of buildings. These building works are required to meet relevant design and construction standards under the BO to ensure:

- the buildings are able to withstand the effect of wind and their own weight;
- the structural safety of the building to which the building works are attached; and
- the availability of lighting and ventilation to the building to which the building works are attached.

Moreover, glass-panel external walls should be able to function as protective barriers to prevent persons or objects from falling out of the building, and should have adequate fire-resistant capability to prevent the spread of fire between the floors through the external walls.



TV display



Large glass panel

Additional Information:

For installation of glass panels, advertisement signboards and TV displays, please refer to the pamphlet “Glass Panel External Walls, Large Signboards and TV Displays in Pedestrianisation Areas”. The pamphlet can be downloaded from the website of the Buildings Department (Website: http://www.bd.gov.hk/english/documents/index_cglist.html).



2 Discussion on the Responsibility for Issues Concerning the Safety of External Walls of Buildings

2.1 Who Are Responsible for Ensuring the Safety of the External Walls of Buildings

According to common law, every owner has the responsibility to repair and manage his/her own flat to make the place safe and suitable for habitation. Generally speaking, such responsibilities include the maintenance and repair of the structure of buildings, walls and installations.

Rights of Owners

Though the owner has to assume certain responsibilities for his/her property, he/she can also exercise the inherent rights. Generally speaking, a person acquires the title of a property together with undivided shares of the land on which the property stands. As stipulated in the deed of mutual covenant (DMC) or Building Management Ordinance (BMO), an owner may exercise the following rights:

- Exclusive possession, use, occupation and free enjoyment of the property under his/her title and all the benefits derived from it;
- Freedom to sell, assign or let his/her undivided shares or his/her interests in the building, or permit the use by others of the same;
- Enjoyment with other owners of the common parts of the building such as staircases, corridors, passageways, lifts or common facilities such as fire services installations, water supply and drainage system, electricity supply, security system, sanitation and recreational provisions; and
- Rights to vote on building management matters.



Responsibilities of Owners

Possession of rights implies the assumption of certain responsibilities. Since the owner is entitled to exercise his/her rights on his/her property, he/she is to assume the responsibilities. For the owner, his/her prime responsibility is to repair and maintain his/her own property.

The owner has to assume responsibilities in repairing and managing not only his/her property but also the common parts of the building. These mainly include:

- Pay his/her share of management fees and make contribution to the repair and management fund in accordance with the conditions set out in the DMC;
- Repair the structural elements, common parts and common facilities in the building and those in his/her own property;
- Pay the taxes and rates of his/her property; and
- Abide by the “Rules for Occupants” stipulated in the DMC or formulated by the owners’ corporation (OC), owners’ committee or property manager in accordance with the DMC.



The Role of the Government

The owners have the responsibilities to maintain the building while the Government has the responsibilities to monitor and promote building maintenance, and educate the public about the importance of building maintenance. The Buildings Department has been playing a major role in the regulation and control of private buildings.

Enforcement Action: Issuing Orders

The Buildings Department will issue statutory orders to owners of private buildings and request them to conduct investigation, repair or rectification works as required. Owners should take immediate action to comply with the orders. Otherwise they are liable to prosecution, fine and/or imprisonment. Moreover, the orders would be registered against the title of the properties concerned at the Land Registry as reference for future buyers.

Additional Information:

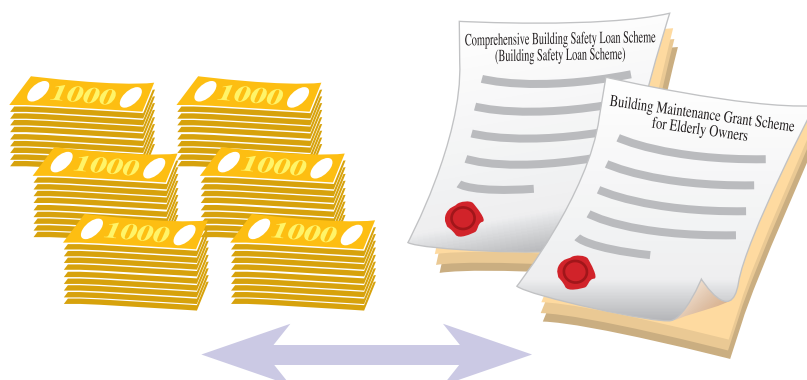
Below are some examples of common orders:

- Removal Order against unauthorized building works – Section 24, the Buildings Ordinance
- Investigation Order– Section 26A, the Buildings Ordinance
- Repair Order – Section 26, the Buildings Ordinance
- Drainage Repair Order – Section 28, the Buildings Ordinance
- Fire Safety Improvement Direction – Fire Safety (Commercial Premises) Ordinance, Cap. 502 and Fire Safety (Buildings) Ordinance, Cap. 572

Support

Individual owners should be responsible for the repair of any damage found in their own properties. However, some owners really cannot afford the high cost of repair. To assist these owners to repair their flats, Government departments such as the Buildings Department (BD), and non-government organisations such as the Hong Kong Housing Society (HKHS) and the Urban Renewal Authority (URA), would provide support and assistance to owners in need. These include financial and technical support.

The HKSAR Government has been providing support and assistance to people in need on the maintenance of buildings. These include the “Comprehensive Building Safety Loan Scheme” (Building Safety Loan Scheme) administered by the BD and “Building Maintenance Grant Scheme for Elderly Owners” which the Government has entrusted the HKHS to administer. However, in order to enhance the cooperation between the BD and other organisations and to achieve better synergy, the Government is planning to improve the division of labour among the departments and organisations, so that the BD will assume the monitoring and law enforcement role, and the URA and HKHS will assist the owners on a district basis. The Government also intends to consolidate the various technical support and financing schemes currently available into one so as to provide comprehensive one-stop technical and financial assistance to owners in need.



2.2 Maintenance of the External Walls of Buildings

Owners or owners’ corporations (OC) have the responsibility to properly maintain and repair their buildings to ensure the buildings are safe and hygienic and without UBWs. If UBWs are found within the confines of the flat stipulated by the title deed, the owner of the flat has the responsibility to remove them and reinstate the place to its original state, whether or not the UBWs were constructed by the owner. If the UBWs are located at the common parts of the building, the OC should be responsible for removing them. If there is no OC, all the owners are jointly responsible for removal.

For construction elements and additions on the external walls of the building that have been approved by the Building Authority, the OC and all the owners have the responsibility to conduct investigation, examination and repair so as to ensure that there is no damage done to the elements concerned and to ensure public safety. If the elements concerned cause casualties as a result of accidents, the owners should bear legal liability.

3 Impacts Arising from Negligence of the Safety of External Walls of Buildings

3.1 Impacts on the Owners

It goes without saying that the maintenance and repair of individual flats is the responsibility of the owner of the flat. For the maintenance and repair of the external wall of the common parts of the building, it is the responsibility of the OC. If no OC has been formed for the building, all the owners have to assume the responsibility together.

Any unauthorised alteration and addition works on the external wall of the building will directly affect the safety of the building. The problems include: damaging the structure of the building, undermining the fire resistance of the flats when fire breaks out, threatening the safety of residents in the building and affecting the quality of life of owners and occupants of the building. Moreover, if the external wall and its appendages become damaged and dilapidated because of disrepair, casualties may result. If the additions on the external walls of the building fall off or the UBWs collapse, the owners also have to bear legal liability. They might need to make monetary compensation to the victims (or their family members) and may even be imprisoned for criminal offence.



3.2 Impacts on the Public

If the owners of a building do not conduct examination and repair of the external walls of the building regularly, not only will the owners or occupants of the building be affected, but the safety of passers-by will also be jeopardised. As a result, public safety will be affected. Hong Kong is a crowded city and there are often a lot of people in the streets, so the safety of the external walls of buildings is particularly important. It is because if the additions or concrete on the external walls, whether authorised or not, fall down in an accident, the first to suffer will definitely be the passers-by. Therefore, neglecting the safety of the external walls of buildings will jeopardise the lives of the public.

Topic 2.2 : Problems Caused by Alteration of External Walls of Buildings

Madam Chan is an elderly lady who lives alone in Mongkok. She sleeps early and gets up early.

Recently, the commercial building opposite to Madam Chan's flat has put up a large TV screen on the external wall to play highlights of the World Cup and some of the matches live. It also keeps playing news and advertisements. Madam Chan is affected by the lights of the TV screen and cannot sleep well. She also has to draw the curtain down throughout the day. As a result, her life is greatly affected. Madam Chan tries to find a way to solve the problem, but what she does is in vain...

Should the owner or shops be held responsible for altering the external wall and thus affecting others or the environment? Can the Government play any role or does it have any responsibility in this matter?



Additional Information:

For the details of light pollution, please refer to the following website:
<http://www.darksky.org/mc/page.do?sitePageId=61045&orgId=idsa#Q:Whatislightpollution>

Key Concepts

1. Light Pollution

It refers to any negative reaction caused by artificial light (inappropriate use or without taking the environment into consideration – such as too much or improper angle of illumination) such as skyglow, glare, light trespass, decreased visibility at night, energy waste and so on.



2. Noise Pollution

According to the information provided by the Environmental Protection Department (EPD), noise can be divided into traffic noise, industrial and commercial noise and construction noise, all of which are regulated by the Noise Control Ordinance. For details, please refer to the EPD website: http://www.epd.gov.hk/epd/english/environmentinhk/noise/help_corner/help_corner.html

Key Concepts

3. Minor Works Control System

Minor works are classified into Class I, II and III. On 31 December 2010, the Government fully implemented the Minor Works Control System. Under this new system, members of the public who want to conduct minor works should appoint minor works contractors already registered with the Buildings Department to avoid breaching the law.

Additional Information:

For the details of Minor Works Control System, please refer to the promotion pamphlet. The relevant pamphlet can be downloaded from the BD website: http://www.bd.gov.hk/english/documents/pamphlet/MWCS_e.pdf.



4. Removal Orders against UBWs

Removal orders are issued to the registered owners of premises where UBWs are found. The owners concerned shall remove the UBWs and reinstate the building to its original state as shown on the original approved plan within the time specified therein.

1 Problems Created by Additions on the External Walls

1.1 Authorised Additions on the External Walls

External appendages are usually cantilevered structures which include eaves, mouldings, projections, construction elements, air-conditioning units, canopies and balconies, drying racks, projecting panels and claddings. Although the structural designs of these elements have already catered for their cantilevered performance, lack of maintenance and repair to combat natural weathering would lead to the defects, which unduly shorten their life-span and eventually result in collapse. Worse still, such collapse might be sudden without obvious symptoms leading to catastrophic consequences. Therefore, the owners should always stay alert and pay attention to the safety of the external walls of their buildings.



1.2 Problems of Unauthorised Additions

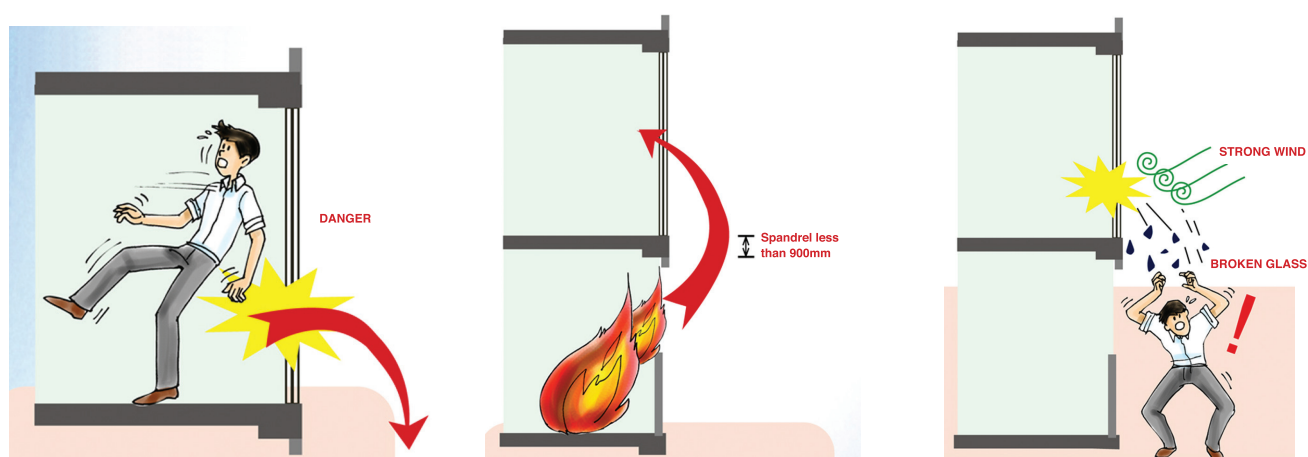
All additions to the external wall which are not approved by the Buildings Department (BD) or which do not meet the requirements stipulated by the BD are unauthorised additions. If the owners do not deal with the additions on the external wall as required, in the worst scenario, casualties may result. Moreover, in order to improve the safety of buildings, the BD would launch removal operations, issue removal orders and take enforcement action so as to remove such unauthorised structures or additions.

1.3 Problems of Alteration of the External Walls

Any glass-panel external walls, advertisement signboards and TV displays erected on a building without the approval and consent of the Building Authority are regarded as UBWs. Like any other UBWs attached to the external wall of a building, these UBWs would affect public safety. The owners or business proprietors concerned should take the initiative to remove the UBWs so as to ensure that the building is safe to the public.

Unauthorised installation of large glass panels or TV displays on the upper floors of a building will lead to the following three potential dangers:

- The unauthorised glass panels could not function as protective barriers to prevent persons or objects from falling;
- The replacement of the approved external wall by unauthorised glass panels would weaken the fire-resistance capacity of the wall. In case of fire, the unauthorised glass panels could not serve to prevent the spread of fire between the floors;
- The unauthorised glass panels may shatter if they could not withstand the wind effect or other impact load.



Unauthorised glass panel compromises safety

1.4 Problems of Dilapidated External Walls

External wall tiles or finishes insecurely fixed to the walls will likely fall off without any prior warning, thus resulting in disasters to pedestrians. All loose parts should be removed and replaced to eliminate the imminent danger and to protect the external walls. A proper connection between the existing concrete wall and the newly finished layer as well as the bonding of individual tile to its bedding mortar is crucial to avoid recurrence of the problems caused by dilapidated external walls. Proper preparation of the exposed surfaces of the existing wall for connection with the new mortar; use of suitable bonding agents or adhesives for the mortar; and special adhesives for the tiles are essential means for this purpose.



Additional Information:

For details of the maintenance of external walls, please refer to the Building Maintenance Guidebook (Chapter 4) (Website: <http://www.bd.gov.hk/english/documents/code/bmg/ch4-1.pdf>).

2 How to Deal with Problems Relating to External Walls of Buildings

The external walls of buildings act as protective barriers. However, many external walls of buildings including commercial buildings in Hong Kong have been altered to cater for the unique environment in Hong Kong. These alterations include installing large advertisement signboards, large glass panels or TV displays which result in different types of UBWs. This trend has become more and more common in the busy urban areas. The alteration of external walls of buildings will affect the safety of residents and the public as well as the quality of life. This situation has aroused concerns among members of the public.



The Buildings Department (BD) launches large scale removal operations to eliminate UBWs in target buildings (buildings with UBWs) that pose threats to lives and property. The BD will identify target buildings located in pedestrian areas and their vicinity for taking removal action according to the seriousness of the threat posed by the UBWs. The BD will issue advisory letters to the owners, users and proprietors of target buildings. When necessary, the BD would issue removal orders to them and order them to remove the UBWs concerned. Moreover, if the target buildings have other defects, such as dilapidated external walls, the BD would issue statutory orders to the owners requiring them to take action so as to ensure public safety and the quality of living.

Review of the Theme

- The external walls of private buildings in Hong Kong reflect changes in the unique environment and economic development of Hong Kong.
- The alteration of external walls will definitely affect the residents and other people.
- The effect of external walls on the public involves many different aspects, such as affecting the structure and safety of buildings, affecting the residents and environment of the community, and thus lowers the quality of living.
- The owners should assume major responsibility for problems relating to the external walls.
- Altering buildings should be done in a lawful way and the works should be carried out by qualified contractors.

Lesson	Teaching Focus, Content and Purpose	Questions for Enquiry	Modules and Topics Related to the “Curriculum and Assessment Guide”	Detailed Teaching Flow: Methods/ Activities	Teaching Materials	Related Values and Attitudes
Lesson (1)	<p>1. Understanding the external walls of buildings</p> <p>2. Introducing common alteration works to the external walls of buildings</p>	<p>1. What are the functions of external walls of buildings?</p> <p>2. Who should assume responsibility for the problems related to the external walls of buildings?</p>	<p>Module 2: Hong Kong Today</p> <p>Theme I: Quality of Life</p> <p>This teaching theme aims to study the quality of life – the housing aspect – among Hong Kong residents</p> <p>Module 1: Personal Development & Interpersonal Relationships</p> <p>Theme I: Understanding Oneself</p> <p>This teaching theme aims to build up a sense of responsibilities for students</p>	<p>Arousing interest (5 minutes)</p> <p>1. Mind-Map Drawing The teacher may encourage students to draw the mind-map with association of ideas to the topic “External Walls of Hong Kong Buildings” The teacher may guide students to think about the materials, features, functions or additions on the external walls of buildings</p> <p>2. Short conclusion: The teacher may point out the functions and features of the external walls of buildings</p> <p>Interface</p> <p>1. Explanation on common alteration works to the external walls of buildings in Hong Kong (10 minutes)</p> <ul style="list-style-type: none"> • Explain common alteration works to the external walls of buildings in Hong Kong by using the teaching PPT a) Four basic concepts of building safety b) Functions of external walls c) Additions to the external walls: signboards, unauthorized building works, balconies and canopies d) Alteration works to the external walls of buildings: glass panels and TV displays 	<p>Companion with the Teachers’ Book “Theme II: Issue 2.1”</p> <p>1. Blackboard or whiteboard or projector</p> <p>2. Teaching PPT</p>	<p>- Respect for quality and excellence</p>

<p>Lesson (1)</p>	<p>3. Analysing who should be responsible for building safety issues, and discussing the responsibilities shared by different stakeholders</p> <p>4. Consequences of neglecting the safety of external walls of buildings</p>			<p>2. Group Discussion on a Case (10 minutes) Case: News related to the safety or maintenance of external walls of buildings</p> <ul style="list-style-type: none"> • The teacher explains the background information of the case and bring out the discussion issues • Discussion issue: Who should be responsible for the maintenance of external walls of buildings • Group discussion: 4-5 students form a group and discuss the issue based on their own knowledge <p>3. Discussion on the responsibilities arising from safety problems related to the external walls of buildings (10 minutes)</p> <ul style="list-style-type: none"> • Explain the rights and responsibilities of different stakeholders by using the teaching PPT a) Owners' rights and responsibilities b) Role of the Government c) Maintenance of the external walls of buildings d) Consequences of neglecting the safety of external walls of buildings <p>Distribution of Assignment (5 minutes)</p> <p>1. How does the Hong Kong Government ensure the safety of external walls of buildings? Distribute worksheet (1). Students are required to find out the laws related to the safety of external walls of buildings from the BD website</p>	<p>3. News clip</p> <p>4. Teaching PPT</p> <p>5. Worksheet (1)</p>
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Lesson	Teaching Focus, Content and Purpose	Questions for Enquiry	Modules and Topics Related to the “Curriculum and Assessment Guide”	Detailed Teaching Flow: Methods/ Activities	Teaching Materials	Related Values and Attitudes
<p>Lesson (2)</p>	<p>1. Revising the key concepts related to the theme</p> <p>2. Analysing the problems caused by alteration and addition works and dilapidated external walls</p>	<p>1. What are the common problems of the external walls of buildings in Hong Kong?</p> <p>2. Installations, alterations and additions on the external walls of buildings are commonly found in Hong Kong. What are their impacts on the public? How should such impacts be dealt with?</p>	<p>Module 2: Hong Kong Today</p> <p>Theme I: Quality of Life</p> <p>This teaching theme aims to study the quality of life – the housing aspect – among Hong Kong residents</p> <p>Module 6: Energys Technology and the Environment</p> <p>Theme II: The environment and sustainable development</p> <p>This teaching theme aims to discuss the problems caused by alteration and addition works to the external walls of buildings</p>	<p>Arousing interest (5 minutes)</p> <p>1. Revision on Lesson (1): The teacher may consider revising the key concepts – the 4 basic concepts of building safety</p> <p>Interface</p> <p>1. Group Discussion (10 minutes)</p> <p>Case: (The teacher may use the following case or draft another sample case)</p> <p>a) Discussion on: Signboards on the external walls of buildings and their impacts on the residents</p> <p>b) Discussion on: Unauthorized building works on the external walls of buildings</p> <p>c) Discussion on: Maintenance of the external walls of buildings</p> <ul style="list-style-type: none"> The teacher explains the background information of the case and bring out the discussion issues <p>Discussion Issue: What are the problems caused by alteration and addition works and the dilapidated external walls of buildings?</p> <ul style="list-style-type: none"> Group discussion: 4-5 students form a group. Students are requested to have 10-minutes discussion based on their own knowledge. They should come up with an agreement, and finish the distributed worksheet (2). Preparation for the following community forum session is needed. 	<p>Companion with the Teachers’ Book “Theme II: Issue 2.2”</p> <p>1. Background information of the case</p> <p>2. Worksheet (2)</p>	<ul style="list-style-type: none"> Responsibilities Well-being of mankind Simplicity

<p>Lesson (2)</p>	<p>3. Discussing the problems caused by alteration and addition works and dilapidated external walls from the perspectives of different stakeholders</p> <p>4. Understanding the problems caused by alteration and addition works to external walls of buildings</p> <p>5. Understanding owners' responsibilities for the maintenance and repair of the external walls of buildings</p>			<p>2. Community Forum (10 minutes)</p> <ul style="list-style-type: none"> Each group should play a role, e.g. government officer, district councillor, building management company, contractor, and take turn to speak. The group playing the role as residents should raise their questions to other participants The teacher concludes the forum, give credits to those who raise good points, and clarify the misunderstandings <p>3. Explanation on the problems caused by additions to the external walls of buildings and solutions to resolve the problems (10 minutes)</p> <ul style="list-style-type: none"> Explain the problems caused by additions to the external walls of buildings and the solutions to resolve the problems by using the teaching PPT <ol style="list-style-type: none"> Examples of authorised building works on the external walls of buildings Examples of unauthorized building works on the external walls of buildings Problems caused by alteration works to the external walls of buildings Problems caused by the dilapidated external walls Solutions to resolve the problems related to the external walls of buildings <p>Concluding the Lesson (5 minutes)</p> <ol style="list-style-type: none"> Review the teaching theme, strengthen students' knowledge, remind them that owners are most responsible for the maintenance and repair of the external walls of buildings Distribute after-school assignment worksheet 	<p>3. Name stands for role play</p> <p>4. Teaching PPT</p> <p>5. After-school assignment worksheet</p>
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