

NOTE FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

Supplementary Information on 177CL – Sha Tin New Town – remaining engineering works

INTRODUCTION

When considering PWSC(2005-06)4 on **177CL** at the Public Works Subcommittee meeting held on 11 May 2005, Members requested the Administration to provide supplementary information on the following aspects –

- (a) information in relation to the construction cost of the water supply facilities for the private development in Areas 34 and 52 in Shui Chuen O and Area 56A in Kau To, Sha Tin;
- (b) findings of noise impact assessments of the relevant noise sensitive receivers (NSRs) along To Shek Street and justifications for the proposed provision of barriers under the project;
- (c) reasons for the non-provision of noise barriers in front of the Ronald MacDonald House at To Shek Street; and whether consideration would be given to the provision of noise barriers at the said location even though the expected noise level would be kept within statutory limit; if yes, what is the estimated costs;
- (d) expected level of noise mitigation for the 65 existing dwellings and about 77 planned dwellings along To Shek Street as a result of the proposed provision of noise barriers; and
- (e) expected completion date of the 77 planned dwellings along To Shek Street.

/THE

THE ADMINISTRATION'S RESPONSE

(a) Information in relation to the construction cost of the water supply facilities for the private development in Areas 34 and 52 in Shui Chuen O and Area 56A in Kau To, Sha Tin

2. The estimated construction cost of the water supply facilities including the pumping station, service reservoir and mainlaying works for the private development in Areas 34 and 52 in Shui Chuen O under **243WF** is about \$48 million, and that for Area 56A in Kau To under **244WF** is about \$82 million.

(b) Findings of noise impact assessments of the relevant noise sensitive receivers (NSRs) along To Shek Street and justifications for the proposed provision of barriers under the project

3. To Shek Street is an existing ground level road with Sha Tin Wai Road and the flyovers of Sha Lek Road running parallel on its northern side. To Shek Village lies on the other side of To Shek Street. The carriageway of To Shek Street will be widened from 6.75 metres (m) to 10.3 m under this project. In the Environmental Study in 2003, the assessment of noise impact due to the proposed widening of To Shek Street is based on the projected traffic in 2020¹ and summarised at Enclosure 1. There are 31 selected NSRs along To Shek Street and located mainly at To Shek Village.

4. In accordance with the Hong Kong Planning Standards and Guidelines and the current practice as advised by Environmental Protection Department, provision of noise barriers in To Shek Street is required if:

- (i) the noise level from the widened To Shek Street is higher than 70 dB(A) $L_{10}(1 \text{ hour})^2$; or

/(ii)

¹ In the 2003 Environmental Study, the year of maximum predicted traffic was taken to be 2020 i.e. 15 years after the previously assumed completion date of 2005 of the widening of To Shek Street. With the latest completion date of To Shek Street widening changed to 2007, we have conducted a review of the noise impact assessment based on the predicted traffic in 2022. The results show that the 2020 and 2022 noise figures differ mostly by only 0.1 dB(A) with a range of 0-0.2 dB(A). The noise mitigation measures proposed in the 2003 Environmental Study are still applicable.

² $L_{10}(1 \text{ hour})$ is the noise level exceeded for 10% of a one-hour period, generally used for road noise at peak traffic flow.

- (ii) the widened To Shek Street contributes significantly to the cumulative noise impact, i.e. the contribution from the widened To Shek Street to the increase in the predicted overall noise level is at least 1 dB(A) if the overall noise level exceeds the standard.

5. Based on the above assessment, it will be necessary to provide noise barriers along To Shek Street from NSR CWK7 to TS2 as shown on the drawing at Enclosure 2.

(c) ***Reasons for the non-provision of noise barriers in front of the Ronald MacDonald House at To Shek Street; and whether consideration would be given to the provision of noise barriers at the said location even though the expected noise level would be kept within statutory limit; if yes, what is the estimated costs***

6. The noise impact assessments at the Ronald MacDonald House are as follows:

NSR	Floor	Predicted noise level dB(A) L ₁₀ (1 hour) without noise barriers			Contribution from widened To Shek Street dB(A)
		Widened To Shek Street	Existing Roads	Overall ³	
MC1	1	65.5	73.9	74.5	0.6
	2	65.5	73.9	74.5	0.6
	3	65.6	73.7	74.4	0.7

7. Based on the noise impact assessment, the noise levels at the Ronald MacDonald House do not meet the criteria in paragraph 4 above. Therefore, no noise barrier will be provided to protect the above premises.

8. The additional estimated cost for providing a 50 m long and 4 m high noise barrier at To Shek Street to protect the Ronald MacDonald House is \$1.1 million.

/(d)

³

Overall means the combined effect of the widened To Shek Street and other existing roads.

(d) Expected level of noise mitigation for the 65 existing dwellings and about 77 planned dwellings along To Shek Street as a result of the proposed provision of noise barriers

9. All the affected dwellings will benefit from the proposed noise barriers with a reduction in the overall noise level. The expected noise level after provision of the noise barriers is at Enclosure 3.

(e) Expected completion date of the 77 planned dwellings along To Shek Street

10. The 77 planned dwellings along To Shek Street are expected to be completed between 2007 and 2010.

在沒有採取舒緩噪音措施下2020年的預計噪音聲級
 PREDICTED NOISE LEVEL IN 2020 WITHOUT NOISE MITIGATION MEASURES

PWSC1(2005-06)S附件1

現有住宅 Existing Dwellings					
噪音敏感地方 Noise Sensitive Receiver, NSR(s)	樓層 Floor	預計噪音聲級(分貝(A)) Predicted Noise Level (dB(A))			
		經擴闊的 多石街 Widened To Shek Street	其他現有 道路 Other Existing Roads	整體 Overall **	差別 Difference
CWK7	1	64.5	70.9	71.8	0.9
	2	66.4	72.1	73.1	1.0
	3	67.6	72.7	73.8	1.1
CWK8	1	65.3	69.8	71.1	1.3
	2	68.5	72.8	74.2	1.4
TS1	1	65.8	72.4	73.2	0.8
	2	67.7	72.8	74.0	1.2
	3	67.8	72.9	74.1	1.2
TS2	1	69.9	75.0	76.1	1.1
	2	70.4	75.2	76.5	1.3
TS3	1	66.4	74.1	74.8	0.7
	2	66.4	74.0	74.7	0.7
	3	66.4	74.1	74.8	0.7
MC1*	1	65.5	73.9	74.5	0.6
	2	65.5	73.9	74.5	0.6
	3	65.6	73.7	74.4	0.7
TS4	1	68.8	72.7	74.2	1.5
	2	69.1	73.1	74.5	1.4
	3	69.1	73.3	74.7	1.4
TS5	1	75.6	75.2	78.4	3.2
	2	75.2	75.4	78.3	2.9
TS6	1	72.9	74.4	76.7	2.3
	2	72.8	74.7	76.8	2.1
	3	72.9	74.9	76.9	2.0
TS7	1	70.4	73.8	75.4	1.6
	2	70.4	74.0	75.6	1.6
	3	70.9	74.2	75.7	1.5
TS8	1	70.0	74.0	75.5	1.5
	2	70.1	74.3	75.7	1.4
	3	70.0	74.4	75.7	1.3
TS9	1	68.1	72.7	74.0	1.3
	2	68.5	73.3	74.5	1.2
	3	68.6	73.4	74.6	1.2

規劃中的住宅 Planned Dwellings					
噪音敏感地方 Noise Sensitive Receiver, NSR(s)	樓層 Floor	預計噪音聲級(分貝(A)) Predicted Noise Level (dB(A))			
		經擴闊的 多石街 Widened To Shek Street	其他現有 道路 Other Existing Roads	整體 Overall **	差別 Difference
PF1	1	72.7	75.6	77.4	1.8
	2	72.9	75.9	77.6	1.7
	3	72.6	76.0	77.7	1.7
PF2	1	66.7	71.6	72.8	1.2
	2	67.0	72.0	73.2	1.2
	3	66.9	72.0	73.2	1.2
PF3	1	72.5	75.6	77.4	1.8
	2	72.7	75.9	77.6	1.7
	3	72.5	76.0	77.6	1.6
PF4	1	74.7	76.2	78.5	2.3
	2	74.7	76.4	78.6	2.2
	3	74.3	76.6	78.6	2.0
PF5	1	71.0	73.3	75.3	2.0
	2	71.1	73.6	75.6	2.0
	3	70.9	73.8	75.6	1.8
PF6	1	74.6	76.0	78.4	2.4
	2	74.6	76.3	78.5	2.2
	3	74.3	76.4	78.5	2.1
PF7	1	68.6	72.5	74.0	1.5
	2	69.3	73.1	74.6	1.5
	3	69.2	73.2	74.6	1.4
PF8	1	72.4	74.9	76.8	1.9
	2	72.5	75.1	77.0	1.9
	3	72.3	75.3	77.1	1.8
PF9	1	67.5	74.5	75.3	0.8
	2	67.6	74.5	75.3	0.8
	3	67.6	74.3	75.2	0.9
PF10	1	66.2	69.0	70.8	1.8
	2	67.1	69.6	71.6	2.0
	3	67.3	69.8	71.8	2.0
PF11	1	67.4	73.4	74.4	1.0
	2	68.3	73.9	74.9	1.0
	3	68.6	73.8	74.9	1.1
PF12	1	63.4	71.7	72.3	0.6
	2	64.5	72.2	72.9	0.7
	3	64.9	72.0	72.8	0.8
PF13	1	63.1	68.1	69.3	1.2
	2	63.9	68.8	70.0	1.2
	3	64.2	68.9	70.2	1.3
PF14	1	64.8	72.4	73.1	0.7
	2	65.7	72.7	73.5	0.8
	3	66.0	72.9	73.7	0.8
PF15	1	58.2	66.0	66.7	0.7
	2	59.1	67.0	67.6	0.6
	3	59.6	67.4	68.1	0.7
PF16	1	64.9	74.2	74.7	0.5
	2	65.7	74.2	74.8	0.6
	3	66.2	74.3	74.9	0.6
PF17	1	66.6	72.9	73.8	0.9
	2	67.0	73.2	74.1	0.9
	3	67.2	73.4	74.4	1.0
PF18	1	66.9	72.7	73.7	1.0
	2	67.2	73.0	74.0	1.0
	3	67.3	73.3	74.3	1.0
PF19	1	61.9	69.0	69.8	0.8
	2	63.1	69.5	70.4	0.9
	3	63.1	70.1	70.9	0.8

註: * 麥當勞叔叔之家
 Note: * Ronald MacDonald House
 ** 整體指經擴闊的多石街和其他現有道路的綜合影響。
 ** Overall means the combined effect of the widened To Shek Street and other existing roads.

75.6 紅色表示經擴闊的多石街引致的噪音聲級超過70分貝(A)。
 Red colour shows the noise level from the widened To Shek Street is higher than 70 dB(A).

3.2 藍色表示多石街擴闊後，顯著增加了累計噪音影響，即當整體噪音聲級超出標準時，經擴闊的多石街會引致預計整體噪音聲級增加至少1分貝(A)。
 Blue colour shows the widened To Shek Street contributing significantly to the cumulative noise impact, i.e. the contribution to the increase in the predicted overall noise level from the widened To Shek Street is at least 1dB(A) if the overall noise level exceeds the standard.



圖則名稱 drawing title

擬建於沙田多石街的隔音屏障
PROPOSED NOISE BARRIERS AT TO SHEK STREET, SHA TIN

繪圖 draw W. K. LEUNG	簽署 initial SIGNED	日期 date 1.6.2005	項目編號 item no. -
核對 checked H. S. WONG	簽署 initial SIGNED	日期 date 1.6.2005	比例 scale 1 : 2000
核准 approved W. T. YEUNG	簽署 initial SIGNED	日期 date 1.6.2005	圖則編號 drawing no. ST2047

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NEW TERRITORIES EAST
DEVELOPMENT OFFICE



土木工程拓展署
CIVIL ENGINEERING
AND DEVELOPMENT
DEPARTMENT

裝置擬議隔音屏障後多石街在2020年的預計噪音聲級
 PREDICTED NOISE LEVEL IN 2020 WITH PROPOSED NOISE BARRIER AT TO SHEK STREET

PWSCI(2005-06)5附件3

現有住宅 Existing Dwellings					
噪音敏感地方 Noise Sensitive Receiver, NSR(s)	樓層 Floor	預計噪音聲級(分貝(A)) Predicted Noise Level (dB(A))			評減數值 Amount of mitigation
		已採取評減措施的多石街 Widened To Shek Street with mitigation	整體 (沒有採取評減措施) Overall without mitigation*	整體 (已採取評減措施) Overall with mitigation*	
		(1)	(2)	(3)	
CWK7	1	61.4	71.8	70.0	1.8
	2	61.4	73.1	70.4	2.7
	3	61.3	73.8	71.1	2.7
CWK8	1	53.6	71.1	65.4	5.7
	2	54.4	74.2	66.9	7.3
TS1	1	60.9	73.2	72.1	1.1
	2	62.4	74.0	73.1	0.9
	3	63.6	74.1	73.4	0.7
TS2	1	68.1	76.1	75.3	0.8
	2	68.2	78.5	75.7	0.8
TS4	1	64.0	74.2	71.1	3.1
	2	64.9	74.5	72.4	2.1
	3	65.4	74.7	73.7	1.0
TS5	1	63.0	78.4	69.5	8.9
	2	67.1	78.3	75.2	3.1
TS6	1	59.0	70.7	68.7	2.0
	2	61.4	76.8	73.0	3.8
	3	64.9	76.9	75.2	1.7
TS7	1	60.4	75.4	69.7	5.7
	2	61.6	75.6	72.0	3.6
	3	62.5	75.7	74.0	1.7
TS8	1	63.7	75.5	72.8	2.7
	2	64.3	75.7	74.1	1.6
	3	65.0	75.7	74.7	1.0
TS9	1	63.0	74.0	70.1	3.9
	2	63.8	74.5	71.3	2.8
	3	64.3	74.6	73.5	1.1

規劃中的住宅 Planned Dwellings					
噪音敏感地方 Noise Sensitive Receiver, NSR(s)	樓層 Floor	預計噪音聲級(分貝(A)) Predicted Noise Level (dB(A))			評減數值 Amount of mitigation
		已採取評減措施的多石街 Widened To Shek Street with mitigation	整體 (沒有採取評減措施) Overall without mitigation*	整體 (已採取評減措施) Overall with mitigation*	
		(1)	(2)	(3)	
PF1	1	64.3	77.4	70.4	7.0
	2	65.0	77.6	72.6	5.0
	3	67.9	77.7	76.4	1.3
PF2	1	63.5	72.8	71.3	1.5
	2	64.1	73.2	72.3	0.9
	3	64.4	73.2	72.6	0.6
PF3	1	58.2	77.4	67.4	10.0
	2	60.0	77.6	70.6	7.0
	3	61.8	77.6	74.8	2.8
PF4	1	58.0	78.5	65.0	13.5
	2	60.3	78.6	67.8	10.8
	3	62.5	78.6	73.1	5.5
PF5	1	49.5	75.3	62.8	12.5
	2	52.4	75.6	65.5	10.1
	3	56.1	75.6	70.4	5.2
PF6	1	62.9	78.4	68.4	10.0
	2	64.8	78.5	70.3	8.2
	3	65.4	78.5	73.2	5.3
PF7	1	64.7	74.0	71.8	2.2
	2	66.3	74.6	73.4	1.2
	3	66.9	74.6	74.0	0.6
PF8	1	63.4	76.8	70.1	6.7
	2	64.8	77.0	72.2	4.8
	3	67.2	77.1	75.4	1.7
PF9	1	61.5	75.3	73.2	2.1
	2	62.9	75.3	73.6	1.7
	3	63.4	75.2	73.7	1.5
PF10	1	48.7	70.8	60.5	10.2
	2	50.8	71.6	63.9	7.7
	3	53.4	71.8	67.6	4.2
PF11	1	59.8	74.4	71.1	3.3
	2	60.7	74.9	72.2	2.7
	3	61.4	74.9	73.2	1.7
PF12	1	57.2	72.3	69.6	2.7
	2	58.9	72.9	70.5	2.4
	3	59.1	72.8	70.9	1.9
PF13	1	48.8	69.3	63.3	6.0
	2	48.3	70.0	65.0	5.0
	3	50.3	70.2	67.5	2.7
PF14	1	58.3	73.1	70.6	2.5
	2	58.8	73.5	71.4	2.1
	3	59.1	73.7	72.3	1.4
PF15	1	43.4	66.7	63.8	2.9
	2	44.5	67.6	65.2	2.4
	3	45.8	68.1	66.5	1.6
PF16	1	59.1	74.7	72.9	1.8
	2	59.6	74.8	73.3	1.5
	3	59.8	74.9	73.7	1.2
PF17	1	62.0	73.8	71.8	2.0
	2	62.2	74.1	72.6	1.5
	3	62.5	74.4	73.3	1.1
PF18	1	61.5	73.7	71.9	1.8
	2	61.9	74.0	72.6	1.4
	3	62.3	74.3	73.4	0.9
PF19	1	55.5	69.8	68.9	0.9
	2	56.0	70.4	69.5	0.9
	3	56.7	70.9	70.2	0.7

註： *整體指經擴闊的多石街和其他現有道路的綜合影響。

Note: * Overall means the combined effect of the widened To Shek Street and other existing roads.