

For information

**Supplementary Information on
810TH – Retrofitting of noise barriers on Tuen Mun Road
(Town Centre Section)**

INTRODUCTION

On 30 January 2015, the Public Works Subcommittee (PWSC) supported the above project (PWSC paper no. PWSC(2014-15)51) and recommended the proposal to the Finance Committee for examination. The following motion (Motion No. 1), moved by the Hon Albert CHAN Wai-yip, was carried at the PWSC meeting –

“That, in connection with PWSC(2014-15)51 – Retrofitting of noise barriers on Tuen Mun Road (Town Centre Section), this Subcommittee requests the Government to retrofit a full-enclosure on the road section outside The Church of Christ in China Tam Lee Lai Fun Memorial School.”

2. Members also requested the following supplementary information –
 - (a) the policy and administrative measures on the mitigation of impacts of noise and air pollution on schools, and whether non-residential buildings like schools and hospitals are not covered by legislations on controlling noise pollution;
 - (b) the air pollution level (e.g. the level of respirable suspended particulates) for the section of Tuen Mun Road covered by the project before and after the completion of works; and
 - (c) the traffic noise levels at the some 1 800 dwellings to be benefitted from the project before and after the completion of works.

GOVERNMENT’S RESPONSE

Motion in paragraph 1 above

3. Located on Tuen Mun Road (Town Centre Section) near Tsing Tin Interchange, the Church of Christ in China Tam Lee Lai Fun Memorial School (the School) is mainly comprised of three teaching buildings, namely 好學樓, 明道樓 and 律己樓. The three teaching buildings are built surrounding the school playground, hence the school playground does not directly border any roads. The location of the school and the adjacent roads are shown at Enclosure 1.

4. It is the Government's policy to accord priority to providing mitigation measures to schools affected by traffic noise. In line with this policy, the Government has completed the installation of double-glazed windows, ventilation systems and air-conditioning equipment, etc. for all 50 classrooms of the School in 1999, such that the noise levels in the classrooms are reduced to 60 dB(A) or below.

5. At the request of the PWSC, we further examined the need to retrofit a full-enclosure on the road section concerned. The School is close to Tsing Tin Interchange and is affected by traffic noise from the interchange. Even if a full-enclosure is provided on Tuen Mun Road, most of the School's classroom windows fronting roads will still have to be kept shut in order to maintain an acceptable teaching environment. On the technical front, results of a preliminary assessment undertaken by the Highways Department indicate various technical problems arising from retrofitting a full-enclosure at the road section concerned (including the need to alter the underground fuel pipeline of the existing petrol filling station at the south of the school, the need to accommodate the existing bus station at the south of the school, and the possible taking-up of part of the football pitch for construction). Further, given the inadequate space at the roadside for construction of a full-enclosure, the existing busy slow lane of Tuen Mun Road outside the School will have to be closed during the construction period, which will seriously affect the traffic in the surrounding areas. The construction costs of a full-enclosure will inevitably be very high, and project completion will be delayed for two years. In view of the aforementioned technical difficulties and the fact that suitable noise mitigation measures have already been provided to the School, we do not see the need to retrofit a full-enclosure barrier on Tuen Mun Road for the School.

Paragraph 2(a) above

6. With regard to traffic noise caused by existing roads, it is the Government's policy to accord priority to providing mitigation measures to schools affected by traffic noise, such that the noise levels inside classrooms are reduced to 60 dB(A) or below, and an acceptable teaching environment for students can be ensured. In line with this policy, the Government has completed the noise abatement programme in schools, which provides all public and aided schools affected by traffic noise of existing roads with noise mitigation measures, including the use of double-glazed windows, the installation of air-conditioning systems and ventilation facilities, etc. For new schools, the Government will, according to the Hong Kong Planning Standards and Guidelines, assess the impact of the surrounding environment on schools and consider the requisite planning and engineering mitigation measures, such that an acceptable teaching environment is maintained.

7. It is the Government's policy to control air pollution at source. In order to reduce emissions from motor vehicles, the Government has implemented a series of administrative measures, including phasing out some 82 000 pre-Euro to Euro III diesel commercial vehicles by 2020, providing one-off subsidies for the replacement of catalytic converters and oxygen sensors in LPG taxis and light buses, subsidising the franchised bus companies to retrofit Euro II and III buses with selective catalytic reduction devices, setting up the \$300 million Pilot Green Transport Fund and fully

subsidising the franchised bus companies to procure six hybrid buses and 36 electric buses for trial at the cost of about \$210 million, etc. These policies and administrative measures will effectively reduce the effect of air pollution at street level on schools.

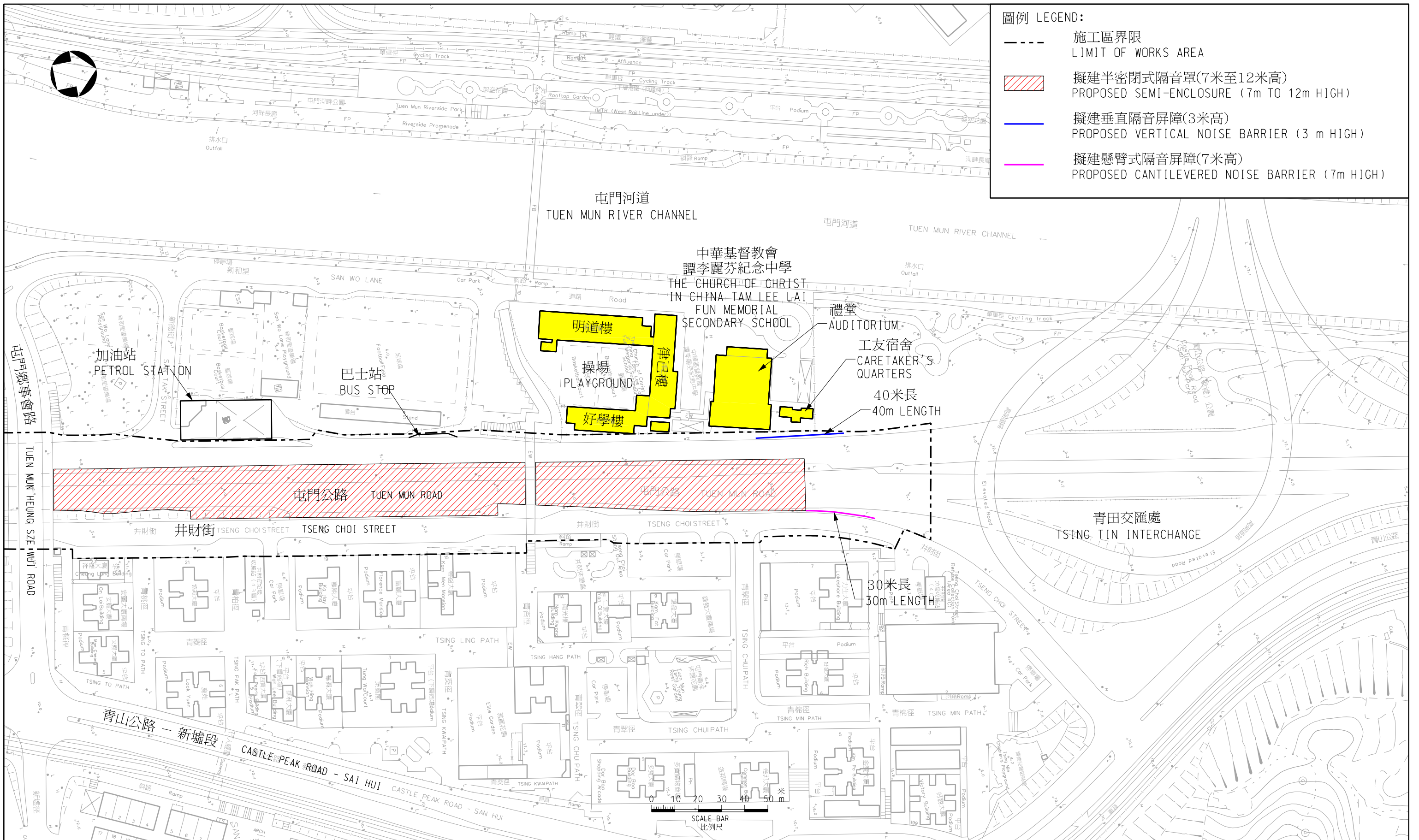
Paragraph 2(b) above

8. The main pollutants of motor vehicle emissions are nitrogen dioxide and respirable suspended particulates. Motor vehicle emissions mainly affect units adjacent to roads and on lower floors. According to the assessment made by the Environmental Protection Department on the air quality impact caused by the proposed works, results indicate that as most of the dwellings along Tuen Mun Road (Town Centre Section) are behind the noise barrier, the pollutants emitted from motor vehicles on Tuen Mun Road will be prevented from entering directly the lower units, thereby slightly reducing the impact of vehicular pollutants (including nitrogen dioxide and respirable suspended particulates) on these units. In short, the proposed works will not have any negative impact on the air quality of the nearby dwellings and the School.

Paragraph 2(c) above

9. The some 1 800 dwellings to be benefitted from the proposed works are located on both sides of Tuen Mun Road (Town Centre Section) between Rosedale Gardens and Lakeshore Building. The dwellings nearest to the roadside with noise abatement level up to 15 to 20 dB(A) include Kam Hing Building, Man Po Building, Yick Lee Building, etc. For the buildings along Tseng Choi Street, including Hip Pont Building, Cheung Lung Building, Ka Hay Building, Florence Mansion and Kam Men Mansion, etc., though affected by traffic noise from the inner roads, the noise abatement level can still be up to 10 dB(A). For buildings to the north of Tuen Mun Road (Town Centre Section), including Rich Building, Lakeshore Building, Affluence Garden and the Government Quarters, as they are also affected by traffic noise of the flyover at Tsing Tin Interchange, the noise abatement level ranges from 1 to 5 dB(A) only. Please refer to **Enclosure 2** for the breakdown of the number of benefitted dwellings and the traffic noise level of the dwellings concerned before and after completion of the proposed works.

Environmental Protection Department
March 2015



工務計劃項目第 6810TH 號 屯門公路（市中心段）加建隔音屏障工程
 中華基督教會譚李麗芬紀念中學前的擬建半密閉式隔音罩平面圖
 PWP ITEM NO. 6810TH RETROFITTING OF NOISE BARRIERS ON TUEN MUN ROAD (TOWN CENTRE SECTION)
 LAYOUT PLAN OF PROPOSED SEMI-ENCLOSURE FRONTING THE CHURCH OF CHRIST IN CHINA TAM LEE LAI FUN MEMORIAL SECONDARY SCHOOL

圖則編號 drawing no. HMW6810TH-SK0034 比例 scale 1:1500

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Enclosure 2

Before Implementation of the Proposed Mitigation Measures		After Implementation of the Proposed Mitigation Measures					
Traffic Noise Level(dB(A))	Number of Dwellings	Traffic Noise Level(dB(A))					
		51-54	55-60	61-64	65-70	71-74	75-80
		Number of Dwellings					
>80	134	12	49	6	19	29	19
77-80	480	0	0	6	247	154	73
74-76	355	0	0	28	199	128	0
71-73	789	0	7	77	627	78	0
Total	(1 758)	(12)	(56)	(117)	(1 092)	(389)	(92)