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For discussion

**A Draft Comprehensive Plan to
Tackle Road Traffic Noise in Hong Kong**

PURPOSE

This paper seeks members' views on a draft comprehensive plan (at **Annex**) to tackle road traffic noise in Hong Kong.

BACKGROUND

2. Like other metropolitan cities, road traffic noise in Hong Kong has become a significant environmental problem that affects a large number of citizens. Excessive traffic noise detracts from the quality of life.
3. The Government's overall policy objectives for road traffic noise control are to ensure that a satisfactory noise environment is attained and maintained in order to safeguard better quality of life for the public, and to protect people against excessive road traffic noise. The Government aims to avoid creating new environmental problems and seize opportunities for environmental improvement as they arise.
4. When planning new roads, or projects involving substantial widening of existing roads, the relevant government department or developer must ensure that traffic noise at residential flats will stay within the noise standard. It is the Government's policy since 1989 that, as a general principle, equitable redress in the form of direct technical remedies should continue wherever practicable where people are adversely affected by the use of a new road. Also, the Environmental Impact Assessment Ordinance (EIAO), which came into operation in 1998, requires all major new roads or road modifications to meet

the traffic noise standard.

5. To address noise impact from existing roads, the Government introduced in November 2000 a policy to implement engineering solutions by way of retrofitting of barriers and enclosures, and resurfacing with low noise material, where practicable, at existing excessively noisy roads. Where engineering solutions are impracticable or where engineering solutions alone are inadequate in reducing the noise to a level below the noise limits, traffic management schemes would be explored where practicable on a case by case basis.

PROGRESS AND SUCCESSES OF THE EXISTING MEASURES

6. The Government has been tackling the road traffic noise problems through a 4-pronged approach -

- (a) prevent noise problems through actions at the outset of land use planning and project design whenever practicable;
- (b) avoid importing noisy vehicles into Hong Kong through legislation;
- (c) address the existing traffic noise problems through abatement programmes; and
- (d) getting the public and other stakeholders involved through education, engagement and partnership programme.

7. Over the past 10 to 15 years, preventive measures implemented through planning of new towns, new residential developments and housing redevelopments have benefited 150,000 dwellings accommodating about 500,000 people. Also, planning of new roads brought benefits to more than 190,000 people through inputs on road alignment, provision of low noise road surfacing and erection of 49 km barriers.

8. Regulation has been in place since August 1996 requiring that only those vehicles complying with the noise emission standards shall be allowed for first registration in Hong Kong. The standards were further tightened in 2002 to bring them in line with the international standards.

9. From 1989 to 1999, the Government also resurfaced 11 km of suitable high speed highway sections with low noise material at cost of HK\$94 million, bringing some relief to 15,600 dwellings.

10. Since the introduction of the government retrofitting policy in November 2000, 36 existing road sections costing about HK\$2,400 million have been identified for retrofitting works. The noise barrier retrofit programme would benefit about 26,000 dwellings upon implementation. So far, 2 road sections in Sheung Shui and Fanling have been retrofitted with noise barriers, and the noise barrier for one road section in Tsuen Wan has commenced construction in September 2005. 18 retrofitting projects have been earmarked with funds for implementation in the next 6 years.

11. In addition, 72 local low speed road sections have been identified for further feasibility studies on their suitability to be resurfaced with low noise surfacing material. This resurfacing programme would be completed by 2010 benefiting about 40,000 dwellings and the cost is about HK\$80 million. So far, 25 road sections have been resurfaced with low noise material benefiting about 15,000 people.

12. An education package for school children and the public has been made available on the web for dissemination of general knowledge about acoustics and noise. Seminars with teachers were organized. A digital 3-dimensional noise modeling and visualization tool has been applied to public consultation for some projects to facilitate public engagement and understanding. Roundtable forum or seminars on noise policy issues have been organized to promote interactive dialogues with professional institutions, noise experts and academics in Hong Kong.

EXTENT OF RESIDUAL ROAD TRAFFIC NOISE PROBLEM IN HONG KONG

13. The existing measures have benefited about 760,000 people. Nonetheless, because of the continuous growth in the economy, population and transport demand and the scarcity of land, about 1.1 million people in Hong Kong are still exposed to high levels of road traffic noise exceeding 70 dB(A) $L_{10}(1 \text{ hour})$ ¹.

¹ $L_{10}(1 \text{ hour})$ is the noise level exceeded for 10% of a one-hour period, generally used for road noise at peak traffic flow. The limit adopted in EIAO and Hong Kong Planning Standards and Guidelines (HKPSG) for assessing road traffic noise affecting residential buildings.

14. Alongside economic growth, there is a rising community aspiration for a better noise environment. In the past 5 years, Environmental Protection Department received an average of some 400 complaints each year. Road traffic noise issues have constantly been raised in the Legislative Council, the District Councils and the media.

15. The situation is expected to get worse if development trends continue. The Strategic Environmental Assessment in the Third Comprehensive Transport Study completed in 1999 has predicted that by 2016, there could be 50% increase in population exposed to excessive traffic noise, as compared with the situation in 1997 and the exposure period would be prolonged and excessive traffic noise would intrude from early in the morning to night-time hours. The latest review indicates a possible improvement but there could still be some 10% increase in population exposed to excessive traffic noise around 2016. A comprehensive action plan is therefore required to prevent worsening of the situation and improve the noise environment.

ENHANCED MEASURES IN THE DRAFT COMPREHENSIVE PLAN

16. A balanced, integrated, proactive and transparent strategy is needed to tackle the road traffic noise problems. In addition to what the Government is doing, we propose the following enhanced measures to tackle the road traffic noise problems -

- (a) Extending the trial of low noise road surfacing materials: we would identify more local roads as part of trial programme to test out the effect in terms of noise reduction and engineering ability;
- (b) Exploring new design of low noise road surfacing materials for wider application: we would commission a comprehensive study to review the application of low noise road surfacing materials in Hong Kong and to develop a more durable low noise road surfacing material with enhanced noise reduction effect;
- (c) Exploring optimum barrier design for wider application: we would commission a focus study to look into the design of roadside barriers in Hong Kong with a view to developing an optimum system and design with enhanced noise reduction ability for wider application in

the territory;

- (d) Feasibility study of controlling noise emission from in-use vehicles: guidance notes on noise conscientious driving habits and proper maintenance of vehicle would be drafted for the trade and franchisees to use to minimize noise nuisances. The feasibility of controlling noise from in-use vehicles would also be looked into as a medium and longer-term measure;
- (e) Review of the Professional Practice Note on Road Traffic Noise: we would review and amend the Practice Note with a view to improving the noise performance of new residential developments so as to protect more future residents from excessive road traffic noise, and providing more noise information to the public in a more transparent manner;
- (f) Promoting the disclosure of noise information in the sales brochure: we would explore, in consultation with the concerned bureaux and departments and other stakeholders, the feasibility of disclosing noise information to the prospective property purchasers in sales brochures;
- (g) Improving joints at flyovers: to reduce noise arising from heavy vehicles running on joints at flyovers, research assignment would be commissioned to look into improving the design and maintenance of the joints;
- (h) Night-time traffic noise standard: we would commission a study to investigate the need and feasibility of establishing night-time traffic noise criteria in Hong Kong; and
- (i) Public engagement and partnership: we would continue to promote research and development on various noise reduction measures and noise planning tools for public engagement and better planning and design. The Government would build partnership with the research institutions, universities and professional bodies.

17. Details of the proposed enhanced measures are set out in the Digest of the Draft Comprehensive Plan at **Annex**.

WAY FORWARD

18. We plan to consult the Legislative Council Panel on Environmental Affairs on the Draft Comprehensive Plan in June 2006. We would also consult the stakeholders including the concerned District Councils, transport trades, public transport operators, professionals, academia, developers, green groups and the general public on the proposed actions and measures at various stages of development. To facilitate public engagement and better public understanding, we would shortly launch a dedicated web site on road traffic noise in Hong Kong. We would take into account the results of the consultation for further development of the action plans.

ADVICE SOUGHT

19. Members are invited to comment on the Draft Comprehensive Plan.

Environmental Protection Department
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