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21 December 2012

Public Account Committee
Legislative Council Complex
1 Legislative Council Road
Central
Hong Kong

Attn.: Ms Mary SO

Dear Ms SO,

Public Account Committee
Consideration of Chapter 2 of the Director of Audit's Report No. 59
Implementation of air quality improvement measures

Thank you for your letter dated 17 December 2012. I would like to provide our responses to your questions as follows :

(a) Measures which have been/will be taken by the Administration to reduce emissions from franchised buses and the time targets for implementing these measures

To reduce emissions from franchised buses, the Administration has taken and will take the following measures :

- (i) **Bus Rationalisation** - Bus service rationalisation is an on-going exercise in response to changing passenger demand and the opening of new transport infrastructure. The Transport Department (TD) will continue to pursue bus service rationalisation and will make use of the commissioning of new railway lines in putting forward large-scale rationalisation proposals. The TD will, in collaboration with the Environmental Protection Department (EPD), step up efforts in reducing franchised bus trips; and formulate a better strategy for reducing franchised buses with more focus/emphasis on the environmental benefits to the society in consultation with franchised bus companies and related District Councils.

- (ii) **Bus-bus and bus-rail Interchange Schemes** - To avoid the introduction of excessive direct bus services, help relieve congestion and minimize the environmental impact on busy corridors, the TD encourages the bus companies to introduce more bus-bus and bus-rail interchange schemes and to offer the interchanging passengers with fare discounts. As at end September 2012, there were a total of about 248 bus-bus interchange schemes. Starting from 26 December 2012, the Tuen Mun Road Bus-Bus Interchange (BBI) located on Tuen Mun Road (Kowloon-bound) near Siu Lam Interchange will be commissioned. Bus passengers can interchange at the BBI from short-haul routes to long-haul routes destined for Sha Tin and areas on Kowloon side. The Administration will continue to explore more suitable sites for implementation of the interchange schemes.

- (iii) **Pilot Low Emission Zones (LEZs)** - We will increase as far as possible the ratio of low emission franchised buses (i.e. those meeting the emission level of Euro IV or above) running in the pilot LEZs in Causeway Bay, Central and Mongkok, with the target of having only low emission buses in these zones by 2015. The Government has been working with franchised bus operators to deploy more environmentally friendly buses on busy corridors.

- (iv) **Reducing bus emissions** - To improve roadside air quality, the Administration will continue to encourage franchised bus companies to take measures to reduce emissions, including retrofitting emission reduction device on their buses. At present, franchised bus companies have retrofitted Diesel Oxidation Catalysts (柴油催化器) on all Euro I buses and Diesel Particulate Filters (柴油粒子過濾器) on Euro II and III buses where technically feasible, in order to reduce particulate emissions.

- (v) **Trial of Retrofitting Selective Catalytic Reduction Device** - The Government is undertaking a trial jointly with the franchised bus companies on retrofitting Euro II and Euro III buses with Selective Catalytic Reduction (SCR) devices (選擇性催化還原器) since September 2011 to reduce emissions of nitrogen oxides. Retrofitting of SCR devices, together with the DPFs already installed on Euro II and Euro III buses, could upgrade the emission performance of these vehicles to Euro IV and Euro V level respectively. Subject to satisfactory trial results, the Government will fund the capital costs for retrofitting SCR devices on Euro II and Euro III franchised buses. EPD

will report the findings of the trial to the Panel on Environmental Affairs of the Legislative Council in January 2013. Subject to promising trial results and funding approval from the Legislative Council, we aim at completing, on a best endeavour basis, the large scale retrofit by 2015.

- (vi) **Trial of hybrid buses** - The Government will fund the full cost of procuring six hybrid buses for trial by the franchised bus companies. The trial aims to test the performance of hybrid buses in Hong Kong. The Kowloon Motor Bus (KMB) and the Citybus (CTB) / New World First Bus (NWFB) have already placed orders for the procurement of six hybrid buses, which are anticipated to be delivered to Hong Kong for trial in 2014. The trial will last for two years.
- (vii) **Trial of electric buses** - The Government will also fund the full cost of procuring 36 electric buses for trial by franchised bus companies. The trial aims to ascertain the readiness of electric buses to take up the role of conventional diesel buses in Hong Kong in terms of technical suitability, operational feasibility and financial affordability. The trial will help the franchised bus companies gather first-hand experience and knowledge for the possible wider application of electric buses in their bus fleets. The trial can also encourage electric bus manufacturers to provide suitable electric buses to meet the needs of the Hong Kong market. The franchised bus companies are now preparing the procurement of suitable electric buses. The trial is expected to commence in 2014 and will last for two years for assessing the operational efficiency and performance of the electric buses under local conditions.
- (viii) **Inspection of buses (annual / regular / surprise check)** - To reduce the black smoke emission from vehicles manufactured after 1 January 1990, the exhaust smoke limit was tightened in May 2008 from 60 to 50 Hartridge Smoke Unit in line with EPD's standard. The TD carries out annual inspections and spot checks on franchised buses to monitor the compliance of tightened smoke requirement.

(b) whether consideration would be given to identifying suitable land to provide more bus interchanging facilities;

In the light of the enhancement of bus network efficiency and the consequential environmental benefits, The TD has set up a number of BBIs at main tunnel portals throughout the years, for example, the Shing Mun Tunnel

portal and the Tai Lam Tunnel portal, where many bus routes observe. These BBIs thus provide passengers with a number of choices of bus services and enhance bus network efficiency. Consideration has been given to identifying suitable location to provide more BBIs. The BBI at Siu Lam in Tuen Mun which will be commissioned on 26 December 2012 is a case in point. With this BBI in place, passengers of Tuen Mun and along Castle Peak Road will have a convenient interchange point and a wider range of bus services to Kowloon and Shatin. Suitable facilities such as electronic information panels, shelters and benches, toilet facilities and vending machines etc are included to enhance comfort and convenience of interchanging passengers.

TD will continue to identify suitable lands to provide more BBIs and explore the possibility of setting up more BBIs at major public transport interchanges (PTIs) and road corridors wherever appropriate so as to enhance passenger convenience and bus network efficiency.

(c) whether consideration would be given to reducing the serviceable life of franchised buses to, say, under the age of 15, to better control emissions from these buses;

Under the current policy, franchised bus companies are required to operate their franchised bus services with buses under the age of 18, and have been replacing their serving buses accordingly. This arrangement has taken account of the maintenance, operational and financial capability of the bus companies and their obligations to provide a proper and efficient bus service to the public.

The proposal to reduce the serviceable life of franchised buses, which in effect means accelerating the pace of the bus replacement, will have impacts on bus operation and the financial position of bus companies. Besides, the proposal will exert pressure on bus fare increase which will not be accepted by the public. There are also views questioning whether it is cost-effective to phase out franchised buses pre-maturely. According to the current age distribution of the franchised bus fleet, there will be about 3,000 buses, representing 50% of the entire franchised bus fleet, to be retired between 2013 and 2017. All the retired buses will be replaced by new buses which have to meet the bus design and facilities requirements and the emission standards set by the TD and EPD respectively. In addition, suitable emissions reduction devices may be

installed as appropriate to upgrade the emission standards.

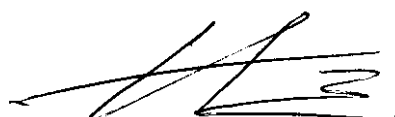
In balancing the bus companies/passengers affordability and environmental improvement, we consider that it would be more cost effective to reduce the emissions of franchised bus fleet through bus route rationalisation and retrofitting after-treatment devices on in-use franchised buses.

(d) a copy of the Administration's paper to the affected District Council on rationalisation of bus route in which the health risks caused by vehicular emissions are incorporated in the paper.

A sample copy of the Transport Department's consultation paper for consulting District Council annually on bus route development programmes is attached. The paper has outlined the environmental benefits of implementing bus rationalization proposals.

Thank you for your attention. Should you have any enquiry, please contact our Mr. Vincent Fan, Chief Transport Officer at 2294 2590.

Yours sincerely,



(HUI Kuen)

for Commissioner for Transport

- c.c. Secretary for the Environment (fax no. 2147 3287)
- Director of Environmental Protection (fax no. 2891 2512)
- Secretary for Development (fax no. 2151 5303)
- Secretary for Transport and Housing (fax no. 2537 6519)
- Director of Marine (fax no. 2854 9210)
- Secretary for Financial Services and the Treasury (fax no. 2147 5239)
- Director of Audit (fax no. 2583 9063)

***Note by Clerk, PAC:** *A sample of the Transport Department's consultation paper for consulting District Council in Chinese version only.*

沙田區議會
交通及運輸委員會

2007-2008 年度沙田區巴士路線發展計劃

目的

本文件旨在向委員闡釋 2007 - 2008 年度沙田區的巴士路線發展計劃，及諮詢委員對有關計劃的意見。

2007-2008 年度巴士路線發展計劃

2. 2007-2008 年度的巴士路線發展計劃已經擬定，現列於附件 1 及 2，供各委員參閱。

3. 2007-2008 年度沙田區的巴士路線發展計劃包括下列措施：

為使本區巴士路線更有效率地提供服務，並改善在繁忙地區，如旺角、尖沙咀、中環、灣仔及銅鑼灣等的交通情況及行人環境，九巴建議在本區實施路線重整計劃。另一方面，巴士公司同時建議在本區實施多項提升服務的項目，如加強班次及調配空調巴士提供服務等，以配合乘客需求。其中有關本區的巴士路線安排在附件 3 及附圖 1、2 及 3 內顯示，即：

- 九巴 70 號(上水 - 佐敦(匯翔道))：取消服務，提供新的轉乘優惠，詳情見附件 3。
- 九巴 72A 號(大圍車站 - 大埔工業邨)：位於沙田大圍車站的總站遷移至美田邨，見附圖 1。
- 九巴 86A 號(沙田圍 - 長沙灣(甘泉街))：往九龍方向改道繞經沙角街（與 87A 線總站遷移一併執行），見附圖 2。
- 九巴 87A 號(沙田圍 - 長沙灣(甘泉街))：總站由博康遷移至沙田圍（與 86A 線改道一併執行），見附圖 2。
- 隧巴 305 號(美田 - 上環)：總站遷移至美田邨，見附圖 3。

策劃本區巴士路線發展計劃的考慮

4. 我們會按下列的長遠公共交通發展策略，繼續發展巴士路線的網絡：

(一) 鐵路是既環保又具效率的集體運輸交通工具，故此政府的交通運輸政策是發展鐵路作為本港公共客運系統的骨幹。在此前提下，我們提倡充分運用鐵路，以其他公共交通工具提供接駁服務作配合，並會繼續鼓勵專營巴士公司改善服務質素。專營巴士服務將會繼續在公共交通系統內，尤其是鐵路未能到達的地方，扮演重要的角色。至於其他公共交通工具，在整個運輸系統內，將繼續發揮輔助性的功能，與鐵路和專營巴士服務相輔相承；

(二) 在保護環境的前提下提供公共交通服務，以確保香港能夠持續發展。我們會採取適當措施，如適當地減低在繁忙交

通地區（包括旺角、尖沙咀、中環、灣仔及銅鑼灣）的巴士流量、改善巴士廢氣排放素質及增闢行人專區等，以減輕交通服務對環境造成的影響；及

（三）我們亦會進一步改善公共交通系統網絡，有效協調各種公共交通工具，並配合需求情況而重整服務，減少惡性競爭和服務重疊，以改善道路擠塞的情況。

5. 過去數年，本港鐵路網絡不斷擴展，包括 02 年底投入服務的地鐵將軍澳支線、03 年底投入服務的九廣西鐵、04 年 10 月由紅磡伸延至尖東的東鐵延線、04 年 12 月啓用的馬鞍山鐵路、05 年 8 月開始運作的迪士尼線，以及於 05 年 12 月伸延至博覽館站的一段機場快線。上述鐵路的落成顯著擴大了鐵路的服務範圍，因此我們必須作出有效的協調及重整服務以維持一個有效率的公共交通系統。展望未來兩年，上水至落馬洲支線將於 2007 年落成，而九龍南環線亦預計會在 2009 年完成。新的鐵路路線將會進一步提高本港公共交通系統的效率及載客量。

制定路線發展計劃的原則

6. 運輸署及專營巴士公司在制定路線發展計劃時有以下的原則：

（一）基本上本港主要已發展地區均已有一至多條巴士線及其他輔助交通工具例如專線小巴提供服務。爲了配合人口變遷，我們會因應現有巴士服務的乘客量及需求調整班次。個別路線如果在繁忙時段最繁忙的半小時內的載客率達 100%及在該一小時內的載客率達 85%；或在非繁忙時段在

最繁忙的半小時內的載客率達 60%，我們會考慮增加車輛行走。在實施增加車輛項目時，首先考慮從其他重組項目減省的車輛中調配使用，視乎減省車輛的實施情況，有關改善項目才可相應實施。

- (二) 我們會按個別使用率不高的路線的運作情況實施各種措施以提高效率。有關措施包括調整現有路線、班次及運作時間表；縮短車程及將部份地區的巴士站密度降低至適當的水平等等。個別路線如果在繁忙時段最繁忙的半小時內的載客率少於 85%；或在非繁忙時段內的平均載客率低於 30%，我們會考慮減少車輛行走。但接駁鐵路、切合社會需求的路線或繁忙時段班次已低於 15 分鐘的巴士線則會按個別情況考慮。
- (三) 當個別班次不頻密的路線的使用率不高時，我們會考慮取消該路線，以提高整體巴士網絡的效率。例如個別路線在最繁忙的一小時內的載客率若少於 50%，而班次在繁忙時段只能維持在 15 分鐘或以上及非繁忙時段只能維持在 30 分鐘或以上。我們會在評估可供乘客選擇的替代服務、該替代服務的水平及車費等因素後，考慮提出取消該路線或與其他路線合併。
- (四) 市民十分關注交通擠塞、噪音及空氣污染等問題。為改善環境、巴士和道路網絡的效率，以及因應近年乘客對巴士服務的需求有所下降等，運輸署一直與專營巴士公司研究重組及重整巴士路線，特別是使用率低及在繁忙道路行走的路線，希望透過取消、合併、縮短巴士路線及調整班次，以減低在繁忙道路的巴士班次，藉此減少路邊空氣污染、噪音滋擾、交通擠塞和能源耗用量，更妥善地協調新鐵路

及巴士網絡整體運作效益。我們亦會同時推行其他措施，例如行人專用區及其他環境改善項目，以更全面地改善環境。

(五) 我們會鼓勵巴士公司在適當及可行的地點，設立更多轉乘鐵路或其他巴士線的計劃，讓乘客可享用優惠轉乘票價前往不同的目的地，並減低對長程及直接「點到點」巴士服務的需求，善用香港的路面空間及巴士資源以提高巴士網絡的效率，以及減少服務重疊造成的擠塞及環境問題。

(六) 如調整現有路線不能滿足需求及沒有可行的替代交通服務，我們會因應需求考慮加設新巴士線，接駁鐵路或在鐵路範圍以外的新巴士服務將予優先考慮。在批選新的巴士路線時，我們亦會考慮新路線對交通擠塞道路及主要幹道的影響，並盡量避免開設長程巴士路線或途經交通繁忙地區的路線，例如旺角、尖沙咀、中環、灣仔及銅鑼灣等。如新路線必須途經以上地區，巴士公司須減少其他路線途經該區的相等班次。此班次調撥安排亦適用於現有路線。

(七) 爲了提升服務質素及迎合乘客需求，各專營巴士公司添置新巴士時，其標準設備已包括空調系統、八達通系統、低地台出入口、環保引擎以及 2 乘 2 的座位。

7. 此外，在考慮巴士路線發展計劃時，運輸署及專營巴士公司亦會顧及下列因素：

(一) 本區現時及已計劃的公共交通服務；

- (二) 地區內的發展；
- (三) 基本運輸建設的落成；
- (四) 該項目對乘客的效益；
- (五) 該項目對路面擠塞情況及對環境方面的影響；
- (六) 該項目對經營者的影響；
- (七) 該項目對其他公共交通服務經營者的影響；
- (八) 該項目是否合乎經濟效益；及
- (九) 市民的意見及建議。

徵詢意見

8. 請各委員就 2007-2008 年度的計劃提供意見。

運輸署

二零零七年二月