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**LegCo Panel on Environmental Affairs and
LegCo Panel on Transport**

**Minutes of joint meeting
held on Friday, 15 December 2000 at 9:30 am
in the Chamber of the Legislative Council Building**

- Members Present** : Members of Panel on Environmental Affairs
Prof Hon NG Ching-fai (Chairman)
Hon Cyd HO Sau-lan (Deputy Chairman)
- * Ir Dr Hon Raymond HO Chung-tai, JP
Hon Bernard CHAN
 - * Hon Mrs Miriam LAU Kin-ye, JP (Chairman of Panel
on Transport)
Hon Emily LAU Wai-hing, JP
Hon LAW Chi-kwong, JP
 - * Hon Abraham SHEK Lai-him, JP (Deputy Chairman of
Panel on Transport)
 - * Hon Tommy CHEUNG Yu-yan, JP
Hon Michael MAK Kwok-fung
 - * Hon Albert CHAN Wai-yip
 - * Hon LAU Ping-cheung

Members of Panel on Transport

Hon David CHU Yu-lin
Hon Albert HO Chun-yan
Hon LAU Kong-wah
Hon Andrew CHENG Kar-foo
Hon TAM Yiu-chung, GBS, JP
Dr Hon TANG Siu-tong, JP
Hon WONG Sing-chi

(* Also members of the LegCo Panel on Transport)

- Members Attending** : Hon Fred LI Wah-ming, JP
Hon CHAN Kam-lam

Members : Members of Panel on Environmental Affairs

Absent Hon Martin LEE Chu-ming, SC, JP
Hon Eric LI Ka-cheung, JP
Hon WONG Yung-kan
Hon CHOY So-yuk
Hon Henry WU King-cheong, BBS
Dr Hon LO Wing-lok

Members of Panel on Transport

Hon Mrs Selina CHOW LIANG Shuk-yea, JP
Hon CHAN Kwok-keung
Hon Andrew WONG Wang-fat, JP
Hon LAU Chin-shek, JP

Public Officers : Mr Thomas CHOW

Attending Deputy Secretary for the Environment and Food

Mr Howard CHAN
Principal Assistant Secretary for the Environment and Food

Mr Brian LO
Principal Assistant Secretary for Transport

Mr Alvis AU
Assistant Director (Environmental Assessment & Noise)
Environmental Protection Department

Mr K S CHAN
Principal Environmental Protection Officer
Environmental Protection Department

Mr C K WONG
Deputy Director of Highways

Mr S M LI
Assistant Commissioner for Transport (Urban)

Clerk in : Mrs Constance LI
Attendance Chief Assistant Secretary (2) 5

Staff in : Mr Andy LAU
Attendance Chief Assistant Secretary (1) 2

Ms Alice AU
Senior Assistant Secretary (1) 5

Ms Joanne MAK
Senior Assistant Secretary (2) 2

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I. Election of Chairman

Mrs Miriam LAU was elected Chairman of the meeting.

II. Measures to address noise impact of existing roads
(LC Paper No. CB(2) 482/00-01(01))

2. At the Chairman's invitation, Deputy Secretary for the Environment and Food (DS(EF)) briefed members on the salient points of the paper provided by the Administration. He explained that under the existing policy, when planning new roads, all practicable direct engineering measures including erection of noise barriers or enclosures must be adopted if it was envisaged that traffic noise generated would exceed the noise limit of 70 dB(A). Under the new policy, the application of such measures would be extended to existing roads where practicable. He said that the Administration had now identified 29 existing roads for retrofitting of noise barriers/enclosures and 72 roads as candidates for resurfacing with low noise material. He added that the retrofitting works would be implemented in phases, with priority given to areas with the highest noise exposure level and the largest number of affected residents.

3. DS(EF) said that where direct engineering solutions were impracticable or where these solutions alone were inadequate to reduce noise to an acceptable level, the feasibility of non-engineering solutions such as traffic management measures would be explored and implemented on a case-by-case basis. Such measures would be assessed with regard to their implications on road users. He said that the Administration would brief the Advisory Council on the Environment and the relevant District Councils on the new policy and the proposed implementation programme.

Installing double-glazed windows/air-conditioners for affected residents

4. Noting that a majority of the excessively noisy roads were technically infeasible for retrofitting or any other mitigating measures, Mr CHAN Kam-lam asked whether the Administration would consider installing double-glazed windows for residents suffering from the noise impact of these roads.

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5. DS(EF) explained that installation of double-glazed windows for affected residents would need to go with air-conditioners. However, previous surveys revealed that elderly people generally did not like air-conditioning particularly in winter. It was estimated that about 300 000 residential units were affected by the 655 excessively noise roads and the total costs for installation works would be at least \$15 billion (i.e. assuming \$50,000 for each residential unit). DS(EF) said that in view of the financial implications, the Administration would have to carefully consider the suggestion. At the present stage, the Administration only planned to adopt engineering or traffic management measures to address road noise problems at source, which should always be the most effective solution.

6. Mr CHAN Kam-lam pointed out that some residents living close to the excessively noisy roads (such as flyovers) were suffering from a noise level in excess of 75 dB(A). He considered that the Administration should address the noise problem faced by these residents. DS(EF) admitted that the proposed retrofitting programme could not resolve all the noise problems pertaining to existing roads, which would have to be addressed in a comprehensive manner through urban renewal and better town planning in the long term. He said that in the short term, the Administration would resort to non-engineering options (such as traffic management measures) for existing excessively noisy roads where engineering solutions were impracticable.

7. The Chairman asked whether the Administration would consider installing double-glazed windows and air-conditioners for residents living close to flyovers and exposed to excessive traffic noise. DS(EF) pointed out that the 29 existing roads identified for retrofitting included 6 flyovers. He stressed that the guiding principle for the selection of existing roads for application of mitigating measures was that the traffic noise generated was above the level of 70dB(A). He pointed out that the noise level of a road or flyover depended on the actual traffic volume, and that the noise level of flyovers might not be necessarily higher than that of other roads. He said that the Administration would need to adopt an equitable approach for all residents who were affected by traffic noise over 70dB(A).

8. Mr Fred LI expressed support for Mr CHAN Kam-lam's suggestion of installing double-glazed windows and air-conditioners for residents living close to excessively noisy flyovers. He pointed out that some of the existing 655 roads where noise barriers were impracticable (such as those in Mongkok and Yue Man Square) were at a noise level in excess of 75 or 80 dB(A) throughout the day. Mr Fred LI considered that the Administration should at least accord priority to those existing roads where the noise level was as high as 80dB(A) and make special arrangement for the installation of double-glazed windows and air-conditioners in the affected residential units.

9. DS(EF) reiterated that for equity reasons, the same policy would be adopted to address the noise impact of existing roads at a noise level in excess of 70dB(A). DS(EF) explained that under the new policy, a number of measures including

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traffic management strategies would be introduced to address the noise impact of existing roads. He said that other options would be explored at a later stage after the Administration had examined the feasibility of introducing measures such as traffic management solutions.

Implementation programme and financial implications of the new policy

10. Mr Fred LI expressed concern that the proposed retrofitting programme would take as long as ten years to complete. Noting that the funding required for implementing the new policy would be sought under the normal resource allocation mechanism, Mr LI asked how the Administration could ensure that adequate resources would be secured for retrofitting barriers/enclosures at the 29 existing roads currently identified.

11. DS(EF) stressed that the implementation timetable would take into account the practical constraints and the impact on traffic circulation. He explained that given the many on-going road construction and maintenance work projects, it would be necessary to implement the retrofitting and resurfacing programmes by phases to avoid causing great traffic problems. He added that retrofitting works for four existing roads could commence once resources were secured. Planning of the remaining roads and the consultation would be carried out concurrently.

12. Mr LAU Kong-wah asked whether it was possible to expedite the implementation programme so that it would not take as long as ten years to complete. DS(EF) responded that the implementation timetable given in Enclosure 4 of the Administration paper was only tentative and the Administration would seek to expedite the implementation programme where conditions and resources permitted.

13. In response to Mr LAU Kong-wah's further enquiry, DS(EF) said that the estimated capital cost and recurrent cost of the retrofitting and resurfacing programmes were detailed in paragraphs 18 to 20 of the LegCo Brief on the subject.

14. Referring to paragraph 5 of the Administration's paper, Mr LAU Kong-wah suggested that where retrofitting was planned for both an existing road and its adjoined new road which was under construction, the existing road should have higher priority than other existing roads for retrofitting noise barriers/enclosures. DS(EF) responded that to minimize disturbance to road users and residents, it was the Administration's intention that retrofitting of barriers/enclosures on an existing road and its adjoined new road should be carried out in parallel where practicable. He said that Mr LAU's view would be taken into consideration.

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Effectiveness and design of noise barriers

Admin 15. Mr LAU Kong-wah asked what remedial measures would be taken if the noise barriers installed still failed to reduce traffic noise to an acceptable level. Assistant Director (Environmental Assessment & Noise) (AD(EAN)) of the Environmental Protection Department (EPD) said that in the past few years, the Administration had assessed the effectiveness of a number of noise barriers already installed in reducing traffic noise, and the results indicated that noise reduction performance of these noise barriers was within the range of predictions. At Mr LAU's request, he agreed to provide the relevant assessment results as far as practicable.

16. AD(EAN) further said that under the current policy, the department or developer concerned was required not only to adopt all practicable measures to reduce the noise impact of new roads on neighbouring residents, but also to provide information to EPD on the effectiveness of the mitigating measures taken for noise reduction. AD(EAN) said that reference would be made to such information and past experience when designing noise barriers/enclosures to ensure their effectiveness.

17. Mr Albert CHAN pointed out that many residents eagerly awaited the construction of noise barriers/enclosures on the excessively noisy roads. He said that the Administration should not design ugly barriers/enclosures in the hope of deterring people from demanding for these structures. DS(EF) said that it was definitely not the Administration's intention to adopt ugly design of noise barriers with a view to deterring people from demanding for their construction. AD(EAN) added that in future due attention would be paid to the aesthetic design of noise barriers and enclosures. To prevent barriers/enclosures from being unduly obtrusive, the visual and landscape impacts would be included in the environmental impact assessment process of the retrofitting programme. Moreover, the design of a noise barrier/enclosure would be provided to the District Councils concerned for consultation and agreement beforehand. The Administration would also explore the feasibility of plantations at noise barriers and enclosures to improve their visual impacts.

Non-engineering measures - traffic management solutions

18. Ms Emily LAU requested for more information on the Administration's initial plan for introducing the traffic management measures. She asked whether the Administration had started to consult those who would be affected by these measures. Assistant Commissioner for Transport (Urban) (AC for T(U)) said that the Administration was in the process of identifying a few existing roads in each region for implementation of traffic management measures on a trial basis to reduce traffic noise. The selection of the roads was based on the following factors -

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- (a) the traffic noise generated exceeded 80 or 85dB(A);
- (b) the living density alongside the road was relatively high; and
- (c) a large number of complaints had been received against the traffic noise generated by the road.

AC for T(U) said that the Administration would consult the transport industry and District Councils concerned in formulating the proposal. He informed members that the Administration had started a trial scheme of prohibiting heavy vehicles from using the West Kowloon Corridor during certain periods of time. As the trial period was coming to an end, the Administration would conduct an evaluation on the effects of the trial scheme. In response to Ms Emily LAU and the Chairman, DS(EF) said that the Administration would have to strike a balance between the interests of affected residents and the transport industry in formulating the traffic management measures.

Planning of roads

19. Dr Raymond HO commented that the Administration should adopt all possible measures to eliminate sources of traffic noise during the early stages of planning and designing new roads. He suggested that the following measures should be taken in the planning of roads -

- (a) heavy vehicles should be restricted from passing through densely populated areas and required to use roads further away from the residential areas;
- (b) more trees should be planted along the roads to abate traffic noise;
- (c) there should be tighter control over unnecessary sounding of horns on the road, converting of motor vehicles to high-speed vehicles and speeding to avoid emergency braking causing subsequent damage to road surface; and
- (d) asphalt surface was preferred to concrete surface as the former was much easier and less noisy to be dug up during resurfacing.

20. Dr Raymond HO pointed out that many of the existing noise barriers were as high as 11 metres and were an eyesore. He considered that noise barriers were not very effective in noise reduction as they were not capable of absorbing noise. He also criticised noise barriers for taking up a lot of space, affecting air circulation, and expensive to build. Dr HO added that some developed countries such as Japan had abandoned the use of noise barriers already and he suggested that the Administration should explore other measures such as alignment adjustment.

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21. Professor NG Ching-fai agreed with Dr Raymond HO's analysis of the problem. He also urged the Administration to be forward-looking in addressing the problem of traffic noise.

22. DS(EF) agreed with Dr Raymond HO that environmental considerations should be taken into account in the planning of roads in order to reduce traffic noise at source. He said that therefore, under the present policy, all practicable direct engineering measures for noise abatement must be adopted in planning new roads. DS(EF) further said that the Administration would also explore different traffic management measures to abate traffic noise, including diverting heavy vehicles to roads farther away from residential buildings where feasible. The design of the noise barriers or enclosures would in future take into account the landscape and visual impacts. Where possible, plants would be grown at these structures to enhance the visual and landscape quality.

23. As regards car alterations, DS(EF) pointed out that under existing legislation, it was an offence for a car owner to alter, without the Commissioner for Transport's approval, the construction of his car resulting in increased noise emission of the exhaust-pipe or the engine of the car. He said that the police could detain such cars when found and take prosecution against the owners concerned. He added that all motor vehicles were required to comply with the construction requirements as laid down by the Transport Department. On the situation in Japan, DS(EF) said that about 30% of the population in Japan were suffering from excessive traffic noise as compared to 16% in Hong Kong. It was a matter of choice of the community as to whether noise barriers were the preferred approach to abate traffic noise.

24. On road surfacing material, Deputy Director of Highways said that it was the established practice to add a layer of asphalt onto the concrete surface of many highway structures which were close to a residential area in order to reduce traffic noise. He added that except for highways and flyovers which were basically reinforced concrete structures, many roads were in fact asphalt-surfaced.

25. Mr Andrew CHENG criticized the Administration for the lack of coordination amongst relevant policy bureaux in reducing the impact of excessive traffic noise when planning new roads. He said that both the Works Bureau and Transport Bureau had failed to take this into account in the road construction programmes. Citing the proposed Road T7 in Ma On Shan as an example, he said that the road would only be a few feet away from some residential units. He queried why it had to be built so close to residential buildings since there was plenty of space in Ma On Shan. He considered that it was a waste of resources for the Environment and Food Bureau to take remedial measures to address the noise impact of roads caused by the poor planning of other bureaux.

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26. The Chairman said that the Administration should from the outset refrain from building roads too close to residential areas to save the trouble of building noise barriers for such roads afterwards. She agreed with Dr Raymond HO and Mr Andrew CHENG that a better alignment of roads would save the subsequent expenditure for construction and maintenance of noise barriers.

27. AD(EAN) of EPD responded that considerable efforts had been devoted to road planning with a view to reducing the noise impact of road traffic. He pointed out that under the current policy, proponents of new roads were required to explore all possible options including alignment adjustment, tunnelling, building barriers enclosures as necessary to protect residential buildings nearby from excessive traffic noise. These possible options would be included in the relevant environmental impact assessment report for public discussion. DS(EF) added that Road T7 was a new road and noise barriers would be built for the road under the current policy.

Restricting heavy vehicles from using certain roads at certain times

28. Professor NG Ching-fai said that he had received a submission from residents of Tai Kok Tsui expressing dissatisfaction that the restriction for heavy vehicles to use the West Kowloon Corridor during certain periods of the day was not strictly enforced. AC for T(U) explained that the restriction was introduced on a trial basis to assess whether heavy vehicles could be diverted to use alternative roads (such as Cheung Sha Wan Road) and whether such measure could effectively reduce the impact of traffic noise on residents of Tai Kok Tsui. AC for T(U) added that the transport industry concerned objected to the trial measure and many heavy vehicles still used the West Kowloon Corridor during the restricted hours. He said that the Transport Department had discussed the problem with the police on stepping up enforcement but was given to understand that there was shortage of manpower for increased enforcement. DS(EF) said that EFB would follow up the matter with the police.

29. The Chairman suggested that the Administration should provide information to the industry on the alternative roads that could be used by heavy vehicles, and also evaluate the noise impact on residents living close to Cheung Sha Wan Road after the traffic diversion. DS(EF) agreed.

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30. Professor NG Ching-fai queried the accuracy of such evaluation if the industry concerned had not strictly complied with the restriction. AC for T(U) said that road blocks had been set up at the West Kowloon Corridor in the previous two nights to ensure that no heavy vehicles could use the road. On-site measurement of the traffic noise levels were then taken by EPD staff at the West Kowloon Corridor and at the adjacent roads (such as Cheung Sha Wan Road).

31. Mr Albert CHAN expressed support for restricting heavy vehicles from using certain roads at certain periods of time. He considered that in residential

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Admin areas with no industrial establishments, heavy vehicles should be banned from accessing the areas for the whole day and not just for the night. He requested the Administration to provide information on any programme that it would introduce for banning certain types of vehicles from entering certain districts at certain times of the day. Mr CHAN added that the Administration should have a comprehensive policy to address traffic noise problems. In this connection, he Admin sought further information on the effectiveness of the engineering and non-engineering measures introduced to reduce traffic noise and any other improvement measures that the Administration would introduce to abate traffic noise in the next five to ten years.

32. DS(EF) said that the Administration would explore various traffic management measures including traffic diversion where practicable to address the noise impact of excessively noisy roads. In this connection, consideration had to be given to whether any traffic diversion measure would increase the traffic noise of the alternative roads. DS(EF) further said that a policy was in place requiring that engineering and non-engineering solution should be taken where practicable at roads where the level of traffic noise was above 70d(B)(A). Moreover, the current legislation already required all newly registered vehicles to comply with prevailing noise emission standards which were on par with those adopted by the European Union.

Cost-effectiveness of the resurfacing programme

33. Referring to paragraph 14 of the LegCo Brief, Dr TANG Siu-tong queried the cost-effectiveness of the resurfacing programme as only about 4 400 residential units would benefit from a reduction in noise to an acceptable level after road resurfacing. He asked whether there were better alternatives. DS(EF) clarified that the resurfacing programme would actually benefit 40 000 residential units by reducing the traffic noise by 2 to 3 dB(A), and 11% of them (i.e. 4 400) would even experience a reduction in noise to a level below 70dB(A). As regards the surface material, DS(EF) said that the Administration would continue to look for better quality and durable surface materials which needed less frequent resurfacing and were more effective in noise reduction.

Health impact of traffic noise

34. Mr Michael MAK asked whether the Administration would consider conducting assessment, in collaboration with the Hospital Authority or the Department of Health (DH), on the health impact of excessive traffic noise on the affected residents. He believed that prolonged exposure to a high noise level could lead to stress, insomnia, or even hearing impairment.

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Admin 35. DS(EF) replied that the Administration had discussed the matter with DH and academics and also conducted research to collect information on the health impact of traffic noise. He said that most of the available data was only related to occupational noise and its effect on hearing. He pointed out that the Administration had not come across any findings of studies which established a cause-and-effect relationship between community noise (including traffic noise) and health. He said that some overseas research studies had found that high traffic noise levels might affect people's sleep and their concentration ability. At the Chairman's request, DS(EF) agreed to provide information on these overseas research studies to the Panel. Mr Michael MAK also urged the Administration to take the initiative of collaborating with HA or DH to conduct surveys on the health impact of excessive traffic noise in Hong Kong.

Transport planning

36. Pointing out that most of the 29 roads identified for retrofitting were located in new towns, Ms Cyd HO asked if it was the Administration's plan that the traffic noise problem of existing roads in old districts could only be addressed through urban renewal. She said that the Administration had relied too much on building noise barriers/enclosures to address traffic noise problems, and requested the Administration to provide more information on the non-engineering measures that would be adopted for existing roads.

37. Ms Cyd HO also criticized the Administration for failing to draw up a comprehensive policy to tackle road noise problems in Hong Kong. Ms HO considered that the Administration's transport policy was creating new traffic noise problems, for example, there were too many buses on the road.

38. Referring to the proposed Route 7 which had met with strong opposition from residents in the Southern District, Ms HO asked the Administration to explore the feasibility of substituting road transport with railway transport in the overall transport planning for Hong Kong.

39. Principal Assistant Secretary for Transport (PAS(T)) responded that the current policy required that the planning and construction of new transport infrastructure must be subject to a full environmental impact assessment and that all necessary mitigating measures must be adopted to meet the standards stipulated by EPD. On railway development in Hong Kong, PAS(T) said that it had been the Administration's policy to accord priority to railway development, and the subject had been thoroughly discussed in many forums such as the meetings of the LegCo Panel on Transport and the relevant District Councils.

Way forward

40. Ms Emily LAU suggested that a further meeting be convened to meet academics and representatives from the transport industry, professional bodies and

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residents affected to gauge their views on the proposed new policy. Mr CHAN Wai-yip and Mr WONG Sing-chi expressed support for Ms LAU's suggestion. Ms Cyd HO added that academics could also be invited to give views on the health impact of traffic noise.

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41. At the request of the Chairman, DS(EF) agreed to provide a report on outcome of the Administration's consultation with 18 District Councils.

Clerk

42. Members agreed to hold a meeting in the following month to further discuss the subject. The Chairman said that the Secretariat would inform members of the meeting arrangements in due course.

43. The meeting ended at 10:45 am.

Legislative Council Secretariat

23 May 2001