

**AIR QUALITY OBJECTIVES (AQO) REVIEW WORKING GROUP
ROAD TRANSPORTATION SUB-GROUP**

**Digest of the 4th Meeting
held on 6 December 2016 (Tuesday) at 3:00pm
in Conference Room, 33/F, Revenue Tower,
5 Gloucester Road, Wanchai**

Present:

Ms. Christine LOH

Under Secretary for the Environment
(**Chairperson**), Environment Bureau

Mrs. CHEUNG CHIU Hoi Yue,
Alice, JP

Deputy Director of Environmental Protection (3)
(**Vice-chairperson**), Environmental Protection
Department

Mr. Roger LEE

Mr. Paul LI

Mr. Aaron NG

Mr. LING Chi Keung

Mr. Madison TANG

Dr. Ringo LEE

Mr. Daniel NG

Dr. HUNG Wing Tat

Ir FUNG Man Keung

Ms. Suzanne Kit Yi CHEUNG

Mr. Evan AU-YANG

Mr. Matthew WONG

Mr. Stanley CHAING

Mr. TUNG Ching Leung

Ir Dr. David HO

Hon CHAN Choi Hi

Hon KWAN Sau Ling

Mr. Patrick FUNG

Mr. MOK Wai Chuen

Assistant Director of Environmental
Protection (Air Policy), Environmental
Protection Department

Mr. Dave HO

Principal Environmental Protection
Officer (Mobile Source), Environmental
Protection Department

Mr. LI Yeuk Yue, Tony

Principal Assistant Secretary for
Transport & Housing (Transport)2,
Transport and Housing Bureau

Mr. LAU Jun Yan, Alex	Assistant Secretary for Transport & Housing (Transport) 2B, Transport and Housing Bureau
Mr. LEUNG Sze Ho, Louis	Assistant Secretary for Transport & Housing (Transport) 1A, Transport and Housing Bureau
Mr. LEE Wai Man	Chief Assistant Secretary (Works) 3, Development Bureau
Ms. Rachel KWAN	Assistant Commissioner/Bus and Railway, Transport Department
Mr. WONG Wai Kwong, Eric	Senior Engineer/Transport Information System, Transport Department
Mr. Tang Kam Fai, Keith	Deputy Head of Civil Engineering Office (Port & Land), Civil Engineering and Development Department
Mr. WONG Wai Yin, Patrick	Senior Town Planner/Strategic Planning 1, Planning Department

Absent with Apologies:

Mr. SO Sai Hung

In Attendance:

Ms. HO Wing Kam, Josephine	Acting Senior Environmental Protection Officer (Air Policy) 1, Environmental Protection Department
Mr. IP Ho Yin, Nelson	Acting Senior Environmental Protection Officer (Mobile Source) 3, Environmental Protection Department
Mr. CHEN Hao Ting, Ambrose	Environmental Protection Officer ((Mobile Source) 31, Environmental Protection Department
Mr. SHEK Wing Kei	Environmental Protection Officer ((Mobile Source) 34, Environmental Protection Department
Mr. KONG Ping	Consultant's Representative, AECOM Asia Company Limited
Mr. Karl AN	Consultant's Representative, AECOM Asia Company Limited
Dr. Jimmy CHAN	Consultant's Representative, Hong Kong University of Science and Technology
Professor FUNG Chi Hung	Consultant's Representative, Hong Kong University of Science and Technology

Chairperson's Remarks

- 1 The Chairperson welcomed members to the fourth meeting of the Road Transportation Sub-group.
- 2 The Chairperson welcomed Mr. LI Yeuk Yue, Tony, from the Transport and Housing Bureau (THB), who succeeded Ms. LAM Wai Ki, Cordelia, to join the Sub-group. The Chairperson also advised members that the Environmental Protection Department (EPD) had engaged AECOM Asia Company Limited as the consultant for the AQO review. The Chairperson welcomed the consultant's representatives to the meeting.

Agenda Item 1: Confirmation of digest of meeting

- 3 The digest of the third meeting held on 29 September 2016 was confirmed.

Agenda Item 2: Discussion on the feasibility assessments of the proposed measures for "Measure A - Tunnel toll policy and toll collection method" and "Measure B - Maintenance and repair of vehicle exhaust system"

- 4 The Chairperson advised members that the Secretariat and relevant departments had prepared the assessments based on members' comments on the feasibility of various proposed measures under Measure A and Measure B after the third meeting. The Chairperson invited members to discuss and confirm the assessments.
- 5 THB briefed members on the assessments of "Measure A1 - Review the tunnel toll policy and level" and "Measure A2 - Consider replacing the existing system with complete automatic toll collection system".
- 6 With regard to Measure A1, THB advised that the Government had commissioned a consultancy study on the overall strategy and feasible options for the rationalisation of traffic distribution among the three road harbour crossings ("RHCs"), and planned to submit toll adjustment proposals covering the three RHCs to the Panel on Transport of Legislative Council for discussion within the 2017-18 legislative year. THB would take into account members' views in formulating the above proposal. The Air Quality Objectives Review Working Group would then make corresponding adjustments to the analysis and assessment of Measure A1 in light of the discussions of the Panel on Transport of Legislative Council.
- 7 After detailed discussion, members confirmed the assessments of Measures

A1 and A2. The Sub-group's conclusions are summarised at **Annex 1**.

- 8 EPD briefed members on the assessments of “Measure B1 - Propose to use chassis dynamometer for testing vehicle tailpipe emissions”, “Measure B2 - Tighten the annual vehicle examination for private cars from over six years old to over three years old”, “Measure B3 - Provide vehicle tailpipe emission testing equipment for rent by small and medium-sized vehicle repair workshops”, “Measure B4 - Establish a maintenance information database of vehicle tailpipe emission system” and “Measure B5 - Raise awareness of the importance of vehicle maintenance and repair”.
- 9 After detailed discussion, members confirmed the assessments of the five measures from B1 to B5 respectively. The Sub-group's conclusions are summarised at **Annex 1**.
- 10 Some members gave additional views on issues related to maintenance and repair (such as lack of land for vehicle repair, succession gap and lack of human resources in the vehicle repair industry, enhancement of the existing apprenticeship system, etc.). The Chairperson responded that these additional views were beyond the Working Group's scope of discussion and therefore could not be dealt with by the Working Group. The Government would find suitable platforms to convey the views to the relevant departments for consideration.

Agenda Item 3: Discussion on key considerations for the implementation of proposed measures

- 11 THB briefed members on the background information and policy directions relating to “Measure C - Fostering a ‘pedestrian-friendly’ and ‘bicycle-friendly’ environment” to facilitate members' discussion and evaluation of the proposed measures. The Chairperson also shared with members the rationale for promoting walking and emphasised the Government's keenness towards this initiative.
- 12 The Planning Department also briefed members on the information relating to the planning of walkways and cycling tracks in the Hung Shui Kiu New Development Area to facilitate members' understanding of the Government's broad directions in designing the New Development Area.
- 13 Members discussed in detail the key considerations for the four measures under “Fostering a ‘pedestrian-friendly’ and ‘bicycle-friendly’ environment”. Members' comments are summarised at **Annex 2**.
- 14 The Administration said that the Secretariat would conduct a feasibility

analysis on the proposed measures under Item C after the meeting according to the comments made by members. A draft of the assessment results would be prepared and distributed for members' information. Any comments members might have on the assessments could be submitted to the Secretariat. The assessment results of Item C would be discussed and confirmed in the fifth meeting. The relevant meeting papers would be distributed for members' information prior to the next meeting.

Agenda Item 4: Any other business

- 15 The second meeting of the Air Quality Objectives Review Working Group would be held on 22 December (Thursday) at 2 p.m.
- 16 The Administration advised members that due to time constraints, there was a need to hold additional special meetings with members in order to discuss and conclude the practicability of the remaining 28 proposed measures by March 2017.

Agenda Item 5: Date of the next meeting

- 17 The fifth meeting of the Sub-group was tentatively scheduled for January 2017. The Secretariat would inform members of details of the meeting after this meeting. [PMN: The fifth meeting of the sub-group will be held on 24 January (Tuesday) at 4:00 p.m. at Conference Room, 33/F, Revenue Tower.]
- 18 The meeting was adjourned at 5:40 p.m.

Members' comments on the assessment results of measures A and B

Measure A – Tunnel payment policy and toll collection method

Measure	Members' Comments and Conclusion
<p>A1. Review the tunnel toll policy and level (e.g. the Government to buy back the tunnels, tunnel toll subsidy pilot scheme)</p>	<p><u>Members' comment:</u></p> <ul style="list-style-type: none"> ● Some members said that the problems of traffic congestion and air pollution were correlated. In reviewing the tunnel payment policy, toll adjustment based on vehicle emission levels could be considered to target high-emission vehicles. ● Some members advised that consumers in principle would choose tunnels with lower tolls and suggested that the Government consider equalizing the tolls to achieve the diversion effect. ● Some members mentioned that the imposition of tunnel tolls was due to the Build-Operate-Transfer (BOT) mode. As the tunnels would gradually be taken over by the Government upon expiry of tunnel franchises, the Government might consider not imposing tolls or replacing the current mode of toll collection with an alternative mode. If the practice of not imposing tolls was adopted, there would be no need to consider the toll collection system. ● THB would take into account members' comments in preparing the aforementioned toll adjustment proposals covering the three RHCs to be submitted to the Panel on Transport of Legislative Council <p><u>Conclusion:</u></p> <p>THB advised that the Government had commissioned a consultancy study on the overall strategy and feasible options for the rationalisation of traffic distribution among the three road harbour crossings ("RHCs"), and planned to submit toll adjustment proposals covering the three RHCs to the Panel on Transport of Legislative Council for discussion within the 2017-18 legislative year. The Sub-group agreed</p>

Measure	Members' Comments and Conclusion
	with the assessment results and confirmed that this would be a long term measure.
A2. Consider replacing the existing system with complete automatic toll collection system	<p><u>Members' comment:</u></p> <ul style="list-style-type: none"> ● Some members advised that, to give a full picture of the cost effectiveness of the measure, the recurrent staff cost saved as a result of using automatic toll collection should be taken into consideration in assessing cost effectiveness. ● Some members hoped that the Government could take lead to promote automatic toll collection policy by implementing complete automatic toll collection in government tunnels first. Meanwhile, the Government should consider subsidising related administrative fees to make the automatic toll collection system more readily accepted by the public. ● Some members expressed that the Government should take into account the health impact on the staff working at toll booths and tunnel areas in considering the toll collection system. ● Some members hoped that the Government could consider building additional roads, such as the fourth RHC. <p><u>Conclusion:</u></p> <p>The Sub-group generally agreed with the assessment results. The Sub-group also agreed that traffic congestion at some of the tunnels was due to the saturation of traffic capacity and there was no direct relation between traffic congestion and the toll collection systems. Therefore, no further discussion of this item was warranted.</p>

Measure B – Maintenance and repair of vehicle tailpipe emissions system

Measure	Members' Comments and Conclusion
B1. Propose to use chassis dynamometer for testing vehicle tailpipe emissions.	<p><u>Members' comment:</u> Nil.</p> <p><u>Conclusion:</u> The Sub-group agreed with the assessment results, and considered that the current practice of using dynamometers for testing emissions of high-emission vehicles had been effective in reducing the impact of these vehicles on roadside air quality. Making the dyno test mandatory for all vehicles could unlikely bring significant improvement to air quality. Such measure would also cause inconvenience and burden to vehicle owners. Therefore, such measure was not recommended.</p>
B2. Tighten the annual vehicle examination for private cars from over six years old to over three years old (or consider adopting vehicle kilometres travelled as the vehicle examination criterion).	<p><u>Members' comment:</u> Nil.</p> <p><u>Conclusion:</u> The Sub-group agreed with the assessment results. Based on the data collected from the remote sensing scheme, private cars found with excessive emissions represented less than 1% of the scanned vehicles and the average age of these high-emitting private cars was around 13 years. Furthermore, the driving mileage of private cars was generally not long, and private cars aged 4 to 6 years were usually still in good shape. The Sub-group considered that the current requirement for private cars over 6 years old to undertake annual vehicle examination was appropriate. There was no need for lowering the age threshold for private cars to undertake the roadworthiness examination.</p>
B3. Provide vehicle tailpipe emission testing equipment for rent by small and medium-sized vehicle repair	<p><u>Members' comment:</u> Nil.</p> <p><u>Conclusion:</u> The Sub-group agreed with the assessment results. It noticed that vehicle tailpipe emission testing equipment affordable by the trade was available in the market (e.g. portable five-gas analyzer and smokemeter were common tools in most vehicle repair workshops).</p>

Measure	Members' Comments and Conclusion
workshops.	Moreover, specialist diagnostic services for vehicles of advanced engine design, particularly diesel ones, were already on the market. These services were more effective than providing rental of equipment. Therefore, such measure was not recommended.
B4. Establish a maintenance information database of vehicle tailpipe emission system.	<p><u>Members' comment:</u> Nil.</p> <p><u>Conclusion:</u> The Sub-group agreed with the assessment results. It noted that when Euro VI vehicle emission standards were introduced, vehicle manufacturers would have to provide access to maintenance and repair information on new vehicle models at reasonable fees. Therefore, the availability of vehicle maintenance information would no longer be an issue for Euro VI diesel vehicles. EPD would continue to organise training sessions and seminars in partnership with the Vocational Training Council (VTC), vehicle manufacturers and the vehicle repair trade to share the maintenance experience and information.</p>
B5. Raise awareness on the importance of vehicle maintenance and repair	<p><u>Members' comment:</u> Nil.</p> <p><u>Conclusion:</u> The Sub-group noted that the Government had been promoting the importance of vehicle maintenance and repair for prevention of excessive vehicle emissions. The Sub-group was aware of the trade's concerns about the aging of technicians in the industry and the lack of support for them to cope with some new testing equipment and softwares when repairing more advanced vehicles. As such, the Sub-group suggested that EPD should continue to work with the VTC, repair trade and vehicle manufacturers in organising seminars and workshops so as to help the vehicle repair trade adapt to the development of vehicle technology and relieve the shortage of labour and technicians. Besides, EPD would continue to promote proper maintenance of vehicles and environmentally friendly driving habits among related parties, including vehicle owners and</p>

Measure	Members' Comments and Conclusion
	fleet managers.
Other relevant views	<ul style="list-style-type: none"> ● Some members said that there were people purchasing diesel commercial goods vehicles for use as private cars. It was suggested that the Government should require the above-mentioned vehicles to undergo annual examination in the same way as diesel commercial goods vehicles. The Government responded that the vehicle types mentioned by members were generally light duty diesel commercial goods vehicles, which were classified as goods vehicles upon registration and therefore required to undergo annual examination in the same way as diesel commercial vehicles during licence renewal. ● Some members suggested that the Government should encourage drivers to properly maintain their vehicles by way of tax incentives or other relevant policies. EPD expressed that free vehicle emission examination was offered in the past to educate vehicle owners on the importance of proper vehicle maintenance and repair, thereby bringing home the message that it was the car owners' responsibility to maintain their vehicles. ● Some members were of the view that the vehicle trade currently faced the problem of shortage of land for operating vehicle repair workshops, and that the Government should reserve land for vehicle repairing under its development plan. Some members also indicated that the repair trade faced the problems of succession, shortage of manpower and the need to improve the apprenticeship system. The Government expressed that such issues could not be dealt with by the Working Group as they were outside its scope of discussion. Nevertheless, the Government would find suitable platforms to convey their views to the relevant departments for consideration.

Measure C1 - Foster "pedestrian-friendly" environment (such as widening of footpaths, construction of covered walkways and enhancing the pedestrian connections) to encourage people to walk

Key Considerations	Members' Comments
1. Ancillary road facilities and their capability	<ul style="list-style-type: none"> ● Some members hoped that the Government would adopt the principle of "pedestrian priority" in planning and development so as to make efficient use of road space and achieve universal accessibility. ● Some members advised that the Government should enhance the walking facilities in urban areas/business districts, such as setting up pedestrian precincts and widening footpaths. ● Members suggested that the Government should look into the connectivity between walking and other means of public transport as people who chose to walk might need change to other means of public transport to complete their journeys. ● Some members suggested that the Government might consider enhancing its work on pedestrian network planning and issuing new guidelines in order to improve pedestrian accessibility. The Transport Department (TD) said that although there were greater constraints on urban transport planning, TD would make effort in improving pedestrian environment during the planning stage as far as circumstances permitted. As for new towns, "pedestrian-friendly" principle had generally been included as a planning element at the planning stage.
2. Public reaction	<ul style="list-style-type: none"> ● No comment.
3. Cost effectiveness	<ul style="list-style-type: none"> ● Some members said that the Government might consider providing incentives for developers to build pedestrian-friendly connecting facilities. Some members pointed out that regrant premium was an important consideration in the provision of

Key Considerations	Members' Comments
	<p>connecting facilities, and the Government should look into relevant strategies to promote the development of such connecting facilities.</p> <p>The Development Bureau (DEVB) said that a pilot scheme was being conducted in Kowloon East to encourage developers, through policy initiatives, to build connecting footbridges so as to improve pedestrian accessibility.</p>
4. Implementation timeframe	<ul style="list-style-type: none"> ● No comment.
5. Technical feasibility and associated environmental impacts	<ul style="list-style-type: none"> ● Some members advised that, when studying planning and development projects, the Government should holistically look into the mobility through walking, cycling and public transport in order to maximize the benefits of these modes of transport. ● Some members were of the view that the Government should not only focus on new development areas or rural areas when developing a “pedestrian-friendly” environment, and should regard walking as a mode of transport instead of merely a leisure activity.
6. Other comments	<ul style="list-style-type: none"> ● Some members hoped that separation of pedestrians, bicycles and vehicles could be considered from a traffic safety perspective. The Government responded that it would consider different comments made by members.

Measure C2 - Foster “bicycle-friendly” environment and study into the provision of ancillary facilities for cycling (such as provision of cycling track network and bicycle parking spaces, park-and-ride facilities at public transport interchanges and bike-friendly policies to facilitate carriage of bicycles on public transport)

Key Considerations	Member’s Comments
1. Ancillary road facilities and their capability	<ul style="list-style-type: none"> ● Some members said that the public were willing to use bicycle as one of the transport modes. However, the availability of ancillary facilities for connecting to other public transport is also a major consideration for the public to decide whether to use bicycle in their daily transport. Therefore, the Government should consider the connectivity between bicycles and other public transport. For example, additional bicycle parking at railway stations could facilitate cyclists and attract more people to use bicycles. ● Some members said that while promoting cycling, the Government should also look into the availability of ancillary facilities provided by other public transport modes, the additional fees charged to the users for these facilities and the relevant governing legislations. ● Members hoped that the Government would include the relevant ancillary facilities in its future planning, such as introducing cycling facilities in the Planning of Underground Space Development in the Urban Areas of Hong Kong to encourage cycling. DEVB advised that a study on the development of underground space near Kowloon Park in Tsim Sha Tsui and Victoria Park to enhance pedestrian access was being conducted in the Planning of Underground Space Development in the Urban Areas of Hong Kong. Shops or community facilities would be included to attract pedestrian flow.
2. Public reaction	<ul style="list-style-type: none"> ● Some members said that although bicycle was not regarded as a transport mode by the Government, they hoped that the Government would give more thoughts to the possibility of using bicycle as a means of transport. The Chairperson said that the Government did not encourage using bicycle as a

Key Considerations	Member's Comments
	transport mode in busy urban areas due to road safety considerations. The Government had been working hard to implement various measures to promote walking as well as the use of bicycles.
3. Cost effectiveness	● No comment
4. Implementation timeframe	● No comment
5. Other comment	<ul style="list-style-type: none"> ● Some members said that the Government should be mindful of the role of bicycle as a medium-distance transport mode and its development in recent years. ● Some members said that the Government could take note of the development of newly emerging bicycle sharing mobile appss.

Measure C3 - Set up cycling and walking shared space at harborfront areas

Key Considerations	Members' Comments
1. Technical feasibility	● Some members hoped that separation of pedestrians, bicycles and vehicles could be considered from a traffic safety perspective. DevB responded that they would consider different comments made by members.
2. Cost effectiveness	● No comment.
3. Implementation timeframe	● No comment.
4. Public reaction	● No comment.

Measure C4 - Establish lower vehicle speed limits zones (e.g. 30km/h) in community roads, school zone and areas with elderly centres, to foster pedestrian environment

Key Considerations	Members' Comment
1. Technical feasibility (e.g. how to define school zones and areas with elderly centres)	<ul style="list-style-type: none"> ● Most of the members said that there was difficulty in the actual implementation of this proposal. The Chairperson said that the spirit of “pedestrian-first” in this proposed measure could be taken and included in C1 for consideration. ● THB advised that various traffic mitigation measures, including narrowing carriageways, narrowing lanes at pedestrian crossings or providing speed tables, would be implemented in certain areas suitable for reducing speed to make drivers slow down. THB believed that further downward adjustment of speed limits would not lead to improvement in roadside air quality.
2. Cost effectiveness	● N/A
3. Implementation timeframe	● N/A
4. Traffic impact	● N/A
5. Public reaction	● N/A