

立法會 *Legislative Council*

LC Paper No. CB(1) 193/09-10(04)

Ref. : CB1/PL/HG

Panel on Housing

Meeting on 2 November 2009

Updated background brief on environment-friendly designs and green measures implemented in public rental housing estates (Position as at 30 October 2009)

Purpose

This paper sets out the progress of environment-friendly designs and green measures implemented in public rental housing (PRH) estates, and gives a brief account of the views and concerns expressed by the Panel on Housing (the Panel).

Background

2. In 2004, the Housing Authority (HA) has adopted a comprehensive strategy on sustainable development to enhance environmental protection and to provide a healthy and comfortable living environment for tenants. Since then, the following environment-friendly elements have been incorporated in the planning, design and construction of PRH estates -

- (a) Micro-climate studies – to ensure that the built environment so designed will enable residents to enjoy natural day light and ventilation;
- (b) Air Ventilation Assessment – to assess whether the developments would pose restriction to air flow;
- (c) Common W-trap system in drainage facilities – to divert waste water from wash basins and shower areas to floor traps, which prevents the floor traps from drying up and helps seal off exhaust gas and bacteria from other storeys, thereby preventing the spread of germs;
- (d) Domestic waste management – two types of compactor system have been adopted to reduce refuse volume, and a volume control device has been installed to prevent refuse spillage and odour leakage during the refuse handling process;
- (e) Refuse storage and collection design to promote sorting at source – in addition to the Refuse Storage and Material Recovery Rooms on

typical floors to accommodate the three recycle refuse bins, an area of not less than 10 square metres would be set aside as Material Recovery Point for sorting and storage of recyclables;

- (f) Installation of de-odourizers at refuse collection points – new de-odourizers would be installed at the covered refuse collection points in some of the estates to help contain the odours at time of refuse collection;
- (g) Energy saving designs – to ensure that all new housing projects will meet the energy efficiency requirements on lighting, electricity, air conditioning, lift and escalator installations;
- (h) Use of renewable energy – selected estates would be installed with solar photovoltaic system and solar-wind combined power lighting to evaluate the effectiveness and long-term performance of such installations;
- (i) Green construction techniques and waste management – modular design and component prefabrication techniques would be adopted as far as practicable to conserve resources and reduce construction waste;
- (j) "Life Cycle Assessment" and "Life Cycle Costing" – to enable HA to develop a technically and economically viable procurement strategy for more environment-friendly materials;
- (k) More environment-friendly façade – the new design features, including extended overhang, reduced window glazing and more use of tinted glass, will help conserve energy; and
- (l) Increased greening in PRH estates – the scope of greening in all housing developments has been increased. This includes a pilot scheme for using prefabricated “vertical green panels” for growing plants on roofs or facades of building.

3. In addition, the Housing Department (HD) is also actively pursuing the following greening and environmental protection initiatives in PRH estates -

- (a) "Green Delights in Estates" – the programme would be rolled out in phases to cover all PRH estates with a view to promoting environmental awareness among PRH tenants;
- (b) Action Seedling – seedling plants would be given out to participants who are willing to nurture the plants at home until they are ready for transplanting to planters of new estates;
- (c) Domestic Waste Disposal – floor-based facilities are provided to facilitate tenants to dump their recyclable waste for separation and recovery;

- (d) Energy conservation – the trial scheme on energy conservation has been extended to ten other estates to further test and assess its effectiveness; and
- (e) Housing Channel – the Housing Channel broadcast at the G/F lift lobbies of PRH blocks has been used to disseminate green messages to encourage tenants to lead a green life.

Deliberations by the Panel

4. The environment-friendly designs and green measures implemented in PRH estates were discussed at the Panel meeting on 3 December 2007.

5. While appreciating the efforts of HA in implementing environment-friendly initiatives in PRH estates, members emphasized that the measures to increase greening in PRH estates should not be cosmetic, but should be implemented in a comprehensive manner covering areas such as rooftops of housing blocks, school premises, shopping centres, leisure facilities and bare slopes covered with cement. However, care should be taken to ensure that the roots of plants would not affect the structural safety of external walls. HA should also pursue the "green office" practices as far as practicable.

6. On the adoption of component prefabrication techniques as a means to promote green construction practices, some members expressed concern that this might adversely affect the employment opportunities of local construction workers, and ran contrary to the Administration's pledge to create more jobs in Hong Kong. They pointed out that under the green procurement policy, more emphasis should be put on using green construction techniques to help generate local demand. HA should also endeavour to use more recycled materials in new PRH projects, with a view to promoting the development of local recycling industry as well.

7. On energy conservation, members noted that the trial scheme launched in early 2007 in Homantin Estate had resulted in savings of about 11% in power consumption. They therefore supported the extension of the trial scheme to other PRH estates so as to reduce the overall electricity consumption in Hong Kong. While welcoming the initiative to use solar power in new PRH estates, members stressed the need to work out an implementation timetable for rolling out the project by phases within the next ten years. They also considered that HA should aim at standards higher than the statutory requirements under the Building Energy Codes, given that the implementation of energy saving requirements in PRH estates could substantially reduce the heat island effect.

8. To keep members abreast of the progress of implementation of environment-friendly measures, the Administration was requested to submit an annual report to the Panel on the effectiveness and progress of these measures as well as the targets set for the following year.

9. At its meeting on 3 November 2008, the Panel discussed the effectiveness of the measures adopted in 2007-2008 and the targets for 2008-2009. Details are set out in the Annex to LC Paper No. CB(1) 149/08-09(04) which is hyperlinked below for ease of reference. Some members stressed the need to improve the designs of PRH estates to avoid a “wall effect”. They also expressed concern about the use of precast concrete components since the overly extended use of these components might undermine the job opportunities of local construction workers. However, they would not object to the use of precast concrete components if these were manufactured in Hong Kong. To this end, consideration should be given for the Administration to set aside some rural areas for the manufacture of precast concrete components with a view to retaining the relevant job opportunities in Hong Kong. Other members were concerned that HA would dispense with the existing arrangement of collecting domestic waste by contractors, and require tenants to dispose of their own waste after the provision of refuse chutes. They also cautioned about the hygienic nuisance if refuse chutes went out of service due to improper maintenance. To improve energy conservation, members considered that the existing incandescent lamps used in lifts and common areas of PRH estates should be replaced by compact fluorescent lamps. More efforts should be made in using renewable energy in PRH estates. They also expressed dissatisfaction about the slow progress of vertical greening and green rooftops.

Latest development

10. The Administration has proposed to brief the Panel on the effectiveness of environment-friendly measures adopted in 2008-2009 and the targets for 2009-2010 at the next Panel meeting on 2 November 2009..

Relevant papers

Information paper provided by the Administration for the Housing Panel meeting on 3 December 2007

<http://www.legco.gov.hk/yr07-08/english/panels/hg/papers/hg1203cb1-340-3-e.pdf>

Minutes of the Housing Panel meeting on 3 December 2007

<http://www.legco.gov.hk/yr07-08/english/panels/hg/minutes/hg071203.pdf>

Information paper provided by the Administration for the Housing Panel meeting on 3 November 2008

<http://www.legco.gov.hk/yr08-09/english/panels/hg/papers/hg1103cb1-149-4-e.pdf>

Minutes of the Housing Panel meeting on 3 November 2008

<http://www.legco.gov.hk/yr08-09/english/panels/hg/minutes/hg20081103.pdf>