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**Panel on Development**

**Meeting on 25 November 2008**

**Background brief on the  
"wall effect" of developments and measures to control development intensity**

**Purpose**

This paper sets out information on the existing mechanisms to control the intensity and measures to improve air ventilation of developments. The paper also summarizes the views and concerns expressed by Members and deputations at various forums of the Legislative Council about the problem of "wall effect" brought about by developments and measures to control development intensity.

**Existing mechanisms to control the intensity of developments**

2. The Town Planning Board (TPB) is charged with the statutory function, under section 3 of the Town Planning Ordinance (Cap. 131), to prepare statutory town plans for the layout of areas of Hong Kong as well as for the types of building suitable for erection therein with a view to promoting the health, safety, convenience and general welfare of the community. Outline Zoning Plans (OZPs) prepared by TPB set out, among other things, the land use zonings and development restrictions for individual areas.

3. In general, plot ratio restrictions are stipulated in OZPs to delineate areas of different development intensities to ensure that the permitted levels of development could be sustainable in terms of infrastructural, environmental and traffic capacities, and compatible with the character of the surrounding areas. Restrictions on building height are imposed to protect views of the public to important ridgelines, the harbour and other valuable attributes of the city's landscape; to preserve the special character of some neighbourhoods; and to achieve compatibility with the surrounding developments and natural setting.

4. In a paper provided to the Panel on Development (formerly known as "Panel on Planning, Lands and Works") in May 2007, the Administration advised that there were a total of 108 OZPs in force at that time, of which 49 had incorporated development restrictions on plot ratio/gross floor area and building height in all appropriate land use zones. The vast majority of the remaining OZPs also had such restrictions in some of the land use zones. In recent years, community awareness and aspirations for a better living environment had intensified. To address and respond to the community calls for lower development intensity, less congested building layouts and more open space, TPB had been taking a more comprehensive approach in progressively updating OZPs with appropriate development restrictions.

5. According to the Administration, the development restrictions under OZPs are enforced through the Buildings Ordinance and land sale/lease conditions. In the absence of specific development restrictions under some OZPs and in cases where specific planning approval from TPB is not required, the control of development intensities and building heights could be exercised through specific provisions contained in the land sale/lease conditions and will in any event be subject to the First Schedule to the Buildings (Planning) Regulations of the Buildings Ordinance, which specifies the maximum plot ratios and site coverage permitted for domestic and non-domestic buildings in relation to building heights, whichever is the lesser. This aims to control the bulk and space around buildings and streets.

6. The Administration has also advised in the same paper that for proposed developments in environmentally sensitive areas or Comprehensive Development Areas, TPB may require the project proponents to submit relevant environmental and visual impact assessment to ensure the scale of developments would not result in adverse environmental and visual impact.

### **Measures to improve air ventilation**

7. In 2003, after public consultation, the Administration introduced the Urban Design Guidelines, as a new chapter of the Hong Kong Planning Standards and Guidelines (HKPSG), setting out the major urban design considerations and the broad framework for urban design assessment. The considerations include general massing and disposition of buildings, stepped height profile for the protection of the ridgelines and the harbour view, provision of breezeways and view corridors, and setback of buildings at street level, etc. The implementation arrangements for the Urban Design Guidelines as set out in Chapter 11 of HKPSG are in **Appendix I**.

8. In 2005, the Planning Department completed the Feasibility Study for the Establishment of Air Ventilation Assessment System (the AVA Study). A set of design guidelines for the improvement of air ventilation was formulated on the basis of the AVA Study findings. The guidelines include the creation of major air paths and open space, appropriate street layout, reference for building design and disposition and the adoption of a varying building height profile and distribution to avoid wind blockage. The guidelines were incorporated into the Chapter "Urban Design Guidelines" of HKPSG in August 2006.

9. The AVA Study has also proposed a performance-based assessment system to compare the air ventilation impacts of various design options. In July 2006, the Government issued a joint Technical Circular to provide clear guidelines on matters concerning AVA. Proponent departments/bureaux or authorities responsible for major government projects are required to undertake AVA and ensure that air ventilation impact is given due consideration in the planning and design of major development and redevelopment proposals. The Technical Circular serves as an internal guideline for including AVA in major government projects. The Government will also conduct AVA for government sale sites to assess the impact of development on pedestrian wind environment.

10. The Administration has commissioned the "Urban Climate Map and Standards for Wind Environment -- Feasibility Study" which aims to provide an "urban climate map" to identify climatically sensitive areas, so as to provide a scientific basis for the formulation of air ventilation standards for plan making and assessment of the impact of major developments on the local wind environment. The Administration will examine the feasibility of formulating a set of air ventilation benchmarking standards after completion of the study in 2009.

### **Concerns and views expressed by Members**

11. The Panel on Development discussed the subject of "wall effect" with the Administration on 27 February 2007 and 21 February 2008. The Panel received views from concerned organizations and individuals at the meeting in 2007. Members have also raised questions on related issues at Council meetings since December 2006. The concerns and views expressed by Members and the Administration's responses are summarized in the ensuing paragraphs.

#### Causes of the problem

12. At the Panel meeting on 27 February 2007, deputations pointed out that a high plot ratio coupled with a large plot size would easily create the wall effect. The provision of bonus and exempted gross floor areas (GFA) in the building

approval process had resulted in the increase in building bulk. Moreover, railway property development projects which were usually undertaken on large and elongated sites were most likely to become screen-like buildings. Members in general shared the concerns of deputations, and raised further points as follows --

- (a) the crux of the problem lay in high development density and the presence of high-rise buildings along the waterfront blocking the views and air ventilation of the inland buildings;
- (b) the intended relaxation of the threshold for compulsory sale from 90% to 80% for private redevelopment projects might lead to more high-rise buildings creating the "wall effect"; and
- (c) building height alone might not lead to the "wall effect" if there was adequate spacing between buildings and the pavement was wide enough.

#### Measures to tackle the problem

13. Many deputations held the view that there was an urgent need for the Administration to devise a package of measures to prevent the emergence of further new developments creating the "wall effect". There were suggestions for a rational and scientific review of Hong Kong's long-term planning strategies and that the Government should improve the planning and building approval mechanisms to ensure that relevant planning intentions could be effectively implemented.

#### *Comprehensive review of existing OZPs*

14. Members have expressed the view that the Administration should deal with the "wall effect" at the time when OZPs are drawn up. The setting of plot ratio and other development restrictions is an effective means to guard against new developments causing the "wall effect".

15. According to the Administration, TPB is conducting a comprehensive review of the OZPs of various districts in a progressive manner and, where justified, review the relevant planning parameters to lower the development density. Priority is given to reviewing areas with potential land sale sites, areas subject to high development or redevelopment pressure and areas of special setting and character (e.g. areas around Victoria Harbour and within view corridors to important ridgelines) which warrant particular attention. In a paper provided to the Panel in January 2008, the Administration advised that since December 2006, five OZPs (for North Point, Wong Nai Chung, Homantin, Ma Tau Kok and Yuen Long) had been reviewed and amendments made to incorporate development restrictions.

Comprehensive review of 53 other OZPs would be undertaken to incorporate appropriate development restrictions progressively.

*Government sale sites*

16. According to the Administration, land sale sites included in the Application List have to comply with the land use zonings, planning intentions, development restrictions and other provisions (hereinafter called the requirements) as stipulated on the relevant OZP and approved departmental plans. The Government has observed the Technical Circular on AVA issued in July 2006 in deciding whether to undertake AVA for individual land sale sites from the 2007-08 Application List onwards. Where necessary, the Administration will conduct an AVA to assess the impact of the development on the pedestrian wind environment, and include the relevant restrictions in the Conditions of Sale of the land sale site to ensure that air ventilation in the surrounding area would not be adversely affected.

17. On a Member's suggestion that the Administration should duly consult environmental bodies and local residents prior to placing any site on the Application List, the Administration has advised that the Application List is a highly sensitive subject and hence public consultation prior to finalization of the list might not be feasible.

*Railway property developments*

18. Members have expressed concern on the visual and air ventilation impacts of other planned railway property developments including those on top of the Nam Cheong and Yuen Long Stations along the West Rail, and the planned Tsuen Wan West Station developments.

19. According to the Administration, the property development projects at Nam Cheong and Yuen Long Stations have already been approved by TPB. However, in response to public concerns, the Administration is engaging the local community in finalizing the revised schemes of property development projects of a reduced development intensity at the two property sites. Should there be losses arising from reduction in the development intensity, such losses would not have financial implication for the railway corporation because it is only the agent of the Government in the development of the property sites. However, this would have impact on public revenue and the supply of private housing.

20. As regards the three developments located at the sites of TW5, TW6 and TW7 of the Tsuen Wan West Station of the West Rail, the Administration has advised that the developments fall within a "Comprehensive Development Area". The Master Layout Plans (MLPs) for these developments were submitted by the

applicant (the former Kowloon-Canton Railway Corporation (KCRC)) to TPB for approval, which were granted planning permissions between 2000 and 2001. In approving the applications, TPB had taken into account the assessment of studies on the visual, traffic, environment and drainage impacts submitted by the former KCRC, as well as the views collected from consultation at the district level.

21. The Administration has also advised that as the above three developments were approved by TPB before the promulgation of the Technical Circular in 2006, the applicant need not submit AVA reports for the projects. The MLPs of the waterfront developments of TW5 and TW6 had been approved by TPB before planning guidelines on the construction of low-rise buildings along the waterfront were incorporated into the Urban Design Guidelines of the HKPSG in November 2003. Regarding the development of TW5, although the relevant MLP was approved in 2000, amendments to the approved MLP were initiated by the former KCRC, which included deleting one residential block at the waterfront site, constructing hotels at the non-waterfront site instead, adjusting the disposition of the buildings, and widening the breezeway and view corridor to improve the air ventilation and visual permeability. The amendments were approved by TPB on 29 June 2005.

22. The Administration has further advised that other existing railway development projects with approved planning schemes should be allowed to proceed. For these projects, relevant environmental considerations would have been incorporated in the scheme design, and fine-tuning of schemes would be made at the detailed design stage for continuous design improvement. Projects without approved planning schemes (including new railway extensions) will be planned and designed following the latest planning standards and design guidelines, including the undertaking of AVA where required.

#### *Legislative measures*

23. Some Members have expressed the view that all statutory bodies including the Urban Renewal Authority (URA) and the MTR Corporation Limited should be obligated to comply with the air ventilation guidelines laid down in the HKPSG when planning new developments. In the longer term, the Administration should make it a statutory requirement to conduct AVA for all development projects. There was also the suggestion that the planning of all large scale developments should be subject to a statutory planning process with the inclusion of public consultation procedures.

24. Members have pointed out that it is unrealistic to expect private developers not to develop a site to its maximum allowable potential in order to avoid the "wall

effect"<sup>1</sup>. It is therefore incumbent upon the Government to address the problem on various possible fronts, including the exercise of powers under the existing legislation to implement planning controls, to plug any loopholes in the existing legislation to prevent abuse by developers, and to introduce new legislation if necessary.

25. According to the Administration, at present, AVA will be conducted for those government sale sites above a certain size, and developments in Comprehensive Development Areas are subject to statutory planning procedures. Development restrictions such as site coverage, maximum gross floor area/plot ratio, building height, podium size, building set-back etc. can be added to the Conditions of Sale for government sale sites by the Director of Lands. For Comprehensive Development Areas, developers would be required by TPB to conduct visual impact assessment and AVA and propose mitigation measures. The Administration has stressed that as scientific standards for air ventilation are yet to be drawn up, it may be risky to go for further legislation in a hasty manner. Besides, inappropriate or excessive legislation may bring about considerable adverse impact on real estate developments.

26. The Administration has affirmed that the URA has strictly mandated that all of its projects must conform with prevailing environmental stipulations. For this reason, URA has decided that for its projects still under planning, reference will be made to the guidelines on AVA in order to meet the community's environmental aspirations. The Administration will continue to encourage quasi-government organizations and the private sector to include AVA in the planning and design of their projects on a voluntary basis.

27. A Member has suggested that Hong Kong may adopt the relevant standards used in the Mainland which are based on building height and distance between buildings. The standards are meant to ensure that sunshine can reach every part of the street in a day. In response, the Administration has advised that the "natural light" standards currently in use in the Mainland may not be applicable to Hong Kong. Nevertheless, the Administration will explore the feasibility of specifying standard ratios between building height and distance between buildings in building regulations.

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<sup>1</sup> In its submission to the Panel, the Real Estate Developers Association of Hong Kong stated that developers were obligated under fiduciary responsibilities to develop a site to its maximum allowable potential and failing to do so might lead to litigation. The only sensible and practical way to tackle the "wall effect" issue was to address it early at the planning stage. Before sites were released to the market, a lower development density and a lighter building bulk could be specified.

*Other issues*

28. Members have sought clarification on whether the redevelopment of an existing building is subject to the development restrictions newly imposed on OZPs. The Administration has advised that in general, existing buildings will not be affected by development restrictions newly imposed on OZPs. However, when an existing building is to be redeveloped, the redevelopment would be subject to the new development restrictions, or the bulk and height of the existing building, whichever is the greater, if the OZPs so provide.

29. As regards the considerations for the imposition of development restrictions in reviewing the existing OZPs, the Administration has advised that TPB will take all relevant considerations into account, including the land rights of affected private properties under leases which are balanced against the general interest of the community. Various other factors including transport facilities, surrounding areas, visual impact of the proposed development, heights of nearby buildings etc. would also be taken into consideration.

30. Some Members have expressed the view that given the peculiar characteristics of Hong Kong, there may not be an easy panacea for the problem. There is also a view that development rights should be protected by law and free from political influence and challenges of individuals and organizations. The Government should not use arbitrary measures to reduce the development intensities of approved developments. Otherwise, Hong Kong's standing as an international city would be undermined.

31. A list of relevant papers is in **Appendix II**.

**Implementation arrangements for the Urban Design Guidelines  
set out in Chapter 11 of the Hong Kong Planning Standards and Guidelines**

**8. Implementation**

- 8.1 Urban design guidelines can be incorporated through the existing statutory and administrative mechanisms.
- 8.2 The statutory means include: (1) regulation of building heights, site coverage, plot ratios, etc through stipulation in Notes of Outline Zoning Plans prepared under the Town Planning Ordinance; (2) control building layouts through submission of master layout plans in areas zoned "Comprehensive Development Area" on Outline Zoning Plans; (3) control on individual building designs under the Buildings Ordinance; and (4) control on heritage features under Antiquities and Monuments Ordinance.
- 8.3 The administrative mechanisms include (1) incorporation and consideration of urban design elements in the preparation of the lease conditions for development sites, e.g. the "Design, Disposition and Height" clause. Lease conditions could include restrictions on design and disposition of buildings, building heights, types of dwelling, landscaping works and requirements for master layout plans etc.; and (2) undertake urban design studies at district or local levels for new large scale development or redevelopment to set out more detailed guidance.

## Appendix II

### "Wall effect" of developments and measures to control development intensity

#### List of relevant papers

Date	Meeting	References
20 December 2006	An oral question on "Improvement of air ventilation" was raised at the Council meeting.	Hansard (pages 30 to 38) ( <a href="http://www.legco.gov.hk/yr06-07/english/counmtg/hansard/cm1220-translate-e.pdf">http://www.legco.gov.hk/yr06-07/english/counmtg/hansard/cm1220-translate-e.pdf</a> )
27 February 2007	PLW Panel discussed the subject of "Developments creating the wall effect" with the Administration and deputations.	Discussion paper ( <a href="http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/plw0227cb1-983-7-e.pdf">http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/plw0227cb1-983-7-e.pdf</a> )  Minutes of meeting ( <a href="http://www.legco.gov.hk/yr06-07/english/panels/plw/minutes/pl070227.pdf">http://www.legco.gov.hk/yr06-07/english/panels/plw/minutes/pl070227.pdf</a> )  Follow-up paper ( <a href="http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/plw0227cb1-1406-1-e.pdf">http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/plw0227cb1-1406-1-e.pdf</a> )  Other papers and submissions ( <a href="http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/plwia.htm">http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/plwia.htm</a> )
28 February 2007	A written question on "Screen-like Buildings" was raised at the Council meeting.	Hansard (pages 7 to 9) ( <a href="http://www.legco.gov.hk/yr06-07/english/counmtg/hansard/cm0228-translate-e.pdf">http://www.legco.gov.hk/yr06-07/english/counmtg/hansard/cm0228-translate-e.pdf</a> )
9 May 2007	A motion on "Improving the planning for Hong Kong and reducing screen-like buildings" was moved at the	Hansard (pages 167 to 247) ( <a href="http://www.legco.gov.hk/yr06-07/english/counmtg/hansard/cm0509-translate-e.pdf">http://www.legco.gov.hk/yr06-07/english/counmtg/hansard/cm0509-translate-e.pdf</a> )

Date	Meeting	References
	Council meeting. The motion was negated.	
13 June 2007	A written question on "Wall effect caused by buildings" was raised at the Council meeting.	Hansard (pages 61 to 63) ( <a href="http://www.legco.gov.hk/yr06-07/chinese/counmtg/floor/cm0613-confirm-ec.pdf">http://www.legco.gov.hk/yr06-07/chinese/counmtg/floor/cm0613-confirm-ec.pdf</a> )
26 June 2007	PLW Panel discussed the subject of Amendments made by the Town Planning Board to Outline Zoning Plans to impose development restrictions.	Discussion paper ( <a href="http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/plw0522cb1-1643-4-e.pdf">http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/plw0522cb1-1643-4-e.pdf</a> )  Minutes of meeting ( <a href="http://www.legco.gov.hk/yr06-07/english/panels/plw/minutes/pl070626.pdf">http://www.legco.gov.hk/yr06-07/english/panels/plw/minutes/pl070626.pdf</a> )  Follow-up paper ( <a href="http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/dev0626cb1-299-1-e.pdf">http://www.legco.gov.hk/yr06-07/english/panels/plw/papers/dev0626cb1-299-1-e.pdf</a> )
21 February 2008	Panel on Development discussed the subject of "Measures to prevent new developments from creating a wall effect".	Discussion paper ( <a href="http://www.legco.gov.hk/yr07-08/english/panels/plw/papers/dev0122cb1-605-4-e.pdf">http://www.legco.gov.hk/yr07-08/english/panels/plw/papers/dev0122cb1-605-4-e.pdf</a> )  Minutes of meeting ( <a href="http://www.legco.gov.hk/yr07-08/english/panels/plw/minutes/de080221.pdf">http://www.legco.gov.hk/yr07-08/english/panels/plw/minutes/de080221.pdf</a> )
25 June 2008	An oral question on "Property Development at Tsuen Wan West Station" was raised at the Council meeting.	Hansard (pages 28 to 34) ( <a href="http://www.legco.gov.hk/yr07-08/chinese/counmtg/floor/cm0625-confirm-ec.pdf">http://www.legco.gov.hk/yr07-08/chinese/counmtg/floor/cm0625-confirm-ec.pdf</a> )