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6 October 2009

Ms Anita Sit  
Clerk to Panel on Development  
Legislative Council Building  
8 Jackson Road  
Central  
Hong Kong

Dear Ms Sit,

**Panel on Development**

**Public Engagement Process on  
"Building Design to Foster  
a Quality and Sustainable Built Environment"  
of the Council for Sustainable Development**

I refer to the discussion of the Panel at the meeting on 28 July 2009. The Administration was requested to:-

- (a) provide information on the possible institutional frameworks and legislative changes with regard to planning and building control powers;
- (b) provide the expected completion date of the Urban Climatic Map and Standards for Wind Environment - Feasibility Study conducted by the Planning Department; and

- (c) reflect to the Chief Secretary for Administration and liaise with the Home Affairs Bureau about a member's suggestion that to promote cultural creativity, for public works projects, funds should be specifically earmarked for the art and cultural aspects of relevant facilities.

I provide below the Administration's response.

(a) **Possible Institutional Frameworks and Legislative Changes with regard to Planning and Building Control Powers**

The aim of the public engagement process is to generate thorough and in-depth discussion amongst various sectors of the community to assist with the formulation of the new policies concerning sustainable built environment. As background for the readers, the Invitation for Response Document (IRD) has provided a read-out of the established policies and practices that influence sustainable building design (Section 4.3, extracted at Annex). With a view to addressing the concerns of the public over such issues as the bulk and height of buildings, air ventilation, greening and energy efficiency in buildings, a number of measures have been undertaken under the existing planning, lands and building control frameworks. Examples include the conduct of air ventilation and visual impact assessments during the development approval process; progressive review of the Outline Zoning Plans to introduce building height restrictions and other development parameters; and imposition of more precise development parameters on Government land sale sites etc. Regarding possible further options on institutional frameworks and legislative measures, the IRD has made a number of suggestions for consideration and discussion of members of the public (Section 5.3 paragraphs 20 – 24 and Section 5.5, extracted at Annex). For instance, the public is invited to consider whether a cap on gross floor area concessions should be imposed and whether the same should be applied through administrative or legislative means. The background of the existing policies as well as the proposed options will also be elucidated to the public through the Council for Sustainable Development (SDC)'s various engagement events and discussion forums. The Administration will adopt an open mind and consider the opinions as well as alternative proposals that the public may suggest during the engagement process.

We will carefully assess the findings and recommendations of the SDC and keep the Panel informed in mapping out the way forward.

**(b) Urban Climatic Map and Standards for Wind Environment Feasibility Study**

The Urban Climatic Map and Standards for Wind Environment Feasibility Study (the Study) was commenced in July 2006. The Study aims at providing a more scientific and objective basis for identifying urban climatic issues to guide town planning and urban design; focusing on the pedestrian wind environment and thermal comfort of pedestrians.

Most of the technical studies including the field measurement studies, part of the wind tunnel benchmarking studies, users' wind comfort level survey studies, and a draft urban climatic analysis map have been completed. A technical expert engagement workshop was held on 7 February 2009 to solicit expert views and to confirm the technical approach, methodology and main technical findings of the Study so far, including the draft Urban Climatic Analysis Map, before proceeding further. The relevant working papers of the Study can be viewed on PlanD's homepage (<http://www.pland.gov.hk>).

Subject to the feedback, the draft Urban Climatic Analysis Map will be finalized. In the next phase of the Study, the Urban Climatic Planning Recommendation Map, wind standards and the refined Air Ventilation Assessment system will be formulated. The wider general public and stakeholders will be consulted on the recommendations of the Study. The Study is expected to be fully completed in 2010.

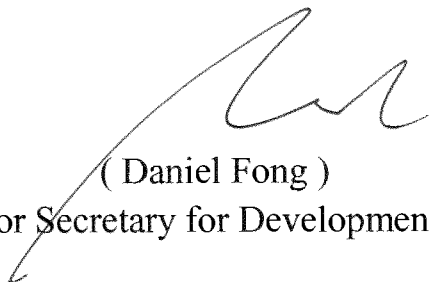
**(c) Promotion of Cultural Creativity in Public Works Projects**

The Home Affairs Bureau (HAB) has been working closely with the relevant bureaux/departments to promote and encourage Government departments to display art works in their buildings. An inter-departmental working group has been established to explore the feasibility of displaying local art works at Government properties

(including Government projects under planning and existing Government properties).

While some overseas countries and cities have implemented the "Percent for Art" scheme which requires the setting aside of a certain percentage of the sum spent on construction works for acquiring or commissioning artworks, the effectiveness of such scheme varies in different places owing to the different levels of maturity of the community in culture and arts and controversy has been aroused in some places. The HAB will carefully consider such proposal and assess its implications accordingly.

Yours sincerely,



( Daniel Fong )  
for Secretary for Development

encl.

Extracts of Invitation for Response Document

c.c.

Secretary for Home Affairs (Attention: Miss Helen Kwan)

Director of Buildings (Attention: Mr H P Li)

4.2.5. Buildings account for almost 90% of the electricity consumption in Hong Kong and are therefore our most significant contributors to greenhouse gas emissions. Reducing building energy use is a critical component of our community's response to the global challenge of climate change. Electricity generation also affects our air quality and therefore our health, with electricity generation being the largest source of air pollution in Hong Kong. On this point alone, the importance of energy efficiency is a matter of significant public concern. When we consider also the potential for cost savings from reduced energy bills, we can quickly realise that energy efficiency is a primary concern for our sustainable development. Many solutions have emerged in recent years and some of these are illustrated in Figure 3 below.

### Figure 3 – Possible solutions to reduce energy consumption

Some examples of how money can be saved through energy conservation...



Use shading devices and high-performance glass to optimise natural daylight into buildings to reduce energy usage



Innovative lighting systems, including blinds and wall light fixtures, further optimise the use of natural and artificial light, thus lowering energy usage and reducing cooling loads

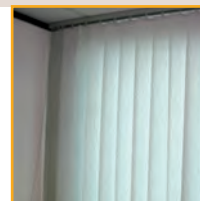
External sunshades and sunshade curtains reduce solar heat gain and increase overall comfort of the living space floor



External sunshades



Sunshade curtain



Double-glazed glass curtain wall



4.2.6. Our overall goal of course is to enhance the positive features of our built environment and create a quality and sustainable built environment. Our efforts must lead to better connectivity, whether at ground level or through elevated pedestrian networks, reduced air pollution, more public space to enhance vibrancy and social amenity. Greening should enhance our neighbourhoods and the buildings themselves should be designed in a manner to fit in and enhance the environment and offer higher levels of user amenity.

### 4.3 What are the established policies and practices that influence our built environment?

4.3.1 As our city and economy have matured, aspirations of our community have changed. While previous generations focused on meeting their basic needs in terms of accommodation, employment and social welfare by maximising development potential and ensuring that a basic infrastructure was provided (i.e. a balance of residential and commercial development, schools, hospitals, recreational facilities, fire stations etc), the present generation's aspiration has shifted towards a better quality of life in harmony with the environment or a quality and sustainable built environment as we refer to it in this exercise.

4.3.2 Hong Kong's existing policies, legislation, guidelines and practices concerning the built environment have evolved to take account of the changing needs of our community. This public engagement exercise is focused on the policies that shape buildings and their direct neighbourhood. There are, however, broader policies and practices that guide urban planning in Hong Kong, ranging from planning and development policies to implementation of the Hong Kong Planning Standards and Guidelines, from town planning prescribed by Outline Zoning Plans to the conditions specified in individual land lease. While these are all relevant to a broader discussion of the built environment in Hong Kong, the focus of this engagement exercise is on the policies and practices that directly impact upon building design and thus our built environment. These include:

- Buildings Ordinance (Cap. 123) (BO), and the Building (Planning) Regulations (Cap. 123 sub. leg. F) (B(P)R);
- Practice Notes for Authorized Persons and Registered Structural Engineers (PNAPs) and Joint Practice Notes (JPNs); and
- Regulatory regime and policies to promote energy efficiency in buildings (such as the voluntary Building Energy Codes)

Sections 4.3.3 to 4.3.10 below set out how these control regimes have sought to facilitate the provision of essential facilities as well as green and amenity features in our buildings, whilst sections 4.3.11 to 4.3.15 describe the promotion of energy efficiency.

### **What measures facilitate the provision of essential facilities, green and amenity features in buildings?**

- 4.3.3 Building development in Hong Kong is under the statutory control of the BO. The BO and other subsidiary legislation such as the B(P)R, provide regulations, guidelines and set detailed statutory controls enforced by the Buildings Department over the construction of buildings in Hong Kong.
- 4.3.4 With the objective to allowing flexibility in building design under special circumstances, the BO provides discretionary power for the Building Authority (BA), namely the Director of Buildings, to grant gross floor area (GFA) and site coverage (SC) concessions for the provision of certain essential facilities, green and amenity features in buildings.

**GFA** – Simply put, GFA is the area contained within the external walls of a building measured at each floor level (including any floor below the level of the ground), together with the area of each balcony in the building. (For a detailed definition, please see section 23(3)(a) of the B(P)R.)

Readers should note that this GFA (of a building) is not with the same as what is referred to as the GFA of flats in the context of flat sale.

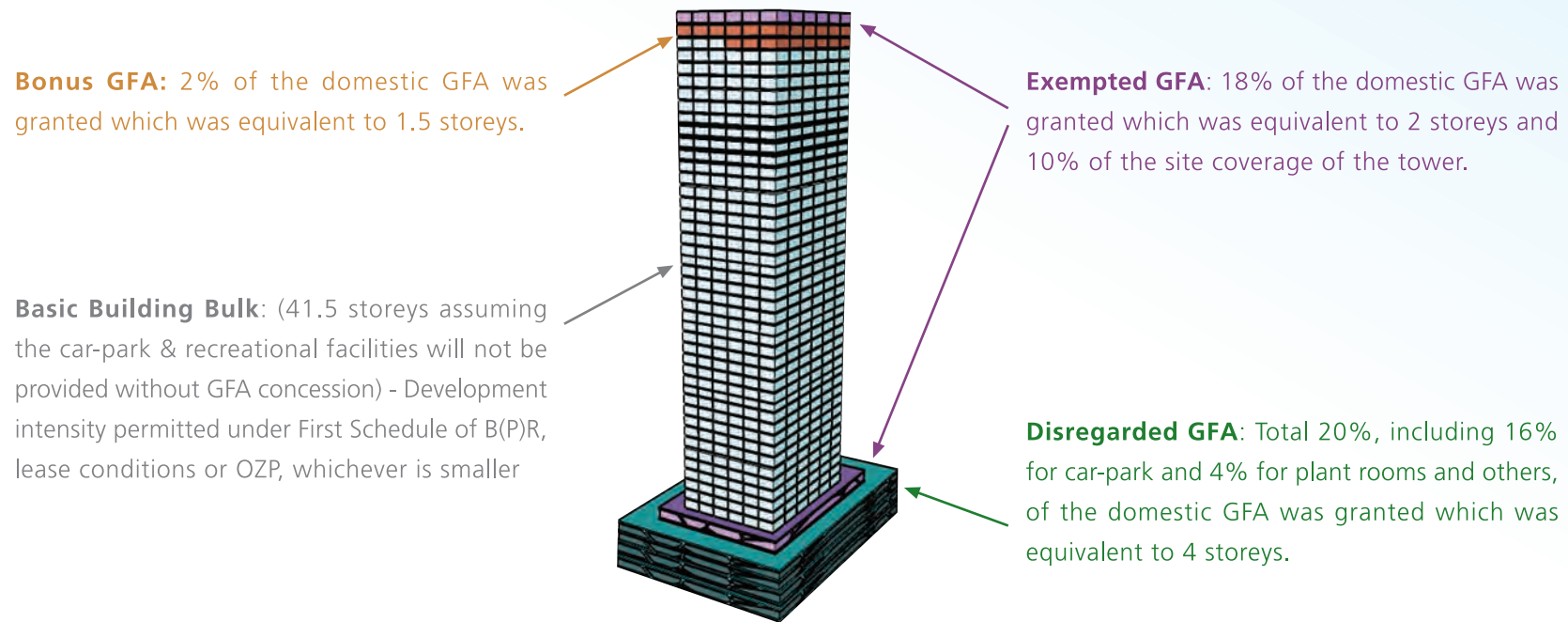
**GFA concessions** – The floor area of certain building features that are allowed to be discounted from the maximum GFA of a development. There are three existing types of GFA concessions, namely disregarded GFA, exempted GFA, and bonus GFA, as illustrated in Figures 4, 5 and 6. Simply put, the greater the GFA concession, the larger the total floor area that can be built, resulting in a taller and bulkier building which may create an impact on the quality of our built environment, especially the neighbourhood area.

**SC** – The portion of a lot covered by buildings or structures.

4.3.5 There are three types of GFA concessions, namely a) **disregarded** b) **exempted** and c) **bonus GFA**<sup>7</sup>. These are explained in more detail in Figures 4, 5 and 6 below. If approved for concession, the area occupied by the concerned features will not be included within the calculation of the maximum GFA

allowed (details on the eligibility of features and associated GFA and SC calculations are set out in various PNAPs available on the Buildings Department's website).

**Figure 4 – Three types of GFA concessions and how they affect building bulk and height**



Remark: GFA concessions granted in this example is based on the BD's study findings on an average building among the 54 cases of Residential Zone 1 (as defined in Chapter 2 of the HKPSG, which covers the highest density of residential development and applies to districts well served by high capacity public transport systems such as rail station or other major transport interchange).

<sup>7</sup> GFA Concessions via "disregarded GFA" (covered under section 23(3)(b)/23A of the B(P)R), "exempted GFA" (covered under section 42 of the BO) and "bonus GFA" (covered under section 22 of the B(P)R).



**Table 1 - Examples of three types of GFA concessions**

Types of GFA Concessions	Features for consideration of GFA Concessions	
	Mandatory Features	Green and Amenity Features
<b>Exempted GFA</b>	<ul style="list-style-type: none"> <li>• Fire refuge floors</li> <li>• Swimming pool filtration plant room if a swimming pool is provided</li> </ul>	<ul style="list-style-type: none"> <li>• Green features include balconies, wider common corridors, sunshades, sky gardens, podium gardens, acoustic fins, utility platforms, mail delivery room with mailboxes, wing walls, wind catchers &amp; funnels, non-structural prefabricated external walls and noise barriers</li> <li>• Recreational facilities</li> <li>• Pipe ducts</li> <li>• Covered gardens/play areas</li> <li>• Horizontal screens/covered walkways</li> <li>• Larger lift shaft areas</li> <li>• Miniature logistic service room in a multi-storey residential building</li> <li>• Counters, kiosks, office stores, guard rooms and lavatories for watchmen and management staff</li> <li>• Voids over prestige entrances of main common lobbies</li> </ul>
<b>Disregarded GFA</b>	<ul style="list-style-type: none"> <li>• Electricity &amp; mechanical rooms (e.g. water tanks, electrical switch rooms, meter rooms, pump rooms, etc)</li> <li>• Lift machine rooms for the fireman's lifts and disabled's lifts</li> <li>• Refuse storage &amp; material recovery chambers/rooms</li> <li>• Telecommunication and broadcasting equipment rooms</li> </ul>	<ul style="list-style-type: none"> <li>• Car-parks</li> <li>• Air conditioning plant rooms including boiler rooms</li> <li>• Horizontal area of staircases &amp; lift shafts through floors where GFA is disregarded</li> </ul>
<b>Bonus GFA</b>		<ul style="list-style-type: none"> <li>• Surrender of land at ground level for road widening</li> <li>• Dedication of set-back areas at ground level for public passage (street widening)</li> </ul>



**Figure 5 - Examples of three types of GFA concessions**

**(a) Exempted GFA** — Adding amenity features and green features enhances occupants' living environment. However, at the same time, these facilities and features also add bulk and height to the buildings, which may have adverse impacts on the streetscape as well as immediate neighbourhood.

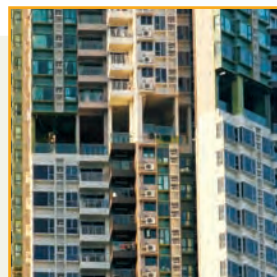
**Green Features**



Balconies



Wider common corridors



Sky gardens



Mail delivery rooms



Podium gardens



Utility platforms

**Amenity Features**



Residents' clubhouses



Covered walkways



Void of shopping arcade

**(b) Disregarded GFA** — Floors of car-parks make parking facility available to occupants, and plant rooms house air-conditioning and building services equipments. However, these additions may result in taller buildings.



Stacked up car-parks under buildings



Generator room



Sprinkler fixed & fire services booster pump room



Refuse storage and material recovery chamber

**(c) Bonus GFA** — Public passageway and building setback, for the purpose of passage and street widening, increase air flow, improve urban environment, allow greenery and amenity installation, but they bring about increase in building height, bulk or site coverage.



Building Setback - Dedication at ground level for street widening



Public Passageway - HSBC Headquarters on Queen's Road Central is one of the most well known examples in HK

4.3.6 To promote the development of green and innovative buildings, the Buildings Department, Lands Department and Planning Department issued two Joint Practice Notes (JPNs) in 2001 and 2002 respectively. The twelve green and innovative features covered by the JPNs are presented in the following box. These features may, subject to specified conditions, be exempted from GFA and SC calculations.

4.3.7 Members of the public should note that while GFA concessions may be granted, they are not necessarily free. Subject to land lease conditions, payment of a land premium may be required for those features in the JPNs that are part of individual flats and for the exclusive possession and enjoyment of the owners and residents (i.e. balconies, utility platforms and non-structural prefabricated external walls).

### Green and Innovative Features Covered by Joint Practice Notes 1 & 2

- Communal sky gardens (including those located in refuge floors);
- Communal podium gardens;
- Non-structural prefabricated external walls;
- Utility platforms;
- Noise barriers;
- Communal sky gardens for non-residential buildings;
- Balconies\* (must be open on at least 2 sides);
- Wider common corridors and lift lobbies\*;
- Acoustic fins\*;
- Sunshades and reflectors\*;
- Wing walls, wind catchers and funnels\*;
- Mail delivery rooms with mailboxes\*

\* The cumulative GFA exemption for these features is subject to a cap of 8% of the total permitted GFA





- 4.3.8 The policies on GFA concessions have evolved and been refined from time to time to meet the development needs of Hong Kong. Together these policies and practices have led to a mode of development, where new developments incorporate a wide range of desirable, green and amenity features (see Figure 7 below). The benefits of these features to the occupants are numerous, and include improved personal and communal space, balconies, sky gardens, improved lift lobbies and mail-rooms, and car parking facilities. Maintaining these facilities adds value to the property, which provides long-term economic benefit. Similarly, energy efficient features such as solar shadings and utility platforms help reduce energy bills.
- 4.3.9 There are also a range of sustainable design considerations that are supplemental to the existing policy framework, in particular, setback of buildings on narrow streets would improve ventilation at street level. Under the existing policy, a bonus GFA concessions of 5 times and 2 times of the area dedicated at the ground and upper floors respectively for setback and public passageways would be granted to the development.
- 4.3.10 These benefits, however, need to be balanced with the associated impacts of the building – through increased building bulk and height – on the neighbourhood and public realm contributing to the quality of life of the broader community. Striking a balance on the degree of development requires clear community consensus.

### What measures are already in place to enhance the energy efficiency of buildings?

- 4.3.11 Between 1998 and 2002, the Electrical and Mechanical Services Department (EMSD) launched four voluntary Building Energy Codes (BECs) prescribing the minimum energy performance standards for lighting, air conditioning, electrical and lift & escalator installations. In 2003, EMSD launched a fifth code – the Performance-based Building Energy Code, which set out an alternative approach to demonstrate compliance with the energy efficiency requirements through assessment of the total energy efficiency performance of a building. The EMSD also launched the Hong Kong Energy Efficiency Registration Scheme for Buildings in 1998 to provide recognition to buildings and premises that comply with the voluntary BECs.
- 4.3.12 Given the limited adoption of the Energy Efficiency Registration Scheme by the private sector, the Government launched a public consultation on the mandatory implementation of the BECs from December 2007 to March 2008. With the overwhelming support from the community, the Government plans to introduce a legislative proposal to the Legislative Council in 2009 to mandate the implementation of the BECs. While this will set out minimum legal standards for energy efficiency performance of fixed building services installations in buildings, it is important to consider what more should be done to encourage energy conservation in buildings.

**Figure 7 - New mode of development in Hong Kong incorporating a wide range of desirable essential facilities, green and amenity features**

#### Wider Sidewalk & Green Buffer



Building setback from the property line of the tower at the ground level provides a wider sidewalk and allows a green buffer between pedestrians and the street.

#### Podium Garden



The provision of podium garden can have many advantages. Not only does it enhance the amenity of a building, allow more daylight and better ventilation, improve visual impact, it also provides a landscape area for recreational uses by the occupants.



4.3.13 The Government promulgated in July 2008 a set of carbon audit guidelines for buildings to facilitate the users and managers of buildings to calculate the amount of greenhouse gas emitted as a result of the operation of their buildings and to explore rooms for improvement. To encourage different sectors of the community to carry out carbon auditing and to implement measures to reduce carbon emissions of their buildings, the Government launched a "Green Hong Kong • Carbon Audit" campaign in the same year.

4.3.14 Building insulation also plays an important role in promoting energy efficiency of buildings. The main piece of legislation in place is the Building (Energy Efficiency) Regulation (Cap. 123 sub. leg. M), which controls the amount of heat transferred through the external walls and roofs of commercial or hotel buildings (known as the Overall Thermal Transfer Value (OTTV)) to reduce the energy needed for air-conditioning. In the case of a building tower the OTTV should not exceed  $30\text{W/m}^2$ , whilst for a podium the OTTV should not exceed  $70\text{ W/m}^2$ . The use of sunshades may be excluded from GFA calculations to encourage improved OTTV performance. Moreover, the provision of balconies and utility platforms promoted under JPNs 1 and 2 may also help improve the energy efficiency of buildings.

4.3.15 In his 2008 Policy Address the Chief Executive, Mr. Donald Tsang, reaffirmed his commitment to meet the climate change challenge through enhancing energy efficiency, using clean fuels, relying less on fossils fuel and promoting a low carbon economy – an economy based on low energy consumption and low pollution. To mobilise joint effort from the community, \$150 million has been reserved under the Environment and Conservation Fund (ECF) to subsidise building owners to conduct energy-cum-carbon audits, which help calculate energy consumption and greenhouse gas emissions of buildings with a view to identifying improvement opportunities. Taking account of the considerable capital investments involved in energy efficiency projects, a further \$300 million has been reserved under the ECF to subsidise such projects.

## **4.4 What are the pros and cons of the existing approaches?**

4.4.1 Our built environment is a shared resource, and we all place a variety of needs on it. However, as in most situations, the resources available in our built environment to meet the needs of our community are limited. Sometimes, competing needs arise which we must consider and balance carefully. It is important for us to consider these when we debate measures related to building design to foster a quality and sustainable built environment. To stimulate discussion, the pros and cons of the existing approaches for incorporating green and amenity, and energy efficiency features are outlined below.

4.4.2 Pros:

- Well established and provide certainty to developers and respect development rights
- Provide for necessary features in buildings without adding excessively to the development cost
- Provide value to building's owners and occupiers – by enhancing the quality of the building
- Improvement to the local environment
- Provide increased social amenity for owners/occupiers
- May slightly improve energy efficiency and reduce energy bills

4.4.3 Cons:

- Increase in GFA and hence the height or bulk of a building may bring about negative impacts to the environment, pedestrians and neighbouring residents depending on the setting of the building and interrelation with other buildings.

## Capping GFA concessions

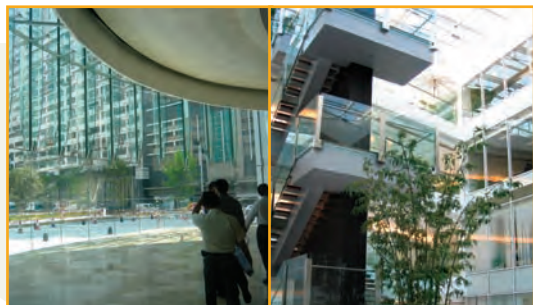
- 5.3.16 A further policy mechanism proposed on control of GFA concessions would be the use of a cap (an upper limit) on individual types of GFA concessions; or as a means to provide more flexibility in the design of new buildings, an overall cap on GFA concessions.
- 5.3.17 Capping the cumulative impact of GFA concessions may control the height and bulk of buildings while retaining a degree of flexibility and incentive to provide building features and facilities that improve the living standards of occupants. It is important to consider however that indiscriminately limiting the GFA concessions may discourage the provision of some desirable facilities or features, and when projected to the broader scale, may lead to other sustainability challenges in the form of urban sprawl.
- 5.3.18 Consideration could be given to applying a cap only to sites of higher development density e.g. buildings with 12 storeys or above if of a residential nature. There could also be separate caps for domestic, mixed and non-domestic developments. Ultimately, the Council seeks the views of the community on whether caps should be considered, and the manner (as a statutory or administrative control) in which they should be applied.
- 5.3.19 For reference, recent Government studies have suggested overall caps for GFA concessions (excluding bonus GFA and car parks) in the range of 25%-35% (of the overall GFA for the building) for domestic/composite developments and 20-30% for non-domestic buildings. These are recommendations drawn from recent Government studies. Please see Table 2 in Appendix 3 for rationale.

## Proposed changes to the existing GFA concession regime

- 5.3.20 **Statutory "Modification Power" and GFA Concessions** – Currently, the BA utilises the "modification" power under section 42 of the BO to grant certain GFA concessions for building projects, where in his/her opinion special circumstances render it desirable to permit by notice in writing modifications of the provisions of the Ordinance.
- 5.3.21 This is a general power not specifically designed for GFA concessions, and the BA uses such power to grant "exempted GFA" concessions for green and amenity features (e.g. balconies and sky gardens). However, for other items such as "disregarded GFA" concessions for car parks or plant rooms, the BA has been explicitly empowered under regulations 23(3)(b) and 23A of the B(P)R to exercise discretion to disregard those areas from GFA calculation. Similarly, for the granting of "bonus GFA", it is governed by regulation 22 of the B(P)R.
- 5.3.22 A move to grant GFA concessions for green and amenity features on a legal basis may provide the BA with a more formal basis and guidance in exercising his future discretion. On the downside, this may decrease flexibility and lengthen the process of future adjustments of the GFA concession policies.
- 5.3.23 Consideration on whether any new measure or cap described above should be applied through an administrative method, that is through the modification (discretionary) powers of the Director of Buildings (the BA) or whether a new piece of legislation requiring mandatory compliance with a GFA cap should be promulgated is a matter for public discussion.
- 5.3.24 As mentioned previously, an administrative mechanism allows for greater flexibility, but is open to interpretation, and may provide less certainty to the community in terms of the final GFA of a development. Conversely, a mandatory approach would provide certainty, but would lack flexibility.



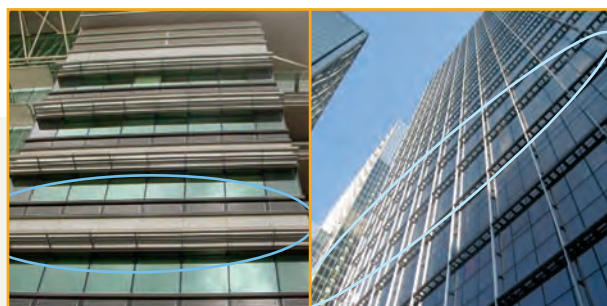
**Figure 14 – Energy efficient building design and installations**



Enhanced use of daylight through building windows



Rooftop solar photovoltaic panels can convert solar energy to electrical energy for the building



Use of shading devices - fixed or movable, located inside or outside the glazing, can control direct or indirect solar gain



Non-absorbing roofing – roof covered by light-coloured or reflective membranes – absorbs less heat



Rooftop greening reduces heat absorbed by the roof



Landscape shading - use of trees or major landscaping elements to provide beneficial shading

5.4.2 In addition, integration of renewable energy devices in buildings could also help reduce reliance on fossil fuel and thereby reduce the emission of greenhouse gases.

5.4.3 In common with other green features, GFA concessions may be applied as a means to further promote energy-efficient building designs. As considered in the previous texts on overall GFA caps, the community should consider such concessions as part of an overall and balanced consideration. Other mechanisms may also be applied to achieve the same or similar ends. These are briefly described below.

## 5.5 Considerations for these possible policy options

5.5.1 Incorporation of green, amenity and energy efficient features into buildings are desirable from many perspectives as highlighted above. They may however lead to an increase in building height or bulk and adversely impact the neighbourhood by reducing visual permeability, and causing overshadowing.

5.5.2 Balancing between the incorporation of these features and the associated trade-offs/costs is an important issue for the community to discuss. In this document, we have introduced the existing situation in Hong Kong, some of the potential design approaches and control mechanisms.

5.5.3 While control on GFA concessions is one approach, it is certainly not the only approach and other mechanisms may be applied. Consideration of whether to make certain features mandatory and accountable for GFA calculations or to apply a GFA cap (a limit) on the amount of GFA (as described above) for these features must be made. The Council wishes to engage all stakeholders in this discussion in order to be able to make an appropriately balanced recommendation to the Government at the end of this public engagement exercise.



5.5.4 Overall, consideration must be given to whether and which features should become mandatory requirements and hence reduced or no GFA concessions should be granted, and what measures may be applied to encourage voluntary provision of certain building features, and whether granting of GFA concessions is the most effective means.

5.5.5 Trying to balance such scenarios gives rise to a variety of considerations, which we must weigh up carefully in order to offer an acceptable way forward. There are various approaches to consider :

**Approach 1 – Status Quo** - We continue to incentivise the provision of essential facilities, green and amenity features in our building developments and continue to grant GFA concessions without additional development controls. We note that many stakeholders are mindful of the increase in building bulk and height in our city and have raised concerns over air ventilation, public health, the urban heat island effect etc. The control over building developments will be manifested through the existing means of planning and building control, such as the review of OZPs and stipulation of development restrictions.

**Approach 2 – Moderate change** - We progressively introduce moderate development controls over the provision of essential facilities, green and amenity features in our building developments. For example, we reduce the rate of GFA concessions for certain features and impose a cap on the total amount of GFA to be granted. This would serve to reduce building height and bulk, and would still allow green and innovative features to be incorporated. As indicated earlier in this document, a certain amount of saleable area of the development would be used to accommodate the features if the same level of such features is to be provided. Alternatively, new developments may be provided with fewer desirable building features without GFA concessions as incentives were progressively reduced. This of course would be market-led, and certain compromises to land development and property value, quality and sustainability would be inevitable. Other incentive and disincentive mechanisms could be applied such as accreditation/recognition

scheme, modification of land premiums, GFA concessions for adopting Sustainable Building Design Guidelines or providing energy efficient features, and construction levies. Moreover, as most of Hong Kong's population lives on only 24% of the territory, consideration may be given in allowing higher development intensity in the urban fringe or rural areas so as to relieve the development pressure on the already dense urban areas.

**Approach 3 – Major change** - We implement more stringent control parameters over development, say, doing away with GFA concessions for certain building features and imposing a stringent cap on overall GFA concessions and requiring mandatory adoption of the Sustainable Building Design Guidelines as well as provision of energy efficient features. While providing benefits to the neighbourhood as building bulk and height will be reduced, development potential of our scarce land may not be maximised, and reduction in development density may put pressure on our community to increase urban density in previously lower density areas. This may result in less desirable features in properties or alternatively if these features are still to be provided, people may need to pay more for these properties in comparison to the existing situation.

5.5.6 In considering how we may pursue a balanced and sustainable development, we must consider the range of policies that may be applied to achieve our goals. These include, but are not limited to the policy options put up in sections 5.3 and 5.4. As mentioned in this sub-section, other mechanisms to achieve our desired objectives exist, and these should also be considered. These include:

- Other fiscal incentives – may be applied where recurrent incentive is required, such as maintaining desirable greenery around buildings or continuing to maintain and operate energy efficient plant and equipment
- Land Premiums may be adjusted to reflect reduced value of developable space
- More comprehensive planning controls may be applied on building height and development intensity