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14 April 2008

Clerk to Public Works Subcommittee  
Legislative Council Building  
8 Jackson Road, Central  
Hong Kong  
(Attn : Mr Anthony Chu)

Dear Anthony,

**Public Works Subcommittee (PWSC)  
Follow-up to meeting on 20 February 2008**

I am writing to provide supplementary information in response to the questions raised by Members concerning the proposed reconstruction and improvement of Tuen Mun Road (Paper PWSC(2007-08)88) at the Public Works Subcommittee meeting on 20 February 2008. Detailed information on the 5 190 trees to be felled under the proposed works can be found at **Enclosure 1** while the information on the number of dwellings benefiting and not benefiting from the proposed works with traffic noise levels lowered to within 70dB(A) can be found at **Enclosure 2**.

I should be grateful if you would relay the above supplementary information to Members of the Public Works Subcommittee for their reference.

Yours sincerely,

  
(Kevin LAI)

for Secretary for Transport and Housing

c.c. SFST (Attn : Mr Davey Chung)  
SEN (Attn : Mr C W Tse)  
DHy (Attn: Ms Mo Sau)

**Tree Felling along Tuen Mun Road (Expressway Section)**

1. When planning and implementing public works projects, Government departments and their consultants need to fully comply with the Environment, Transport and Works Bureau Technical Circular (Works) No. 3/2006 – Tree Preservation, which states that (a) no tree should be unnecessarily felled or pruned; (b) trees shall be preserved in the priority of being retained in-situ, transplanted on site or transplanted off site; and (c) tree felling should be the last resort.

Despite that the proposed “Reconstruction and Improvement of Tuen Mun Road” project (the Project) is not a Designated Project under the Environmental Impact Assessment Ordinance (EIAO), a comprehensive tree survey report based on EIAO requirements was prepared. The report was circulated to the relevant parties, including the Tree Works Vetting Committee of Highways Department, Leisure and Cultural Services Department (LCSD) and Agriculture, Fisheries and Conservation Department (AFCD), for comment. Both the Tuen Mun District Council and Tsuen Wan District Council were also consulted on the recommendations. The current tree felling proposal has taken into account the rareness of the species, conservation and amenity value, chance of surviving or recovering to its normal form after transplanting, cost and programme implications, etc..

2. The Project will involve the removal of about 5 200 trees, including about 5 190 trees to be felled and about 10 trees to be replanted within the project site. The 5 190 trees to be felled include 504 weed trees (*Leucaena leucocephala* 銀合歡) and dead trees, which are located at the 207 slopes requiring cutting back to make space for road improvements or stabilization according to the latest slope safety requirements. These slopes are located at both sides of Tuen Mun Road from Tsuen Wan to Sam Shing Hui. The location and species of the 504 trees are summarized in Table 1.1.

**Table 1.1 Location and species of the 504 weed trees and dead trees to be felled**

Sections	Size of Tree Girth (perimeter), mm	No. of trees to be felled	Species Name
Sam Shing Hui	100-150	24	Dead tree, <i>Leucaena leucocephala</i> 銀合歡
So Kwun Wat	100-150	25	<i>Leucaena leucocephala</i> 銀合歡
Siu Lam	100-200	137	Dead tree, <i>Leucaena leucocephala</i> 銀合歡
Tai Lam	100-200	42	Dead tree, <i>Leucaena leucocephala</i> 銀合歡
Tsing Lung Tau	100-200	2	<i>Leucaena leucocephala</i> 銀合歡
Sham Tseng	100-150	72	Dead tree, <i>Leucaena leucocephala</i> 銀合歡
Ting Kau	100-200	52	<i>Leucaena leucocephala</i> 銀合歡
Yau Kom Tau	100-250	150	Dead tree, <i>Leucaena leucocephala</i> 銀合歡
	<b>Total</b>	<b>504</b>	

The location and species of the remaining 4686 trees to be felled under the proposed works are summarized in Table 1.2.

Table 1.2 Location and species of the 4 686 trees recommended for felling

Sections	Size of Tree Girth (perimeter), mm	No. of trees to be felled	Species Name
Sam Shing Hui	300 - 942	567	<i>Acacia confusa</i> 台灣相思 <i>Casuarina equisetifolia</i> 木麻黃 <i>Celtis sinensis</i> 朴樹 <i>Cratogeomys cochinchinense</i> 黃牛木 <i>Eucalyptus citriodora</i> 檸檬桉 <i>Eucalyptus torelliana</i> 毛葉桉 <i>Eurya nitida</i> 細葉齒柃 <i>Ficus microcarpa</i> 細葉榕 <i>Ficus microcarpus</i> 細葉榕(榕樹) <i>Hibiscus tiliaceus</i> 黃槿 <i>Litsea glutinosa</i> 潺槁樹 <i>Litsea rotundifolia</i> 豺皮樟 <i>Lophostemon confertus</i> 紅膠木

Sections	Size of Tree Girth (perimeter), mm	No. of trees to be felled	Species Name
			<i>Macaranga tanarius</i> 血桐 <i>Melaleuca quinquenervia</i> 白千層 <i>Pinus massoniana</i> 馬尾松 <i>Rhaphiolepis indica</i> 車輪梅 <i>Rhus hypoleuca</i> 白背漆 <i>Rhus succedanea</i> 野漆樹 <i>Sapium sebiferum</i> 烏柏 <i>Thevetia peruviana</i> 黃花夾竹桃
So Kwun Wat	300 - 628	350	<i>Acacia auriculiformis</i> 耳葉相思 <i>Acacia confusa</i> 台灣相思 <i>Acacia mangium</i> 大葉相思 <i>Adinandra millettii</i> 楊桐 <i>Casuarina equisetifolia</i> 木麻黃 <i>Celtis sinensis</i> 朴樹 <i>Clausena lansium</i> 黃皮 <i>Cratoxylum cochinchinense</i> 黃牛木 <i>Dimocarpus longan</i> 龍眼 <i>Eucalyptus citriodora</i> 檸檬桉 <i>Eucalyptus robusta</i> 大葉桉 <i>Gordonia axillaris</i> 大頭茶 <i>Litsea glutinosa</i> 潺槁樹 <i>Lophostemon confertus</i> 紅膠木 <i>Rhus succedanea</i> 野漆樹 <i>Tetradium glabrifolium</i> 棟葉吳茱萸
Siu Lam	300 - 1 256	1 286	<i>Acacia confusa</i> 台灣相思 <i>Albizia lebbek</i> 大葉合歡 <i>Bauhinia variegata</i> 宮粉羊蹄甲 <i>Bombax ceiba</i> 木棉 <i>Casuarina equisetifolia</i> 木麻黃 <i>Celtis sinensis</i> 朴樹 <i>Clausena lansium</i> 黃皮 <i>Dimocarpus longan</i> 龍眼 <i>Eriobotrya japonica</i> 枇杷 <i>Eucalyptus camaldulensis</i> 赤桉

Sections	Size of Tree Girth (perimeter), mm	No. of trees to be felled	Species Name
			<p><i>Eucalyptus citriodora</i> 檸檬桉  <i>Ficus elastica</i> 印度橡樹  <i>Ficus hispida</i> 對葉榕  <i>Ficus microcarpus</i> 細葉榕  <i>Ficus superba</i> 筆管榕  <i>Gordonia axillaris</i> 大頭茶  <i>Litchi chinensis</i> 荔枝  <i>Litsea glutinosa</i> 潺槁樹  <i>Lophostemon confertus</i> 紅膠木  <i>Macaranga tanarius</i> 血桐  <i>Melaleuca quinquenervia</i> 白千層  <i>Melia azedarach</i> 苦楝  <i>Musa paradisiaca</i> 大蕉  <i>Pinus elliottii</i> 愛氏松  <i>Psidium guajava</i> 番石榴  <i>Rhus succedanea</i> 野漆樹  <i>Sapium sebiferum</i> 烏柏  <i>Scaevola sericea</i> 草海桐  <i>Schefflera heptaphylla</i> 鴨腳木  <i>Syzygium jambos</i> 蒲桃</p>
Tai Lam	300 - 628	164	<p><i>Acacia confusa</i> 台灣相思  <i>Albizia lebbek</i> 大葉合歡  <i>Bombax ceiba</i> 木棉  <i>Bridelia tomentosa</i> 土密樹  <i>Casuarina equisetifolia</i> 木麻黃  <i>Celtis sinensis</i> 朴樹  <i>Cinnamomum camphora</i> 樟樹  <i>Ficus microcarpus</i> 細葉榕  <i>Ficus superba</i> 筆管榕  <i>Litsea glutinosa</i> 潺槁樹  <i>Lophostemon confertus</i> 紅膠木  <i>Macaranga tanarius</i> 血桐  <i>Melia azedarach</i> 苦楝  <i>Sapium sebiferum</i> 烏柏  <i>Scaevola sericea</i> 草海桐</p>

Sections	Size of Tree Girth (perimeter), mm	No. of trees to be felled	Species Name
Tsing Lung Tau	300 - 1 256	1 070	<i>Acacia confusa</i> 台灣相思 <i>Albizia lebbeck</i> 大葉合歡 <i>Casuarina equisetifolia</i> 木麻黃 <i>Celtis sinensis</i> 朴樹 <i>Cleistocalyx operculatus</i> 水翁 <i>Cratoxylum cochinchinense</i> 黃牛木 <i>Eucalyptus citriodora</i> 檸檬桉 <i>Eucalyptus torelliana</i> 毛葉桉 <i>Gordonia axillaris</i> 大頭茶 <i>Litsea glutinosa</i> 潺槁樹 <i>Lophostemon confertus</i> 紅膠木 <i>Macaranga tanarius</i> 血桐 <i>Mallotus paniculatus</i> 白楸 <i>Melaleuca quinquenervia</i> 白千層 <i>Melia azedarach</i> 苦楝 <i>Rhus succedanea</i> 野漆樹 <i>Sapium discolor</i> 山烏柏 <i>Schefflera heptaphylla</i> 鴨腳木 <i>Sterculia lanceolata</i> 假蘋婆 <i>Tetradium glabrifolium</i> 棟葉吳茱萸
Sham Tseng	300 - 2512	399	<i>Acacia confusa</i> 台灣相思 <i>Albizia lebbeck</i> 大葉合歡 <i>Aleurites moluccana</i> 石栗 <i>Bridelia tomentosa</i> 土密樹 <i>Casuarina equisetifolia</i> 木麻黃 <i>Celtis sinensis</i> 朴樹 <i>Cinnamomum camphora</i> 樟樹 <i>Clausena lansium</i> 黃皮 <i>Cratoxylum cochinchinense</i> 黃牛木 <i>Delonix regia</i> 鳳凰木 <i>Dimocarpus longan</i> 龍眼 <i>Eucalyptus torelliana</i> 毛葉桉 <i>Ficus hispida</i> 對葉榕 <i>Gordonia axillaris</i> 大頭茶

Sections	Size of Tree Girth (perimeter), mm	No. of trees to be felled	Species Name
			<i>Litsea glutinosa</i> 潺槁樹 <i>Macaranga tanarius</i> 血桐 <i>Melaleuca quinquenervia</i> 白千層 <i>Melia azedarach</i> 苦楝 <i>Pinus massoniana</i> 馬尾松 <i>Rhus succedanea</i> 野漆樹 <i>Sapium sebiferum</i> 烏桕 <i>Schefflera heptaphylla</i> 鴨腳木
Ting Kau	300 - 1570	240	<i>Acacia confusa</i> 台灣相思 <i>Bombax ceiba</i> 木棉 <i>Casuarina equisetifolia</i> 木麻黃 <i>Celtis sinensis</i> 朴樹 <i>Eucalyptus torelliana</i> 毛葉桉 <i>Ficus hispida</i> 對葉榕 <i>Macaranga tanarius</i> 血桐 <i>Melia azedarach</i> 苦楝
Yau Kom Tau	300 - 1 256	610	<i>Acacia confusa</i> 台灣相思 <i>Albizia lebbek</i> 大葉合歡 <i>Bauhinia variegata</i> 宮粉羊蹄甲 <i>Bridelia tomentosa</i> 土密樹 <i>Cassia surattensis</i> 黃槐 <i>Casuarina equisetifolia</i> 木麻黃 <i>Celtis sinensis</i> 朴樹 <i>Cinnamomum camphora</i> 樟樹 <i>Cleistocalyx operculatus</i> 水翁 <i>Dimocarpus longan</i> 龍眼 <i>Eucalyptus torelliana</i> 毛葉桉 <i>Ficus elastica</i> 印度橡樹 <i>Ficus hispida</i> 對葉榕 <i>Ficus microcarpa</i> 細葉榕 <i>Ficus superba</i> 筆管榕 <i>Gordonia axillaris</i> 大頭茶 <i>Hibiscus tiliaceus</i> 黃槿 <i>Liquidambar formosana</i> 楓香



Sections	Size of Tree Girth (perimeter), mm	No. of trees to be felled	Species Name
			<i>Litsea glutinosa</i> 潺槁樹 <i>Lophostemon confertus</i> 紅膠木 <i>Macaranga tanarius</i> 血桐 <i>Melaleuca quinquenervia</i> 白千層 <i>Melia azedarach</i> 苦楝 <i>Musa paradisiaca</i> 大蕉 <i>Syzygium jambos</i> 蒲桃
<b>Total</b>		<b>4686</b>	

The number of trees with girth size to be felled are summarized in Table 1.3.

Table 1.3 Girth of trees to be felled

Tree girth (perimeter), mm	Number of trees
300 – 950 mm	4 572
950 – 1300 mm	76
1300 – 1570 mm	37
> 1570 mm	1

3. Felling of the remaining 4 686 trees was individually assessed based on the criteria as outlined in para. 1 above. All trees to be removed are not important trees<sup>1</sup>. In addition, transplanting of the trees on slopes would be difficult because their roots are inherently un-balanced, being stronger on the downhill side than on the uphill side. This would mean that their chance of survival will be very low after transplanting. Furthermore, transplanting trees on slopes would jeopardize the stability of the slopes and disrupt seriously the traffic flow of the adjacent running traffic lanes.

<sup>1</sup> “Important trees” refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument and trees in memory of important persons or events;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree size, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 metres.

**Noise Barriers along Tuen Mun Road (Expressway Section)**

1. The Project is not a Designated Project under the Environmental Impact Assessment Ordinance (EIAO) as it mainly involves improvement of the existing traffic lanes and provision of hardshoulders to enhance its traffic operation to comply with the current expressway standard. The provision of noise barriers at six sections of the road is proposed under the retrofitting programme devised following the policy on mitigating existing road traffic noise endorsed by the ExCo in November 2000. Under the policy, direct engineering measures, by way of retrofitting of noise barriers and enclosures, will be implemented where practicable at existing roads where the noise level exceeds 70dB(A) L<sub>10</sub> (1 hour).
2. We have carried out an assessment on traffic noise for dwellings for the Project. Out of the 5 200 dwellings along the road currently exposed to traffic noise level exceeding 70dB(A) L<sub>10</sub> (1 hour)<sup>2</sup>, 2 850 dwellings will be protected by the proposed noise barrier works with mitigated traffic noise levels not exceeding 70dB(A) L<sub>10</sub> (1 hour). Their locations are summarized in Table 2.1.

Table 2.1 No. of dwellings protected

<b>Section</b>	<b>No. of dwellings protected</b>
Tsuen Wan	1551
Sham Tseng	242
Anglers' Beach	36
Tsing Lung Tau	178
Yau Kom Tau	266
Castle Peak Bay	577
<b>Total</b>	<b>2 850</b>

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<sup>2</sup> L<sub>10</sub>(1 hour) is the noise level exceeded for 10% of a one-hour period, generally used for road noise at peak traffic flow. The noise limit of 70 dB(A) for residential premises as stipulated in the Hong Kong Planning Standards and Guidelines is adopted as the administrative guideline for retrofitting projects identified under the policy introduced in 2000.

3. The remaining 2 350 dwellings will still be exposed to traffic noise exceeding 70dB(A) L<sub>10</sub> (1 hour) after the completion of the proposed retrofitting works, of which 1 250 dwellings will be benefited due to the proposed works by having their present noise level reduced by 1dB(A) or above. The balance of 1 100 dwellings could not be benefited through the proposed retrofitting works mainly because effective noise mitigation measures could not be implemented due to site constraints including sight distance at road bend, inadequate structural capacity at existing bridges, etc. The breakdown of dwellings exposed to different levels of traffic noise after the provision of the proposed noise barriers, is summarized in Table 2.2.

Table 2.2 - Number of dwellings exposed to noise levels after retrofitting of noise barriers and enclosures ( $L_{10}(1 \text{ hour})$ )

Location	Above 85dB(A)	Above 80 dB(A) but not exceeding 85 dB(A)	Above 75 dB(A) but not exceeding 80 dB(A)	Above 70 dB(A) but not exceeding 75 dB(A)	Not exceeding 70dB(A)	
Tsuen Wan	0	0	117	180	1551	
Sham Tseng	0	0	307	300	242	
Anglers' Beach	0	16	472	943	36	
Tsing Lau Tau	0	0	0	0	178	
Yau Kom Tau	0	0	0	15	266	
Castle Peak Bay	0	0	0	0	577	
<b>Total</b>	<b>0</b>	<b>16</b>	<b>896</b>	<b>1 438</b>	<b>2 850</b>	<i>Total = 5200</i>
	Total for dwellings above 70 dB(A) = 2 350					

**Remarks**

1. The total number of dwellings exposed to traffic noise not exceeding 70 dB(A)  $L_{10}(1 \text{ hour})$  after completion of the proposed retrofitting works = 2 850
3. The total number of dwellings exposed to traffic noise exceeding 70 dB(A)  $L_{10}(1 \text{ hour})$  after completion of the proposed retrofitting works  
= 16+896+1 438 = 2 350